Assiut Scientific Nursing Journal
http://asnj.journals.ekb.eg http://www.arabimpactfactor.com
DOI: 10.21608/asnj.2025.350531.1983 http://olddrji.lbp.world/indexedJournals.aspx
https://vlibrary.emro.who.int/journals/assiut-scientific-nursing-journal

Nurse Navigation Principles and Responsibilities and its Relation to Total Quality Management

Noura Alsayed Esmeil[1], Fatma Rushdy Mohamed[2] & Karima Hosny Abdelhafez[3]
[1.] Assistant lecturer of Nursing Administration, Faculty of Nursing Assuit University, Egypt.
[2.] Professor of Nursing Administration, Faculty of Nursing Assiut University, Egypt.
[3.] Assistant Professor of Nursing Administration, Faculty of Nursing Assiut University, Egypt.

Abstract:
Background: The principles and responsibilities associated with nurse navigation align closely with the fundamentals of total quality management (TQM) in healthcare, which aims to improve quality, continuous improvement, safety, and patient satisfaction. **Aim:** Assess nurses' knowledge level about nurse navigation principles and responsibilities and its relation to TQM at Main Assiut University Hospital. **Study design:** Descriptive correlational design was used. **Setting:** Main Assiut University Hospital. **Subjects:** A convenience sample of all nurses working at Medical departments at Main Assiut University Hospital (n =41 nurses). **Tools**: Two tools were used to collect data namely, a structured questionnaire that consists of two parts includes personal data and principles and responsibilities of nurse navigation assessment scale. The second tool is TQM knowledge questionnaire. **Results:** The majority of nurses had low level of knowledge about nurse navigation (principles and responsibilities) and TQM. **Conclusion:** A statistically significant positive correlation exists between principles and responsibilities of nurse navigation and TQM. **Recommendations:** Develop and implement targeted educational programs for nurses that focus on the practical principles of navigation and responsibilities of nurse navigator and how it aligns with TQM.

Keywords: Nurse Navigation, Principles, Responsibilities & TQM.

Introduction
The principles and responsibilities of nurse navigation strongly align with total quality management (TQM) in fostering high-quality, patient-centered care. Nurse navigators play a vital role in guiding patients through complex healthcare systems, especially in fields like oncology, where treatment processes are often intricate and emotionally challenging. They serve as advocates for patients, promoting seamless care coordination and offering tailored support that addresses clinical, emotional, and logistical challenges **(Stein, et al., 2021).**

Nurse navigators are essential in guiding patients through their care journeys, working closely with multidisciplinary teams to ensure care is cohesive and personalized to meet each patient's unique needs. They help address obstacles to care, such as financial difficulties, scheduling conflicts, and limited access to necessary resources **(Moore, et al., 2022).** These responsibilities align with the core objectives of total quality management (TQM), which focus on continuous improvement, operational efficiency, and measurable outcomes to enhance the overall quality of care **(Nair, et al., 2023).**

By promoting a culture of quality, TQM principles strengthen the effectiveness of nurse navigation, allowing navigators to systematically evaluate care processes. This approach enhances patient outcomes and satisfaction by improving care coordination, streamlining workflows, and fostering clear and effective communication among healthcare teams **(McGowan, et al., 2024).** Despite the clear alignment between TQM principles and nursing practice, challenges remain in their implementation. Issues such as inadequate training, limited organizational support, and resource constraints can hinder the successful integration of quality management practices, preventing the full realization of their potential benefits **(Holland, et al., 2023).**

Significance of the Study
Nurse navigators play a vital role in advocating for patients, coordinating multidisciplinary care, and addressing obstacles to treatment, ultimately improving patient satisfaction and outcomes. When these responsibilities are integrated with total quality management (TQM) principles, they contribute to a culture of continuous improvement, highlighting the importance of data-driven decision-making and enhancing process efficiency across the healthcare system (**Ioppolo, et al., 2024**). Moreover there's no nationally or internationally studies were applied about principles and responsibilities of nurse navigation and its relation to TQM. But there were many studies done about navigation with different variables as exploring the nurse navigator role: A

thematic analysis (**Byrne,et al., 2020**). Nurse Navigator Core Competencies: An Update to Reflect the Evolution of the Role (**Baileys, et al., 2018**). Navigation to prioritizing the patient" –first-line nurse managers' experiences of participating in a quality improvement collaborative (**Sjølie, et al., 2020**). This motivation led to the assessment of nurse navigation principles and responsibilities and their alignment with total quality management (TQM) at Main Assiut University Hospital.

The present study aimed to:

Assess nurses' knowledge level about nurse navigation principles and responsibilities with TQM at Main Assiut University Hospital.

Research Questions:

Q1: What is the nurses' knowledge level about navigation principles and responsibilities?

Q2: What is the nurses' TQM level?

Q3: Are there relationships among nurse navigation principles and responsibilities and TQM?

Subject and Method

The methodology pursued in the conduction of the study was portrayed according to the following designs: technical, operational, administrative, statistical design

Technical design

This design involved research design, setting, subject, and the tools of data collection.

Study design:

Descriptive correlational was utilized for this study.

Study setting:

The present study was conducted at Main Assuit University Hospital in all medical units (41) included; Female Medical Unit, Male Medical Unit, Blood Diseases Unit, Kidney and Rheumatoid unit.

The main hospital has a total bed capacity of 1,700, offering medical and surgical services to patients from Upper Egypt, including the governorates of Assiut, Beni-Suef, El-Minia, Sohag, South Valley, Qena, Luxor, and Aswan. The Nurses' Navigation Educational Program was implemented at the Continuing Education Center.

Study Subject:

The present study was included a convenient sample of nurses working in Medical department at Main Assiut University Hospital (No. = 41) Table (1)

Ser.	unit Name	Number of nurses
1-	Female Medical Unit	**16**
2-	Male Medical Unit	**16**
3-	Blood Diseases Unit	**5**
4-	Kidney and Rheumatoid Unit	**4**

Data collection tools: two tools were used to collect data of the present study.

Tool I: A structured questionnaire which consists of two parts:

Part (1): Personal data questionnaire which include data about: age, gender, marital status, educational qualification and years of experience in the hospital,

Part (2): Nurse navigation knowledge questionnaire which was developed by the researcher in order to assess nurse navigation principles and responsibilities**.** It consisted of 12 questions, (8) questions related to principles of navigation, (4) questions related to nurse navigation responsibilities, Nurse's responses was measured on correct answer given (1) mark, and incorrect answer given (zero) mark.

Scoring system:

- ≥ 60% satisfactory level.
- < 60**%** unsatisfactory level.

Tool (II): Total Quality Management Knowledge Questionnaire; it was a self-administered questionnaire which developed by **Korani, (2017)** to assess the perception of nurses about TQM, and included 2 subscales component as follow: nurse's concepts of quality (20 items), and requirement for applying TQM (43 items), which classified into: leadership (13 items), capability (5 items), training (11 items), communication and encouragement (8 items) , and teamwork (6 items). Each Item was measured with five points Likert scale as (Strongly Disagree= (1), Disagree= (2), Neutral= (3), Agree = (4), and Strongly Agree= (5)

Scoring system:

- ≥ 70% high level of knowledge about TQM.
- < 70% low level of knowledge about TQM.

Operational design: Preparatory phase; it includes reviewing the available literature concerning the study topics and Arabic translation of the study tools was done. It took about three months from beginning of August to the end of October 2023.

Validity:

Face validity:

This assessment aimed to ensure an accurate understanding of the study tool, which was validated through expert opinions provided by a jury. The jury consisted of two professors from Nursing Administration, two professors from Community Health Nursing, and one professor from Medical and Surgical Nursing Department, all from the Faculty of Nursing at Assiut University.

Content validity:

The tool was assessed and analyzed using Confirmatory Factor Analysis (CFA) to ensure the significance, clarity, and suitability of its items. The CFA results confirmed the validity of tool items of nurse navigation principles and responsibilities, affirming their relevance and clarity for inclusion in the study **(Table 2)**.

Variable	CFA
Principles of navigation	0.906
Responsibilities and roles of nurse navigator	0.796

Pilot study:

A pilot study was conducted to assess the time required to complete the questionnaire, which took between 20 to 30 minutes. The pilot also aimed to identify any potential issues that could arise during the data collection phase. The questionnaire was administered to five nurses (10%) from Main Assiut University Hospital. No changes were done after the pilot study and the nursing staff included in the pilot study was included in the total study sample.

Reliability

Data collected from the pilot study were analyzed using Cronbach's Alpha Coefficient test, yielding $\alpha = 0.788$ for the principles and responsibilities of the nurse navigation scale and $\alpha = 0.927$ for the TQM scale. To ensure data integrity, nurses who participated in the pilot study were excluded from the final study sample.

Filed work:

After ensuring the clarity and understandability of the study tools the actual data collection was started in November 2023 by the researchers through distributing questionnaire forms for nurses. The researchers construct meeting with every nurse in her/his departments at Main Assiut University Hospital and explained the purpose of the study. Then they filled the questionnaire forms. The whole duration to collect data of questionnaire forms was about one month from the beginning to the end of November 2023.

Administrative design:

An official letter from the Dean of the Faculty of Nursing at Assiut University was sent to the Directors of Main Assiut University Hospital as well as to all nurses participating in the study. The letter's purpose was to request permission and support for the collection of the necessary data for the current study.

Ethical considerations:

The research proposal was approved by the Ethical Committee at the Faculty of Nursing, Assiut University, under code (1120230552). Informed consent was obtained in accordance with standard ethical guidelines for clinical research. Verbal agreements were secured from all participants after they were informed of their right to refuse participation, join, or withdraw from the study at any time without any negative consequences. Confidentiality and privacy were guaranteed, and participants were assured that all data collected would be used exclusively for research purposes.

Statistical design:

Data entry and data analysis were done using SPSS version 22 (Statistical Package for Social Science). Data were presented as frequency, percentage, mean, standard deviation. Chi-square and Fisher Exact tests were used to compare between qualitative variables. Pearson correlation was done to measure correlation between quantitative variables. P-value considered statistically significant when $P < 0.05$.

Results

Table (1): Personal data of the studied nurses at Main Assiut University Hospital (n= 41)

Personal data	No. (41)	%
Age: (years)		
20 – 30	**17**	**41.5%**
31 – 40	13	31.7%
> 40	11	26.8%
Gender:		
Female	**37**	**90.2%**
Male	4	9.8%
Marital status:		
Single	9	22.0%
Married	**28**	**68.3%**
Divorced	2	4.9%
Widow	2	4.9%
Educational qualifications:		
Secondary school of nursing Diploma	15	36.6%
Technical institute of Nursing	**26**	**63.4%**
Years of experience in the field of specialization:		
≤ 5	13	31.7%
6 – 15	12	29.3%
> 15	**16**	**39.0%**

Table (2): Nurse navigation principles and responsibilities levels at Main Assiut University Hospital (n= 41)

Variables	Nurse navigation levels (n= 41)	
	No.	%
Nurse navigation responsibilities		
Unsatisfactory	31	75.6
Satisfactory	10	24.4
Nurse navigation principles		
Unsatisfactory	35	85.4
Satisfactory	6	14.6

Unsatisfactory < 60% *Satisfactory >= 60%*

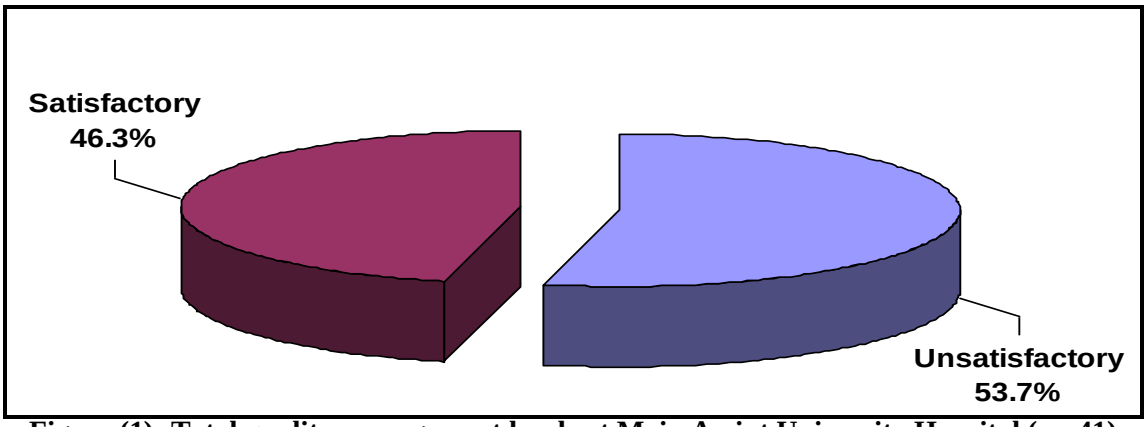

Figure (1): Total quality management levels at Main Assiut University Hospital (n= 41)

Table (3): Correlation between nurse navigation principles and responsibilities and TQM

		Total quality management
Principles of navigation	r-value	0.227
	P-value	0.154
Responsibilities and roles of nurse navigator	r-value	0.266
	P-value	0.093

Table (4): Relationship between personal data, Nurse Navigation level and Total Quality Management level

Personal data	Knowledge level	
	Nurse navigation	TQM
	Mean ± SD	Mean ± SD
Age: (years)		
20 – 30	35.00 ± 6.04	331.06 ± 56.52
31 – 40	35.08 ± 6.18	334.38 ± 62.02
> 40	28.36 ± 5.66	328.18 ± 35.45
P-value	0.012*	0.961
Gender:		
Female	33.43 ± 6.67	332.35 ± 54.47
Male	31.50 ± 5.92	322.00 ± 30.89
P-value	0.582	0.713
Marital status:		
Married	33.50 ± 6.65	343.32 ± 42.14
Not married	32.69 ± 6.60	305.54 ± 64.19
P-value	0.719	0.030*
Educational qualifications:		
Secondary school of nursing	32.60 ± 5.82	337.67 ± 55.49
Technical nursing	33.62 ± 7.04	327.69 ± 51.39
P-value	0.639	0.564
Years of experience in the field of specialization:		
≤ 5	33.77 ± 6.56	322.77 ± 58.20
6 – 15	36.33 ± 5.55	357.83 ± 42.28
> 15	30.50 ± 6.47	318.44 ± 50.14
P-value	0.059	0.111

Table (1): This table illustrates personal data of the studied nurses, it shows that majority of them aged 20years to 30years old (41.5 %). Also, the table illustrates that the majority of nurses are females, married, technical nursing, a large portion of the nurses have more than 15 years (39.0%) of experience.

Table (2): It shows that a majority of nurse navigators scored "Unsatisfactory" in both responsibilities as well as principles of nurse navigation (75.6%)**,** (85.4%) respectively.

Figure (1): It shows nearly half (46.3%) of the studied nurses have satisfactory level of TQM, but a slight majority (53.7%) consider it unsatisfactory, With 61% of respondents rating TQM as unsatisfactory, with 58.5% viewing the challenges as unsatisfactory

Table (3): It explores a weak positive correlation which suggests a slight association between TQM and principles of navigation. However, the P-value (0.154) is above the significance level of 0.05, meaning this relationship is not statistically significant, similarly, a weak positive correlation is observed in responsibilities of nurse navigation, with a slightly higher r-value than for principles of navigation. The P-value (0.093) is closer to significance but still above 0.05, indicating no statistically significant correlation.

Table (4): It presents the relationship between personal variables and knowledge levels in Nurses' Navigation (NN) and total quality management (TQM). Gender, educational qualifications, and years of experience showed no significant impact on knowledge levels in either NN or TQM. However, age demonstrated a statistically significant influence on NN knowledge (P = 0.012), with younger age groups scoring higher. Conversely, marital status significantly influenced TQM knowledge (P = 0.030), with married participants showing higher scores.

Discussion

Nurse navigation has become a vital element in the healthcare system, particularly in assisting patients through complex care pathways, improving their overall experience, and enhancing health outcomes. The principles of nurse navigation cover various responsibilities centered on patient care, such as care coordination, education, emotional support, and advocacy. To achieve total quality management (TQM) outcomes, nurse navigators must fully understand and apply the core principles of TQM. These include a focus on patient needs, a process-oriented approach, teamwork, and a commitment to continuous improvement **(Hadid, et al., 2022)**. Integrating TQM into nurse navigation can significantly improve the effectiveness of navigators in carrying out their duties. This integration promotes a systematic approach to patient care, resulting in more efficient processes, improved communication, and better coordination. Ultimately, it leads to enhanced healthcare experiences for patients and improved outcomes **(Sahoo, et al., 2024)**.

Factors like insufficient training, unclear role definitions, and a lack of organizational support frequently obstruct the successful integration of TQM in nursing. These challenges can limit the ability of nurse navigators to fully implement TQM principles, affecting the quality of care and the efficiency of healthcare delivery **(Howard, 2024)**. Therefore, understanding the relationship between nurse navigation and TQM principles is crucial for enhancing nursing practices and improving patient care. This understanding helps align care delivery with quality management standards, leading to better outcomes and a more efficient healthcare system.

The findings of the present study showed that majority of participated nurses were females (90.2%), aged between 20-30 years (41.5%), most nurses were married (68.3%), and nearly two thirds had a diploma from a technical institute of nursing (63.4%), a large portion of the nurses have more than 15 years of experience (39.0%). From the researcher points of view that the sample was composed of relatively young nurses with varying levels of professional experience. A significant portion (39.0%) of the participants had more than 15 years of experience, which could have influenced their knowledge of nurse navigation and TQM**.**

These findings were in agreement with **Alzoubi, et al., (2023)** who illustrated that the predominance of female nurses (90.2%) and the young age group (41.5% aged 20-30), which suggests that younger, predominantly female nursing populations may have unique perspectives and experiences that influence their professional roles and patient care outcomes.

These findings were in agreement with **Kokorelias, et al., (2021)** the substantial number of nurses with over 15 years of experience (39.0%) suggests a well-established workforce that can leverage their extensive knowledge in TQM practices.

These findings were in agreement with **Alzoubi, et al., (2023)** that illustrated the majority holding diplomas from technical institutes (63.4%) indicates a foundational level of training that, when combined with practical experience, enhances their capability to implement TQM strategies effectively. Educational interventions focused on TQM have been shown to improve nurse commitment and performance, suggesting that ongoing professional development is essential for maximizing the potential of nursing staff in quality management roles.

Regarding responsibilities and principles of the studied nurses, It showed that a majority of nurse navigators scored "Unsatisfactory" about responsibilities as well as principles of navigation (75.6%), (85.4%) respectively, From the researcher points of view these percentages suggest a critical need for targeted educational interventions and training programs to enhance nurse navigators' knowledge and competencies in fulfilling their responsibilities and adhering to professional principles. Addressing these deficiencies was essential to improving patient care outcomes and ensuring the effective functioning of navigation services within the healthcare system**.**

The high percentage of unsatisfactory ratings aligned with findings from a study by **Duffy& O'Brien, (2021)**, the study highlighted several challenges faced by nurse navigators, including insufficient training, unclear role definitions, and a lack of institutional support. The authors emphasized that these obstacles notably affect job satisfaction and hinder the ability to effectively fulfill responsibilities**.**

A study by **O'Leary & McGowan, (2023)** findings were consistent with the results of the present study, which emphasized that unclear expectations and responsibilities can diminish the effectiveness of navigation roles. Research has shown that when nurse navigators have well-defined roles and responsibilities, they can significantly enhance patient outcomes and satisfaction. A review by **Kim& Lee, (2022)** pointed out that adequate training in navigation principles is essential for the effective execution of the nurse navigator role. Their findings suggested that without proper training and support, nurse navigators face difficulties in meeting their responsibilities, which leads to lower satisfaction scores. This underscores the importance of investing in comprehensive training programs to enhance the effectiveness of nurse navigators and improve patient care outcomes.

A study by **Patel & Singh, (2024)** was incongruent with the findings of the present study, as it found that in institutions with robust support systems and clear role definitions, nurse navigators reported higher satisfaction levels with their roles and responsibilities. Additionally, research by **Zhao& Wang, (2023)** indicated that nurse navigators in environments with strong interdisciplinary collaboration felt more supported and effective in their roles, which contrasts with the high dissatisfaction levels observed in the study findings. Furthermore, a study by **Meyer& Gates, (2023)** reported that despite facing challenges, Nurse navigators played a critical role in enhancing patient engagement and guiding them through complex healthcare systems.

Regarding to TQM, It showed nearly half (46.3%) of the studied nurses rate a satisfactory level of TQM, but a slight majority (53.7%) consider it unsatisfactory, With 61% of respondents rating TQM requirements as unsatisfactory, with 58.5% viewing the challenges as unsatisfactory, From the researcher points of view These results suggested that while some nurses are comfortable with TQM concepts, the majority encounter challenges in fully understanding, applying, or overcoming obstacles related to TQM. To address these issues, targeted training, clearer guidelines, and improved support systems could be implemented to help nurses meet TQM standards more effectively and improve the overall quality of care.

The mixed perceptions regarding TQM concepts were consistent with findings from a recent study by **Shaheen & Mir, (2022)**, which reported that while healthcare professionals acknowledge the importance of TQM in improving care quality, many struggle with its practical application in their daily work. Similarly, research by **Doshi & Mehta, (2021)** highlighted that insufficient training, lack of leadership commitment, and inadequate resources hinder the effective implementation of TQM initiatives in healthcare settings. Additionally, the findings aligned with a study by **Houghton & Casey, (2023)**, which emphasized that a supportive organizational culture is essential for the successful adoption of TQM principles.

While the majority of nurses expressed dissatisfaction with TQM concepts and requirements, research by **Al-Amin & Islam, (2024)** founded that when nurses are actively involved in TQM initiatives and decision-making processes; their perceptions of TQM significantly improve. The dissatisfaction expressed by many nurses regarding TQM requirements contrasted with findings from **Pinto, et al., (2023)**, which emphasized that targeted training and education on TQM can enhance nurses' perceptions and willingness to engage with quality management practices. Finally, the perceptions of TQM challenges as unsatisfactory diverge from a systematic review by **McGowan & Tso, (2024)**, which reported that hospitals that successfully implemented TQM principles saw improvements in both patient care outcomes and staff satisfaction.

Regarding correlation between nurse navigation principles and responsibilities and TQM was explored. It explored weak positive correlation suggested a slight association between TQM and principles of navigation, meaning this relationship was not statistically significant, similarly, a weak positive correlation was observed in responsibilities of nurse navigation, with a slightly higher r-value than for principles of navigation. The P-value (0.093)

was closer to significance but still above 0.05, indicating no statistically significant correlation, these results imply no strong or statistically significant relationship. From the researcher points of view this might indicated that TQM implementation alone did not substantially impact nurse navigators' adherence to principles or fulfillment of responsibilities.

A study by **Sadeghi & Mohammadi, (2021)** found that while TQM principles are crucial in healthcare settings, their direct application and integration into nursing practices are often limited, resulting in weak correlations. This suggested that although TQM and navigation principles may conceptually align, their practical implementation within nursing roles may not be as strong or effective as anticipated.

The lack of a statistically significant correlation found in the present study aligned with research done by **Ibrahim, et al., (2023)**, which highlighted the challenges healthcare organizations face ineffectively implementing TQM initiatives within nursing. The authors noted that barriers such as inadequate training, lack of leadership support, and unclear role definitions often hinder the successful integration of TQM principles into nursing practice. These obstacles can lead to weak correlations when evaluating the relationship between TQM principles and nursing roles.

A study conducted by **Blumenthal& Hsiao, (2020)** emphasized that a fundamental understanding of TQM principles among nursing staff was essential for their effective application. The weak correlation found in the present study may reflect a broader issue within healthcare, where TQM concepts were not sufficiently communicated or integrated into nursing workflows, leading to minimal association between the two.

These findings were inconsistent with those of **Zhang & Zheng, (2022)**, who found that hospitals that effectively implemented TQM principles observed significant improvements in patient care outcomes and nursing efficiency. The results also contrast with research done by **Morgan& Sahni, (2024)**, which found that a positive organizational culture and supportive leadership significantly strengthened the relationship between TQM and nursing roles. Their study demonstrated that when organizations foster a culture of quality and provide support for nursing initiatives, the correlation between TQM and nursing responsibilities becomes more pronounced.

Furthermore, the weak correlation observed in your study may not account for various contextual factors that influence the relationship between TQM and nurse navigation. Research conduct by **Abdullah & Nordin, (2023)** indicated that external factors such as regulatory pressures, patient demographics, and institutional policies can affect how TQM principles are perceived and implemented in nursing practice, potentially influencing the findings.

Regarding the relationship between personal variables and knowledge levels in Nurses' Navigation (NN) and Total Quality Management (TQM). The findings revealed that personal factors influence knowledge levels in Nurses' Navigation (NN) and Total Quality Management (TQM) differently. While gender, educational qualifications, and years of experience did not show significant effects on knowledge levels in either area, age and marital status emerged as influential factors. From the researcher points of view these findings may be due to that the targeted educational strategies are necessary to address the distinct needs of different demographic groups. For nurse navigation programs, a focus on maintaining engagement with younger nurses could be beneficial, while TQM training might benefit from leveraging the strengths associated with the stability and experience observed in married nurses. Future training initiatives should consider these demographic insights to optimize learning outcomes and knowledge retention.

Research conducted by **Mohamed, et al., (2021)** consistent with the findings, which emphasized the importance of targeted educational initiatives to improve TQM knowledge among nursing staff, regardless of demographic factors such as gender, age, educational qualifications, or years of experience**.**

Conclusion

In the light of the present study findings, the following conclusions can be drawn as:

A majority of nurses had "Unsatisfactory level" in both responsibilities as well as principles of nurse navigation and TQM. There was a weak positive correlation between TQM and nurse navigation principles responsibilities.

Recommendations

In the light of the study results, the following recommendations will be suggested:

- Develop and implement targeted educational programs for nurses that focus on the practical principles of navigation and responsibilities of nurse navigator and how it aligns with TQM.
- Encourage nurses to participate in TQM initiatives and provide feedback on areas for improvement
- Conduct regular assessment of nurses' knowledge about nurse navigation and TQM to identify gaps and inform the development of targeted interventions.
- Address decision makers to apply nurse navigation in hospitals at the Egypt.
- Conduct a research for the association between nurse navigation and their satisfaction.

References

- **Abdullah, R. & Nordin, N. (2023):** External factors affecting the implementation of total quality management in healthcare: A systematic review. Journal of Health Management, 25(1), 45-60. https://doi.org/10.1177/09720634211028900
- **Al-Amin, M. & Islam, M. (2024):** Engaging nurses in total quality management: A systematic review of effective practices. International Journal of Health Care Quality Assurance, 37(2), 234-249. https://doi.org/10.1108/IJHCQA-12-2022-0185
- **Alzoubi, M., Hayati, K., Rosliza, A., Al-Zoubi, K., Khalid, A., Alsenany, S. & Abdelaliem, S. (2023):** Effect of total quality management intervention on nurse commitment and nurse performance: A quasi-experimental study. Medicine, 102(40), e35390.
- **Baileys, K., McMullen, L., Lubejko, B., Christensen, D., Haylock, P. J., Rose, T. & Srdanovic, D. (2018):** Nurse Navigator Core Competencies: An update to reflect the evolution of the role. Clinical Journal of Oncology Nursing, 22(3).
- **Blumenthal, D. & Hsiao, C. (2020):** The role of quality management in nursing practice: A qualitative study. Nursing Outlook, 68(5), 583-591. https://doi.org/10.1016/j.outlook.2020.06.002
- **Byrne, A., Hegney, D., Harvey, C., Baldwin, A., Willis, E., Heard, D. & Ferguson, B. (2020):** Exploring the nurse navigator role: A thematic analysis. Journal of Nursing Management, 28(4), 814-821.
- **Doshi, P. & Mehta, S. (2021)**: Barriers to effective implementation of total quality management in healthcare: A comprehensive review. Journal of Health Organization and Management, 35(2), 258-272. https://doi.org/10.1108/JHOM-07-2020-0251
- **Duffy, M. & O'Brien, M. (2021):** Barriers to effective nurse navigation in cancer care: A qualitative study. Journal of Nursing Administration, 51(2), 100-106. https://doi.org/10.1097/NNA.0000000000000934
- **Hadid, M., Elomri, A., El Mekkawy, T., Kerbache, L., El Omri, A., El Omri, H., & Al Thani, M. (2022):** Bibliometric analysis of cancer care operations management: current status, developments, and future directions. Health Care Management Science, 25(1), 166-185.
- **Holland, D., Brumley, R., & Smith, L. (2023):** Barriers to implementing Total Quality Management in nursing: A qualitative study. Journal of Nursing Administration, 53(4), 200-206. https://doi.org/10.1097/NNA.0000000000001134
- **Houghton, C., & Casey, D. (2023)**: The role of organizational culture in implementing total quality management in nursing. Nursing Management, 30(4), 32-39. https://doi.org/10.7748/nm.2023.e2303
- **Howard, C. (2024):** Leadership as a Catalyst for Health Equity: An Exploratory Study of Strategies and Insights for Quality Improvement in Healthcare Organizations (Doctoral dissertation, University of Maryland, College Park).
- **Ibrahim, S., & Al-Omari, A. (2023):** Barriers to the implementation of TQM in nursing: A qualitative perspective. International Journal of Health Care Quality Assurance, 36(2), 255-264. https://doi.org/10.1108/IJHCQA-08-2021-0171
- **Ioppolo, G., Ciliberto, C., & Szopik-Depczyńska, K. (2024):** Total Quality Management and Lean Thinking 5.0: Theories and Methods. Taylor & Francis.
- **Kim, H., & Lee, Y. (2022):** The importance of training for nurse navigators in improving patient outcomes. International Journal of Nursing Studies, 126, 103973. https://doi.org/10.1016/j.ijnurstu.2021.103973
- **Kokorelias, K., Shiers-Hanley, J., Rios, J., Knoepfli, A., & Hitzig, S. (2021):** Factors influencing the implementation of patient navigation programs for adults with complex needs: a scoping review of the literature. Health Services Insights, 14, 11786329211033267.
- **Korani, M. (2017):** Assessment Nursing Staff Opinion of the Requirement and Obstacles to Adopt TQM in the Selected Hospitals at Fayoum Governorate, Faculty of Nursing, Cairo University.
- **McGowan, J., & Tso, M. (2024)**: Systematic review of total quality management in healthcare: A focus on outcomes. Journal of Healthcare Management, 69(1), 50-64. https://doi.org/10.1097/JHM-D-23-00012
- **McGowan, J., Brown, C., & Lewis, A. (2024)**: The impact of nurse navigators on patient outcomes in oncology: A systematic review. Supportive Care in Cancer, 32(3), 1435-1444. https://doi.org/10.1007/s00520-023-06923-5
- **Meyer, L., & Gates, C. (2023):** The role of nurse navigators in facilitating patient engagement: A mixed-methods study. Journal of Healthcare Management, 68(3), 181-195. https://doi.org/10.1097/JHM-D-22-00045
- **Mohamed, F., Mohamed, F., Abd Elrahman, S., & Aref, S. (2021):** Nursing Staff Awareness Regarding Challenges for Applying Total Quality Management. Minia Scientific Nursing Journal, 9(1), 104-110.
- **Moore, S., Jones, D. & Roberts, K. (2022):** Nurse navigation in cancer care: A review of the literature. Journal of Oncology Nursing, 26(2), 102-111. https://doi.org/10.1188/22.JON.102-111

- **Morgan, G. & Sahni, S. (2024):** Organizational culture and its impact on TQM implementation in nursing. Journal of Health Organization and Management, 38(1), 12-23. https://doi.org/10.1108/JHOM-10-2022-0436
- **Nair, S., Dey, S. & Kumar, S. (2023):** Integrating Total Quality Management in nursing practice: Strategies for success. International Journal of Health Care Quality Assurance, 36(2), 181-190. https://doi.org/10.1108/IJHCQA-06-2022-0142
- **O'Leary, K. & McGowan, S. (2023):** Role clarity and job satisfaction among nurse navigators: A qualitative approach. Nursing Management, 54(2), 40-45. https://doi.org/10.1097/01.NUMA.0000847246.40053.75
- **Patel, N. & Singh, M. (2024):** The impact of organizational support on nurse navigator satisfaction: A multi-site study. Journal of Health Organization and Management, 38(1), 56-70. https://doi.org/10.1108/JHOM-12-2022-0271
- **Pinto, M. & Wang, H. (2023):** The impact of training on nurse engagement in quality management practices: A meta-analysis. Journal of Nursing Administration, 53(2), 85-92. https://doi.org/10.1097/NNA.0000000000000512
- **Sadeghi, S. & Mohammadi, S. (2021):** The correlation between total quality management and nursing outcomes: A review. International Nursing Review, 68(4), 533-541. https://doi.org/10.1111/inr.12693
- **Sahoo, B., Pillai, J., Md, S. & Sahoo, M. (2024)**: Implementation of Wayfinding Signage in Public Hospitals and Its Evaluation Towards Quality Improvement. Cureus, 16(7).
- **Shaheen, I. & Mir, P. (2022):** The Effect of Job Transfer on Employee Satisfaction: A Study of Hospital Paramedic Staff. RES MILITARIS, 12(3), 3043-3055.
- **Sjølie, B., Hartviksen, T. & Bondas, T. (2020):** "Navigation to prioritizing the patient"–first-line nurse managers' experiences of participating in a quality improvement collaborative. BMC health services research, 20(1), 1-13.
- **Stein, K., Christian, C. & Cummings, R. (2021)**: Navigating the cancer care continuum: The role of nurse navigators. Cancer Nursing, 44(5), E456-E462. https://doi.org/10.1097/NCC.0000000000000807
- **Zhang, L. & Zheng, R. (2022):** The impact of TQM on patient care in nursing: Evidence from a systematic review. Journal of Healthcare Quality, 44(2), 45-53. https://doi.org/10.1097/JHQ.0000000000000156
- **Zhao, Y. & Wang, Y. (2023):** Interprofessional collaboration and its influence on nurse navigator effectiveness: A systematic review. International Nursing Review, 70(1), 23-33. https://doi.org/10.1111/inr.12793