Factors Affecting Registration on Postgraduate Program among Bachelor Nurses in Selected Central Hospitals

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Abstract

Background: Nurses are the common link between different members of the health care team, and are subsequently responsible for the delivery and coordination of the majority of patient care. Equipping nurses with advanced knowledge and skills will therefore enable them to effectively contribute to the patient journey and to ensure quality care is provided. It is essential to know motivating factors and inhibiting factors of the nurses' participation in Postgraduate programs. **Aim:** to assess factors affecting registration on postgraduate program among bachelor nurses in selected central hospitals. **Design:** A descriptive research design was utilized in this study. **Setting**: The study was conducted at selected central hospitals including (Maghagha ,Matay and Bani-Mazar).**Subject:** the study sample was included all nurses who have bachelor degree that working at selected central Hospitals during the period of data collection (n=61) .**Tools:** one tool was used in this study to assess Motivating Factors and Inhibiting Factors among bachelor nurses. **Results**: the majority of the sample (88.5%) have high level of motivating factors and half (50.8%) of the sample have moderate level of inhibiting factors. **Conclusions:** most of bachelor nurses had high level of motivating factors and half of them had moderate level of inhibiting factors. There is a negative correlation between motivating and inhibiting factors at the three selected hospitals. **Recommendations:** The hospital administration should provide nurses with financial, moral support and reducing working hours for them to join the master's and doctoral programs for career development.

Keywords: Factors Affecting Registration, Postgraduate program, Bachelor Nurses

Introduction

A knowledgeable and competent nursing workforce is instrumental in ensuring safe and appropriate patient care. To develop the necessary nursing knowledge and skills to deliver best practice there is evidence to suggest that clinicians need to be motivated to actively engage in Postgraduate education throughout their careers. As such, the provision of effective healthcare services demands a workforce that is motivated to learn and strives to ensure the delivery of evidence-based practice **(Kinsella et al., 2018).**

A nurse may complete PGE in order to obtain another degree, such as registered nurse seeking a master or doctoral degree in nursing as Basic nursing education alone cannot effectively meet the challenging and complex demands of the expanding range of health care. Technological advances and continuous changes in nursing practice, create a demand on nurses to take Postgraduate Education courses to remain competent because (PGE) is considered as one means of maintaining competency **(foecke, 2017)** Postgraduate education (PGE) is increasingly critical for nurses to keep abreast of rapid changes in patient care due to advancements in knowledge and technology. The application of new knowledge is increasingly important means to improve patient care in today's health environment. **(Abdulfatah & Jehad, 2020)**.

Postgraduate education for nursing community is one of the modern strategies to maintain and elevate knowledge in medical community, which in turn elevates the health status of the society. Postgraduate education allowing the nurses to maintain, increase or improve their skills, so that this is consistent with the development of their responsibilities, characterizing, competence and individual attribute **(Granner & Ayoola, 2021)**. Postgraduate education is a basic component of professionalism in nursing and can act as an organizing element in nursing function. Postgraduate education (PGE) includes directed activities designed to acquire new knowledge further to that which was acquired through the basic nursing education **(Aljohani , 2020) .**

Several factors affect nurses' participation in PGE, and that their participation in PGE affects patients and community health status, it is essential to know motivations and barriers of nurses' participation in (PGE) programs and plan accordingly. Motivating factors have long been considered important to nurse's engagement and learning **(Ozga et al., 2020).** Nurses participate in Postgraduate education programs for many reasons such as promotion of professional knowledge and clinical skills, providing better care services for patients, up-dating their information, fulfilling organizational commitments, and obtaining educational certificates improve their clinical confidence. Improved self-esteem and increased participation in professional activities reflects changing attitudes towards nursing work and can contribute to the advancement of patient care **(Moonsamy, 2020).**

Furthermore, there are an inhibiting factors for postgraduate education among bachelor nurses such as financial constraints, staff shortages, family commitments, non-supportive partners, difficulty being released from work, inflexible working hours, unpleasant experiences of previous programs، a lack of encouragement from managers ،lack of sufficient incentives for nurse's participation in these courses and weakness in applying learnt subjects in the workplace, these programs may intensify disagreements and conflicts between nurses and their managers and policy makers **(Boczkowska et al., 2018).**

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Significance of the study:

Nurses are the common link between different members of the health care team, and are subsequently responsible for the delivery and coordination of the majority of patient care. Equipping nurses with advanced knowledge and skills will therefore enable them to effectively contribute to the patient journey and to ensure quality care is provided. Nurses' knowledge and skills can be enhanced through further education and training. A formal structured program of education can equip nurses with the skills required to provide evidence based care that is safe, efficacious, cost effective and person-centered. **(Abu-Qamar et al., 2020)**

Also, There is evidence of a substantial link between nursing education levels and patient outcomes exists, specifically relating to critical thinking skills, Postgraduate education is the base for the progression of evidenced-based advanced clinical skills **(Rouleau et al., 2019)** . The goal of Post graduate education was to develop the practice of nurses through the process of learning transfer and connecting the real world of practice with knowledge and theory. (**Wilkinson et al., 2018).**

Aim of the study:

The aim of the current study is to assess factors affecting registration on postgraduate program among bachelor nurses in selected central hospitals.

Research questions:
1. What are the factors affecting registration on postgraduate program among bachelor nurses in selected central hospitals?
2. Is there a relation between personal data and factors affecting registration on postgraduate program among bachelor nurses in selected central hospitals?

Subjects and Methods
Research design:

A descriptive research design was used to achieve the aim of the current study.

Setting:

The study was conducted at selected central hospitals including (Maghagha, Matay and Bani-Mazar central Hospital) at Minia Governorate in Egypt.

Subject:

Subjects of the study sample was included all nurses who have bachelor degree that working at selected central Hospitals including Maghagha (n=9), Matay (25) Bani-Mazar central Hospital (n=27) and total number of nurses (n = 61)

Data collection tools:

Data were collected through the utilization of one self-administered tool That developed by **Ng, L., Eley,R& Tuckett, A.(2016)** And **Hamzehgardeshi & Shahhosseini, (2014)** and modified by the researcher as following:-

Scale (I): Factors affecting registration on postgraduate program.

This scale was divided into three parts as following:-
Part (1): personal data sheet:

It was used to collect data about nursing staff and encompass items such as age, gender, current work setting, marital status and years of experience.

Part (2): The Motivating Factors Affecting Registration on Postgraduate Program among Bachelor Nurses.

This scale was aimed to assess the motivating factors affecting registration on postgraduate program among bachelor nurses. It was consisted of (20 items) each item was measured by a five-point Likert scale ranged as (Strongly agree =5, Agree= 4, Neutral =3, Disagree =2, and strongly disagree =1).So, the scoring system was ranged from 20 to 100, and it is divided into three levels as follows:
- Low level of motivating factors from 20 to 46.
- Moderate level of motivating factors from 47 to 73.
- High level of motivating factors from 74 to 100.

Part 3: The Inhibiting Factors Affecting Registration on Postgraduate Program among Bachelor Nurses.

This scale was aimed to assess The Inhibiting Factors Affecting Registration on Postgraduate Program among Bachelor Nurses. It consisted of 21items divided into three subscales.

Each item was measured by a five-point Likert scale and ranged as (Strongly agree=5, Agree= 4, Neutral =3, Disagree =2, and strongly disagree =1).

The scoring system was ranged from 21 to 105, and it is divided into three levels as follows.
- Low level of inhibiting factors from 21 to 48.
- Moderate level of inhibiting factors from 49 to 76.
- High Level of inhibiting factors from 77 to 105.

Validity of the tool:

The scales were tested for the content validity by a jury of 5 experts 'in the field of Nursing Administration and education, the jury composed of one professor from faculty of nursing Minia university and four professors from faculty of nursing Assuit university. Each of the expert panel was asked to examine the instruments for content coverage, clarity, wording, length, format and overall appearance. And necessary modification was done from jury panel.

Reliability of the tool:

Reliability of the scales was performed to confirm consistency of scales. The internal consistency measured to identify the extent to which the items of the scales measure what it was intended to be measured. Also, the scales were tested for its reliability by using Cronbach alpha test which revealed good internal reliability for the scales; and distributed as follows: the motivating factors scale .886 and the Inhibiting Factors scale .845.

Pilot study:

To make sure the items were clear and applicable and to gauge the amount of time needed to complete the questionnaire, the pilot research was conducted (10%) of the present sample .the findings indicated that between 25 and 30 minutes were spent on the surveys completion .no changes to the questionnaire were made in response to the analysis of the pilot research. therefore, the overall number of the study sample includes the number of pilot studies.

Data Collection Procedure:
- Written approvals were obtained from administrative authorities
- Meet directors of the Bani-Mazar, Matay and Maghagha central Hospitals to gain cooperation.

- Oral consent from each participant after explaining the aim of this study.
- Data was collected using self-administered tool covering bachelor nurses' data.
- The tool was distributed to all the bachelor nurses after explaining the purpose and process of data collection.
- Bachelor nurses were given from 20-minute 25 minute to answer them.
- The data were collected through three months from beginning of august to end of October 2021.

Ethical Consideration:

- An official letter was granted from the Research Ethics Committee of the Faculty of Nursing, Minia University
- Approval to conduct the study was obtained from Dean of the Faculty of Nursing, Minia University
- A permission and consent were obtained from director of the hospitals and nursing managers of the three selected hospitals.
- A permission and consent were obtained from the head of the department and the head nurse working at the three selected hospitals.

Statistical analysis

- The collected data was tabulated, computerized, analyzed and summarized by using descriptive statistical tests to test research questions by using SPSS version (25). Qualitative data were expressed as frequency and percentage.
- Probability (P-value) is the degree of significance, less than 0.05 was considered significant. The smaller the P-value obtained, the more significant is the result (*) and less than 0.001 was considered highly significant (**).
- Fisher –exact was used for qualitative data test was used to detect the relation between personal data of nursing staff and their study variables.
- The statistical method of correlation is used to determine the type and degree of a link between two numerical variables. The co-sign efficient's indicate the type of the relationship (positive/negative), while the value indicates its strength, as follows: Rho values below 0.25 indicate a weak correlation, 0.25-0.499 indicates a fair connection, 0.50-0.74 indicates a moderate correlation, and values above 0.74 indicate a strong correlation.

Results

Table (1) Percentage distribution of bachelor nurses' personal data (no.= 61).

Hospitals	Bani Mazer Central Hospital (no.=27)		Matay Central Hospital (no.=25)		Maghagha Central Hospital (no.=9)		Hospital's total (no.=61)	
	no.	%	no.	%	no.	%	no.	%
Age								
22-25yrs.	8	29.6	3	12	1	11.1	12	19.7
26-30 yrs.	14	51.9	21	84	7	77.8	42	68.8
31-35 yrs.	5	18.5	0	0	0	0	5	8.2
36-40 yrs.	0	0	1	4	1	11.1	2	3.3
Mean ± SD	27.47±5.783		28.42±9.123		26.58±5.044		28.25±7.246	
Experience								
1-5yrs	19	70.4	19	76	7	77.8	45	73.7
6-10yrs	8	29.6	5	20	1	11.1	14	23
11-15yrs	0	0	1	4	1	11.1	2	3.3
Mean ± SD	3.38±.562		4.36±.515		3.11±.495		3.25±.529	
Marital statues								
Single	12	44.4	8	32	5	55.6	25	41
Married	15	55.6	17	68	4	44.4	36	59
Gender								
Female	24	88.9	23	92	7	77.6	54	88.5
Male	3	11.1	2	8	2	22.2	7	11.5

Table (1) illustrates the personal characteristic of the nursing staff, it is noted that the nursing staff's age at Bani Mazer Central Hospital, Matay Central Hospital and Maghagha Central Hospital (51.9%, 84%, 77.8% respectively) are ranged between26-30 year, With Mean ± SD (27.47±5.783, 28.42±9.123, 26.58±5.044 respectively). Moreover, it is observed that (68.8%) of bachelor nurses age at the three selected hospitals are ranged between 26-30 year, With Mean ± SD (28.25±7.246).

In relation to experience years , it is noted that (70.4%, 76%, 77.8% respectively) of nursing staff at Bani Mazer Central Hospital, Matay Central Hospital and Maghagha Central Hospital have 1-5 years of experience, with Mean ± SD (3.38±.562, 4.36±.515, 3.11±.495respectively). Moreover, it is observed that (73.7%) of them at the three selected hospitals have 1- 5 years of experience, With Mean ± SD (3.25±.529).

Moreover, table (1) explores that, (55.6%, 68%, respectively) of bachelor nurses are married at Bani Mazer Central Hospital and Matay Central Hospital, while it is noted that (55.6%) of bachelor nurses are single at Maghagha Central Hospital. Moreover, it was observed that (59%) of them at the three selected hospitals are married and (41%) of them are single. Concerning to gender, table (1) shows that the highest percent of bachelor nurses at Bani Mazer Central Hospital, Matay Central Hospital and Maghagha Central Hospital (88.9%, 92% &77.8 respectively) are female. Moreover, it is observed that (88.5%) of them at the three selected hospitals are female.
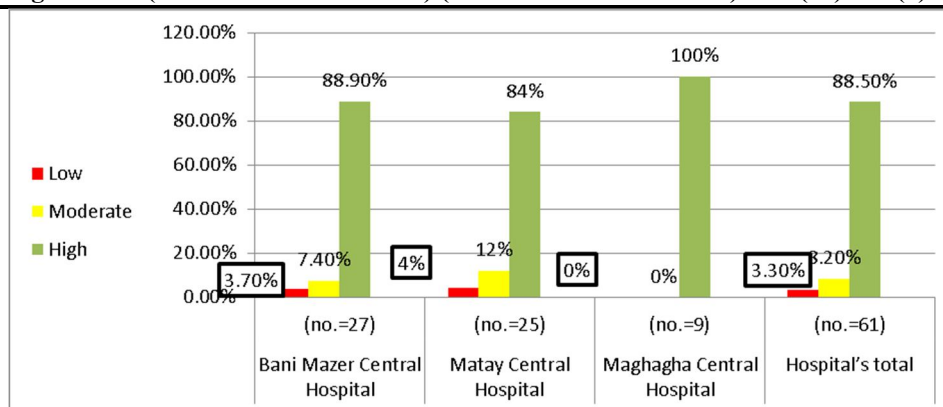
Figure (1) percentage distribution of bachelor nurses' responses regarding motivating factors affecting registration on postgraduate program at selected hospital (no.=61)

Figure (1) shows that (88.9%,84%&100%) of bachelor nurses at Bani Mazer Central Hospital, Matay Central Hospital and Maghagha Central Hospital have high level of motivating factors affecting registration on postgraduate program, while (7.4%,12%% &0%) of them have moderate level of motivating factors affecting registration on postgraduate program. Moreover, it is observed that (88.5%) of them at the three selected hospitals have high level of motivating factors affecting registration on postgraduate program.
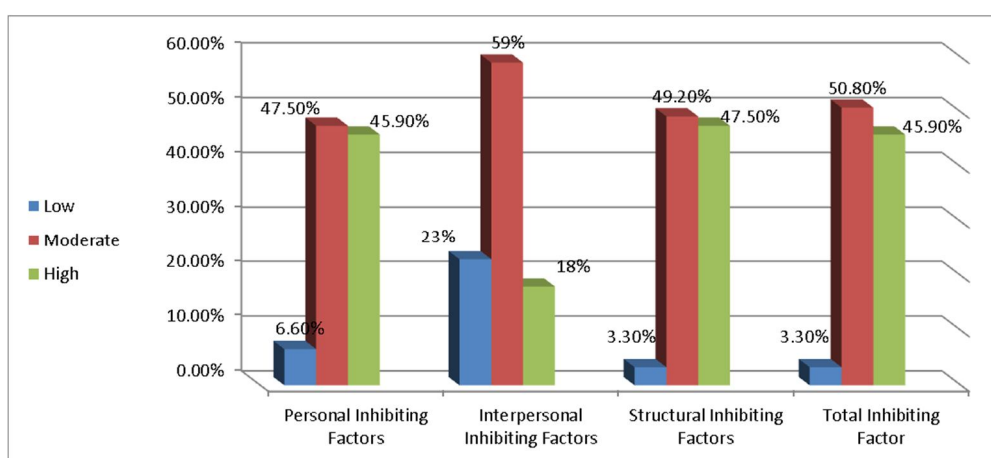

Figure (2) Percentage distribution of bachelor nurses responses in relation to inhibiting factors affecting registration on postgraduate program at three selected Hospitals (no =61)

Figure (2) clarifies that (47.5%,59%&49.2%) of bachelor nurses at three selected hospitals and have moderate level followed by (45.9%) of them have high level of inhibiting factors in relation to "personal inhibiting factors, interpersonal inhibiting factors and structural factors respectively, in addition (45.9% &47.5%) of them have high level of interpersonal factors and structural inhibiting factors. Moreover, it is evident that (50.8%) of them moderate level followed by (45.9%) of them have high level of total inhibiting factors.

Table (2) Comparison between different hospitals means scores of bachelor nurses in relation to motivating factor (no. =61)

	Bachelor nurses (no=61)		
Variable	Motivation factor Mean+SD	Anova test	P-value
Bani Mazer central hospital	82.3+12.3	1.32	.274 NS
Matay central hospital	79.7+14.4		
Maghagha central hospital	87.7+9.35		

NS= No Significant difference

Table (2) shows that, there are no significant difference between bachelor nurses in relation to motivating factor at the three selected hospitals (P=.274)

Table (3) Comparison between different hospital mean score of bachelor Nurses in relation to inhibiting factor (n=61)

	Bachelor nurses (no.=61)		
Variable	inhibiting factor Mean+SD	Anova test	P-value
Bani Mazer central hospital	71.9+14.8	.144	.866 NS
Matay central hospital	71.1+13.9		
Maghagha central hospital	71.9+8.94		

NS= No Significant difference

Table (3) explain that, there are no Significant difference between bachelor nurses in relation to inhibiting factor at the three Selected Hospitals (P=.866).
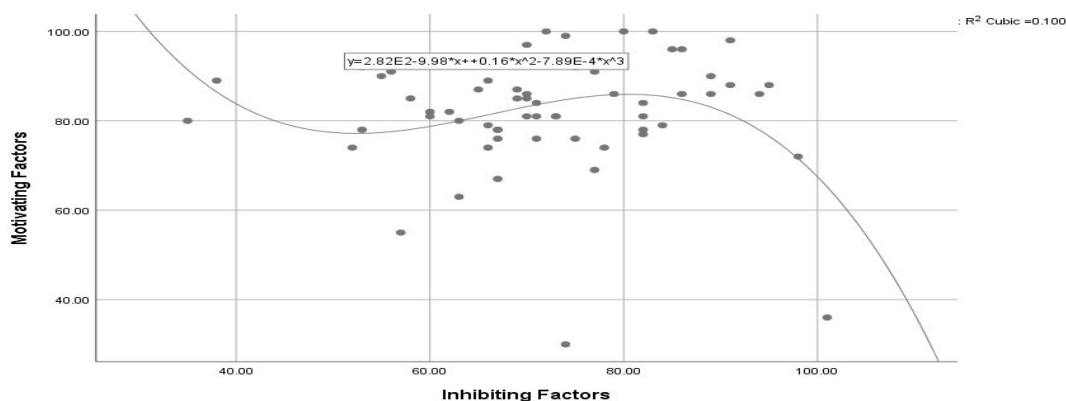
Figure (3): Correlation between motivating and inhibiting factor at selected hospital (N=61)

Figure (3) explore that, there are a negative correlation between motivating and inhibiting factors at the three selected hospitals as (r=.71, P=.899).

Discussion

Postgraduate education (PGE) is the key for increasing and updating nurses' knowledge, skills, attitudes, and, ultimately the competence. Post-graduate education influence on nurses' satisfaction. Postgraduate education is designed to prepare competent nurses to meet the current and future health care needs of society, so health care organizations should take actions to support nurses for completion Postgraduate education. **(Ozga et al, 2020).**

This study aimed to assess factors affecting registration on postgraduate program among bachelor nurses in selected central hospitals.

Regarding percentage distribution of bachelor nurses' personal data, the present findings illustrated that more than half of nursing staff's at Bani Mazer Central Hospital and majority of them at Matay Central Hospital and Maghagha Central Hospital are ranged between twenty six to thirty years. Moreover, it is observed that more than two thirds of bachelor nurses age at the three selected hospitals is ranged between twenty six to thirty years old. In relation to experience years, it is noted that about three quarters of nursing staff at Bani Mazer Central Hospital, Matay Central Hospital and Maghagha Central Hospital have one to five years of experience. Moreover, it is observed that less than three quarters of them at the three selected hospitals have one to five years of experience.

Concerning percentage distribution of bachelor nurses' marital status, the study finding mentioned that more than half, more than two thirds and more than two fifth of bachelor nurses at Bani Mazer Central Hospital, Matay Central Hospital and Maghagha Central Hospital respectively are married. Moreover, it was observed that more than half of them at the three selected hospitals are married. As regards to' gender the majority of bachelor nurses at Bani Mazer Central Hospital, Matay Central Hospital and Maghagha Central Hospital are female.

Regarding percentage distribution of bachelor nurses' responses regarding motivating factors affecting registration on postgraduate program at selected hospital, the current finding showed that most of bachelor nurses at Bani Mazer Central Hospital, Matay Central Hospital and Maghagha Central Hospital had high level of motivating factors affecting registration on postgraduate program, while minority of them had moderate level of motivating factors affecting registration on postgraduate program. Moreover, it was observed that most of them at the three selected hospitals had high level of

motivating factors affecting registration on postgraduate program. From my point of view this could be due to the awareness of the studied nurses about importance of post graduated program and continues education.

This result was in harmony with **Kinsellaa et al., (2018)** who carried out their study about "motivational factors influencing nurses to undertake postgraduate hospital based education" and reveals that majority of the studied nurses had high level of motivating factors affecting related to registration on postgraduate educational program. This study finding incompatible with **Estrada-Masllorens et al., (2016)** who carried out their study about "Analysis of University postgraduate nursing education in Spain" and indicated that more than two thirds of the studied nurses had low level of motivating factors affecting registration on postgraduate education.

Regarding percentage distribution of bachelor nurses responses in relation inhibiting factors affecting registration on postgraduate program at selected Hospitals, the current findings showed that nearly half of bachelor nurses at three selected Hospitals had moderate level followed by less than half of them had high level of inhibiting factors in relation to "personal inhibiting factors, interpersonal inhibiting factors and structural factors respectively, in addition less than half of them had high level of interpersonal factors and structural inhibiting factors. Moreover, it is evident that more than half of them had moderate level followed by less than half of them had high level of total inhibiting factors.

From my point of view. This may due to the negative feedback of the society about postgraduate program and their believe that the nurse still a nurse even she has a PHD, furthermore The undertaking PGE while working is stressful, Difficulty in finding a work-life balance and postgraduate student's relationships to their children, friends and family are negatively affected in addition to the high cost of postgraduate education programs.

The current finding congruent with **Linda et al, (2016)** who carried out their study about "Exploring factors affecting registered nurses' pursuit of postgraduate education in Australia" and indicated that two thirds of the studied nurses'' had moderate level and more than two fifth of them had high level of total inhibiting factors about registration in postgraduate program.

As well as comparison between different hospital mean scores of bachelor nurses in relation to motivating factors the study results showed that, there was no significant

difference between bachelor nurses in relation to motivating factor at three selected Hospitals.

The study finding was similar with **Lugulu .,(2022)** who conducted their study about "Students' perception of factors that influence registration rates of doctoral studies in public universities in Kenya" and demonstrates that there was no significant relation between the studied nurses in relation to motivating factors for registration in postgraduate education.

Regarding comparison between different hospitals mean score of bachelor nurses in relation to inhibiting factor, the present findings explained that there was no significant difference between bachelor nurses in relation to inhibiting factor at three Selected Hospitals. The study finding supported by **Abu-Qamar et al., (2020)** who reported that there was no statistically significant relation between the participant nurses in relation to inhibiting factor.

Regarding correlation between motivating and inhibiting factor at selected hospital, the present findings explored that, there were a negative correlation between motivating and inhibiting factors at the three selected hospitals. The study finding was agreement with **Linda et al, (2016)** who indicated that there were a negative correlation between total motivating and total inhibiting factor .From my point of view this might be due to when the motivating factors be higher this will make staff seek registration in the post graduated program and will face any inhibitor factor.

Furthermore the current finding supported by **De Palma R., (2018)** who reported that there was statistically significant a negative correlation between total motivations and inhibiting items related to postgraduates nurses' education.

Conclusion

It can be concluded from the current study that the majority of the sample had high level of motivating factors affecting registration on postgraduate program and half of them had moderate level of inhibiting factors. There is no statistically significant difference between nurse's personal data and motivating factors. Moreover, there is no statistically significant difference between nurse's personal data and inhibiting factors and there was a negative correlation between motivating and inhibiting factors at the three selected hospitals.

Recommendations

Based on the results of the present study, the researcher came up with the following recommendations:

- The policy and procedures for registration should be clear and known for all students by using different ways such as, design manual or guideline book, regular meeting and using the web site to informing students.
- Facilitate registration process and assigned facilitators for helping postgraduate students.
- Availability of feedback by the academic staff and a system of bilateral feedback from teachers to students and adverse should be set for good evaluation of students.

- Making periodic survey and regular meeting to identify students' opinions, needs, discuss their problems and try to solve it.
- Nurses who undertake postgraduate education programs should be encouraged and supported to publish their research findings.
- Directors of nursing should actively explore the scope for joint appointments in order to foster collaborative working to enhance clinical practice, research, and education.
- The hospital administration should provide nurses with financial, moral support and reducing working hours for them to join the master's and doctoral programs for career development.

Recommendations for further research:

- A study to determine the effects of motivating factors and inhibiting factors on registration at Postgraduate Program. .
- A study to determine the effect of postgraduate program on nurses competence and its relation to patient's outcome s.
- A study to enhance strategies supporting motivating factors and strategies to overcomes inhibiting factors for registration in Postgraduate Program.

References

1. AbdulFatah, H.M.&Jeehad,S.K,.(2020). Self-evaluation of Continuing Nursing Education Programs in Kirkuk Health Directorate Hospitals.Medico legal update ,20(3),1356-1360.
2. Abu-Qamar, M. e. Z., Vafeas, C., Ewens, B., Ghosh, M., & Sundin, D. (2020). Postgraduate nurse education and the implications for nurse and patient outcomes: A systematic review. Nurse education today, 92, 104489.
3. Aljohani, K. A. S. (2020). Nursing education in Saudi Arabia: History and development. Cureus, 12(4).
4. Boczkowska, K., Bakalarski, P., Sviatoslav, M., & Leszczyński, P. K. (2018). The importance of e-learning in professional improvement of emergency nurses. Critical Care Innovations, 1(1), 16-24.
5. DePalma R., (2018). Motivating forces influencing nurses to obtain postgraduate degree in nursing education, thesis PhD, Capella University.
6. Estrada-Masllorens M J., Guix-Comellas M, E., Galimany-Masclans J., Roldan-Merino J., and Lluch-Canut T, (2016). Analysis of University Postgraduate Nursing Education in Spain, Journal of Nursing Education • Vol. 51, No. X.
7. foecke,J.(2017).Amultiple case etudy approach to explore generational theory to enhance online continuing nursing education (doctoral dissertation ,northcentral university)1-209
8. Granner, J. R., & Ayoola, A. B. (2021). Barriers for BSN students to pursue a PhD in nursing and recommendations to address them: A scoping review. Nursing outlook, 69(6), 1101-1115.
9. Kinsella, D., Fry, M., & Zecchin, A. (2018). Motivational factors influencing nurses to undertake postgraduate hospital-based education. Nurse education in practice, 31, 54-60.
10. Linda Ng., Eley R, and Tuckett A, (2016). Exploring factors affecting registered nurses' pursuit of postgraduate education in Australia, Nursing and Health Sciences 18, 435–441.
11. Lugulu M.A. J (2022). Students' perception of factors that influence registration rates of doctoral studies in public universities in Kenya , International Journal of Education Humanities and Social Science,Pp 89-97.
12. Moonsamy, A. (2020). Postgraduate education: personal, organisational and higher educational barriers experienced by radiographers in KwaZulu-Natal.
13. Ozga D., Gutysz-Wojnicka A., Lewandowski B., and Dobrowolska B., (2020). The clinical learning environment, supervision and nurse teacher scale (CLES+T): psychometric properties measured in the context of postgraduate nursing education, http://creativecommons.org/licenses/by/4.0/.
14. Rouleau,G.,Gagnon,M.P.,Cote,J.,Payne-Gagnon,J,Hudson,Eduboismca&Bouix-Picasdso,J.(2019). Effects of e-learning in a continuing education context on nursing care: areview of systematic qualitative,quantitative and mixed studies reviews.journal of medical internet research ,21(10),e15118.
15. Wilkinson, J., Carryer, J., & Budge, C. (2018). Impact of postgraduate education on advanced practice nurse activity–a national survey. International nursing review, 65(3), 417-424.