



## Effect of Entrepreneurship Educational program on Head nurses' Entrepreneurial Intention and attitude

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### Abstract

**Background:** Entrepreneurship has the potential to increase the visibility of the nursing profession and create new spaces for nurses. Being creative and entrepreneurial in the nursing profession, improving health services and patient safety, is seen as a prerequisite for achieving excellence in the health sector. **Aim:** the study aimed to assess effect of entrepreneurship educational program on head nurses' entrepreneurial intentions and attitude. **Design:** A quasi-experimental research design was utilized in this study. **Setting:** The study was conducted at El Hussein University Hospital, Cairo, Egypt. **Subjects:** A simple random sample (80) from head nurses was included. **Data collection tools:** Three tools were used for data collection (1) Entrepreneurship knowledge Questionnaire, which included demographic data, (2) Entrepreneurial Intention Questionnaire, and (3) Entrepreneurship Attitude Questionnaire. **Results:** There was a highly statistically significant difference in total knowledge, intention and attitude pre, post and follow up applying entrepreneurial educational program. There were significant statistical positive correlations between head nurses' total entrepreneurial knowledge and attitude and entrepreneurial attitude and intention of head nurses. **Conclusion:** The educational program for head nurses was effective and improved their level of entrepreneurial knowledge, intention and attitude. **Recommendation:** Creating a supportive environment that fosters nurses' independence and encourages them to take risks that foster their creativity and entrepreneurship.

**Keywords:** Entrepreneurship, Intention, Attitude & Head nurses

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### Introduction

Entrepreneurship is described as an activity to identify an opportunity, to initiate an action to utilize it, and to create a work to implement the actions purposely to make benefits. Nursing entrepreneurship is the act of taking calculated risks, acting holistically, seizing opportunities, and demonstrating autonomy, independence, determination, creativity, self-confidence, and responsibility (Malakoti, 2023; Andrade et al., 2015).

The importance of entrepreneurship that helping to achieve health development, competitiveness, job creation and national prosperity has led to a marked global interest into the development of work, in the hope that will lead to an increase in social, health and organizational development. Additionally management through nurse entrepreneurship increases autonomy in practice, advances professionalism and will transform the healthcare delivery system. Entrepreneurship can increase the visibility of the profession and foster

the creation of new spaces for nurses. (*Warden et al., 2020*).

An individual's state of mind when comes to planned entrepreneurial behavior is known as their entrepreneurial intention. The motivating elements that affect behaviour are described as the source of the intention, which represents the effort that a person is putting forth to engage in the planned behavior (*Anwar, Saleem, Islam et al., 2020*).

An entrepreneurial attitude allows people to spot possibilities, take them, overcome hurdles, learn from failure, and succeed in various circumstances. Entrepreneurial attitudes help create new businesses, impress employers, and boost academic performance (*Lleva et al., 2021*).

As a key force in healthcare services, nurses must constantly innovate to keep pace with the health industry and improve the quality of care (*Yan et al., 2020*). Nurse entrepreneurs can change healthcare. Independent efforts, breakthrough technologies, and systematic changes can revolutionize medical delivery. These advances aim to increase patient care efficiency, improve treatment outcomes, and enable individualized, proactive patient wellness regimens (*Marville University, 2023*).

### **Significance of the study**

Entrepreneurship in healthcare is crucial for the economy, as healthcare businesses have a prominent role in driving transformative changes in both the public and private healthcare sectors. This has led to the establishment of numerous new startups. Nevertheless, the proportion of entrepreneurial nurses is merely 0.5%–1% among the total number of employed nurses worldwide. This indicates a significant opportunity for entrepreneurship within the nursing field, given the high demand for healthcare services and the ability of nurses to meet these demands (*Jakobsen et al., 2021*).

### **AIM OF THE STUDY**

**The study was aimed to assess effect of entrepreneurship educational program on entrepreneurial head nurses intentions and attitude through:**

1. Assess head nurses knowledge toward entrepreneurship pre and post program implementation.

2. Assess head nurses entrepreneurial intentions pre and post program implementation.
3. Assess head nurses attitudes regarding entrepreneurship pre and post program implementation.

### **SUBJECTS AND METHODS**

#### **Research Design:**

Quasi –experimental design was conducted to the study. Quasi-experimental one group pretest-posttest design will be utilized to fulfill the aim of the study.

#### **Setting**

El Hussein University Hospital. Cairo, Egypt.

#### **Subjects:**

The subject for the study was selected by simple random sample from head nurses which working at El Hussein University Hospital during the data collection period and the required sample size was consisted (80) head nurses.

#### **Tools of Data Collection:**

##### **Tool (I)- Entrepreneurship knowledge**

**Questionnaire:** This tool will be developed by the researcher based on literature review (*Hagen, 2013 & Abun et al. 2018*): To assess knowledge of head nurses regarding entrepreneurship, it will consist of two parts:

- **Part one:** Socio-demographic characteristics of head nurses such as age, gender, and previous training regarding entrepreneurship.
- **Part two:** To assess head nurses knowledge regarding entrepreneurship. It composed of (10) multiple choice questions. Every question had three choices.

##### **Tool (II)- Entrepreneurial Intention**

**Questionnaire:** it was developed by *Orman, (2009)*. The questionnaire reflected the participants desire to become an entrepreneur and consisted of six items. This instrument was scored through 5- points Likert scale

##### **Tool (III)- Entrepreneurship Attitude**

**Questionnaire:** it was developed by *Abun et al. (2017)* to assess head nurses attitude regarding Entrepreneurship. It consists of (49) items, divided into five domains namely: Need of achievement (10 items), Need for autonomy (10 items), Creative Tendency (9 items), Calculated Risk Taking (10 items) and Drive and Determination (10 items).

Head nurses rated each statement of the scale using a five-point Likert scale.

### Validity and Reliability of the tools

The tools of data collection were tested for their content and face validity sheet by a jury of five experts specialized in nursing administration from two different universities ((2) professors of nursing administration of Helwan university and (3) professors of nursing administration of Cairo university).The reliability of tools was tested entrepreneurship knowledge (0.834), intention (0.913) and attitude (0.780).

### Pilot Study

A pilot study was carried out with 10% of the study sample (8) head nurses to test the tools clarity, understanding, applicability and to estimate the consumed for filling in the forms.

### Administrative Design

An official letters were issued from the Faculty of Nursing, Zagazig University to gain permission from the hospital administration and the nursing director.

### Statistical Design

Data entry and quantitative data analysis were done by the SPSS, Version 20. Data were presented as mean and standard deviation (SD). A chi-square (X) statistical value used to measure how a modal compares to actual observed data. The one- way ANOVA analysis (F-test) was used to determine whether statistically significant differences between two or more independent groups. Pearson correlation coefficient was used to determine significant correlations between the

**Table (1):** Frequency distribution of head nurses' personal data (n=80).

Personal Data	No.	%
<b>Age:</b> 20-30 years	2	2.3
31-40 years	83	96.5
41-50 years	1	1.2
Mean± SD	25.20±3.67	
<b>Gender:</b> Male	6	7
Female	80	93
<b>Marital status:</b> Married	51	59.3
Single	35	40.7
<b>Place of residence:</b> Rural	56	65.1
Urban	30	34.9
<b>Previous self-employment:</b> Yes	21	24.4
No	65	75.6
<b>knowing someone near to you self-employed before:</b> yes	54	62.8
No	32	37.2

variables. The significance level was set at  $P < 0.05$ .

### RESULTS

**Table (1)** clarifies that almost all (96.5%) of the head nurses were 31-40 years old, the great majority (93%) of them were females, about three fifths (59.3%) of them were married, about two thirds (65.1%) of them were living in rural areas, about one quarter of them were previously self-employed, near two thirds (62.8%) of them know someone near to them self-employed, and only 16.3% of them had attended training programs before this program about entrepreneurship.

**Figure (1)** illustrates that there were elevation of head nurses' mean scores of total entrepreneurial knowledge at posttest ( $8.70 \pm 1.77$ ) and follow up ( $8.01 \pm 0.99$ ) than pretest ( $2.99 \pm 3.06$ ).

**Figure (2)** demonstrates that there was elevation of head nurses' mean scores of total entrepreneurial intention at posttest ( $15.76 \pm 2.30$ ) and follow up ( $15.12 \pm 2.07$ ) than pretest ( $12.41 \pm 4.31$ ).

**Table (2)** concludes that there were highly significant statistical differences ( $p \leq 0.001$ ) in total entrepreneurial attitude mean scores with elevation of attitude mean score in posttest ( $117.38 \pm 9.13$ ) and follow up ( $115.0 \pm 13.1$ ) than pretest ( $103.27 \pm 29.77$ ).

**Figure (3)** illustrates that there were elevation of head nurses' mean scores of total entrepreneurial attitude at posttest ( $117.38 \pm 9.13$ ) and follow up ( $115.0 \pm 13.1$ ) than pretest ( $103.27 \pm 29.77$ ).

**Table (3)** concludes that there were significant statistical positive correlations between head nurses' total entrepreneurial attitude and intention ( $r=0.65$ ,  $p=0.00$ )

Attending training programs before this program about entrepreneurship: Yes	14	16.3
No	72	83.7

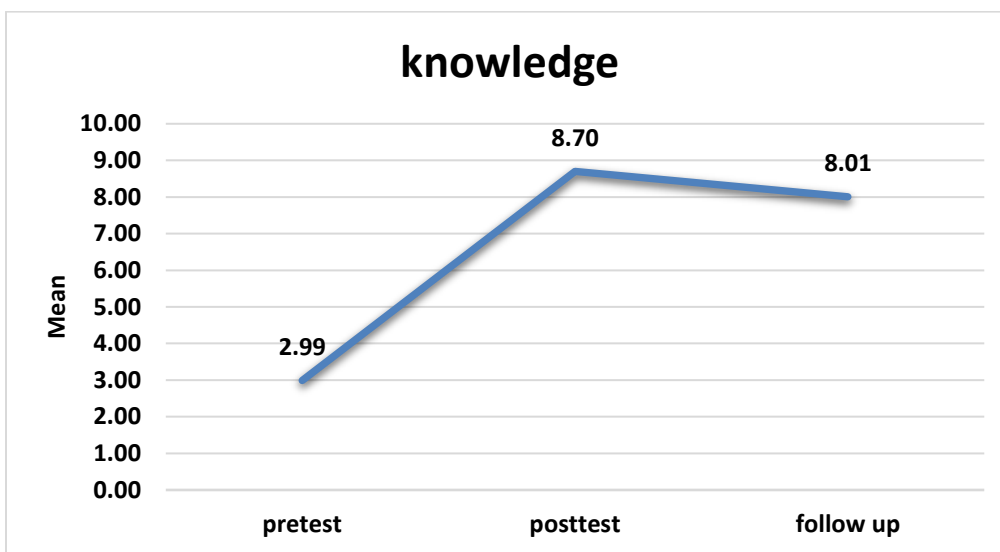


Figure (1): Head nurses' mean scores of total entrepreneurial knowledge during pre, post and follow up educational program.

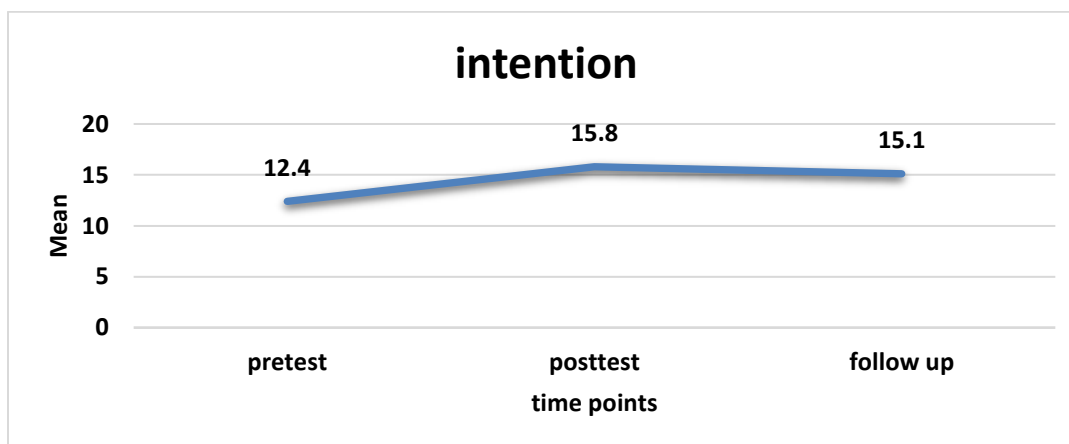


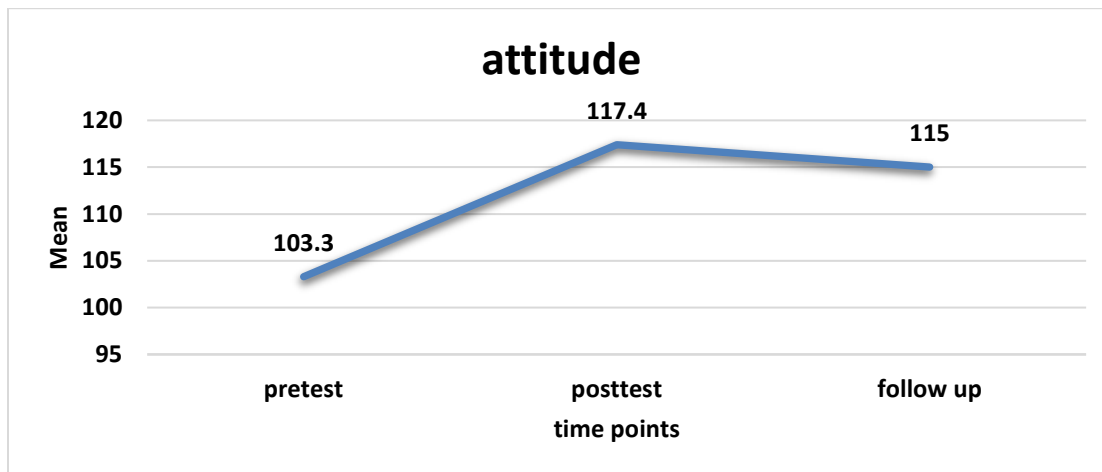
Figure (2): Head nurses' mean scores of total entrepreneurial intention during pre, post and follow up educational program.

Table (2): Head nurses' total entrepreneurial attitude mean scores during pre, post and follow up educational program (n=80).

Dimensions	Pretest		Posttest		Follow up		Repeated measures ANOVA	
	Mean	SD	Mean	SD	Mean	SD	F	p
A- Need for achievement	21.66	7.34	26.51	2.65	25.23	1.78	33.24	.00
B- Need for Autonomy	21.15	6.63	24.16	3.20	24.11	2.31	14.39	.00
C- Creative Tendency	19.13	6.19	19.99	2.64	19.98	3.76	1.41	.00
D- Calculated Risk Taking	19.90	6.40	22.27	2.90	21.95	1.34	9.79	.00
E- Drive and Determination	21.43	6.17	24.45	1.95	24.08	3.90	18.75	.00

<b>Total attitude</b>	103.27	29.77	117.38	9.13	115.0	13.1	17.67	.00
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*P* value is significant at  $\leq 0.05$ , highly significant at  $\leq 0.001$ .



**Figure (3):** Head nurses' mean scores of total entrepreneurial attitude during pre, post and follow up educational program.

**Table (3):** Correlation between head nurses' total entrepreneurial intention and attitude

Pearson Correlation		Total knowledge	Total intention
<b>Total Intention</b>	r	-0.19	
	P	0.09	
<b>Total attitude</b>	r	-0.17	0.65
	P	0.11	0.00

*P* value is significant at  $\leq 0.05$ , highly significant at  $\leq 0.001$ .

### DISCUSSION

Entrepreneurship is the establishment or improvement of something, in order to generate benefits to individuals and society. This phenomenon has advanced in recent decades due to economic transformations, technological innovations and globalization. Entrepreneurial motivation is the process that activates the entrepreneur to exert higher level of efforts to achieve his/her entrepreneurial goals (Duprez et al., 2021).

The present study illustrated that, the distribution of demographic characteristics of studied sample, majority of head nurses were aged between 30-40 years. According to their gender, almost of head nurses were female. Regarding their place of residence, more than two thirds of nursing interns were rural residents.

The present study illustrated that, the program had a positive effect on improvement of nurses' knowledge, intention and attitude level about entrepreneurship during post and follow-up of program phase compared with the pre-program

phase. From researcher point of view, this result might be due to the interest of nurses with this new program. In addition to, during sessions the head nurses showed an interest to the program content revealed by the positive interaction during program sessions. This could be attributed to the ability of gaining knowledge easily.

In agreement with *Abdo, et al., (2023)* and clarified that the training course had a positive effect on improvement of nursing interns knowledge, attitude and intention level about entrepreneurship throughout immediately post and follow-up (after three months) of program phase compared with the pre-program phase.

The current study displayed that head nurses had a high level of intention regarding entrepreneurship during the post and follow up educational program phases than preprogram phase and there were highly significant statistical differences regarding entrepreneurial intention during pre, post & follow up educational program.

From the researcher point of view, it was because of entrepreneurship intention is a personal



commitment to actions to demonstrate entrepreneurial endeavor start his/her own business. In this sense, entrepreneurial activity entails engaging in an intentionally planned behavior not depended on personal characteristics. So, it is important to affect behavior by training programs and courses toward entrepreneurship.

These results were in harmony with *Jahani et al., (2018)* and summarized that entrepreneurship education can affect nurses' self-efficacy belief and entrepreneurship intention. On the same direction, *Kim & Lim, (2022)* and clarified that entrepreneurial orientation had a positive effect on entrepreneurial intention as entrepreneurial intention increases nurses' intrinsic confidence in entrepreneurship and improves their sense of extrinsic control.

Paradoxically, an Egyptian study conducted by *Zinhom et al. (2020)* and reviewed that there were insignificant statistical differences in nurses entrepreneurial intention and entrepreneurial training program and nurses intention did not affected by training program as they were newly graduated and had no experiences in entrepreneurship. In agreement with *Kalyoncuoğlu et al., (2017)* which concluded that there were insignificant effect from entrepreneurial education on students entrepreneurial intention.

The concurrent study dedicated that all of studied head nurses had a high level regarding entrepreneurial attitude during the post and follow up educational program phases than preprogram phase. Additionally, there were highly significant statistical differences regarding entrepreneurial attitude during pre, post & follow up educational program. These results might be due to the interest of head nurses with this new program nurses which can improve their ability to think creatively by participating in activities workshops and engaging in participative learning.

Additionally, the results showed that the highest mean percentage of entrepreneurial attitude dimensions among head nurses with mean and standard deviation  $26.51 \pm 2.65$  was related to need of achievement dimension, while the lowest mean percentage with mean and standard deviation was  $(19.99 \pm 2.64)$ ,  $(22.27 \pm 2.90)$  related to creativity dimension and risk taking.

From the researcher point of view, This might be due to head nurses have the ability to take

decisions effectively and plan the goals of their work in the future but they lacks trust in carrying out plans due to lack of self-confidence. Also, work environment didn't support nurses creativity due to lack of staff nurses authority, that limited creative behavior and fear of blaming when idea failing.

The findings were compatible with, *Abd-elmonem et al., (2023)* who indicated that the highest mean percentage of entrepreneurial attitude dimensions was related to need of success while the lowest mean percentage was related to bearing risk dimension. This result was supported by *Trotte et al., (2021)* who reported that a high score on need for achievement and success can show that young nurses, as they get closer to entering the job market and drive in their attitudes and knowledge to achieve their professional goals.

On contrary, *El Desoky et al., (2021)* indicated that the risk-taking domain was seen as having the highest mean score, ranking first among nursing staff. Also, the findings of *Owusu & Asiamah, (2018)* demonstrated that nurse-midwife entrepreneurs face risks in varied degrees. The risk-taking proclivity is higher when establishing and expanding the work.

Furthermore, the study findings evidenced that there were positive correlation between entrepreneurial attitude and intention. On the same line, *Anjum et al. (2022)* who pointed out that entrepreneurial attitude had a significant impact on entrepreneurial intention. *Wn et al. (2020)* also support this view; that is student nurse who have a positive attitude toward entrepreneurship are more likely to start businesses in the future. On the same line, *Abdo et al., (2023)* summarized that there was a highly statistical significant positive correlation between total knowledge, total attitude, total skills and total motivation through all program phases.

## **CONCLUSION**

The educational training program for head nurses was effective and improved their level of entrepreneurial knowledge, intention and attitude.

## **RECOMMENDATIONS**

**In the light of the main study findings, the following recommendations are proposed:**

1-Hospital administrators should create policies and strategies to support career growth and developmental opportunities of entrepreneurial nurses.

2-Creating a supportive environment that fosters nurses' independence and encourages them to take risks that foster their creativity and entrepreneurship.

3-Professional organizations should create a climate that will support the autonomy of the profession and colleague solidarity without ignoring the traditional roles of nurses.

## REFERENCES

**Abd-elmonem, A. M., Elshahat, M.M., & Hasanin, G. (2023).** Entrepreneurial Tendencies of New Graduate Baccalaureate Nurses and its Relation to their Professional Development and Career Aspiration. *Assiut Scientific Nursing Journal*, 11(36), 237-248

**Abdo, M.M., M Eid, N. & M Ebrahim, R. (2023).** Effect of Nursing Interns' Entrepreneurship Education Program on their Motivation. *Benha Journal of Applied Sciences*, 8(4), 125-138.

**Abun, D., Foronda, S.L.G., Belandres, M.L., Agoot, F. & Magallanez, T. (2018).** Measuring Entrepreneurial Knowledge and Entrepreneurial Intention of ABM Grade XII, Senior High School Students of Divine Word Colleges in Region I, Philippines.

**Abun, D., Lalaine, S., Foronda, G., Agoot, F., Luisita, M., Belandres, V., & Magallanez, T. (2017).** Measuring entrepreneurial attitude and entrepreneurial intention of ABM grade XII, Senior High School Students of Divine Word Colleges in Region I, Philippines.

**Andrade, A., Dal Ben, L.W. & Sanna, M.C. (2015).** Entrepreneurship in Nursing: overview of companies in the State of São Paulo. *Brazilian nursing journal*, 68 (1), 35–44. Retrieved from <https://doi.org/10.1590/0034-7167.2015680106p>.

**Anjum, T., Amoozegar, A., Farrukh, M. and Heidler, P. (2022).** Entrepreneurial intentions among business students: the mediating role of attitude and the moderating role of university support. *Educ. Train.* doi: 10.1108/et-01-2021-0020

**Anwar, I., Saleem, I., Islam, K.B., et al. (2020).** Entrepreneurial intention among female university students: examining the moderating role of entrepreneurial education. *Journal for International Business and Entrepreneurship Development* 12(4): 217-234.

**Duprez, V., Vermote, B., Van Hecke, A., Verhaeghe, R., Vansteenkiste, M. & Malfait, S. (2021)** Are internship experiences during a pandemic related to students' commitment to nursing education? A cross-sectional study. *Nurse Education Today*, 107, 105124

**El Desoky, E., El Said, N. & El-Shaer, A. (2021):** Organizational culture, individual innovation and their relation to nursing staff's work engagement. *Mansoura Nursing Journal (MNJ)*, Vol. (8), No.(1)

**Hagen, J. (2013).** Concepts in Health Care Entrepreneurship. Remedy Books.

**Jahani, S.I.M.I.N., Babazadeh, M.A. H. B.U.B.E.H., Haghighi, S.H.A.Y.E. S. T.E.H., & Cheraghian, B.A.H.M.A. N. (2018).** The effect of entrepreneurship education on self-efficacy beliefs and entrepreneurial intention of nurses. *Journal of Clinical & Diagnostic Research*, 12(6), 18-21.

**Jakobsen, L., Qvistgaard, L.W., Trettin, B & Rothmann, M.J. (2021).** Entrepreneurship and nurse entrepreneurs lead the way to the development of nurses' role and professional identity in clinical practice: A qualitative study. *Journal of Advanced Nursing*, 77(10), 4142–4155.

**Kalyoncuoğlu, S., Aydıntan, B. & Göksel, A. (2017).** The effect of entrepreneurship education on entrepreneurial intention: An experimental study on undergraduate business students. *Journal of Management Research*, 9(3), 72-91.

**Kim, Y.J. & Lim, J.Y. (2022).** Predictive models for nurses' entrepreneurial intentions using comparison of competing models. *International Journal of Environmental Research and Public Health*, 19(10), 6027.

**Lleva, F.J.D., Abuan, B.M.G., Agcarao, M.E.U., Ambrocio, F.S.L., Bagongan, K.E., Lumauig, G. K. & Regacho, M.J.G. (2023).** Exploring the Entrepreneurial Mindset in Nursing: Unleashing Innovation and Leadership for Healthcare Transformation.

**Malakoti, N., Zabihi, V., Ajilian Abbasi, M., Akhlaghi, A., Alipour-Anbarani, M. & Shariati, K. (2023).** An Overview of Entrepreneurship in Nursing: Challenges, Opportunities, and Barriers. *Medical Education Bulletin*, 4(3), 803-811.

**Marville University (2023).** What is a nurse entrepreneur, and how do you become one? Retrieved July 11, 2023 from <https://online.maryville.edu>

**Orman, S., (2009).** Factors Affecting Entrepreneurial Intentions: An Application for University Students and University Graduate Employees, (Unpublished Master Dissertation)

**Owusu-Asiamah, J. (2018):** Exploring health related entrepreneurial activities among nurses and midwives in the greater accra region. Master thesis. University of Ghana.

**Trotte, L., Santos, J., Sarat, C., Mesquita, M., Stipp, M., Souza, P. & Lima, C. (2021):** Entrepreneurial tendency of nursing students: A comparison between graduating beginners and undergraduate students. *Revista Latino-Americana de Enfermagem*, Vol.( 29)

**Wardan, S. M., Ghandour, S. & Mohamed Elghabbour, G. M. (2020).** Entrepreneurship and

work innovation among nurse managers at Port Said Governmental Hospitals. *Port Said Scientific Journal of Nursing*, 7(3), 201-217.

**Wn, A., Myh, B., Kw, C. and Rsa, D. (2020).** Perceived public support and entrepreneurship attitudes: A little reciprocity can go a long way! *J. Vocat. Behav.* 121:103474. doi: 10.1016/j.jvb.2020.103474

**Yan, D., Wen, F., Li, X. & Zhang, Y. (2020).** The relationship between psychological capital and innovation behavior in Chinese nurses. *Journal of nursing management*, 28(3), 471 -479. <https://doi.org/10.1111/jonm.12926>.

**Zinhom A. Abd Elwahab E. & Abed F. (2020).** Effect of Entrepreneurship Training Program on Nursing Interns' Awareness and Entrepreneurial Intention. *SYLWAN*, 146.