

Research Article

Nurse Managers' Authentic Leadership and their Relationship with Work Engagement among Registered Nurses

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Reports have highlighted the role of supportive work environments in several nurse outcome measures, indicating a need for effective leadership styles that improve the nurse working environment. Authentic leadership is a relatively new concept in Arab work culture. The purpose of this study was to examine the relationship between authentic leadership demonstrated by nurse managers and work engagement among Jordanian registered nurses. A cross-sectional correlational design was employed. A sample of 238 registered nurses working in a public hospital in Jordan was collected. Data collection was performed by using the staff demographics questionnaire, the authentic leadership questionnaire (ALQ), and the Utrecht Work Engagement Scale (UWES)-17 items. Descriptive statistics, independent samples *t*-tests, one-way ANOVA, Pearson correlation, and hierarchical multiple regression analysis were employed to analyze the data. The results showed a statistically significant positive correlation between authentic leadership and work engagement in the hierarchical regression analysis ($B = 0.34$, $t = 5.54$, $p < 0.001$). After controlling demographic variables, authentic leadership accounted for 11% of the additional variance above and beyond the 5% accounted for age, educational level, and work experience (change of $R^2 = 0.11$, $p < 0.01$). Nurses whose managers demonstrate higher levels of authentic leadership report more work engagement ($r = 0.37$, $p < 0.001$). Considering the role of authentic leadership in promoting nurses' work engagement, it would be beneficial to develop authentic leadership behaviors for nurse managers.

1. Introduction

For many decades, nurses' disengagement from one's job has been an area of interest for researchers due to its profound effect on job performance and patient outcomes [1, 2]. It is also found in recent literature that there are increasingly serious discussions among nurse researchers about the role of leadership styles of nurse managers in improving various nursing outcomes including nurses' job performance, motivation, mental health, turnover intention, and experiences of workplace bullying [3–5].

Recently, work engagement among nurses has been identified as a positive organizational construct that is critical to the organization's success [6]. Nurse work engagement is a commonly used term to describe people who are committed, dedicated, or have a sense of pride in the nursing field and the institutions in which they work [7]. Nurse work engagement or lack thereof affects the overall healthcare delivery system's institutions' outcomes, including hospitals [8]. Previous research found that nurses with high levels of work engagement have higher levels of job satisfaction and better teamwork collaboration than nurses with lower levels of work engagement [9]. Healthcare

organizations seeking to improve outcomes must identify human factors and leadership styles that could affect employee work engagement [10]. Effective leadership increases employee motivation, job satisfaction, and loyalty to the organization [3, 11]. In addition, employing effective leadership styles such as authentic leadership could address various challenges related to employee work engagement in healthcare organizations [12]. According to Du Plessis and Boshoff [2], authenticity is the most important part of effective leadership because it improves patient safety and employee engagement by building trust and healthy work environments.

Over the last decade, numerous empirical studies have emphasized the significant role of authentic leadership in contributing to key performance indicators in healthcare and influencing followers' job outcomes [13]. In addition, previous research indicated a need for more empirical studies that examine the outcomes of employing authentic leadership across different disciplines [13]. According to the theory of authentic leadership, authentic leaders can increase the engagement of followers by generating hope, trust, optimism, and other positive feelings [14]. In particular, nurse managers (NMs) are uniquely positioned within hospital organizations to improve nurses' work engagement due to their direct interaction with nursing staff and their understanding of department concerns [15].

In the Arab culture, leaders are appreciated and considered to be great individuals who guide their followers and attend to their needs. The Arabic or Islamic perspective of leadership adheres to ethical principles such as justice, consultation, commitment, honesty, trust, and integrity [16]. These ethical principles are directly relevant to authentic leadership dimensions [14]. Authentic leadership is a relatively new concept in the Arab work culture that differs substantially from its Western counterparts [17].

An understanding of nurses' work engagement and the factors that influence it has been gained in Western countries [18]. However, more research studies are needed to understand the factors that could improve work engagement among nurses in the context of Arab countries such as Jordan. In addition, there is a lack of satisfactory evidence in the literature about the link between authentic leadership and nurses' work engagement in Arab culture. While some studies have established a correlation between leadership styles and nurse work engagement [19–21], these studies showed that this relationship is confounded by demographic and organizational factors.

The current study aimed to investigate the relationship between authentic leadership demonstrated by nurse managers and work engagement among Jordanian registered nurses (RNs) for controlling demographic and organizational factors. The current study adds to the literature on work engagement and develops current knowledge on work engagement in sectors other than business.

2. Methodology

2.1. Research Design. The study used a cross-sectional correlational design.

2.2. Settings. In this study, data were collected from two major government hospitals located in Amman. These hospitals were chosen because they are large and easily accessible for patients from all governorates. These hospitals are also similar in terms of leadership and organizational structure and are considered the largest public hospitals in Jordan.

2.3. Participants. The target population consisted of all registered nurses working in the governmental hospitals in Jordan. The accessible population included registered nurses working in the selected hospitals. Inclusion criteria were a registered nurse in Jordan, currently employed in the hospital, and at least one year of experience in the current position. Nurses in administrative roles and nurses who do not work at the bedside were excluded from the study.

The study sample was recruited by using a convenience sampling technique. The sample size was estimated by using the G*Power version 3.1.9.2 program [22]. A minimum sample size of 233 participants was required for regression analysis with a small to medium effect size, a power of 0.90, and an alpha = 0.05. The sample size was increased to 260 to account for the possibility of incomplete questionnaires or a high rate of nonresponse.

2.4. Measurement. This study used a sociodemographic sheet and well-recognized scales to measure the main study variables, including authentic leadership and work engagement.

2.5. The Sociodemographic Sheet. The sociodemographic sheet was used to collect participants' demographic data including age, gender, marital status, education level, university of graduation, whether private or governmental, total years of experience in nursing, total years of experience in the current hospital, hospital type, and working units.

2.6. The Authentic Leadership Scale. Perception of authentic leadership was measured by using the Authentic Leadership Scale [14]. The subscales are self-awareness, relational transparency, internalized moral perspective, and balanced processing. Participants reported the frequency (0 = not at all to 4 = frequently) with which their leaders assumed the 16 behaviors. Examples of these behaviors are as follows: (a) "seeks feedback to improve interactions with others" (self-awareness); (b) "says exactly what he or she means" (relational transparency); (c) "demonstrates beliefs that are consistent with actions" (internalized moral perspective); and (d) "listens carefully to different points of view before coming to conclusions" (balanced processing). A variety of research studies conducted have yielded support for the reliability and validity of the ALQ [23–25]. Internal consistency was evaluated by using Cronbach's alpha and was equal to 0.96 [26]. Cronbach's alpha in this study was 0.93.

2.7. Work Engagement Scale. The Utrecht Work Engagement Scale (UWES) was used in this study to measure work engagement. It was developed by Schaufeli et al. [27]

and was extensively used worldwide. The scale is available in 21 languages. It includes three-dimensional constructs, including vigor (high energy levels and mental resilience), dedication (involved in work, enthused, and inspired), and absorption (engrossed in work). These dimensions were reflected through seventeen items: vigor (six items), dedication (five items), and absorption (six items). Responses to each item ranged between 0 (never) and 6 (always). A higher score reflects higher levels of work engagement. The UWE-9S has been validated in different organizational settings in different countries worldwide [28, 29]. The internal consistency of the vigor, dedication, and absorption items was 0.86, 0.89, and 0.76, respectively [27]. The internal consistency reliability of the UWES-9 was excellent (0.92) [27]. Discriminant validity and predictive validity are ensured as compared with job involvement and organizational commitment scales [30]. The UWES-9S has a good construct validity to measure work engagement [27]. Cronbach's alpha in this study was 0.88.

2.8. Data Collection Procedures. Data collection began after IRB approvals were obtained. The researcher visited all unit managers and explained to them the main ideas and purposes of the study and asked them to help in identifying nurses who met the criteria. Unit managers announced the details of the study to their staff nurses via WhatsApp group to save time and effort. A link explaining the purpose of the study and its procedure was sent to all participants.

The total number of eligible registered nurses for this study was 300. The invitation was sent to a convenience sample of 260 nurses, 170 nurses from the first hospital and 90 from the second one. Of them, 238 participants responded (response rate = 92%). For data analysis, questionnaire data were downloaded to the SPSS program version 26.

2.9. Ethical Considerations. Before collecting data, official IRB approval was obtained from the institutional review board at the Faculty of Nursing, Zarqa University, and then from the Jordan Ministry of Health to access the selected setting. The completion of the online survey and electronic cover letter reflected the consent to participate in the study. Participants were given written information about the study's objectives, procedures, and implications of participating in the study via an electronic cover letter. Participation in the study was entirely voluntary, and no participant was coerced into participating against his or her will. The collected data were kept on the researcher's password-protected personal computer, and no one except the research team had access to the data. The participants were assured that all information gathered would be used solely for research purposes. Participants were reminded of their right to withdraw from the study at any time without penalty. In addition, the researcher's WhatsApp number was included in case participants had any questions.

2.10. Data Management and Analysis. The first step was to review all collected responses to ensure that all the data were entered correctly and that no data were missing. Coding and data entry were performed before starting the data analysis process. IBM SPSS version 26 was used to analyze the data (SPSS 26). Descriptive statistics were used to present the characteristics of Jordanian registered nurses who participated in the study and to describe the study participants' scores on authentic leadership and work engagement. An independent samples *t*-test was used to examine differences in work engagement based on the gender of participants, marital status, educational level, and type of the university from which participants earned their last degree. Differences in work engagement based on other categorical demographics such as the current working unit in this study were examined by using one-way ANOVA because this categorical variable has more than two categories. The relationship between work engagement and other continuous variables (age and years of experience) was examined by using the Pearson correlation. A hierarchical multiple regression analysis was conducted to investigate the distinct relationship between authentic leadership and work engagement while controlling for demographic variables. Age, educational level, total nursing experience, and total experience in the current unit were entered into the first model of the regression analysis, while authentic leadership was entered into the second model.

The assumptions for using parametric statistical tests were checked before conducting the principal analysis. The normality assumption of the continuous variables was met for all parametric tests. In addition, the homogeneity of variances assumption of the independent samples *t*-test and the one-way ANOVA was examined by using Levene's test. Linearity and absence of multicollinearity assumptions of Pearson correlation and hierarchical multiple regression were also met before proceeding further in the analysis. A significance level of 0.05 (two-tailed) was chosen.

3. Results

3.1. Sample Characteristics. A sample of 238 participants completed the study. Most participants were females ($n = 138$, 58%), married ($n = 162$, 68.1%), and had a BSN ($n = 164$, 68.9%). Participants were assigned from medical-surgical units ($n = 59$, 24.8%), adult and pediatric intensive care units ($n = 59$, 24.8%), emergency departments ($n = 45$, 18.9%), and other units (operation rooms and maternity rooms) ($n = 75$, 31.5%). Regarding the university of graduation, 136 participants (57.1%) gained their academic degree from a governmental university, while the remaining 102 (49.9%) earned it from a private university.

The mean age of participants was 35.25 years ($SD = 7.364$), ranging from 22 years to 54 years. The mean total experience in nursing was 12.26 years ($SD = 7.11$), ranging from 1 to 33 years. The mean total years of experience in the current hospital was 7.75 ($SD = 4.64$), ranging from 1 to 18 years (Table 1).

TABLE 1: Sample characteristics.

| | | Frequency | Percent |
|---|---|-------------|-----------|
| Gender | Male | 100 | 42 |
| | Female | 138 | 58 |
| Marital status | Unmarried | 76 | 31.9 |
| | Married | 162 | 68.1 |
| Educational level | Bachelor in nursing | 164 | 68.9 |
| | Higher postgraduate degree in nursing | 74 | 31.1 |
| University of last education | Governmental | 136 | 57.1 |
| | Private | 102 | 49.9 |
| Current working unit | Medical-surgical | 59 | 24.8 |
| | ICU (adult/pediatrics) | 59 | 24.8 |
| | Emergency room | 45 | 18.9 |
| | Other (operation room and maternity room) | 75 | 31.5 |
| | | <i>Mean</i> | <i>SD</i> |
| Age | | 35.25 | 7.36 |
| Total years of experience in nursing | | 12.26 | 7.11 |
| Total years of experience in current hospital | | 7.75 | 4.65 |

3.2. *Scores of the Main Study Variables.* The overall mean score for the authentic leadership questionnaire was 2.16 (SD=0.85). The mean scores of subscales were 2.30 (SD=0.90) for the moral-ethical domain, 2.09 (SD=0.93) for the transparency domain, 2.15 (SD=1.04) for the self-awareness domain, and 2.11 (SD=1.05) for the balanced processing domain. The moral-ethical domain has the highest mean score of all subscales, while the transparency domain has the lowest mean score of all subscales (Table 2).

The overall mean score for the work engagement questionnaire was 4.09 (SD=1.19). The mean scores of subscales were 4.11 (SD=1.27) for the vigor domain, 3.85 (SD=1.46) for the dedication domain, and 4.26 (SD=1.16) for the absorption domain. The absorption domain has the highest mean score of all subscales, while the dedication domain has the lowest mean score of all subscales.

3.3. *The Relationship between Authentic Leadership and Nurses' Work Engagement.* A Pearson correlation was used to correlate each authentic leadership subscale with the nurses' work engagement subscales. All work engagement subscales, including vigor, dedication, and absorption, were significantly and positively correlated with ALS subscales and the overall ALS score (r ranged from 0.25 to 0.40, $p < 0.001$). Furthermore, the overall work engagement score was significantly and positively correlated with all ALS subscales and with the overall ALS score (r ranged from 0.31 to 0.37, $p < 0.001$) (Table 3).

3.4. *Differences in the Scores of Work Engagement and Authentic Leadership Based on Nurses' Sociodemographic Characteristics.* An independent samples t -test was used to examine mean differences in nursing work engagement and authentic leadership according to nurses' gender, marital status, educational level, and university of graduation. A one-way ANOVA test was conducted to examine work engagement and authentic leadership mean score

differences with respect to the current working unit. Results revealed that the mean scores of nursing work engagement significantly differed based on educational level ($t(123) = 2.30, p = 0.023$). Post hoc analysis indicated that the bachelor participants (4.21 ± 1.11) had significantly higher mean scores of nursing work engagement than higher studies participants (3.80 ± 1.30). No statistically significant difference was found in the mean scores of nursing work engagement according to gender ($p = 0.717$), marital status ($p = 0.112$), and university of graduation ($p = 0.054$). Results revealed no statistically significant difference in the mean nursing work engagement score according to the current working unit ($p = 0.280$) as shown in Table 4. Results revealed that the mean authentic leadership significantly differed based on gender, ($t(221) = 3.15, p = 0.002$), indicating that the male participants (2.36 ± 0.802) had significantly higher mean scores of authentic leadership than female participants (2.017 ± 0.863). No statistically significant difference was found in the mean scores of authentic leadership according to marital status ($p = 0.102$), educational level ($p = 0.225$), and university of graduation ($p = 0.583$). Results revealed no statistically significant difference in the mean authentic leadership score according to the current working unit ($p = 0.767$) (Table 4).

3.5. *The Relationship between Work Engagement, Authentic Leadership, and Continuous Demographics.* A Pearson correlation was performed to assess the relationship between continuous variables. Results show that nursing work engagement is significantly and positively correlated with participants' age ($r = 0.14, p = 0.027$), total experience in nursing ($r = 0.13, p = 0.039$), and experience in their current hospital ($r = 0.15, p = 0.022$). Results show that nursing authentic leadership is significantly and positively correlated with participants' age ($r = 0.18, p = 0.004$), total experience in nursing ($r = 0.14, p = 0.028$), and experience in their current hospital ($r = 0.18, p = 0.005$).

TABLE 2: Mean scores of the study variables.

| | Mean | Standard deviation |
|----------------------------|---------------------|--------------------|
| Authentic Leadership Scale | Moral/ethical | 2.30 |
| | Transparency | 2.09 |
| | Self-awareness | 2.15 |
| | Balanced processing | 2.11 |
| | Overall ALS score* | 2.16 |
| Work Engagement Scale | Vigor | 4.11 |
| | Dedication | 3.85 |
| | Absorption | 4.26 |
| | Overall UWES** | 4.09 |

*ALS, Authentic Leadership Scale; **UWES, Utrecht Work Engagement Scale.

TABLE 3: Correlation between authentic leadership and work engagement.

| UWES** | ALS* | | | | |
|-------------------------------|--------------|---------------|---------------------|----------------|-------------------|
| | Transparency | Moral/ethical | Balanced processing | Self-awareness | Overall ALS score |
| Vigor | R | 0.30 | 0.32 | 0.34 | 0.35 |
| | P | <0.001 | <0.001 | <0.001 | <0.001 |
| Dedication | R | 0.31 | 0.27 | 0.36 | 0.35 |
| | P | <0.001 | <0.001 | <0.001 | <0.001 |
| Absorption | R | 0.25 | 0.22 | 0.24 | 0.27 |
| | P | <0.001 | <0.001 | <0.001 | <0.001 |
| Overall work engagement scale | R | 0.31 | 0.29 | 0.34 | 0.35 |
| | P | <0.001 | <0.001 | <0.001 | <0.001 |

*ALS, Authentic Leadership Scale; **UWES, Utrecht Work Engagement Scale.

TABLE 4: Differences in the scores of work engagement and authentic leadership based on nurses' sociodemographic characteristics.

| Independent variables | Categories | N | Work engagement | | | | Authentic leadership | | | |
|--|------------------|-----|-----------------|------|-------|---------|----------------------|------|-------|---------|
| | | | Mean | SD | t/F | P value | Mean | SD | t/F | P value |
| Gender | Male | 100 | 4.05 | 1.33 | -0.36 | 0.717 | 2.36 | 0.80 | 3.15 | 0.002 |
| | Female | 138 | 4.11 | 1.08 | | | 2.02 | 0.86 | | |
| Marital status | Unmarried | 76 | 3.90 | 1.60 | 1.59 | 0.112 | 2.03 | 0.86 | 1.64 | 0.102 |
| | Married | 162 | 4.17 | 1.19 | | | 2.22 | 0.85 | | |
| Educational level | Bachelor | 164 | 4.21 | 1.11 | 2.30 | 0.023 | 2.21 | 0.86 | 1.82 | 0.225 |
| | Higher studies | 74 | 3.81 | 1.30 | | | 2.06 | 0.83 | | |
| University of graduation in last education | Governmental | 136 | 3.96 | 1.21 | -1.93 | 0.054 | 2.14 | 0.89 | -0.55 | 0.583 |
| | Private | 102 | 4.26 | 1.15 | | | 2.17 | 0.80 | | |
| Current working unit | Medical-surgical | 59 | 3.85 | 1.32 | 1.29 | 0.280 | 2.15 | 0.84 | 0.38 | 0.767 |
| | ICU | 59 | 4.12 | 0.86 | | | 2.20 | 0.73 | | |
| | ER | 45 | 4.06 | 1.50 | | | 2.25 | 0.94 | | |

3.6. *The Unique Relationship between Authentic Leadership and Work Engagement for Controlling Demographic Variables.* Overall, the two regression models were significant: ($F(4, 233) = 2.95, p = 0.021$) and ($F(5, 232) = 8.79, p = 0.001$). Age, educational level, total nursing experience, and total experience in the current unit accounted for 5% of the variance in nurses' work engagement, while authentic leadership score accounted for 11% additional variance above and beyond the 5% accounted for the first model. In the first model, only educational level ($t = -2.34, B = -0.39, p = 0.02$) significantly predicted work engagement. In the second model, both educational level ($t = -2.12, B = 0.48, p = 0.035$) and

overall authentic leadership score ($t = 5.54, B = 0.48, p = 0.001$) significantly predicted work engagement, as shown in Table 5.

4. Discussion

Leadership is one of the most important factors in an organization's success. Authenticity is required in nursing practice to maximize healthcare outcomes and empower staff to provide safe and effective nursing practices [31]. The overall mean score for ALS in this study is consistent with authentic leadership scores reported in previous research [4, 32, 33]. Regarding authentic leadership subscales, the

TABLE 5: The unique relationship between authentic leadership and work engagement for controlling demographic variables.

| Model | Unstandardized coefficients | | Standardized coefficients | <i>t</i> | <i>P</i> value | |
|-------|--------------------------------------|------------|---------------------------|----------|----------------|--------|
| | B | Std. error | Beta | | | |
| 1 | Constant | 3.93 | 0.66 | | 5.97 | <0.001 |
| | Age | 0.014 | 0.03 | 0.09 | 0.58 | 0.562 |
| | Educational level | -0.37- | 0.17 | -0.15 | -2.34 | 0.020 |
| | Total nursing experience | -0.00- | 0.03 | -0.01- | -0.09 | 0.931 |
| | Total experience in the current unit | 0.02 | 0.02 | 0.09 | 0.99 | 0.323 |
| 2 | Constant | 3.33 | 0.63 | | 5.29 | <0.001 |
| | Age | -0.00- | 0.02 | -0.01- | -0.074- | 0.941 |
| | Total nursing experience | 0.011 | 0.03 | 0.07 | 0.42 | 0.676 |
| | Total experience in the current unit | 0.010 | 0.02 | 0.04 | 0.46 | 0.647 |
| | Educational level | -0.33- | 0.16 | -0.130- | -2.12- | 0.035 |
| | ALS* | 0.48 | 0.09 | 0.34 | 5.54 | <0.001 |

moral-ethical domain has the highest mean score of all subscales, while the transparency domain has the lowest mean score. These results match those of a study conducted in Jordan [34] and a study conducted in Poland [35]. In fact, there are variations across cultures in perceptions of what constitutes as a leader. The perceptions of leadership could be influenced by cultural background and organizational policies and practices. The Arab culture emphasizes leadership and advocates practicing moral-ethical leadership through adherence to key principles such as honesty, justice, commitment, trust, and integrity [16]. The relatively low mean score of relational transparency could raise a concern related to cultural factors or organizational norms that impact the level of leaders' openness and willingness to share information with followers [25]. Due to the scarce availability of relevant research, the data of Arab nurse leaders on authentic leadership could not be adequately benchmarked with other cohorts. However, this interesting area would require conducting more research studies to confirm our findings.

The mean score of participants' work engagement in this study was 4.09. The highest mean score of the work engagement subscales was for absorption, while the lowest mean score of the subscales was for the dedication domain. Our results were consistent with those in some previous studies [36, 37]. However, the scores of work engagement in this study were higher than the scores reported by a previous study conducted in Jordan among healthcare professionals [38]. Scores of work engagement could vary as per work settings, work environments, and psychological and physical demands that impact nurses' ambition, initiation, and commitment at work.

Nurses' work engagement was positively correlated with authentic leadership. This outcome suggests that nurses from the Arab culture are more likely to be engaged at work when their leaders inspire trust, cooperation, and enthusiasm. In general, positive leadership styles have been shown to improve and increase employee engagement in the workplace [20, 39–41]. This study expanded these results from a sample of nurses from the Arab culture. The relationship between authentic leadership and work engagement was significant and positive in all of the ALQ subscales suggesting that all of the four components of authentic

leadership that characterize authentic nurse managers could play an important role in promoting nurses' work engagement. However, nurse managers' self-awareness dimension had the strongest correlation with work engagement in comparison with all four domains of authentic leadership. This suggests that self-awareness and recognizing the strengths and limitations of the nurse manager were important in facilitating nurses' work engagement. It is expected that nurse managers' self-awareness demonstrated in self-regulation and possession of stress management could support nurses to accomplish their work goals, engage in their work, and provide safe care to patients [42, 43].

Contrary to the previous research, participants with a bachelor's degree had significantly higher mean scores of nursing work engagement than participants with a higher education degree. While some studies found that there was no statistically significant link between the level of education of nurses and how engaged they were at work [44], other studies revealed that higher education level is associated with more work engagement [45]. In fact, higher education levels among Jordanian nurses could have little positive impact on their working conditions including salary, exposure to disciplinary actions, and position.

In contrast to the findings of Kim et al. [46], who found a strong association between gender and work engagement and described low levels of job engagement among women, our study showed no differences in work engagement based on gender. To date, few research studies have been conducted on work engagement among female nurses in Arab culture. However, this outcome contradicts the expectation of a patriarchal culture where men have underestimated women's abilities to succeed in workplace [47]. The link between total experience in nursing and work engagement is supported by Saito et al. [48]. However, these findings contradict a study conducted by Al-Hamdan and Bani Issa [49], who revealed no statistically significant difference in the level of work engagement among nurses based on their total years of nursing experience.

In the current study, there was an independent relationship between authentic leadership and work engagement for controlling participant's demographics. Alok and Israel [19] investigated a multiple regression model between

authentic leadership and nurse work engagement. The results showed that authentic leadership accounted for 11% of the total variance in nurses' work engagement. These results suggest that authentic leadership behaviors that encourage a culture of motivation, trust, and cooperation promote staff to exhibit positive work-related outcomes such as work engagement. The findings also confirmed that authentic leadership demonstrated by Jordanian nurse managers exerts a significantly positive effect on the work engagement of registered nurses in healthcare settings.

4.1. Limitations of the Study. The current study employed a convenience sampling technique, which may limit the study's ability to generalize findings. In addition, the study targeted the two largest public hospitals; private hospitals, charities, and other healthcare organizations were not included.

4.2. Study's Recommendations and Implications. The findings of this study demonstrate to nurse managers the value of being authentic with their subordinates. This study could help nurse managers to be authentic role models by encouraging them to learn and teach the values and principles of authenticity to their staff.

When true leadership is imposed in the workplace, it results in a healthier work environment and encourages a trusting relationship between the nursing team and their nursing manager. This could result in higher staff satisfaction and a reflection on staff practice, resulting in high-quality care. In addition, decision-makers should take management capabilities in Jordanian hospitals seriously. The availability and effective management of these capabilities and resources enable hospitals to achieve higher levels of engagement.

In nursing education, there should be a strong emphasis on integrating the concepts of authentic leadership and modern management methods into students' curricula. This could prepare students as future nurses who are ready to lead and be trusted. Employees, leaders, and the human resources department must all understand the impact of authentic leadership on work engagement outcomes. The lack of ownership, strict rules and regulations, and other challenges in the health sector, such as workplace stress, may have an impact on leaders' willingness to display authentic behaviors, which may have an impact on nurses' feelings of engagement.

5. Conclusion

This study investigated the correlation between a nurse manager's authentic leadership and work engagement. The findings revealed a positive association between a nurse's manager's authentic leadership and work engagement among Jordanian nurses, which is consistent with studies conducted in Western countries. The results of the current study provide insights into the importance of recruiting authentic leaders to improve work engagement. Finally, the results of the current study support the application of the

theory of authentic leadership to nursing managers in health sectors, thereby increasing the work engagement of registered nurses.

Data Availability

The datasets generated during and/or analyzed during the current study are not publicly available, but are available from the corresponding author upon reasonable request.

Disclosure

This study has been produced from the Master's thesis of the first author, which was conducted under the supervision of the second author. The full thesis is available at <https://zu.edu.jo/en/NewsForm/NewsDetails.aspx?id=3975>.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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References

- [1] P. Szilvassy and K. Širok, "Importance of work engagement in primary healthcare," *BMC Health Services Research*, vol. 22, no. 1, p. 1044, 2022.
- [2] M. Du Plessis and A. B. Boshoff, "The role of psychological capital in the relationship between authentic leadership and work engagement," *SA Journal of Human Resource Management*, vol. 16, no. 1, pp. 1–9, 2018.
- [3] Y. Smama'h, N. F. Eshah, I. A. Al-Oweidat, A. Rayan, and A. J. Nashwan, "The impact of leadership styles of nurse managers on nurses' motivation and turnover intention among Jordanian nurses," *Journal of Healthcare Leadership*, vol. 15, pp. 19–29, 2023.
- [4] N. S. Al-Hassan, A. H. Rayan, M. H. Baqees, S. H. Hamaideh, and H. Khrais, "Authentic leadership and its role in registered nurses' mental health and experiences of workplace bullying," *SAGE open nursing*, vol. 9, Article ID 23779608231185919, 2023.
- [5] S. A. Allan and A. H. Rayan, "Association between authentic leadership in nurse managers and performance and intention to leave among registered nurses," *Journal of Nursing Research*, vol. 31, no. 5, p. e293, 2023.
- [6] K. Keyko, G. G. Cummings, O. Yonge, and C. A. Wong, "Work engagement in professional nursing practice: a systematic review," *International Journal of Nursing Studies*, vol. 61, pp. 142–164, 2016.
- [7] L. Sun and C. Bunchapattanasakda, "Employee engagement: a literature review," *International Journal of Human Resource Studies*, vol. 9, no. 1, pp. 63–80, 2019.
- [8] S. De Simone, A. Planta, and G. Cicotto, "The role of job satisfaction, work engagement, self-efficacy and agentic capacities on nurses' turnover intention and patient satisfaction," *Applied Nursing Research*, vol. 39, pp. 130–140, 2018.
- [9] M. Vera, I. M. Martinez, L. Lorente, and M. J. Chambel, "The role of co-worker and supervisor support in the relationship between job autonomy and work engagement among

- Portuguese nurses: a multilevel study," *Social Indicators Research*, vol. 126, no. 3, pp. 1143–1156, 2016.
- [10] M. Badwan, N. Eshah, and R. Ahmad, "The role of organizational support in work engagement among nurses working in intensive care units," *Journal of Holistic Nursing And Midwifery*, vol. 32, no. 4, pp. 301–308, 2022.
 - [11] G. G. Cummings, K. Tate, S. Lee et al., "Leadership styles and outcome patterns for the nursing workforce and work environment: a systematic review," *International Journal of Nursing Studies*, vol. 85, pp. 19–60, 2018.
 - [12] R. Niswaty, H. Wirawan, H. Akib, M. S. Saggaf, and D. Daraba, "Investigating the effect of authentic leadership and employees' psychological capital on work engagement: evidence from Indonesia," *Heliyon*, vol. 7, no. 5, Article ID e06992, 2021.
 - [13] B. Alilyyani, C. A. Wong, and G. Cummings, "Antecedents, mediators, and outcomes of authentic leadership in health-care: a systematic review," *International Journal of Nursing Studies*, vol. 83, pp. 34–64, 2018.
 - [14] F. O. Walumbwa, B. J. Avolio, W. L. Gardner, T. S. Wernsing, and S. J. Peterson, "Authentic leadership: development and validation of a theory-based measure," *Journal of Management*, vol. 34, no. 1, pp. 89–126, 2008.
 - [15] M. L. Grubaugh, N. Warshawsky, and L. M. Tarasenko, "Reframing the nurse manager role to improve retention," *Nurse Leader*, vol. 21, no. 2, pp. 195–201, 2023.
 - [16] M. A. I. Gazi, "Islamic perspective of leadership in management; foundation, traits and principles," *International Journal of Management and Accounting*, vol. 2, no. 1, pp. 1–9, 2020.
 - [17] A. Rayan, "Cultural misconceptions, attitudes, knowledge, and beliefs about mental illness among Jordanian nurses working in psychiatric units," *The Journal of Continuing Education in Nursing*, vol. 53, no. 11, pp. 513–520, 2022.
 - [18] Q. Wan, Z. Li, W. Zhou, and S. Shang, "Effects of work environment and job characteristics on the turnover intention of experienced nurses: the mediating role of work engagement," *Journal of Advanced Nursing*, vol. 74, no. 6, pp. 1332–1341, 2018.
 - [19] K. Alok and D. Israel, "Authentic leadership and work engagement," *Indian Journal of Industrial Relations*, pp. 498–510, 2012.
 - [20] N. Maximo, M. W. Stander, and L. Coxen, "Authentic leadership and work engagement: the indirect effects of psychological safety and trust in supervisors," *SA Journal of Industrial Psychology*, vol. 45, no. 1, pp. 1–11, 2019.
 - [21] G. R. Muddle, "Relationship between leadership style and hospital employee engagement in Papua New Guinea," *Asia Pacific Journal of Health Management*, vol. 15, no. 4, pp. 42–55, 2020.
 - [22] F. Faul, E. Erdfelder, A.-G. Lang, and A. G. Buchner, "G*Power 3: a flexible statistical power analysis program for the social, behavioral, and biomedical sciences," *Behavior Research Methods*, vol. 39, no. 2, pp. 175–191, 2007.
 - [23] R. Roof, "Authentic leadership questionnaire (ALQ) psychometrics," *Asian Journal of Business Ethics*, vol. 3, no. 1, pp. 57–64, 2014.
 - [24] M. Panczyk, M. Jaworski, L. Iwanow, I. Cieślak, and J. Gotlib, "Psychometric properties of authentic leadership self-assessment questionnaire in a population-based sample of polish nurses," *Journal of Advanced Nursing*, vol. 75, no. 3, pp. 692–703, 2019.
 - [25] V. G. Maziero, F. L. R. Rocha, J. A. D. B. Campos et al., "Authentic Leadership Questionnaire applied to Brazilian nurses: evidence of validity," *Revista Latino-Americana de Enfermagem*, vol. 30, p. 30, 2022.
 - [26] M. Ahmadi, A. Amini, and S. Nikmaram, "The effects of ethical leadership on employees' voices," *Journal of Research in Human Resources Management*, vol. 7, no. 4, pp. 167–190, 2016.
 - [27] W. B. Schaufeli, A. B. Bakker, and M. Salanova, "The measurement of work engagement with a short questionnaire: a cross-national study," *Educational and Psychological Measurement*, vol. 66, no. 4, pp. 701–716, 2006.
 - [28] P. Seppälä, S. Mauno, T. Feldt et al., "The construct validity of the Utrecht work engagement scale: multisample and longitudinal evidence," *Journal of Happiness Studies*, vol. 10, no. 4, pp. 459–481, 2009.
 - [29] J. Sinval, A. Marques-Pinto, C. Queirós, and J. Marôco, "Work engagement among rescue workers: psychometric properties of the Portuguese UWES," *Frontiers in Psychology*, vol. 8, p. 2229, 2017.
 - [30] U. E. Hallberg and W. B. Schaufeli, "Same same" but different? Can work engagement be discriminated from job involvement and organizational commitment?" *European Psychologist*, vol. 11, no. 2, pp. 119–127, 2006.
 - [31] A. Y. Alharbi, "Leadership styles of nurse managers and their effects on nurse and organisational performance, issues and problems," *International Journal of Information Retrieval Research*, vol. 4, no. 9, pp. 4516–4525, 2017.
 - [32] C. Zeng, W. Kunaviktikul, and P. Thungjaroenkul, "Head nurses' authentic leadership and group cohesion as perceived by nurses in tertiary hospitals in yunnan province, China," *Nursing Journal*, vol. 49, no. 1, pp. 86–98, 2022.
 - [33] H. F. Lee, H. Y. Chiang, and H. T. Kuo, "Relationship between authentic leadership and nurses' intent to leave: the mediating role of work environment and burnout," *Journal of Nursing Management*, vol. 27, no. 1, pp. 52–65, 2019.
 - [34] O. H. M. Alkarabsheh, A. H. Jaaffar, P. Wei Fong, D. A. Attallah Almaaitah, and Z. H. Mohammad Alkarabsheh, "The relationship between leadership style and turnover intention of nurses in the public hospitals of Jordan," *Cogent Business and Management*, vol. 9, no. 1, Article ID 2064405, 2022.
 - [35] A. Kalbarczyk, L. Serafin, and B. Czarkowska-Pączek, "Novice nurses' leadership competence: a cross-sectional study," *Pielęgniarstwo XXI wieku/Nursing in the 21st Century*, vol. 21, no. 2, pp. 88–93, 2022.
 - [36] F.-Y. Lai, H.-C. Tang, S.-C. Lu, Y.-C. Lee, and C.-C. Lin, "Transformational leadership and job performance: the mediating role of work engagement," *Sage Open*, vol. 10, no. 1, Article ID 215824401989908, 2020.
 - [37] J. J. García-Iglesias, J. Gómez-Salgado, M. Ortega-Moreno, and Y. Navarro-Abal, "Relationship between work engagement, psychosocial risks, and mental health among Spanish nurses: a cross-sectional study," *Frontiers in Public Health*, vol. 8, Article ID 627472, 2020.
 - [38] N. A. Younes, R. AbuAlRub, H. Alshraideh, M. A. Abu-Helalah, S. Alhamss, and O. Qanno, "Engagement of Jordanian physicians in continuous professional development: current practices, motivation, and barriers," *International Journal of General Medicine*, vol. 12, pp. 475–483, 2019.
 - [39] S. Saeed and P. Riasat Ali, "Exploring authentic leadership in relation to work engagement in public and private sector universities," *Journal of Applied Environmental and Biological Sciences*, vol. 8, no. 2, pp. 59–67, 2018.

- [40] W. B. Schaufeli, "Engaging leadership in the job demands-resources model," *Career Development International*, vol. 20, 2015.
- [41] H. Wirawan, M. Jufri, and A. Saman, "The effect of authentic leadership and psychological capital on work engagement: the mediating role of job satisfaction," *The Leadership and Organization Development Journal*, vol. 41, no. 8, pp. 1139–1154, 2020.
- [42] A. Sun, J. Zhao, and Q. Xiao, "The relationship between work engagement and work-related flow experience among nurses," *Chinese Journal of Practical Nursing*, vol. 36, pp. 837–840, 2015.
- [43] S. Al Sabei, R. AbuAlRub, A. Al Yahyaei et al., "The influence of nurse managers' authentic leadership style and work environment characteristics on job burnout among emergency nurses," *International Emergency Nursing*, vol. 70, Article ID 101321, 2023.
- [44] F. O. Ugwu, I. E. Onyishi, and A. M. Rodríguez-Sánchez, "Linking organizational trust with employee engagement: the role of psychological empowerment," *Personnel Review*, vol. 43, no. 3, pp. 377–400, 2014.
- [45] A. Sharma, A. Goel, and S. Sengupta, "How does work engagement vary with employee demography?:—revelations from the Indian IT industry," *Procedia Computer Science*, vol. 122, pp. 146–153, 2017.
- [46] Y.-J. Kim, S.-Y. Lee, and J.-H. Cho, "A study on the job retention intention of nurses based on social support in the COVID-19 situation," *Sustainability*, vol. 12, no. 18, p. 7276, 2020.
- [47] J. W. Whiteoak, N. G. Crawford, and R. H. Mapstone, "Impact of gender and generational differences in work values and attitudes in an Arab culture," *Thunderbird International Business Review*, vol. 48, no. 1, pp. 77–91, 2006.
- [48] Y. Saito, A. Igarashi, M. Noguchi-Watanabe, Y. Takai, and N. Yamamoto-Mitani, "Work values and their association with burnout/work engagement among nurses in long-term care hospitals," *Journal of Nursing Management*, vol. 26, no. 4, pp. 393–402, 2018.
- [49] Z. Al-Hamdan and H. Bani Issa, "The role of organizational support and self-efficacy on work engagement among registered nurses in Jordan: a descriptive study," *Journal of Nursing Management*, vol. 30, no. 7, pp. 2154–2164, 2022.