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The Relationship of Total Quality Management Practices and the Empowerment of Jordanian Nurses in Governmental Hospitals

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Abstract

Background

Total Quality Management (TQM) practices has become a pivotal global strategy in modern healthcare, focusing on enhancing patient satisfaction and resource utilization by fostering quality-driven practices across all levels of healthcare organizations.

Aim

The study examines the relationship between TQM practices and empowerment among Jordanian nurses in governmental hospitals.

Design: This research study used a descriptive, cross-sectional, correlational design.

Methods

The study was conducted in a convenience sampling technique Using questionnaires in three governmental hospitals in Jordan.

Results

Overall, a high levels of TQM practices, and moderate psychological and structural empowerment among Jordanian nurses working in governmental hospitals. Significant differences were found in the levels of empowerment based on gender, and TQM practices and empowerment based on monthly income ($p < 0.01$). TQM practices had a significant positive relationship with psychological ($r = 0.701$, $p < 0.001$) and structural ($r = 0.577$, $p < 0.001$) empowerment. Also, psychological empowerment had a significant relationship with structural empowerment ($r = 0.550$, $p < 0.001$).

Conclusions

Implementing TQM practices in Jordanian hospitals holds the potential to enhance nurse empowerment, ultimately leading to safer and more compassionate patient care. Future research may further substantiate the role of TQM practices in improving patient satisfaction and nurturing competent, empowered nurses at the bedside.

Key points for policy, practice and/or research

- The study revealed strong positive association between TQM practices and psychological empowerment, and moderately positive association between TQM practices and structural empowerment.
- This study discovered that there is a scarcity of empirical research conducted in Jordan that relates TQM to empowerment, thus the present findings can be considered novel evidence to inform local and regional nursing workforce development strategies.

- The improvement of TQM practices, especially process improvement-focused TQM, can complement the decision-making skills and autonomy of nurses to promote safer, more compassionate, and patient-centered care.
- Total Quality Management (TQM) principles can be integrated into workforce development and hospital accreditation standards to encourage empowerment and retention of nursing personnel.
- Longitudinal and interventional designs are necessary for understanding the causal relationships between TQM and staff empowerment in different hospital settings, and for examining the impact of cultural or contextual moderators (e.g., gender attitudes, remuneration structures, etc.) on these relationships.

Introduction

Total Quality Management (TQM) is one of the strategies to ensure that healthcare services are delivered in such a way as to target patient and family satisfaction (Alzoubi et al., 2019). It was developed initially as a strategy in business and finance (Kamaruddin et al., 2021). In healthcare, TQM emphasizes continuous quality improvement, patient attention, and employee empowerment as critical components for achieving service excellence (Alzoubi et al., 2019; Sweis et al., 2013). Employee decision-making and empowerment to support ongoing improvement initiatives are key components of TQM practices (Fraihat et al., 2023).

Empowerment in healthcare, especially among nurses, is vital for creating a positive work environment, increasing job satisfaction, and eventually improving patient care outcomes (Albasal et al., 2022). Nurse empowerment, which encompasses psychological and structural dimensions, entails encouraging and enhancing their involvement in decision-making processes (Connolly et al., 2018). Its goal is to eliminate feelings of powerlessness, improve nurses' competencies, and allow them to actively participate with hospital management to enhance the quality of care and safety. Ultimately, empowered nurses become essential players in defining healthcare design and practices (Connolly et al., 2018).

Structured empowerment, providing nurses with the resources and support they require, can assist them in identifying and reporting unsafe practices (Darawad et al., 2020). Psychological empowerment, which represents nurses' sense of purpose and control over their work, might impact their decision to turnover (Amarneh et al., 2021). Implementation of TQM was significantly related to performance and empowerment (Jumady, 2020). Sweis et al. (2013) examined the impact of TQM practices, including training, teamwork, top management commitment, continuous improvement, and customer satisfaction, on employee empowerment in Saudi healthcare. The results indicate that effective implementation of TQM practices positively influences employee empowerment. A study conducted in Taiwanese regional teaching hospitals found that TQM positively influenced patient safety culture attitudes through work values and employee satisfaction. The study shows that TQM promotes a positive work environment and is a strong predictor of nurses' attitudes toward patient safety culture (Wang et al., 2019).

However, there is sparse evidence on the relationship between TQM practices and empowerment (Wang et al., 2019). Consequently, not paying attention to the empowerment of nurses can have significant repercussions on the safety and quality of nursing care, as the literature suggests that burned-out, poorly performing, and disenfranchised nurses were more likely to be associated with adverse clinical events, complications and never events in hospital settings (Dall'Ora et al., 2020). In Jordan, researchers found limited studies on TQM. These studies did not examine the relationship between TQM practices and empowerment among nurses (Alshourah, 2021; Samawi et al., 2018; El-Tohamy and Raoush, 2015). A'Aqoulah et al. (2016) and Algunmeeyn et al. (2021) performed a qualitative study to identify barriers and facilitators in implementing TQM among managers, doctors, and nursing staff in Jordanian hospitals. So, this study provides empirical evidence that TQM practices are associated with the empowerment of nurses, offering insights that can enhance nursing practices and patient care quality. The study's findings may benefit nursing policymakers' decision-making about staffing and quality improvement by incorporating TQM concepts into the nursing curriculum. Therefore, this study examines the relationship between TQM practices and empowerment among Jordanian nurses in governmental hospitals.

Methods

Design

This study employed a descriptive, cross-sectional, correlational design. Primary data was collected via a self-reported questionnaire.

Sampling and setting

The research study used a convenience sampling technique from three public hospitals in Jordanian areas. The selected hospitals are among the largest public hospitals in Jordan's northern, middle, and southern parts. Participants who met the inclusion criteria were registered nurses with at least six months of experience. Exclusion criteria were participants holding a managerial position. The G*Power software was used to calculate the sample size, which was estimated using the correlation test (power = 0.8, alpha = 0.05 two-tailed, effect size = 0.3); as a result, the minimum sample size was determined to be 84. To accommodate missing data, 110 participants were expected.

Instruments

Sociodemographic and professional data questionnaire. This part collected sociodemographic and professional characteristics. Data were collected, including age, gender, salary, educational level, area or place of work, length of experience as a registered nurse, and length of experience working in the participating hospital.

Total quality management practices tool. Total quality management (TQM) practices was measured using the tool developed by Abu Daqar and Constantinovits (2020). It consists of 22 items that assess six

subscales of TQM practices: top management commitment (5-items), employee involvement (3-items), customer satisfaction (5-items), teamwork (2-items), processes (2-items), and continual improvements (5-items). The tool is measured on a 5-point Likert scale, the total scores range from 22 to 110. The higher mean scores indicate higher total quality management practices. Cronbach alpha ranging from 0.706 to 0.787 across all subscales (Abu Daqar and Constantinovits, 2020). Internal consistency for the current study, Cronbach alpha is 0.955.

Psychological empowerment. The study used the Measuring Empowerment Questionnaire (MEQ) developed by Spreitzer (1995). This tool comprises 12 items, with 4 subscales, each one consisting of 3 items. The subscales are meaning, competence, self-determination, and impact. It is measured on a 7-point Likert scale, the total scores range from 12 to 84, higher mean scores reflecting high levels of psychological empowerment. The MEQ has good internal consistency, with a Cronbach's alpha ranging from .73 to .87 across the four subscales (Spreitzer, 1995). Cronbach's alpha is also 0.948 in the current study sample.

Structural empowerment. The Conditions for Work Effectiveness Questionnaire (CWEQ-II), developed by Laschinger et al. (2001). The tool consists of 12 items that assess four subscales of nurse empowerment: access to opportunity, information, support, and resources (Laschinger et al., 2001). Each subscale consists of 3 items with a 5-point Likert scale. The total scores range from 12 to 60, where a higher mean score indicates better access to empowerment structures. Internal consistency with a Cronbach alpha was 0.89 (Laschinger et al., 2001). Cronbach alpha for current study is 0.922.

Data collection

After obtaining ethical approval, the data was collected through an online Google Form questionnaire. After discussing the project with nurse managers, the researcher obtained a list of eligible nurses, and distributed invitation letters via WhatsApp. Nurses who agreed to participate signed an electronic informed consent form and completed an online English questionnaire about TQM practices, empowerment, and sociodemographic data.

Ethical considerations

The study was reviewed and approved by the Institutional Review Board (IRB) of the Faculty of Nursing-Zarqa University and the Ministry of Health (ref.nr: 22/2022). The Declaration of Helsinki 1964 ethical principles (World Medical Association 1964) applied to the study. The study's aims, target population, significance, and related risks were all defined in the electronic informed consent form that participants signed voluntarily. The researcher assured anonymity, confidentiality, and privacy.

Data analysis

Data was analyzed using The Statistical Package for the Social Sciences (SPSS) version 26 with statistical significance set at $p < 0.05$. Descriptive statistics determined means, standard deviations, and relationships among sociodemographic, professional characteristics, total quality management practices, and empowerment for Jordanian nurses. Inferential statistics were employed to assess group differences and relationships, including independent t-tests, one-way ANOVA, and Pearson *r*.

Results

Sociodemographic characteristics

A total of 110 nurses participated in the study. The mean age was 35 years (SD = 7.4), Min = 23 years and Max = 56 years. The majority of the participants were females (*n* = 60, 54.5%). The majority completed a bachelor's degree (*n* = 77, 70%). The mean length of experience as a registered nurse was 10.9 years (SD = 6.7), Min = 0.6 years and Max = 35.0 years, while the mean length of experience in the current hospital employer was 9.3 years (SD = 6.8). About half of the participants had a monthly income of 400–600 JD (*n* = 52, 47.3%), as presented in Table 1.

Table 1
Sociodemographic Characteristics of Participants (n = 110)

Variables	**Mean**	**SD**
Age	35.3	7.4
Length of experience as a registered nurse (in years)	10.9	6.7
Length of experience in current hospital (in years)	9.3	6.8
	Frequency (*n*)	Percentage (%)
Gender		
Male	50	45.5
Female	60	54.5
Educational Level		
Bachelor's degree	77	70
Master's degree	28	25.5
Doctorate degree	5	4.5
Family Income (monthly)		
400–600 JD	52	47.3
601–800 JD	36	32.7
801–1000 JD	17	15.5
> 1000 JD	5	4.5
Note. SD: Standard Deviation		

Level of total quality management practices and empowerment

Table 2 shows that the mean score of TQM was 3.70 (SD = 0.72), indicating a high level of TQM practices. High scores were also measured for the subscales of TQM practices, except the processes subscale, which was at a moderate level. On the other hand, the mean scores for psychological empowerment were 5.39 (SD = 0.94), indicating a moderate level of psychological empowerment, while mean scores for structural empowerment were 3.46 (SD = 0.83), indicating a moderate level of structural empowerment. The subscale of psychological empowerment, the highest mean score was meaning, while the subscale with the lowest score were self-determination and impact. The subscale of structural empowerment, the highest mean score was opportunity, while the subscale with the lowest score was support, as presented in Table 2.

Table 2
Level of Total Quality Management Practices and Empowerment Scales and Subscales

Scale and Subscales	Mean	SD
Total Quality Management Practices	**3.70**	**0.72**
Top Management Commitment	3.65	0.95
Employee Involvement	3.70	0.90
Customer Satisfaction	3.72	0.80
Teamwork	3.80	0.86
Processes	3.57	0.91
Continual Improvements	3.75	0.75
Psychological empowerment Scale	**5.39**	**0.94**
Meaning	5.54	1.00
Competence	5.51	1.01
Self-determination	5.25	1.04
Impact	5.25	1.04
Structural empowerment Scale	**3.46**	**0.83**
Opportunity	3.53	0.95
Information	3.51	0.98
Support	3.35	0.87
Resources	3.42	1.05
Note. SD: Standard Deviation		

The differences in TQM Practices and empowerment based on sociodemographic characteristics

Table 3 shows the independent *t*-test exhibits a statistically significant difference in gender with psychological empowerment ($t(108)= -2.195$, $p = 0.030$) which male showed high mean, and structural empowerment ($t(108)= -2.789$, $p = 0.006$) which male showed high mean.

Table 3
Differences of Sociodemographic Characteristics with TQM Practices, Psychological Empowerment and Structural Empowerment

Variables	TQM Practices			PE			SE		
	Mean (SD)	**t or F**	**P value**	**Mean (SD)**	**t or F**	**P value**	**Mean (SD)**	**t or F**	**P value**
Gender[a]		-0.853	0.396		-2.195	**0.030***		-2.789	**0.006***
Male	3.77 (0.83)			5.60 (0.91)			3.69 (0.83)		
Female	3.65 (0.61)			5.21 (0.93)			3.26 (0.78)		
Educational Level[b]		1.407	0.249		0.917	0.403		0.986	0.376
Bachelor's degree	3.77 (0.72)			5.42 (0.97)			3.52 (0.81)		
Master's degree	3.51 (0.71)			5.41 (0.89)			3.32 (0.86)		
Doctorate degree	3.72 (0.62)			4.83 (0.54)			3.13 (0.97)		
Monthly Income[b]		5.268	**0.002***		8.343	**< 0.001****		5.454	**0.002***
400–600 JD	3.53 (0.59)			5.05 (0.76)			3.26 (0.73)		
601–800 JD	3.96 (0.79)			5.75 (1.05)			3.66 (0.86)		
801–1000 JD	3.89 (0.67)			5.90 (0.73)			3.87 (0.83)		
> 1000 JD	2.97 (0.70)			4.58 (0.43)			2.60 (0.58)		
Hospital[b]		8.535	**< 0.001****		3.737	**0.027***		5.607	**0.005***
Al Basheer Hospitals	3.53 (0.61)			5.17 (0.94)			3.27 (0.68)		
Princess Basma Hospital	4.12 (0.61)			5.74 (0.94)			3.86 (0.89)		

Note. [a]: Independent *t*-test and, [b]: One-way ANOVA, TQM: Total Quality Management, PE: Psychological empowerment, SE: Structural empowerment, *Significant at $p < 0.05$, **Significant at $p < 0.001$

Variables	TQM Practices			PE			SE		
	Mean (SD)	t or F	P value	Mean (SD)	t or F	P value	Mean (SD)	t or F	P value
Ghour Safi Hospital	3.54 (0.82)			5.39 (0.85)			3.35 (0.87)		

Note. [a]: Independent *t*-test and, [b]: One-way ANOVA, TQM: Total Quality Management, PE: Psychological empowerment, SE: Structural empowerment, *Significant at $p < 0.05$, **Significant at $p < 0.001$

One-way ANOVA exhibits no statistically significant difference in educational level differences in TQM practices, psychological empowerment, and structural empowerment. Regarding monthly salary, the result showed a statistically significant difference in TQM practice ($F(3,106) = 5.268$, $p = 0.002$), psychological empowerment ($F(3,106) = 8.343$, $p < 0.001$), and structural empowerment ($F(3,106) = 5.454$, $p = 0.002$). Post hoc analysis (LSD) revealed that nurses earning 601–800 JD had significantly higher TQM practices scores than nurses earning 400–600 JD and more than 1000 JD, and nurses earning 801–1000 JD had significantly higher TQM practices scores than nurses earning more than 1000 JD. In terms of empowerment, similar trends were found with nurses earning 601–800 JD and 801–1000 JD significantly demonstrating higher psychological and structural empowerment scores than nurses earning 400–600 JD and more than 1000 JD.

The relationship between TQM Practices and empowerment

Table 4 presents TQM practices had a significantly strong positive relationship with psychological empowerment ($r = 0.701$, $p < 0.001$), which indicated that nurses with high TQM practices had high psychological empowerment. Similarly, TQM practices had a significantly moderate positive relationship with structural empowerment ($r = 0.577$, $p < 0.001$), indicating that nurses with high TQM practices had high structural empowerment. Lastly, psychological and structural empowerment are significantly moderate positively correlated ($r = 0.550$, $p < 0.001$), indicating that nurses with high psychological empowerment had high structural empowerment.

Table 4
The Relationship Between TQM Practices and Empowerment

Variables	TQM Practices	PE	SE
TQM Practices	1		
PE	0.701**	1	
SE	0.577**	0.550**	1

Note. TQM: Total Quality Management, PE: Psychological empowerment, SE: Structural empowerment, *Significant at p < 0.05, **Significant at p < 0.001

Discussion

The study findings present valuable insights into the current state of TQM practices and empowerment among nurses in healthcare settings. A high level of TQM practices in nursing demonstrated in current study. These findings align with studies conducted by Hussain et al. (2023), Sweis et al. (2016), and Wang et al. (2019) that showed high levels of TQM among study participants in different countries. The explanations to the high level of TQM practices in nursing that TQM focuses on continual improvement and customer happiness, aligning with nursing's primary objective of patient-centered care. Nurses regularly seek patient feedback, incorporate it into decision-making, and aim to provide tailored care experiences (Hussain et al., 2023; Wang et al., 2019).

Regarding subscales, nurses scored high on top management commitment, employee involvement, customer satisfaction, teamwork, and continual improvements; they also scored moderately in processes. In hospitals that attained high levels of leadership commitment, quality support, strategic quality planning, information and data, training and participation, customer focus, and continuous improvement facilitated TQM practices to be effectively implemented (Alshourah, 2021). In a study by Hussain et al. (2023), the same areas were found to influence TQM practices significantly. Previous studies revealed an association between TQM implementation and patient satisfaction in nursing settings (Alzoubi et al., 2023; Hussain et al., 2023). In addition, TQM emphasizes data analysis to determine and track opportunities for improvement. Nursing research increasingly emphasizes evidence-based practices, and nurses use data to drive clinical decisions, track patient outcomes, and assess the effectiveness of interventions (Alzoubi et al., 2023; Hill et al., 2020).

Total Quality Management (TQM) encourages healthcare providers to work together as a team. This aligns with the collaborative character of nursing practices, in which nurses collaborate closely with physicians, therapists, and other team members to improve patient outcomes, which is consistent with TQM concepts (Alzoubi et al., 2023; Hill et al., 2020). Finally, TQM emphasizes continuous learning and adaptability. This attitude of continual improvement is consistent with studies showed that nurses participating in TQM efforts were more inclined to adopt new procedures and technology in order to enhance the quality of care (Alzoubi et al., 2023; Hill et al., 2020).

Consistent with previous studies, that nursing professionals experience a moderate level of psychological and structural empowerment (Abdullatif Ibrahim, 2023; Albasal et al., 2022; Connolly et al., 2018; Ta'an et al., 2021; Ta'an et al., 2022). Connolly et al. (2018) investigated the clinical leadership of registered nurses in an emergency department. Emergency department nurses showed moderate levels of psychological empowerment. Regionally, Abdullatif Ibrahim (2023) reported that Egyptian nurses demonstrated moderate levels of empowerment in public hospitals. In Jordan, a study found that nurses reported moderate psychological and structural empowerment (Albasal et al., 2022). Also, Khrais and Nashwan (2023), Saleh et al. (2022), Ta'an et al. (2021), and Ta'an et al. (2022) suggest that moderate perceptions of structural empowerment, which not limited to a specific geographical or cultural setting.

These findings could be related to a compromise between autonomy and support, with nurses feeling empowered to make decisions within their roles while still appreciating a collaborative and supportive work environment (Saleh et al., 2022). Nurses may also express moderate levels of psychological empowerment as a result of their job satisfaction. In addition, nurses may find intrinsic motivation at work, which driven nurses may feel psychologically empowered because they are associated to their work and its outcomes. The findings of empowerment suggest that hospital settings have the necessary support, resources and infrastructure in place to ensure that nurses are not only engaged and involved with the processes and affairs significant to the healthcare organization but are also equipped with the skills to cope with the professional demands of nursing work appropriately (Saleh et al., 2022).

The contrasting findings study on Jordanian emergency nurses during the COVID-19 pandemic revealed a high-moderate level of perceived psychological empowerment (Khrais and Nashwan, 2023). Additionally, Saleh et al. (2022) showed low psychological empowerment among Jordanian nurses. Further, female nurses working in pediatric units in Saudi Arabia reported low psychological empowerment (Alharbi and Alrwaitey, 2022). These studies show disparities in psychological empowerment levels, implying that situational conditions, such as a global pandemic, might alter nurses' perspectives.

In terms of subscales, previous studies showed similarly moderate levels of scores on meaning, competence, self-determination and impact, and on the opportunity, information, support, and resources, which is consistent with the current studies (Abdullatif Ibrahim, 2023; Albasal et al., 2022; Connolly et al., 2018; Khrais and Nashwan, 2023; Ta'an et al., 2021). The moderate levels on subscales of psychological and structural empowerment suggest that Jordanian hospitals possess infrastructures that support the meanings, experiences, and significance that nurses put into their work and their relationships with their patients, colleagues, and significant others, and that Jordanian hospitals ensure logistical architectures that afford nurses the resources, supplies, information and evidence necessary to carry out their works (Goedhart et al., 2017).

The study revealed significant differences in psychological and structural empowerment based on gender. However, Abdullatif Ibrahim (2023) research found no significant differences in structural and psychological empowerment among Egyptian clinical nurses. The level of psychological empowerment an individual experiences, which pertains to their perception of self and confidence, could potentially be impacted by societal gender norms that influence control and autonomy (Spreitzer, 1995). In the same way, organizational structures and leadership practices may contain gender-related biases that affect structural empowerment, which includes access to resources and decision-making authority (Cummings et al., 2018).

The study's findings show no significant variations in TQM practices, psychological empowerment, or structural empowerment based on educational level. A study conducted by Al-Shdaifat (2015) found that demographic variables (gender, age, education, experience department) did not significantly differ with the implementation of TQM principles. Also, the current findings are consistent with previous studies investigating nurses' psychological empowerment in pediatric units (Alharbi and Alrwaitey, 2022). On the other hand, a study that found the educational level not differences in structural empowerment but

significant differences with psychological empowerment (Abdullatif Ibrahim, 2023). A possible explanation of the findings is that while higher education levels are associated with stronger knowledge and skills, experience having a substantial influence on empowerment may have obscured any educational impacts. Workplace characteristics such as supportive leadership, enough resources, and teamwork may have influenced empowerment levels, mitigating the impact of individual educational differences.

A significant differences in TQM practices, psychological empowerment, and structural empowerment based on monthly salary. Nurses earning salaries in the middle range had significantly higher TQM practices than those earning lower or higher ranges. Alshourah (2021) and Akhorshaideh et al. (2023) observed that adequate compensation plays a role in successfully implementing TQM practices. Possible explanation for the variations in TQM practices level could be the relationship between compensation and perceived organizational commitment to quality. This perception of fair compensation could foster a stronger commitment to quality improvement initiatives, resulting in higher TQM practices.

A consistent pattern emerged regarding the empowerment, where nurses earning salaries in the middle range had significantly higher psychological and structural empowerment than those in the lower or higher range. This could be attributed that the middle range balances financial recognition and a focus on professional development, leading to increased empowerment and a more positive perception of their work environment (Woodward, 2020). Also, the middle range might give nurses a sense of value and autonomy in their roles, promoting feelings of empowerment (Spreitzer, 1995). Additionally, opportunities for skill development, autonomy in decision-making, and participation in decision-making processes can enhance empowerment among mid-range salary earners (Göktepe et al., 2020).

The findings revealed a significant relationship between TQM practices, psychological empowerment, and structural empowerment. These findings are similar to previous studies that being empowered can have a significant influence on how nurses would be engaged on an organizational level with their employers (Alzoubi et al., 2018; Vituri and Évora, 2015; Ju and Park, 2016; Alshourah, 2021). Nurses who perceive their work environment as committed to quality improvement are more likely to experience increased psychological empowerment (Wang et al., 2019). Engagement in quality enhancement activities might enhance nurses' sense of control, autonomy, and influence over their work, ultimately leading to higher levels of psychological empowerment. In addition, this finding implies that healthcare organizations prioritizing quality management and continuous improvement are more likely to have structures and processes in place that allow nurses to exert influence and engage in decision-making (Sahputra et al., 2021). Such alignment fosters an environment where structural empowerment is facilitated, enabling nurses to actively contribute to their work setting (Laschinger, 2008).

Implications for nursing practice, education, and research

The results indicate that TQM practices are positively associated with both psychological and structural empowerment in Jordanian nurses. This indicates that hospitals ought to enhance TQM practices, specifically on processes with lower scores, to cultivate an empowering environment for nurses.

Hospitals can employ TQM-based training programs emphasizing quality improvement, collaboration, and patient-centred care, assisting nurses in developing critical skills and feeling empowered. Encouraging nurse involvement in decision-making and quality improvement efforts is critical for enhancing patient care and hospital policy.

Total Quality Management (TQM) principles should be included into curriculum to improve healthcare quality and empower nurses. Educational programs must prioritize the enhancement of nurses' self-determination and influence, which received lower scores in psychological empowerment, while also developing abilities to pursue opportunities and support within the structural framework. Continuous professional development and empowerment workshops are essential for nurses to effectively implement TQM practices, resulting in improved patient outcomes and enhanced job satisfaction.

The study emphasizes the need for additional research into the relationships between TQM practices and nurse empowerment in various hospital settings. Future research should focus on the precise processes by which TQM influences empowerment in various healthcare contexts. Furthermore, longitudinal studies could assess the persistent effect of TQM practices on nursing performance and empowerment, while contrasting outcomes among various healthcare settings.

Strengths and limitations of the study

This is one of the few studies exploring the relationship between TQM practices and empowerment among Jordanian nurses working in Governmental hospitals. The study gathered its target sample size, meaning that inferential statistical analyses were adequately powered. However, the study also has several limitations. Self-reported questionnaires, which are vulnerable to response biases including social desirability. Another limitation is using a cross-sectional design, which only measures at a snapshot of time and constrains the cause-and-effect relationship. The study used convenience sampling, limited to nurses working in only three government hospitals, and did not include other healthcare settings such as private hospitals. Thus, the study results have limited generalizability and can only be applied to nurses and hospitals with organizational characteristics as the settings and study participants.

Conclusions

Given the significant positive relationships between TQM practices, nurse empowerment and implementing TQM practices as the healthcare delivery model within Jordan hospital settings might be valuable. When nurses perform within standards and are empowered to speak up and be involved in shaping the character, nature and quality of nursing services, patients receive safe, compassionate and free from harm and injury care. Nurse managers and hospital administrators must plan, devise and implement strategies within the main tenets of TQM practices to ensure that empowerment corresponds to the demands, pressures and needs of patients, families and other stakeholders. Future research can help generate evidence supporting the notion that TQM practices improve patient satisfaction and that TQM practices can be instrumental in growing, nurturing and developing competent and empowered nurses at the bedside.

Declarations

Conflict of Interest Statement

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Ethics Statement

This study was approved by Institutional Review Board-Faculty of Nursing at the Zarqa University (ref.nr: 22/2022). The study was carried out in accordance with the 1964 Helsinki Declaration.

Transparency Declaration

The lead author (Ms. Yafa H. Abu Olwan) affirms that this manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.

Consent for Publication

Not Applicable.

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Author Contribution

Yafa H. Abu Olwan: Conceptualization; Investigation; Writing- Original Draft; Methodology; Data Curation. Anas H. Khalifeh: Conceptualization; Validation; Formal Analysis; Writing- Review and Editing; Project Administration; Supervision. Mohammad R. Alosta: Methodology; Investigation; Writing-Review and Editing. Mohammed Al-Bashtawi: Methodology; Validation; Writing-Review and Editing. All authors have read and agreed to the published version of the manuscript. Mutaz I. Othman: Methodology; Validation; Writing-Review and Editing. All authors have read and agreed to the published version of the manuscript.

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Data Availability

Data Availability StatementThe authors confirm that the data supporting the findings of this study are available within the article.

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