

Nursing Students' Entrepreneurial Managerial Readiness; Their Psychological Traits and Intention for Entrepreneurship

Ali Abousoliman⁽¹⁾, Hasan Abualruz⁽²⁾, Mahitab Mohamed Abdelrahman⁽³⁾

(1) Lecturer of Nursing Administration, Faculty of Nursing, Kafr Elsheikh University, Egypt.

(2) Assistant Professor, Faculty of Nursing, Al-Zaytoonah University of Jordan, Amman, Jordan.

(3) Lecturer of Nursing Administration, Faculty of Nursing, Suez Canal University, Egypt.

Abstract

Background: Entrepreneurship is essential for both individuals and all businesses. In contrast to other industrial domains, the nursing field exhibits separate traits unique to entrepreneurial desire. **Aim:** This study sought to assess the correlation between nursing students' entrepreneurial managerial readiness, psychological traits, and their intention for entrepreneurship. **Design:** A descriptive correlational study. **Settings:** The study was conducted at Nursing College, Suez Canal University, Egypt. **Participants:** A convenience sampling of senior nursing students in third and fourth academic years of BSN Program were enrolled (N=274). **Methods:** Entrepreneurial psychological traits questionnaire, entrepreneurial managerial readiness questionnaire, and entrepreneurial intention questionnaire were the three instruments we utilized to gather data. **Results:** Significant positive relationships were found between psychological trait-section one (external influences) with entrepreneurship intention and entrepreneurship readiness among the participants ($r= 0.39, 0.41$) respectively, significant positive relationship between entrepreneurship intention and entrepreneurship readiness ($r=0.44$). **Conclusion:** This study concluded that most nursing students have entrepreneurship psychological readiness and intention, their perception of the external influences of psychological traits are positively significant related to the entrepreneurship intention and readiness. And a significant positive relationship between entrepreneurship intention and entrepreneurship readiness. **Recommendations:** Nursing education leaders must ensure that their students are provided with the opportunity to develop the needed knowledge and skills. University must empower their students psychologically in addition to the academically so that they can compete successfully in entrepreneurship.

Keywords: Entrepreneurship, Entrepreneurship Readiness, Entrepreneurship Intention, psychological readiness, and managerial readiness.

Introduction

In today's economy, entrepreneurship is growing more and more important since it is the primary tool for generating prosperity and combating unemployment. University education is a critical component in the development of the economy knowledge and of the world human capital (Bilan & Apostoiaie, 2023; Nabi, Liñán, Fayolle, Krueger, & Walmsley, 2017). Entrepreneurship has emerged as a viable solution to address a wide range of social, environmental, and economic challenges. It

offers effective remedies to address business-related problems for individuals, organizations, and institutions. With its numerous advantages socially and economically, entrepreneurship has a pivotal role in driving the economic prosperity of nations and societies. In this regard, universities play a vital role in supporting the government's efforts to foster students' entrepreneurial aspirations and encourage them to pursue entrepreneurship as a profession after completing their education (Aga, 2023; Ayo-Sobowale, 2021; Inoubli &

Gharbi, 2022;Gomes, Ferreira, Lopes, & Farinha, 2022; Nooh, 2022).

Entrepreneurship comprises the methodical launch of new products onto the market as well as the spotting, evaluation, and exploitation of development potential (**Tripathi et al., 2022**). Entrepreneurship is a specific type of deliberate activity that can boost economic efficiency, by generating new employment, supporting innovation, and encouraging development (**Gomes et al., 2022**). Entrepreneurship, according to **Bolton & Thompson (2015)** defined it as the capacity to see opportunities and assemble resources to capitalize on them in order to put fresh ideas into practice.

Intention to start a business is regarded as being the most important factor in its future formation. Entrepreneurship is a type of planned behavior. All planned actions have to be deliberate. Intention is the first stage to take into consideration because entrepreneurship is a multistep process that can result in the formation of a business. The intention and viability of a person to become an entrepreneur determine if they have any plans to launch a new business (**Esfandiar, Sharifi-Tehrani, Pratt, & Altinay, 2019; Nguyen, Do, Vu, Dang, & Nguyen, 2019**).

Individual's intention to be engaged in planned entrepreneurial behavior is determined by their mental state and personal background (**Malebana & Mothibi, 2023**). The intention is defined as motivating variables that affect behavior and expresses a person's suggested attempt to engage in planned behavior. Therefore, the likelihood that an act will be performed increases with increasing intention (**Souitaris, Zerbinati, & Al-Laham, 2007**). Entrepreneurial intentions are an indication of the mindset that encourages people to choose self-employment over employer employment (**Ambad & Damit, 2016**). It described as the desire to take part in entrepreneurial activities in order to work for oneself (**Muhammad, Aliyu, & Ahmed, 2015**).

Entrepreneurial intentions play a crucial role in determining the level of entrepreneurial interventions needed. The extent of these interventions varies depending on the duration of one's intentions. Individuals with longer-term intentions tend to engage in a broader range of interventions, aligning with their extended commitment to entrepreneurship. On the other hand, those with shorter-term intentions show a stronger association with seeking Specialist Business Advice as their primary intervention (**Bozward et al., 2023**). On the same line, entrepreneurial readiness is the capacity to display entrepreneurial behavior and engaged in entrepreneurial activities related to self-employment initiatives and new start-ups of organization (**Dohse & Walter, 2010**). Personality traits and behavioral styles are non-cognitive attributes observed in health professionals. Across all health professional groups, there is a common presence of agreeable, cooperative, and self-directed personality traits, often accompanied by lower levels of neuroticism (**Louwen, Reidlinger, & Milne, 2023**). The beliefs of students regarding their potential for success or failure, as well as their intentions to engage in entrepreneurial behaviors, are influenced by the presence of effective entrepreneurial guidance and a positive mindset. When students receive proper support and guidance in entrepreneurship, combined with a positive outlook, they are more likely to develop the confidence and determination necessary to pursue entrepreneurial endeavors (**Mahama et al., 2023**).

Entrepreneurship has the potential to enhance the visibility of the health profession and open new avenues for future health science professionals to make an impact. By embracing entrepreneurial principles and practices, individuals in the health field can create innovative solutions, launch new initiatives, and explore uncharted territories (**Romero-Galisteo et al., 2022**). By providing entrepreneurial care connected to the growth of options and genuine possibilities for people, families, and communities, nurses may contribute to sustainable social

development, which might be a call for the improvement of nursing science. In order to promote and safeguard people's health in all of its many manifestations, these professionals take a proactive approach to assessing the care requirements of the public (Stein Backes et al., 2019).

Additionally, entrepreneurship allows for the reconfiguration of a profession through the development of new ideas, ventures, and services (Al-Sadi, Al-Oweisi, Edwards, Al-Nadabi, & Al-Fahdi, 2015). The independent practice of advising and counselling, the establishment of nursing offices, and home care are advancements made in connection to nursing entrepreneurship. However, there are still untapped opportunities, particularly in respect to the advancement of new technology and inventions. In addition to their services in the fields of administration, consulting, research, and teaching, nurses can also provide direct care as nurse practitioners, advice on risk management strategies, or design and market a product like clothing or software (Copelli, Erdmann, Santos, Lanzoni, & Andrade, 2017; Kim & Lim, 2019). The entrepreneurial spirit of nurses has led to the creation of businesses that offer services like air ambulance services, home health care, temporary staffing, uniforms and patient hospital gowns, pediatric surgical preparation kits, educational toys, corporate employee health programs, elder care, childcare, breastfeeding counselling, chronic pain management, family therapy, parenting classes, and home adaptation for patients with disabilities (Norful, de Jacq, Carlino, & Poghosyan, 2018).

Nurse entrepreneurs need to have a good self-perception, be risk-takers, innovative and creative, self-disciplined, autonomous, self-confidence, goal-oriented, future focus, have integrity, be excellent organizers, be proactive, be optimistic, and be able to deal with failure, ambiguity, and uncertainty (Hayes, Subhan, & Herzog, 2020). The combination of interpersonal communication and entrepreneurial skills

helps nurses to advocate for changes in their workplace and supports team leadership and participation in the changes that need to be made so that everyone works toward this objective. Throughout the nursing undergraduate degree, it is crucial to impart to nursing students knowledge about how to teach these abilities (Copelli et al., 2017; Jahani, Babazadeh, Haghighi, & Cheraghian, 2018).

Through training and lectures, nursing students can get entrepreneurship-related experiences to enhance their intention and prepare for important nursing careers, since college-level education influences entrepreneurial intent in students. Therefore, the initial stage in entrepreneurship is not preparing for it but rather developing a general interest. To foster students' identification of entrepreneurial ideals and ultimately their real execution, entrepreneurial enthusiasm and technical abilities are required at this stage (Lim, Kim, & Kim, 2021; Ratten & Usmanij, 2021).

Significance of the study:

Understanding the entrepreneurial intentions of Health Sciences students can provide valuable insights for developing and implementing university policies that effectively foster and support entrepreneurship. This knowledge can guide efforts to promote an entrepreneurial culture and create an environment conducive to entrepreneurial success within the field of Health Sciences, Entrepreneurial intentions serve as a reliable indicator of future entrepreneurial behavior (Romero-Galisteo et al., 2022). From this point of view, both entrepreneurial readiness and intention are very important for any person to achieve the desire objectives and quality of human and work life. The analysis done by Zhao and Wibowo (2021) shows that the willingness of entrepreneurs to learn from failure and increase their ability to recover is affected by entrepreneurial psychological traits.

So, the study was designed to evaluate the relationship of nursing students' Entrepreneurial managerial readiness and psychological traits on their intention for entrepreneurship. Thus, the following aim and questions were developed:

Aim of the study:

The study sought to assess correlation between nursing students' entrepreneurial managerial readiness, their psychological traits and intention for entrepreneurship.

Research Questions

1. What is the level of Nursing students' Entrepreneurial Managerial Readiness?
2. What is the level of Nursing students' intention for entrepreneurship?
3. Are Nursing students have Entrepreneurial psychological traits?
4. Is there correlation between nursing students' Entrepreneurial managerial readiness, their psychological traits and intention for entrepreneurship?

Subjects and Methods:

Study Design

A correlational descriptive design was used.

Setting

The study was conducted at the Nursing College, Suez Canal University.

Participants: Senior nursing students in third and fourth academic years of BSN program

Sampling type: Utilizing convenient sampling.

Sample size: It was calculated by using the following formula (Thompson, 2012):

$$n = \frac{N \times p(1-p)}{[(N-1) \times (d^2 \div z^2)] + p(1-p)}$$

Where: n stands for the needed sample size (255), N for the population size (750), Z for the required level of confidence at 95% (1.96), d for the required error proportion (0.05), and p for the probability (50%) period, the sample size was 310, when a 20% dropout included. A total of 274 nursing students in the third and fourth years participated in and successfully completed the study.

Instruments:

Tool (I) Entrepreneurial intention questionnaire:

It consisted of two parts:

Demographic Information:

This part was developed to collect participant information regarding their gender, age, academic year, marital status, place of residence, and participation in entrepreneurial training courses.

Entrepreneurial intention Scale:

A 6-item scale developed by Orman (2009) was used to evaluate the intention of senior nursing students towards entrepreneurship. A 5-point Likert rating scale was used, with 1 representing severely disagree, 2 strongly disagree, 3 somewhat disagree, 4 agree, and 5 highly agree. The overall score varied from 6 to 30. Since 15 is the midway mark, with this score or above are more likely to act with strong intentions of starting their own business. 0.922 is Cronbach's alpha value for the scale used in this study.

Tool (II) Entrepreneurial Psychological traits questionnaire:

Entrepreneurial psychological traits questionnaire adopted from Coduras, Saiz-Alvarez, & Ruiz, (2016) to evaluate nursing student's psychological readiness for being an

entrepreneur. 0.967 is the Cronbach's alpha value for the scale used in this study. It is composed of two parts as following:

Part 1. Entrepreneurial Psychological Trait- External Influences that composed of four items, with responses graded as "no" earning a score of zero, and "yes" earning a score of one. The scoring system for this section is as follows: A score of 4 points reflects the maximum level of influences and background. A score of 3 points indicates a high level of influences and background, 2 points represent a medium level of influences and background, 1 point signifies a low influences and background, and 0 points denote the absence of the external influences and background. 0.935 is Cronbach's alpha value for the scale used in this study.

Part 2. Entrepreneurial Psychological Trait- Personal Value that comprised 25 items and employed a three-point scale for assessment, based on the following criteria: 1. Not very significant to you, 2. Not very important to you, and 3. Essential or very important to you. Subsequently, scores were assigned as follows: (1 = 0, 2 = 5, 3 = 10). From a psychological perspective, 0 is the lowest and 250 is the maximum score for individuals who are ready for entrepreneurship. People that score at or above the center point of 125 frequently already have psychological traits for entrepreneurship. 0.90 is Cronbach's alpha value for the scale used in this study.

Tool (III). Entrepreneurial managerial readiness questionnaire:

Entrepreneurial managerial readiness questionnaire adopted **form Coduras, Saiz-Alvarez, & Ruiz, (2016)** to evaluate their managerial readiness for being an entrepreneur. It comprised 23 items and employed a three-point scale for assessment, based on the following criteria: 3. Yes, or somewhat yes, 2. Neither no nor yes, 1. Somewhat not or not. Subsequently, scores were assigned as follows: (1 = 0, 2 = 5, 3 = 10). From a managerial perspective, the

halfway point is at 115 points, therefore people with this score or higher are likely to be prepared for entrepreneurship while people with lower scores are not. 0.880 is Cronbach's alpha value for the scale used in this study.

Validity and Reliability:

To ensure tool validity, five bilingual nursing experts were chosen to assess content and face validity. The panel evaluated various aspects, including relevance to the study's purpose, question clarity, comprehensiveness, ease of understanding, question length, order, bias, and redundancy. Adjustments were made based on their feedback, leading to the final valid tool versions, which were approved by the experts.

To assess the reliability and time limits of the questionnaires, a pilot study was carried out, the questionnaire took between 15 and 20 minutes to complete, the recommendations and appropriate adjustments were made. The pilot study was done with 30 students (10%) of the study population, then they were excluded from the total sample.

Field Work:

Preparatory phase: Running from March to September 2022, this phase encompassed modifying and validating the tools, obtaining ethical approval, conducting a pilot study, and finalizing the tools. Extensive literature review was done using various sources.

Data collection phase: Students in their third and fourth academic years of nursing engaged in research from the middle of September to the middle of October 2022. The last researcher invited the students to set up a time that fit for them, after which they were briefed on the relevance of the study, they asked for help in gathering data, and then each one was handed an envelope with the survey questionnaire. The questionnaire's first page stated the purpose of the investigation and the informed consent, emphasizing that

all responses were optional. The average time each student spent filling out the questionnaire was 17 minutes. Then, the researchers reviewed the questionnaires and discovered that partial responses were taken out of the results. Consequently, 34 questionnaires were eliminated, leaving 276 in total.

Ethical considerations

Before participating, students were required to fill out an informed consent letter, which summarized the objectives of the study, outlined that their responses wouldn't burden them or affect their grades, and ensured anonymity. They had the freedom to withdraw without consequences, and there was no obligation to participate. The research proposal was approved by the College of Nursing, Suez Canal University's research ethics committee in October 2022 (Approval No. 173/9/2022).

Statistical analysis

To evaluate the data, IBM SPSS Statistics (version 23) was employed. The participant profile was shown using frequency and percentage descriptors. The psychological traits, managerial readiness for entrepreneurship and entrepreneurial intention of the students were described using means and standard deviations. For variables having a normal distribution, Student's t-parametric tests and Pearson's correlation were employed. The significance threshold was chosen at 0.05, and the confidence range utilized at 95%.

Results

Table (1) shows that a total of 274 participants were included in the analysis, with the mean age of participants was (M=21.2, SD=1.1), ranging from 19-24 years. 96.4% participants were single, and 65% were female. 51.1% of the participants in the fourth academic year and 59.1% lived in urban areas. While only 13.1% of participants have attended an entrepreneurial course previously.

Table (2) displays the mean entrepreneurship readiness score among the participants was (M=156.0, SD=45.8). Two participants scored the lowest possible score (0), and 38 participants scored the highest possible score (230). Whereas 89.1% of the participants had scores equal to or above the midpoint score of 115.

The mean entrepreneurship intent among the participants was (M=24.1, SD=4.0). Only 14.6% of participants scored low on the entrepreneurship intent scale (6-18), 50.4% of the participants had moderate entrepreneurship intent (19-25), and the remaining participants (35%) had high entrepreneurship intent (26-30).

In the first section of the entrepreneurship psychological trait tool ENPT-(EI), which measures the external influences on individuals' entrepreneurship background, the mean score was (M=1.6, SD= 1.3). A total of 24.1% of participants scored zero (absence of external influences and background), 28.5% of participants scored one (low influences and background), 24.1% participants scored two (medium level of influences and background), 11.7% of participants scored 3 (high level of influences and background), and 11.7% of participants scored 4 (maximum level of influences and background).

In the second section of the entrepreneurship psychological trait tool ENPT (PV), which measures personal values related to entrepreneurship; the scores mean was (M=155.4, SD=83.0). 3.6% of participants scored zero (the lowest possible score), and 9.1% of participants scored 250 (the highest possible score). A total of 67.5% of participants had scores equal to or above the midpoint score (125).

Table (3) shows that there are no significant differences in the entrepreneurship managerial readiness means between participants who resided in rural areas and participants who resided in urban areas, between married and single participants, and

between participants who attended entrepreneurship readiness courses and participants who didn't attend ($P=0.09$, $t= -1.71$; $P= 0.95$, $t=-0.07$; $P= 0.78$, $t=-0.29$) respectively. On the other hand, participants in the third academic year and male participants scored significantly higher entrepreneurship managerial readiness means than participants in the fourth academic year and female participants ($P= 0.01$, $t= 2.78$; $P< 0.001$, $t=3.64$) respectively.

No significant differences in the entrepreneurship intent means between participants who resided in rural areas and participants who resided in urban areas, between married and single participants, and between participants who attended entrepreneurship readiness courses and participants who did not attend ($P=0.39$, $t= 0.87$; $P= 0.09$, $t=1.70$; $P= 0.47$, $t=0.73$) in that order. In contrast, participants in the third academic year and male participants scored significantly higher entrepreneurship intent means than participants in the fourth academic year and female participants ($P= 0.004$, $t= 2.91$; $P= 0.01$, $t=2.72$) in that order.

The were no significant differences in means between participants who resided in rural areas and those who resided in urban areas, between third-year students and fourth-

year students, and between married and single participants ($P= 0.37$, $t=-0.90$; $P=0.20$, $t=1.29$, $P= 0.65$, $t=-0.460$) respectively, In contrast, male participants and those who attended courses previously scored significantly higher scores than female participants and those who did not attend courses ($P=0.01$, $t=2.57$, $P=0.02$, $t=2.37$) respectively.

The only significant difference in personal value means was between the third and fourth-year students ($P=0.03$, $t=-2.15$); students in the fourth academic year had a higher mean ($M=165.9$) compared to students in the third academic year ($M=144.5$).

Table (4) exhibit that Significant positive relationships were found between entrepreneurship psychological trait-section one (external influences) with entrepreneurship intention and entrepreneurship managerial readiness among the participants ($r= 0.39$, 0.41) respectively. Moreover, Significant positive relationship between entrepreneurship intention and entrepreneurship managerial readiness ($r=0.44$). On the other hand, personal value was not significantly correlated with entrepreneurship intention and entrepreneurship managerial readiness.

Table 1. Sample Characteristics (N=274)

Variable	Frequency (%)
Gender	
Male	96(35.0%)
Female	178(65.0%)
Marital Status	
Single	264(96.4%)
Married	10(3.6%)
Academic year	
3 rd year	140(51.1%)
4 th year	136(48.9%)
Residency	
Urban	162(59.1%)
Rural	112(40.9%)
Attending Entrepreneurship Training Course Previously	
Yes	36(13.1%)
No	238(86.9%)

Table 2. Entrepreneurship Managerial Readiness, Entrepreneurship Intention, and Entrepreneurship Psychological Traits (N=274)

Variable	Frequency (%)	Mean	Standard Deviation	Minimum	Maximum
Entrepreneurship Managerial Readiness		156.0	45.8	0	230
Entrepreneurship Intent		24.1	4.0	15	30
Low Intent	40(14.6%)				
Moderate Intent	138(50.4%)				
High Intent	69(35%)				
Entrepreneurship Psychological Trait		1.6	1.3	0	4
External influences					
Absence of Influences	66(24.1%)				
Low Influences	78(28.5%)				
Medium Influences	66(24.1%)				
High Influences	32(11.7%)				
Maximum Influences	32(11.7%)				
Personal Values		155.4	83.0	0	250

Table 3. Differences in Entrepreneurship Managerial Readiness, Entrepreneurship Intention, and Entrepreneurship Psychological Traits Based on Participants' Demographics (N=274)

Variable (N)	En-MR			En-I			En-PT(EI)			En-PT(PV)			
	M	P	t	M	P	t	M	P	t	M	P	t	
Gender			<0.001*	3.64		0.01*	2.72		0.01*	2.57		0.60	-0.53
Male	169.4				25.0			1.9			151.8		
Female	148.7				23.6			1.4			157.4		
Marital Status		0.95		-		0.09	1.70		0.65	-0.46		0.64	-0.46
Married				0.07									
Single	155.0				26.2			1.4			143.5		
	156.0				24.0			1.6			155.9		
Academic year						0.004*	2.91		0.20	1.30		0.03*	-2.15
3 rd year	163.7	0.01*		2.78	24.8			1.7			144.5		
4 th year	148.5				23.4			1.5			165.9		
Residency		0.09		-		0.39	0.87		0.37	-0.90		0.11	-1.60
Ruler				1.71									
Urban	150.3				24.4			1.5			145.8		
	159.9				23.9			1.6			162.1		
Attending EN Course		0.78		-		0.47	0.73		0.02*	2.37		0.19	-1.31
Previously				0.29									
Yes													
No	153.9				24.6			2.1			138.6		
	156.3				24.0			1.5			158.0		

* Significant at $\alpha:0.05$

Table 4. Entrepreneurship Psychological Traits Relationships with Entrepreneurship Managerial Readiness, and Entrepreneurship Intention(N=274)

Variable	Entrepreneurship Managerial Readiness	Entrepreneurship Intention	Entrepreneurship Psychological Traits-External Influences	Entrepreneurship Psychological Traits-Personal Value
Entrepreneurship Managerial Readiness		0.44*	0.41*	
Entrepreneurship Intention	0.44*		0.39*	
Entrepreneurship Psychological Traits-External Influences	0.41*	0.39*		
Entrepreneurship Psychological Traits- Personal Value				

* Significant at alpha: 0.05

Abbreviations:

En-MR: Entrepreneurship Managerial Readiness

En-I: Entrepreneurship Intention

En-PT(EI): Entrepreneurship Psychological Trait- External Influences (Section 1)

En-PT(PV): Entrepreneurship Psychological Trait- Personal Value (Section 2)

M= Mean

SD= Standard Deviation

Discussion:

This study was designed to assess correlation between nursing students' entrepreneurial managerial readiness, their psychological traits and intention for entrepreneurship among senior nursing students in their third and fourth academic years at College of Nursing, Suez Canal University.

First, results showed that external influences perception of the psychological traits are positively significant related to the entrepreneurship intention and readiness. This result is agreed with **Kallas (2019)** who found that the perception of the external environment is positively significant related to the entrepreneurship intention. Additionally, **Budiyono and Setyawasih (2018)** who found that the positive and direct

external influences as family support on entrepreneurial intention of the student. That finding confirm what is known that any changes of the environment constraints can lead to the qualitative and quantitative changes in the work, its formation and of course have significant impacts on the entrepreneurial intention. In the view of **Postigo et al. (2020)**, several personality traits are associated with entrepreneurial behavior, including self-efficacy, autonomy, inventiveness, internal self-control, motivation to achievement, optimism, and stress management.

Second, the outcomes of this study provided evidence that there is a significant positive relationship between entrepreneurship intention and entrepreneurship readiness. These results are entirely consistent with what has been demonstrated by **Schillo et al. (2016)** that entrepreneurial readiness can explain individuals' entrepreneurial intentions to a considerable extent. In addition to entrepreneurship readiness, a variety of national environmental factors influence individuals' entrepreneurial intentions.

Finally, the outcomes of this study implied that majority of nursing students have entrepreneurship psychological readiness and

intention. **Griffin-El (2014)** stated that entrepreneurship gives meaning to activities by discover, analyze, and exploit an opportunity to develop new services and products; it establishes ways and processes that did not exist before. Therefore, entrepreneurial nursing education is becoming an important concept. So, it is important for universities to invest in the development and enforcement of an entrepreneurial culture in higher education in Nursing, as a result, nurses need to be entrepreneurial to maintain and improve individual care, as nurses, they must understand the process of introducing and managing change in order to determine and fulfill our role as valid participants in this process.

Limitations of the study:

The study has met with some limitations. First, the study adopted the descriptive-correlational research design that could not draw causal explanations. Thus, studies with longitudinal designs examining managerial and psychological readiness and intention for entrepreneurship are recommended. Second, the study involved nursing Egyptian University students', indicating that the study findings might have been affected by national culture. Therefore, conducting similar studies on other countries is recommended to confirm the findings of the study. Third, the data were gathered through self-reported measures, which increases the possibility of source bias. In future studies to assure objectivity, multi-source data, including nursing supervisors and staff nurses could be useful.

Implications for Nursing Management and Education:

The findings of this study can affect the nursing management practice in several ways. First, the effect of managerial and psychological readiness; the study results assured that nursing students' managerial readiness and psychological traits is essential in enhancing student nurses' intention for entrepreneurship. Nursing education leaders

must ensure that students are provided with opportunities to develop the needed knowledge and skills. It means quite a bit to consider the entrepreneurial phenomena, to find logical enlistment, and to acknowledge methodical development in entrepreneurial theory to effectively direct entrepreneurial activity of all levels (**Lim, et al., 2021; Guo-fa & Cui-chun, 2011**). Recommendations are made regarding the role of the university in enabling students academically and psychologically so that they can compete successfully in entrepreneurship. Furthermore, the study paved the way to understand and investigate the relationship between nursing students' managerial readiness and psychological traits and their intention for entrepreneurship, that was not studied and clarified in the literature.

Conclusions:

This study concluded that most nursing students have entrepreneurship psychological readiness and intention, the perception of the external influences of psychological traits are significantly and positively related to the entrepreneurship intention and readiness. And a significant positive relationship between entrepreneurship intention and entrepreneurship readiness. Additional knowledge was provided by the study related to the role of student nurses' managerial readiness and psychological traits in boosting student nurses' intention for entrepreneurship. Furthermore, this study explained that psychological readiness is the intervening mechanism through which student nurses' managerial readiness and psychological traits could enhance student nurses' intention for entrepreneurship.

References

- Aga, M. K. (2023).** The mediating role of perceived behavioral control in the relationship between entrepreneurship education and entrepreneurial intentions of university students in Ethiopia. *Journal of Innovation and Entrepreneurship*, 12(1), 32.

- Al-Sadi, A. M., Al-Oweisi, F. A., Edwards, S. G., Al-Nadabi, H., & Al-Fahdi, A. M. (2015).** Genetic analysis reveals diversity and genetic relationship among *Trichoderma* isolates from potting media, cultivated soil and uncultivated soil. *BMC microbiology*, 15(1), 1-11.
- Ambad, S. N. A., & Damit, D. H. D., (2016).** Determinants of entrepreneurial intention among undergraduate students in Malaysia. *Procedia economics finance*, 37, 108-114.
- Ayo-Sobowale, M. O. (2021).** Effect of Entrepreneurship Education on Entrepreneurial Intentions of Undergraduate Students in Selected Universities in South-West of Nigeria. (Ph.D), Kwara State University (Nigeria).
- Bilan, I., & Apostoaie, C. M. (2023).** Unemployment benefits, entrepreneurship policies, and new business creation. *Small Business Economics*, 1-26.
- Bolton, B., & Thompson, J. (2015).** The entrepreneur: The all-in-one entrepreneur-leader-manager: Routledge.
- Bozward, D., Rogers-Draycott, M., Angba, C., Zhang, C., Ma, H., An, F., ... & Beaumont, E. (2023).** How can entrepreneurial interventions in a university context impact the entrepreneurial intention of their students?. *Entrepreneurship Education*, 6(1), 1-23.
- Budiyono, H. and Setyawasih, R. (2018).** Entrepreneurial Intentions among Entrepreneurship Course Students Shaped by Individual Effects and Family Support. In *Proceedings of the 1st International Conference on Recent Innovations (ICRI 2018)*, 2109-2119. DOI: 10.5220/0009939821092119
- Coduras, A., Saiz-Alvarez, J. & Ruiz, J. (2016).** Measuring readiness for entrepreneurship: An information tool proposal, *Journal of Innovation & Knowledge*, (1),2, 99-108.
- Copelli, F. H. d. S., Erdmann, A. L., Santos, J. L. G. d., Lanzoni, G. M. d. M., & Andrade, S. R. d. (2017).** Entrepreneurship in the public university management of nursing: obstacles and strategies.
- Dohse, D., & Walter, S. G. (2010).** The role of entrepreneurship education and regional context in forming entrepreneurial intentions. Retrieved from
- Esfandiar, K., Sharifi-Tehrani, M., Pratt, S., & Altinay, L. (2019).** Understanding entrepreneurial intentions: A developed integrated structural model approach. *Journal of Business Research*, 94, 172-182.
- Gomes, S., Ferreira, J., Lopes, J. M., & Farinha, L. (2022).** The impacts of the entrepreneurial conditions on economic growth: Evidence from OECD countries. *Economies*, 10(7), 163.
- Guo-fa, C., & Cui-chun, W. (2011).** Connotation & evaluation index of entrepreneurship environment in China's entrepreneurship management perspectives. 2011 International Conference on Management Science & Engineering 18th Annual Conference Proceedings, Rome, Italy.
- Hayes, D., Subhan, Z., & Herzog, L. (2020).** Assessing and understanding entrepreneurial profiles of undergraduate students: Implications of heterogeneity for entrepreneurship education. *Entrepreneurship Education*, 3(2), 151-195.
- Inoubli, C. E., & Gharbi, L. (2022).** Entrepreneurial orientation and its crucial role in entrepreneurial intention and behaviour: Case of Tunisian Students. *Entrepreneurship Education*, 5(1), 97-121.
- Jahani, S., Babazadeh, M., Haghghi, S., & Cheraghian, B. (2018).** The Effect of Entrepreneurship Education on Self-Efficacy Beliefs and Entrepreneurial Intention of Nurses. *Journal of Clinical Diagnostic Research*, 12(6).
- Kallas, E. (2019).** Environment-Readiness Entrepreneurship Intention Model: The Case of Estonians and the Russian-Speaking Minority in Estonia. *SAGE Open*, 9(1), 1-15. <https://doi.org/10.1177/2158244018821759>
- Kim, Y. J., & Lim, J. Y. (2019).** Factors influencing entrepreneurial intention of nursing students based on theory of planned behavior. *Journal of Korean Academy of Nursing Administration*, 25(3), 175-185.
- Lim, J. Y., Kim, G. M., & Kim, E. J. (2021).** Predictors of entrepreneurial intention of nursing students based on theory of planned

- behavior. *Journal of multidisciplinary healthcare*, 14, 533.
- Louwen, C., Reidlinger, D., & Milne, N. (2023).** Profiling health professionals' personality traits, behaviour styles and emotional intelligence: a systematic review. *BMC Medical Education*, 23(1), 1-56.
- Mahama, I., Eshun, P., Amos, P. M., Antwi, T., Amoako, B. M., & Eggle, V. E. (2023).** Psychological precursors of entrepreneurial intentions among higher education students in Ghana. *Discover Education*, 2(1), 29.
- Malebana, M. J., & Mothibi, N. H. (2023).** Relationship between prior entrepreneurship exposure and entrepreneurial intention among secondary school learners in Gauteng, South Africa. *Journal of Innovation and Entrepreneurship*, 12(1), 1-20.
- Muhammad, A. D., Aliyu, S., & Ahmed, S. (2015).** Entrepreneurial intention among Nigerian university students. *American Journal of Business Education*, 8(4), 239-248.
- Nabi, G., Liñán, F., Fayolle, A., Krueger, N., & Walmsley, A. (2017).** The impact of entrepreneurship education in higher education: A systematic review and research agenda. *Academy of Management Learning Education*, 16(2), 277-299.
- Nguyen, A. T., Do, T. H. H., Vu, T. B. T., Dang, K. A., & Nguyen, H. L. (2019).** Factors affecting entrepreneurial intentions among youths in Vietnam. *Children Youth Services Review*, 99, 186-193.
- Nooh, M. N. (2022).** A review of the entrepreneurial mindset. *Voice of Academia*, 18(2), 178-198.
- Norful, A. A., de Jacq, K., Carlino, R., & Poghosyan, L. (2018).** Nurse practitioner-physician comanagement: a theoretical model to alleviate primary care strain. *The Annals of Family Medicine*, 16(3), 250-256.
- Orman, S. (2009).** Factors affecting entrepreneurial intentions: an application for university students and university graduate employees. *Marmara Universitesi (Turkey)*.
- Ratten, V., & Usmanij, P. (2021).** Entrepreneurship education: Time for a change in research direction? *The International Journal of Management Education*, 19(1), 100367.
- Romero-Galisteo, R. P., González-Sánchez, M., Gálvez-Ruiz, P., Palomo-Carrión, R., Casuso-Holgado, M. J., & Pintero-Pinto, E. (2022).** Entrepreneurial intention, expectations of success and self-efficacy in undergraduate students of health sciences. *BMC Medical Education*, 22(1), 1-7.
- Schillo, S., Persaud, A., & Jin, M. (2016).** Entrepreneurial readiness in the context of national systems of entrepreneurship. *Small Business Economics An Entrepreneurship Journal*, 1.1. DOI 10.1007/s11187-016-9709-x
- Souitaris, V., Zerbinati, S., & Al-Laham, A. (2007).** Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? The effect of learning, inspiration and resources. *Journal of Business venturing*, 22(4), 566-591.
- Stein Backes, D., Forgiarini, A. R., Dutra da Silva, L., Souza, M. H. T., Stein Backes, M. T., & Büscher, A. (2019).** Nursing entrepreneur care in social inequity contexts. *Revista brasileira de enfermagem*, 73(4).
- Thompson, S. K. (2012).** *Sampling*: John Wiley & Sons.
- Tripathi, M. A., Tripathi, R., Sharma, N., Singhal, S., Jindal, M., & Aarif, M. (2022).** A brief study on entrepreneurship and its classification. *International Journal of Health Sciences*, 6.