Relationship between Demographic Determinants and Nurse Managers' Proactive Work Behavior.

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Abstract

Background: *The dynamic nature of the healthcare atmosphere, which involves ambiguity, challenges, and ongoing alterations, has greatly increased the necessity of proactive work behavior.* ***Aim of study:*** *Investigate the relationship between demographic determinants and nurse managers' proactive work behavior.* ***Research question:*** *what is the relationship between demographic determinants and nurse managers' proactive work behavior?* ***Settings:*** *This study was conducted at Mabert El Asafra East Hospital, and Alexandria New Medical Center at Alexandria, Egypt.* ***Subjects:*** *The target population for this study included all nurse managers (N=46) who are working in the previously mentioned setting, and classified as follow; Mobaret El Asafra East Hospital (N=23), and Alexandria New Medical Center (N=23).* ***Tool****: In order to collect the necessary data for the study two tools were used: tool one: Demographic data and work-related characteristics of nurse managers questionnaire, and tool two: proactive work behavior scale.* ***Results,*** *Nurse managers reported moderate levels of proactive work behavior with a mean score of 46.02±5.85. This study implies there were no statistically significant differences between the overall mean score of proactive work behavior and all demographic data and work -related characteristics except for qualification and job position where (p-value = 0.020, 0.010), respectively.* ***Conclusion:*** *the present study revealed that demographic and work-related characteristics have no significant effect on the proactive work behavior level.* ***Recommendations:*** *-Offer nurse managers PWB-focused conferences, workshops, and training courses to increase organizational success.*

Keywords: Demographic determinants, proactive work behavior, nurse managers.

Introduction

The current workplace environment in healthcare organizations, particularly in nursing, has increased competitiveness and dynamism, and the need for qualified and proactive professionals has become greater than ever. These professionals have distinct traits that enable them to adapt to different organizational contexts in health care, gaining the ability to actively seek out novel and inventive solutions that allow for intervention in different issues (Ferreira et al., 2016; Richter et al., 2019). Moreover, healthcare organizations are being urged to improve their management methods and foster proactive work behavior among their nurses in order to provide patients with appropriate care (Galletta et al., 2019).

Proactive work behavior (PWB) is defined as anticipatory, self-initiated endeavors that are directed toward the future with the intention of altering and enhancing one's personal attributes or the circumstances at hand (Lam et al., 2018; Parker et al., 2019). As well, it was explained that an individual's

ambitious behavior, characterized by a proactive approach that involves a challenge-seeking mindset, anticipation, and creativity, is capable of instigating a change in the existing situation or creating novel opportunities in the work environment (Nurjaman et al., 2019; KIM, 2021). Therefore, it has been known as a higher-order category of motivated behaviors and a pioneering behavior (Varela et al., 2019). Parker and Collins (2010) specify four dimensions of PWB: taking charge, voice, individual innovation, and problem prevention.

Proactive nurse managers, in contrast to their reactive counterparts, perceive changes as opportunities, remain consistently one step ahead, exhibit an aptitude for anticipating future obstacles, demonstrate adaptability, possess a propensity for independent work, and remain in a perpetual pursuit of enhanced patient outcomes through efficient, effective, qualitative, and safe care. It follows that nurse managers who embody these qualities can boost staff enactment and devise resolutions for work-related dilemmas (Galletta et al., 2019; Al-Fatlawi & Amanah, 2021).

Proactive work behavior leads to a variety of advantageous outcomes, including task proficiency, social interaction, a lower turnover rate, improved performance, and organizational success (Uri, 2017; Smithikrai & Suwannadet, 2018). Moreover, it results in better work outcomes, including job satisfaction, individual innovation (Li, 2020), vocational identity, self-efficacy, greater autonomy, commitment, and trust, as well as higher productivity (Permata & Mangundjaya, 2021). It assists nurse managers in actively mastering the workplace, particularly in the face of uncertainty and novelty, which can foster a sense of competence at work (Wu et al., 2018).

Significance of the study

Nurse managers hold an essential role within the workplace, as they are responsible for extracting participation from others and crafting an envisioning for the desired future (Evans, 2016). They must acquire skills and talents in order to function as integral members of a multidisciplinary team in the healthcare field (Proud, 2018). As well, healthcare fields necessitate their workforce to exhibit proactive behaviors to avoid recurrent issues and optimize work efficiency. It is imperative to have nurse managers who exhibit proactive tendencies, possess knowledge of emerging prospects, and generate and articulate innovative ideas. This enables hospitals to promptly adapt to fluctuations and obstacles while prioritizing the enhancement and transformation of their internal structure (Zhang et al., 2022). Therefore, it is anticipated that such an investigation will yield significant knowledge regarding the extent of PWB and the demographic variables that forecast it among nurse managers.

Aims of the Study

This study aims to:

1. Investigate the relationship between demographic determinants and nurse managers' proactive work behavior.
2. Determine the level of proactive work behavior among nurse managers.

Research Question

- What is the relationship between demographic determinants and nurse managers' proactive work behavior?

Materials and Method

Materials

Design: A descriptive correlational design was used to conduct this study.

Settings: This study was conducted in all departments at two private hospitals, namely: Mobaret El Asafra East Hospital

(13 units) and Alexandria New Medical Centre (18 units). These hospitals were selected because they provide a wide range of services, multi-specialty, planned for General Authority for Healthcare Accreditation and Regulation accreditation (GAHAR), and have a bed capacity exceeding 50 beds.

Subjects: The target population for this study included all nurse managers (N = 46) who were working in the previously mentioned setting, and they were classified as follows; Mobaret El Asafra East Hospital (N = 23), and Alexandria New Medical Centre (N = 23). They have completed at least six months of experience in the previously mentioned private hospitals.

Tools: In order to collect the necessary data for the study two tools were used:

Tool one: Demographic data and work-related characteristics of nurse managers.
This tool was developed by the researchers to identify important and relevant information about nurse managers' demographic data and work-related characteristics that included age, gender, marital status, level of education, job position, years of experience in the nursing profession, years of experience in the job position, and previous knowledge about PWB.

Tool two: Proactive Work Behavior Scale (PWBS): This tool was developed by Parker and Collins (2010) to assess nurse managers' levels of PWB. It is composed of 13 items that are classified into four dimensions: taking charge (3 items), voice (4 items), individual innovation (3 items), and problem prevention (3 items). The responses were measured on a 5-point Likert scale, ranging from (1) very infrequently to (5) very frequently. The overall score ranged from (13 to 65), where the score ranging from (13 to 30) represented the low perception of nurse managers about PWB, the score ranged from (31 to less than 48) indicated moderate perception, and the score ranged from (48 to 65) indicated the high perception of nurse managers about PWB.

Method

- Approval for conducting the study was obtained from the Research Ethics Committee of the Faculty of Nursing, Alexandria University, prior to the start of the study.
- Permission for conducting the study was obtained from the Dean of the Faculty of Nursing at Alexandria University and the hospital administrators to collect the necessary data.
- All study tools were translated into Arabic and tested for their validity by five experts in the field of the study; accordingly, the necessary modifications were made.
- Tool two was tested for reliability using the appropriate statistical tests to measure the internal consistency using Cronbach's alpha correlation coefficient test. The result of the tool revealed that it was reliable with a value of r = 0,895 for the Proactive Work Behavior Scale (PWBS).
- A pilot study was carried out on 10% of nurse managers (n = 5), who were not included in the study subjects, in order to check and ensure the clarity of tools, applicability, and feasibility, identify obstacles and problems that were encountered during data collection, estimate the time needed to fill out each question, and make the necessary modifications.
- Data were collected for this study by the researchers after meeting with each nurse manager in each unit to explain the aim of the study, and the needed instructions were given before the distribution of questionnaires. Each nurse manager took about 10–15 minutes to fill out these tools. Data collection took a period of one month, starting from 15/1/2023 to 15/2/2023.

Ethical considerations:

- Written informed consent from the study subjects was obtained after explaining the aim of the study.
- The nurse managers have participated in the study on a voluntary basis.
- Confidentiality regarding data collection was maintained during the study .
- Subjects also had the right to withdraw during research at any time.

Statistical Analysis

The collected data were organized, tabulated, and statistically analyzed using the Statistical Package for Social Studies (SPSS) Version 25.0. Quantitative data were described as mean ± standard deviation. Finally, analysis and interpretation of the data were conducted. P-values of 0.05 or less were considered statistically significant.

Results

Table 1 shows that slightly less than one-third of the nurse managers were in the age group ranging from 40 to less than 50 years old while the lowest percentage of them (17.4%) were in the age group ranging from 20 to less than 30 years old. The majority of the nurse managers were female (80.4%). According to marital status, more than two-thirds of nurse managers were married (76.1%). Concerning the nurse managers' level of education, the highest percentage of them (82.6%) held a Bachelor's Degree in Nursing Science, moreover 67.4% of them are head nurses.

Pertaining to working units, the highest percentage (23.9%) of nurse managers work in patient care units, compared with a low percentage of them working in outpatient units. Regarding years of experience in the nursing profession, more than half of nurse managers (65.2%) had more than 15 years of experience, while the lowest percentage (8.7%) had experience ranging from 1 to less than 5 years of experience in the nursing profession. Concerning nurse managers' years of experience in the job position, slightly less than one-third (32.6%) of nurse managers had more than 15 years of experience, while the lowest percentage (8.7%) of them had less than one year of experience in the job position.

Table 2 clarifies that nurse managers' perceived moderate mean score of overall proactive work behavior (46.02±5.85) represented in all dimensions.

Table 3 explains that there were no statistically significant differences between the overall mean score of proactive work behavior and all demographic data and work-related characteristics except for qualification and job position where (p-value = 0.020, 0.010), respectively.

Discussion

Nurse managers who possess PWB exhibit remarkable proficiency in steering consequential transformations in their professional trajectories. They evince a proclivity to identify and capitalize on opportunities that align with their vocational aspirations while also manifesting superior aptitude for career strategizing (Valls et al., 2020; Vashisht et al., 2021). In other words, nurse managers exhibiting elevated levels of initiative demonstrate a greater propensity to readily conform to the dynamic career milieu as opposed to their counterparts displaying low levels of initiative (Hu et al., 2021; Wen et al., 2022). So, the current study aimed to investigate the relationship between the demographic determinants of nurse managers and their PWB.

The current investigation revealed that nurse managers reported a moderate level of perception of PWB. This result could be related to a lack of the nurse manager's endeavor to think, plan, and act in advance, taking initiative for improvement in current situations. Also, limit their abilities to create new techniques, search for causes of problems, optimize work procedures, and

express ideas. As well as decreased their capacity to come up with novel and innovative solutions to avoid recurring issues. Additionally, they could not take charge in some work areas, such as quality assurance, nursing standards, guidelines, or hospital missions.

The findings of this study corroborate those of Khan (2021) and Qincai et al. (2022), who clarified the moderate level of PWB among nurse managers. They referred to the lack of experience, education, and training that limit the abilities of nurse managers to voice their opinions, take charge, innovate, and prevent the recurrence of the problems. Therefore, nurse managers who worked in university-affiliated hospitals perceived PWB at a moderate level.

Moreover, El-Gazar et al. (2022), Zhang et al. (2022), and Htet et al. (2023) suggested that developing training projects to promote nurse managers' PWB is essential in healthcare organizations to raise the standard of patient care and achieve favorable organizational outcomes. At the same time, Yuhong et al. (2021) concluded that healthcare organizations ought to direct their attention toward nurse managers' PWB and foster an open, transparent work environment for them in order to establish better leader-member exchange relationships. Furthermore, proactive nurse managers should be placed in appropriate positions that allow them to maximize their skills and boost their innovative output.

On the other hand, Molin et al. (2019) indicate that nurses who occupy managerial positions exhibit a heightened inclination towards PWB, primarily due to their pivotal role in guiding and elucidating proposals for change as well as their responsibilities in coordinating teams to effectively accomplish the proposed objectives. While Frögéli (2019) addressed the fact that newly registered nurses' avoidance of PWB is effective in reducing manifestations of stress-induced physical and mental maladies while additionally providing reinforcement as individuals adapt to their novel occupational responsibilities.

The results of the current study revealed that there were no statistically noteworthy variances observed in the overall mean PWB score and all demographic information and work-related attributes, with the exception of qualification and job position. In these particular instances, an augmentation in each of these factors would result in an elevated level of PWB. It is worth noting that the nurse managers' qualifications and job positions, as well as having knowledge about PWB and encouraging them to exhibit proactive behavior in the workplace while also leveraging their personal capabilities and competencies, can lead to a constructive transformation in nursing protocols. Furthermore, this approach can enhance patient contentment and yield favorable results, alongside a concerted effort to cultivate a positive transformation within the internal hospital milieu.

This study is consistent with Zhang et al. (2022), who clarified that the educational level of nurses is positively related to PWB. They lack the knowledge to actively pursue and implement efficient strategies aimed at mitigating the recurrence of problems. Moreover, nurses who hold managerial roles are undoubtedly confronted with more challenging scenarios in which decision-making is necessary. These situations demand a significant level of proactive performance, leading to enhanced team growth within organizations and the prevention of adverse events that have an impact on the quality of patient care (Molin et al., 2019).

In contrast, the studies done by El-Gazar et al. (2022) and Qincai et al. (2022) found that no statistically significant variation exists in the nurse managers' demographic characteristics and PWB, except for the nurse managers' years of experience in the hospital. where less experience and less training limit the abilities of nurse managers to create new techniques, search for causes of problems,

optimize work procedures, and express ideas. Moreover, Permata and Mangundjaya (2021) argued that the variables that exhibit significant differences with regard to PWB are the gender and age factors of nurses.

Conclusion:

Based on the findings of the current study, it could be concluded that the level of nurse managers' PWB was moderate. There were no statistically significant differences between the overall mean score of PWB and all demographic data and work-related characteristics except for qualification and job position.

Recommendations

In line with the findings of the study, the following recommendations are made:

- Offer nurse managers PWB-focused conferences, workshops, and training courses to increase organizational success.
- Encourage nurse managers to demonstrate PWB practices in healthcare organizations.
- Recommend faculty leaders and members of the curriculum committee to incorporate PWB into the nursing curriculum, which becomes a core aspect and critical feature of nursing education and provides useful outcomes.
- Inform nurse educators to teach students how to cultivate innovative and valuable ideas within the domains of identifying opportunities, employing resources, and resolving difficulties.
- Raise nurses' awareness toward PWB, and its impact on patients, nurses, and organizations by offering ongoing education and training initiatives and workshops related to this issue.

Table (1): Distribution of Sociodemographic and work-related characteristics of the nurse managers (n=46):

Demographic data		Total (n=46)	
		No.	%
Age (years)	20 < 30	8	17.4
	30 < 40	12	26.1
	40 < 50	14	30.4
	≥ 50	12	26.1
Gender	Male	9	19.6
	Female	37	80.4
Marital status	Married	35	76.1
	Single	8	17.4
	Widow	3	6.5
	Divorced	0	0.0
Level of education	Secondary School of Nursing	6	13.0
	Technical Institute of Nursing	0	0.0
	Bachelor's degree in Nursing	38	82.6
	Diploma in Nursing	1	2.2
	Master's degree in Nursing	0	0.0
	Doctorate degree in Nursing	1	2.2
Job position	Nurse director	2	4.3
	Assistance nurse director	3	6.5
	Supervisor	10	21.7
	Head nurse	31	67.4
Years of experience in the nursing profession	< 1	0	0.0
	1<5	4	8.7
	5<10	7	15.2
	10< 15	5	10.9
	≥ 15	30	65.2
Years of experience in the job position	< 1	4	8.7
	1<5	12	26.1
	5<10	7	15.2
	10< 15	8	17.4
	≥ 15	15	32.6
Do you have knowledge about Proactive Work Behavior ?	Yes	15	32.6
	No	31	67.4

Table (2): Nurse managers' mean score perception of Proactive work behavior (n = 46):

Dimensions of Proactive work behavior	Mean Scores	
	Min- Max	**Mean ± SD.**
▪ Problem prevention	3.0 – 15.0	10.63±1.58
▪ Individual innovation	3.0 – 15.0	9.24±1.54
▪ Voice	4.0 – 20.0	14.72±2.02
▪ Taking charge	3.0 – 15.0	11.43±1.81
▪ **Total proactive work behavior mean score**	**13.0 - 65.0**	**46.02±5.85**

Interpretation of mean score: Low mean score of PWB perception (13 – 30), moderate mean score PWB perception (31 to less than 48), and high mean score PWB perception (48-65).

Table (3): Mean score of nurse manager's perception of Proactive Work Behavior (PWB) dimensions in relation to their demographic data and work -related characteristics (n=46):

Demographic data	Proactive Work Behavior (PWB)				
	Problem prevention	**Individual innovation**	**Voice**	**Taking charge**	**Overall PWBS**
	Mean ± SD.	Mean ± SD.	Mean ± SD.	Mean ± SD.	Mean ± SD.
Age					
20 to less than 30	12.13±1.81	11.38±1.41	15.63±2.07	12.38±2.00	51.50±6.85
30 to less than 40	11.67±1.97	11.42±1.51	16.33±2.31	13.08±1.98	52.50±7.05
40 to less than 50	11.64±1.15	11.14±1.56	15.50±2.21	12.21±1.63	50.50±5.42
50 years and more	11.25±1.54	11.08±1.78	15.42±1.51	12.08±12.43	49.83±4.61
F (p)	**0.477 (0.700)**	**0.126 (0.944)**	**0.504 (0.682)**	**0.724 (0.544)**	**0.459 (0.713)**
Gender					
Male	11.89±2.20	11.56±1.59	16.00±2.12	12.89±2.15	52.33±7.70
Female	11.57±1.42	11.16±1.54	15.65±2.02	12.32±1.73	50.70±5.39
t (p)	**0.542 (0.591)**	**0.684 (0.497)**	**0.464 (0.645)**	**0.837 (0.407)**	**0.747 (0.459)**
Marital status					
Married	11.54±1.54	11.20±1.57	15.91±2.05	12.46±1.79	51.11±5.78
Single	11.38±1.69	11.13±1.64	14.50±1.77	12.13±2.10	49.13±6.58
Widow	13.33±1.15	12.00±1.00	16.67±1.15	13.00±1.73	55.00±3.46
F (p)	**1.977 (0.151)**	**0.390 (0.680)**	**2.044 (0.142)**	**0.258 (0.774)**	**1.126 (0.334)**
Qualification					
Secondary School of Nursing	10.83±0.75	11.33±1.37	16.50±2.07	12.17±1.83	50.83±5.34
Bachelor's degree in Nursing	11.87±1.49	11.37±1.48	15.76±1.90	12.61±1.72	51.61±5.40
Diploma in Nursing	12.00	9.00	14.00	12.00	47.00
Doctorate degree	7.00	8.00	11.00	8.00	34.00
F (p)	**4.527*(0.008*)**	**2.514 (0.071)**	**2.626 (0.063)**	**2.379 (0.083)**	**3.662*(0.020*)**
Job position					
Nurse Director	12.00±1.41	12.50±0.71	16.50±0.71	13.50±2.12	54.50±4.95
Assistance nurse director	13.33±1.15	11.67±0.58	16.67±1.15	13.00±1.73	54.67±3.79
Supervisor	10.60±1.84	10.10±2.08	13.90±1.97	11.30±2.21	45.90±6.81
Head nurse	11.77±1.38	11.48±1.26	16.16±1.85	12.68±1.58	52.10±4.85
F (p)	**3.063*(0.038*)**	**2.959*(0.043 *)**	**4.299*(0.010 *)**	**1.940 (0.138)**	**4.309*(0.010*)**

Cont. Table (3): Mean score of nurse manager's perception of Proactive Work Behavior (PWB) dimensions in relation to their demographic data and work -related characteristics (n=46):

Demographic data	Proactive Work Behavior (PWB)				
	Problem prevention	Individual innovation	Voice	Taking charge	Overall PWBS
	Mean ± SD.	Mean ± SD.	Mean ± SD.	Mean ± SD.	Mean ± SD.
Years of experience in the profession					
1<5	12.75±1.89	12.00±1.41	11.24±1.54	13.50±1.73	54.25±6.85
5<10	11.86±1.77	11.29±1.25	16.00±2.16	12.14±1.86	51.00±6.48
10<15	10.80±2.59	10.40±1.52	15.71±2.06	12.60±2.79	49.60±9.61
15 and more	11.57±1.28	11.27±1.62	15.80±2.95	12.33±1.67	50.83±5.00
F (p)	**1.207 (0.319)**	**0.818 (0.491)**	**0.033 (0.992)**	**0.551 (0.650)**	**0.498 (0.686)**
Years of experience in the unit					
<1	11.25±2.06	11.25±2.06	14.75±2.63	12.25±2.75	49.50±9.47
1<5	11.83±1.85	11.17±1.59	15.83±1.27	12.67±1.92	51.50±5.82
5<10	12.57±0.79	12.00±0.82	17.29±1.60	13.00±1.41	54.86±3.18
10<15	10.88±1.96	10.88±2.17	14.50±2.07	11.63±2.20	47.88±7.12
15 and more	11.53±1.19	11.13±1.30	15.80±2.18	12.47±1.46	50.93±4.53
F (p)	**1.219 (0.318)**	**0.542 (0.706)**	**2.257 (0.079)**	**0.610 (0.657)**	**1.481 (0.226)**
Do you have knowledge about PWB?					
Yes	10.60±1.84	10.10±2.08	13.90±1.97	11.30±2.21	45.90±6.81
No	11.77±1.38	11.48±1.26	16.16±1.85	12.68±1.58	52.10±4.85
F (p)	**1.977 (0.151)**	**0.390 (0.680)**	**2.044 (0.142)**	**0.258 (0.774)**	**1.126 (0.334)**

F: One way ANOVA test t: Student t-test *: Statistically significant at $p \leq 0.05$

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