



## An Overview of Entrepreneurship in Nursing: Challenges, Opportunities, and Barriers

Narges Malakoti<sup>1</sup>, Vajihe Zabihi<sup>2</sup>, Maryam Ajilian Abbasi<sup>3</sup>, Alireza Akhlaghi<sup>4</sup>, Masumeh Ghazanfarpour<sup>5</sup>, \* Khatereh Shariati<sup>6</sup>

<sup>1</sup>Nursing Research Center, Kerman University of Medical Sciences, Kerman, Iran. <sup>2</sup>BSN, Omid Hospital, Mashhad University of Medical Sciences, Mashhad, Iran. <sup>3</sup>MSc of Clinical Psychology, Mashhad University of Medical Sciences, Mashhad, Iran. <sup>4</sup>MSc of Health Education and Promotion, Bushehr University of Medical Sciences, Bushehr, Iran. <sup>5</sup>Assistan Professor, Kerman University of Medical Sciences, Kerman, Iran. <sup>6</sup>Department of Medical Education, Mashhad University of Medical Sciences, Mashhad, Iran.

### Abstract

**Background:** Nursing entrepreneurship has promising opportunities for nurses. However, the development of entrepreneurship in nursing still faces several obstacles. This overview aims to review and summarize the main characteristics of nursing entrepreneurship and its concept, barriers, and opportunities in today's world.

**Materials and Methods:** In this overview, online databases (Medline, Scopus, Web of Science, ERIC, ProQuest, CIVILICA, and Google Scholar search engine) were searched in both English and Persian up to March 2023, using combinations of keywords (“nursing entrepreneurship”, “nursing entrepreneurial”, “barrier of nursing entrepreneur”, “opportunities of nursing entrepreneur”, “nurses”, and “nursing student”).

**Results:** A total of five reviews and two systematic reviews were included. The concept of entrepreneurship in nursing was related to personal and professional characteristics, such as autonomy, independence, flexibility, innovation, proactivity, self-confidence, and responsibility. There were seven barriers (fear, knowledge, and skill; prior working culture experience; decision-making policy and regulations; health insurance, colleague jealousy; and unprofessional attitudes) and two supporting factors (knowledge and skills; ability to seek opportunities). It was found that entrepreneurial nurses need personal, interpersonal, commercial, and strategic skills, and there must be internal and external stimuli to motivate nurses to overcome these obstacles.

**Conclusion:** Entrepreneurial nurses require personal, interpersonal, commercial, and strategic skills. Thus, it is necessary to identify the obstacles and needs of entrepreneurial nurses and solve their problems to provide the necessary backgrounds for nursing entrepreneurship so that they can meet the health needs of individuals and societies. The barriers against entrepreneur nurses were mostly due to a lack of entrepreneurial knowledge, experience, and skills.

**Key Words:** Barriers, Concept, Nursing entrepreneurship, Opportunities, Nurses.

\*Please cite this article as: Malakoti N, Zabili V, Ajilian Abbasi M, Akhlaghi A, Ghazanfarpour M, Shariati Kh. An Overview of Entrepreneurship in Nursing: Challenges, Opportunities, and Barriers. Med Edu Bull 2023; 4(3): 803-11. DOI: [10.22034/MEB.2023.418132.1084](https://doi.org/10.22034/MEB.2023.418132.1084)

### \*Corresponding Author:

Khatereh Shariati, Department of Medical Education, Mashhad University of Medical Sciences, Mashhad, Iran.

Email: [shariatikh1@mums.ac.ir](mailto:shariatikh1@mums.ac.ir)

Received date: Mar. 20, 2023; Accepted date: Sep.22, 2023

## 1- INTRODUCTION

The word entrepreneurship is derived from the French word “enterprendre”, meaning “to undertake”, and translated into English in 1848 (1). Entrepreneurship has been the focus of educational circles around the world since the end of the 20th century and has become the source of significant developments in industries, education, and services. Entrepreneurial skills encompass various abilities such as research, analysis, communication, creativity, networking, financial literacy, leadership, negotiation, and management (2-5).

Entrepreneurship in healthcare is not a new phenomenon. Many nurses worked as entrepreneurs before World War II. After the war, nurses in many countries began working in the public service sector due to social and economic changes. Social, political, and economic factors such as economic crises, nurses’ dissatisfaction with their work, and changes in the health needs of people and consumers have led many nurses to entrepreneurship during the past few decades. A nurse as an entrepreneur offers various nursing services in the private sector in care, education, research, and administrative fields (6).

The International Council of Nurses defines a nurse entrepreneur as “a proprietor of a business that offers nursing services of a direct care, educational, research, administrative, or consultative nature” (7). Nurse entrepreneurs can play an essential role in the healthcare system by supporting the development of targeted services, such as nursing entrepreneurship or nursing businesses (8). However, according to a study in 2018, nurses had only 6% of the share of entrepreneurship compared to other health professions such as medicine and physiotherapy (9).

Education can play an important role in creating a context for new entrepreneurs

(10). Some studies show that the lack of competence in entrepreneurship is a major obstacle for nurses who want to become entrepreneurs (11, 12). On the other hand, entrepreneurial nurses claim that their training was based on traditional nursing teaching methods and did not provide them with sufficient knowledge about entrepreneurship (12, 13). Therefore, developing and institutionalizing entrepreneurial skills in graduates can be essential to higher education (14).

A study in Thailand (2020) on entrepreneurial abilities and teaching-learning strategies to promote them among nursing students categorized entrepreneurial abilities among students into two areas: 1) interpersonal or soft skills, and 2) work or hard skills. Soft skills include creative thinking, a positive attitude, hard work and patience, leadership, vision, and problem-solving. Hard skills include business management knowledge and skills, risk acceptance, and information technology skills. The researchers suggested that these skills should be integrated into the curriculum and education of students (15). Rapid changes in the healthcare system have created great opportunities for nurses who have creativity, innovation, and business acumen to become entrepreneurs (16).

Today, health is one of the most effective factors affecting social welfare and development, and nurses are receiving special attention as its integral parts. Rapid changes in the healthcare system, especially in recent years and with the spread of the COVID-19 disease, have imposed a heavy workload on this group (17, 18). Nurses are part of a pillar of the health system with a comprehensive care approach, have a significant impact on the effectiveness of the health system, and play an important role in health promotion, disease prevention, treatment, and care. The importance of the role of nurses in investments in the health system and

improving the economic growth of societies is undeniable. The lack of awareness of nursing capabilities has caused very few nurses to be present as service providers at the community level. The attitude of most officials and practitioners is on the second level of prevention, i.e., clinical care in hospitals, and their care in other levels of prevention and other service delivery environments in society is very limited (19). Nursing entrepreneurship or, in other words, nurses with entrepreneurial motivations can give this group the opportunity to pursue their personal views and ideas to improve health outcomes using new and innovative approaches (20). The platforms and opportunities created during the COVID-19 pandemic can provide unprecedented conditions for creating entrepreneurial sparks in nurses who have creativity, innovation, and business acumen. The present study aimed to review and summarize the main characteristics of nursing entrepreneurship and its concept, barriers, and opportunities in the world.

## **2- MATERIALS AND METHODS**

### **2-1. Data sources**

In this overview, a data search was conducted using the electronic databases of Medline (via PubMed), Scopus, Web of Science, ERIC, ProQuest, CIVILICA, and Google Scholar search engine with no time limit up to March 15, 2023. The following keywords were used alone or in combination: “nursing entrepreneurship”, “nursing entrepreneurial”, “barrier of nursing entrepreneur”, “opportunities of nursing entrepreneur”, “nurses”, and “nursing student” and their Persian equivalents. The search was done independently and in duplication by two reviewers, and any disagreement between the reviews was resolved by the supervisor.

### **2-2. Inclusion and Exclusion criteria**

This overview included reviews (scoping, narrative, and rapid reviews), and systematic reviews (with or without meta-analysis) that focused specifically on nursing entrepreneurship and its barriers and opportunities. Review studies available in full, in Persian and English, were considered for inclusion. The exclusion criterion was entrepreneurship outside the nursing field.

### **2-3. Data collection process**

A researcher-made form was developed as a template and followed for each study. Two reviewers collected the data independently, and a third reviewer solved any discrepancies. The collected data included the study population, authors' names, and settings, year of publication, study type, sample size, target population, and the main results.

### **2-4. Ethics**

Approval by the research ethics committee was not necessary as the study analyzed only publicly available articles.

## **3-RESULTS**

A total of seven studies, consisting of five reviews and two systematic reviews published from 2000 to 2023, were selected. The main characteristics of the selected studies are summarized in the following:

1. A systematic review (2013-2022, n=30 articles) aimed to examine the method, scope, and bibliometric analysis of the studies on nursing entrepreneurship, their country origins, and the types of entrepreneurship. The results showed that the literature mostly focused on the opportunities and obstacles before entrepreneurial nurses. Also, nurse entrepreneurship did not receive sufficient attention both in practice and in research. However, although limited in number, the findings of these studies provided several clues about the necessity of reconsidering

the entrepreneurial roles of nurses. Studies show that the potential of nurses in the health sector is not recognized sufficiently despite nursing as a profession being one of the fundamental areas of the health sector. Still, re-evaluation is required in new job descriptions and employment opportunities suitable for its changing roles. With this perspective, nurses should not only be considered human power in the health sector but should also take part in the new and competitive health industry with various entrepreneurship dimensions (21).

**2.** A systematic review (2020, n=37 articles) aimed to explore the main characteristics of entrepreneurial nursing. The results showed that the employment status of entrepreneurial nurses represents an important difference in their activities, challenges, and motivations. Entrepreneurial nurses are influenced by the support that they receive and the challenges that they face in the healthcare system. Knowing the characteristics of entrepreneurial nurses is important for nurse managers, as they lead employees who may become nurse entrepreneurs or nurse intrapreneurs (22).

**3.** A review (2023, n=13 articles) aimed to investigate the engagement of nurses in entrepreneurship. The results showed that nurses start their ventures for various reasons, such as financial gain, career progress, personal fulfillment, and autonomy. Their self-efficacy, perceived barriers, and their received social support all play a role in how they view entrepreneurial opportunities. It is possible to harness the entrepreneurial spirit of nurses and use it to produce new solutions that meet the issues faced by the healthcare business as it undergoes continuous change. This way, nurses can pursue their ambitions of becoming entrepreneurs while still providing high-quality care to their patients (23).

**4.** A review (2000-2021) aimed to summarize the data in the field of entrepreneurship in nursing. The results showed that entrepreneurial nurses need personal, interpersonal, commercial, and strategic skills. They can work as social, business, and inter-organizational entrepreneurs. However, entrepreneurial nurses have been constantly facing personal, sociocultural, academic, and organizational obstacles, and they need internal and external stimuli to be motivated to overcome these obstacles (24).

**5.** A narrative review (2011-2021, n=11) aimed to identify the hindering and supporting factors for nurses in entrepreneurship. The results found seven hindering factors (fear, knowledge and skill, prior working culture experience, decision-making policy and regulations, health insurance, colleague jealousy, and unprofessional attitudes), and two supporting factors (knowledge and skills, ability to seek opportunities) (25).

**6.** A review (2020, n=8 articles) aimed to explore the development of entrepreneurship in nursing. The results showed that the obstacles to entrepreneur nurses were mostly due to a lack of entrepreneurial knowledge, experience, and skills. Besides, the presence of trust between colleagues or partners in building a business is also necessary in identifying barriers. The solution to developing nursing entrepreneurship is to increase the interest, knowledge, skills, training, and experience of nursing entrepreneurs (26).

**7.** A review (2019, n=31) aimed to examine the concept and typology of entrepreneurship in nursing in the national and international literature. The results showed that the concept of entrepreneurship in nursing is associated with personal and professional characteristics, such as autonomy, independence, flexibility, innovation,

proactivity, self-confidence, and responsibility. The typologies found were social and business entrepreneurship and intrapreneurship. Social entrepreneurship is a mechanism of social mobilization and transformation, entrepreneurship is when nurses are autonomous professionally, and intrapreneurship relates to corporate entrepreneurs (27).

#### 4- DISCUSSION

This overview aims to review and summarize the main characteristics of nursing entrepreneurship and its concept, barriers, and opportunities. The review of existing studies showed that the concept of entrepreneurship in nursing is associated with personal and professional characteristics, such as autonomy, independence, flexibility, innovation, proactivity, self-confidence, and responsibility. There were seven hindering factors (fear, knowledge and skill, prior working culture experience, decision-making policy and regulations, health insurance, colleague jealousy, and unprofessional attitudes), and two supporting factors (knowledge and skills; ability to seek opportunities) for nursing entrepreneurship.

Entrepreneurship in nursing can offer enormous opportunities for a nurse. It includes palliative/home care, nursing counseling, caregiver training, and physiotherapy services, among others (26). Entrepreneurship can increase the visibility of the profession and foster the creation of new spaces for nurses (27). Nevertheless, studies show that the potential of nurses in the health sector is not recognized enough (20). The evaluation of entrepreneurship indicators by the Global Entrepreneurship Monitor in 2019 shows that the rate of starting a business in Iran is ranked 178 out of 190 countries. This means that entrepreneurship and its skills are not receiving enough attention in society, especially in higher education (28).

Entrepreneurship involves identifying, evaluating, and exploiting opportunities and introducing new products to the market through organized efforts. There is a general recognition that entrepreneurship contributes to economic development, competition, innovation, and employment generation in economies. This phenomenon has expanded in recent decades due to economic developments, technological innovation, and globalization (29). In some cultures, entrepreneurship in nursing is often referred to as private work, independent work, and self-employment, and considers a nurse to be the owner of a business that provides nursing services of care, education, research, administration, or consulting with a direct nature (30). According to a study in 2018, nurses had only a 6% share in entrepreneurship compared to other health professions, such as medicine and physiotherapy (9).

Teaching entrepreneurship skills is essential in creating the ground for new entrepreneurs (31). As entrepreneurs play an important role in promoting employment and improving the economic status of societies, entrepreneurship training and increasing entrepreneurial activities can be a suitable stimulus for the growth and development of societies and bring an increase in income and improvement of people's quality of life. Social and economic planners in different countries are determined to promote and expand entrepreneurship using educational systems, especially higher education (32, 33). However, the development of entrepreneurship in nursing still faces several obstacles (26). The entrepreneur world is full of challenges and opportunities, so nurses must face them professionally (25). The recent pandemic provided an excellent opportunity for nurses to conduct entrepreneurship. Nurses must develop their self-potentials and identify the obstacles and supports so that their businesses run competently.

Based on the review of existing studies, there were seven hindering factors (fear, knowledge and skill, prior working culture experience, decision-making policy and regulations, health insurance, colleague jealousy, and unprofessional attitudes), and two supporting factors (knowledge and skills and the ability to seek opportunities) in nursing entrepreneurship (25).

Another study conducted in 2021 on the development of entrepreneurship in nursing showed that the obstacles facing entrepreneurial nurses are mostly due to the lack of knowledge, experience, and entrepreneurial skills. Researchers suggested ways to overcome the obstacles in nursing entrepreneurship, e.g., increasing entrepreneurial knowledge and experience, identifying opportunities through the Internet or social media, and interaction between entrepreneurs, patients, and the community to find more entrepreneurial opportunities (34).

Jahani et al. (2014) conducted a qualitative study to describe entrepreneurial motivations perceived by Iranian entrepreneurial nurses. In the data analysis, five main themes were proposed: professional promotion, serving society, spiritual achievements, earning more money, and creating employment (35). Some studies show that the desire to be one's own boss, the need for a flexible work schedule, the ability to follow ideas, and earning more money are among the reasons for the tendency of professional employees to become entrepreneurs (36, 37). The results of another study showed that nurses start their ventures for various reasons, such as financial gain, career progress, personal fulfillment, and autonomy (23). Nurses have multiple needs to play their entrepreneurial role. Thus, it is necessary to identify and alleviate the problems and needs of entrepreneurial nurses and provide the necessary foundation for their creative activities so they can meet the health needs

of individuals and societies (24). In the past, researchers believed that entrepreneurial traits (e.g., determination and creativity) were inherited and born in a person, and entrepreneurs could not be nurtured. However, a review of evidence shows that entrepreneurial capabilities are often acquired and cultivated through educational programs (38). Developing and institutionalizing entrepreneurial skills in graduates can be an aim in higher education (14). University education is no longer a passport to secure employment for the 21st century graduate (39).

Choosing the path of entrepreneurship and then taking risks and facing numerous problems require motivation and strong drivers. The findings of various studies show that material incentives are not sufficient for nurses to enter nursing entrepreneurship and continue working in this field. The study by Jahani et al. showed that immaterial and higher motivational factors, such as professional promotion, service to society, and spiritual achievements, are necessary to overcome existing problems and obstacles to nursing entrepreneurship (35). Another study showed that quality care and job satisfaction are benefits of nursing entrepreneurship (40), while the reduction or lack of motivation among nurses, in addition to personal problems, causes destructive effects on the health of society and loss of capital (41-43).

Entrepreneurship offers nurses the opportunity to follow their personal views and feelings to improve health outcomes using innovative approaches (38). A meta-analysis of 41 articles showed that entrepreneurial motivations are positively and significantly related to the choice of entrepreneurial approaches (39), and people with high entrepreneurial motivations are more likely to become entrepreneurs (44). Experts believe that nurses should be supported by professional organizations and health authorities to

create opportunities in this field. Future nurses should be equipped with entrepreneurship knowledge, skills, and culture through education. In addition, the capacities of nurses can be developed while they are still students, especially with an entrepreneurship education included in vocational training (45).

## 5- CONCLUSION

From seven reviews and systematic reviews published between 2000 and 2023, it was found that the concept of entrepreneurship in nursing is associated with personal and professional characteristics such as autonomy, independence, flexibility, innovation, proactivity, self-confidence, and responsibility. Studies show that the potential of nurses in the health sector is not recognized enough, even though entrepreneurship in nursing offers promising opportunities. It includes palliative/ home care, nursing counseling, caregiver training, and physiotherapy services, among others.

Based on the existing evidence, there are seven barriers to nursing entrepreneurship, i.e., fear, knowledge and skill, prior working culture experience, decision-making policies and regulations, health insurance, colleague jealousy, and unprofessional attitudes, and two supporting factors, i.e., sufficient knowledge and skills and the ability to seek opportunities. Entrepreneurial nurses require personal, interpersonal, commercial, and strategic skills. The development of entrepreneurship in nursing still faces various obstacles, mostly due to a lack of entrepreneurial knowledge, experience, and skills. The solution to developing nursing entrepreneurship is to increase the interest, knowledge, skills, training, and experience of nursing entrepreneurs, and there must be internal and external stimuli to motivate nurses to overcome these obstacles.

## 6- AUTHORS' CONTRIBUTIONS

Study conception or design: NM and KS; Data analyzing and draft manuscript preparation: VZ, MA, AA, and MG; Critical revision of the paper: MG; Supervision of the research: NM and KS; Final approval of the version to be published: NM, MA, VZ, AA, MG, and KS.

**7- CONFLICT OF INTEREST:** None.

## 8- REFERENCES

1. Guo L, Kristian R. Entrepreneurship management in health service: an integrative model. *Journal of Health and Human Service Administration*. 2006; 28(4): 504-30.
2. Barnett L, Sandford F. *Entrepreneurial Skills Check List*. An Economics Network Funded Project. London: School of Economics and Political Science; 2006.
3. Ajka Baručić, B. Umihanić. Entrepreneurship education as a factor of entrepreneurial opportunity recognition for starting a new business. *Management*, 2016; 21 (2): 27-44.
4. Edom, S. The 5 critical stages you go through as an entrepreneur. *StartupTipsDaily*. Retrieved from <http://startuptipsdaily.com/the-entrepreneurial-process/>. *Education: Serious games and learning through play*. *Entrepreneurship Education and Pedagogy*, 2016;1(1): 61-89.
5. Andrade Ade C, Dal Ben LW, Sanna MC. Entrepreneurship in Nursing: overview of companies in the State of São Paulo. *Rev Bras Enferm*. 2015; 68(1):35-9, 40-4.
6. Salminen L, Lindberg E, Gustafsson ML, Heinonen J, Leino-Kilpi H. Entrepreneurship Education in Health Care Education. *Educ Res Int*. 2014; 2014:1-8.
7. Sanders, E., & Kingma, M. *Handbook on entrepreneurial practice: Nurse creating opportunities as entrepreneurs and intrapreneurs*. International Council of Nurses. ICN, 2003. ISBN: 9295005902, 9789295005907.
8. Vannucci, M. J., & Weinstein, S. M. The nurse entrepreneur: Empowerment needs, challenges, and self-care practices. *Nursing: Research and Reviews*, 2017;7: 57–66.

9. Colichi RMB, Lima SAM. Entrepreneurship in Nursing compared to other health professions. *Rev Bras Enferm* [Internet]. 2019;72(Suppl 1):289-98. <https://doi.org/10.1590/0034-7167-2017-0523>.
10. Porter L. Entrepreneurship: Creating a business with the framework of nursing knowledge and passion. Available from: <https://sigma.nursingrepository.org/bitstream/handle/10755/21801/Slides.pdf?sequence=1&isAllowed=y>.
11. Drennan V, Davis K, Goodman C, Humphrey C, Locke R, Mark A, et al. Entrepreneurial nurses and midwives in the United Kingdom: an integrative review. *J Adv Nurs*. 2007; 60(5):459- 69.
12. Elango B, Hunter GL, Winchell M. Barriers to nurse entrepreneurship: a study of the process model of entrepreneurship. *J Am Acad Nurse Pract*. 2007; 19(4):198-204.
13. Sankelo M1, Akerblad L. Nurse entrepreneurs' attitudes to management, their adoption of the manager's role and managerial assertiveness. *J Nurs Manag*. 2008;16(7):829-36.
14. Mardanshahy M, Tajik Esmaili A, Mobaraky M. Entrepreneurial talent search outgoing and incoming students at public universities. *J Entrepreneursh Dev*. 2014;7(14):755-71.
15. Udomluck, S. Entrepreneurial Competencies and Teaching-Learning Strategies to Promote Entrepreneurial Competencies among Nursing Students. *Journal of Nurses Association of Thailand Northern Office*, 2021;27(1): 92–100.
16. Black BP. *Professional Nursing: Concepts& challenges*.7th ed, St. Louis: Saunders, Elsevier, 2014.
17. Noori A, Azma F, Shojaee S, Bayani A. Entrepreneurial Talent among Nursing Students of Golestan Province Universities in Iran in 2019. *J Res Dev Nurs Midw* 2020; 17 (2):32-35.
18. Araghian Mojarad F, Sanagoo A, Joibari L. Entrepreneurship: a new horizon in nursing education in Iran. *Strides in Development of Medical Education*, 2016; 13 (4): 434-35.
19. Bahramnezhad F, Asgari P. Nurses as the Leading Voices: Health is a Human Right. *SJNMP* 2019; 5 (1):1-5.
20. Arunrat Thepna, Barbara B Cochrane, Marla E Salmon. Advancing nursing entrepreneurship in the 21st century. *J Adv Nurs*. 2023;79(9):3183-85. doi: 10.1111/jan.15563. Epub 2023 Jan 16.
21. Şenel Tekin P., Bekar F. Nurse Entrepreneurship in the Emerging Healthcare Industry: A Systematic Review. *Anadolu Üniversitesi Sosyal Bilimler Dergisi*, 2023;23(3):603-28.
22. Gunn-Berit Neergård. Entrepreneurial Nurses in the Literature: A Systematic Literature Review. *J of Nursing Management*. 2021 Jul;29(5):905-15.
23. Adizas, Jane B, Alejandro, Kathleen A, Octaviano, Adonis Alfredo R, Palaganas, Alexander R, Faller, Erwin M. Engagement of Nurses in Entrepreneurship: A Review. *International Journal of Research Publication and Reviews*, 2023;4(4): 471-74.
24. Hosseinzadeh F, Imani R, Chekeni A.M, Anvari H, Roozbahani Gh, Heidari - Soureshjani R. Entrepreneurship in Nursing: a literature review. *J Med Edu Dev*; 18 (1): 359 –78.
25. Christantie Effendy, Maryadi Maryadi, Nurdina Wahyu Hidayati, Ruby Susmawati. Hindering and Supporting Factors of Entrepreneurship Implementation for Nurses: A Narrative Review. *International Journal of Environmental Sustainability and Social Science* 4(3):857-64.
26. Borimnejad, L., Mardani-Hamooleh, M., Khachian, A. Barriers to developing entrepreneurial skills in nursing and midwifery students: a descriptive study. *Entrepreneurship Knowledge*, 2023; 3(6): 47-53.
27. Entrepreneurship in Nursing: an integrative literature review. *Rev Bras Enferm*.2019 Feb;72(suppl 1):289-98. doi: 10.1590/0034-7167-2017-0523.
28. *The Global Entrepreneurship Monitor (GEM) Iran*, 2019.



29. Andrade Ade C, Dal Ben LW, Sanna MC. Entrepreneurship in Nursing: overview of companies in the State of São Paulo. *Rev Bras Enferm.* 2015; 68(1):35-9, 40-4.
30. Ellen M. Sanders, Mireille Kingma. Handbook on Entrepreneurial Practice Nurses creating opportunities as entrepreneurs and intrapreneurs. International Council of Nurses, 3, place Jean-Marteau, CH-1201 Geneva (Switzerland), 2012. ISBN: 978-92-95094-83-3.
31. Martin Lackeus. Entrepreneurship in education, what, why, when, how, 2015. Available from: <https://www.oecd.org/cfe/leed/BGP-Entrepreneurship-in-Education.pdf>.
32. Zampetakis L, Kafetsios K, Bouranta N, Dewett T, Moustakis V. On the relationship between emotional intelligence and entrepreneurial attitudes. *International Journal of Entrepreneurial Behavior & Research.* 2009; 15(6): 598-618.
33. Weeks W, Weinberger S. Evolution in health care business. *Journal of Health Care Finance.* 2004; 31(2): 53-61.
34. Puspita, A.P.W., Castury, D., Suparto, T.A., Hermayanti, Y. and Rahayuningsih, D. Nursing entrepreneurship development: Literature review. *Indonesian Journal of Community Development*, 2021;1(1):8-18.
35. Jahani S, Abedi -H, Fallahi Khoshknab - M, Elahi -N. Perceived entrepreneurial motivators by Iranian nurse entrepreneurs: a qualitative study. *Quarterly Journal of Nursing Management.* 2014;3(3):68-77.
36. Barringer BR, Ireland RD. Entrepreneurship: successfully launching new ventures. Englewood Cliffs, NJ: Prentice Hall 2006.
37. Kuratko DF, Hodgetts RF. Entrepreneurship: theory, process, practice, 6th ed. Taunton, MA: Thomson Learning 2004.
38. Aungst TD, Patel R. Integrating digital health into the curriculum considerations on the current landscape and future developments. *J Med Educ Curric Dev.* 2020;7:2382120519901275.
39. Collins C, Hanges P, Locke EA. The relationship of achievement motivation to entrepreneurial behavior: a meta-analysis. *Human Performance* 2004; 17(1): 95-117.
40. Wilson A, Averis A, Walsh K. The influences on and experiences of becoming nurse entrepreneurs: a Delphi study. *Int J Nurs Pract.* 2003;9(4):236-45.
41. Najafi Kalyani M, Sharif F, Moattari M, Gamshidi N, Karimi S. Decrease in motivation of nursing students: A qualitative study. *Nurs Educ.* 2011;6(21):39-47.
42. Valizadeh S, Hririyani H. Nurses Work Motivation: A Big Challenge for HealthSystem; a Review article. *J Prev Care Nurs Midwifery.* 2015;5(2):56-64
43. Wilson A, Whitaker N, Whitford D. Rising to the challenge of health care reform with entrepreneurial and intrapreneurial nursing initiatives. *The Online Journal of Issues in Nursing* 2014; 17(02): 1-13.
44. Shane S, Locke EA, Collins C. Entrepreneurial motivation. *Human Resource Management Review* 2003; 13(2): 257-79.
45. Lizette Jakobsen, Laura Wachter Qvistgaard, Bettina Trettin, Mette Juel Rothmann. Entrepreneurship and nurse entrepreneurs lead the way to the development of nurses' role and professional identity in clinical practice: A qualitative study. *JAN,* 2021; 77 (10): 4142-55.