EVALUATION OF KNOWLEDGE AND FACTORS RELATED TO ENTREPRENEURSHIP OF YOUNG PHARMACISTS IN THE MEKONG DELTA IN 2023

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ABSTRACT

Background: *The term "Entrepreneurship" refers to innovative, high-risk, and rapidly expanding business ventures that frequently need a substantial cash source. Most of the initial funding comes from individual savings or family's financial support. The process of becoming an entrepreneur starts with identifying an opportunity and ends with creating a plan to take advantage of it. However, it has never been straightforward or simple to start a firm, particularly in the pharmaceutical sector. In order to initiate and maintain a profitable business, pharmacists must train themselves with business startup expertise.* ***Objectives:*** *To evaluate the knowledge and factors affecting the entrepreneurship of young pharmacists in the Mekong Delta from May 2023 to November 2023.* ***Material and methods:*** *To ascertain the viewpoints of 815 young pharmacists aged from 20 to under 40, this study used a cross-sectional descriptive design and conducted interviews with them, basing on the features of the research item, obtaining knowledge about entrepreneurship and identify some relevant elements.* ***Results:*** *Women made up 69.1% of the young pharmacist workforce, including the majority of college pharmacists (46.5%), university pharmacists (43.1%), and those with master or doctoral degrees (10.4%). 80% were familiar with entrepreneurship, and 90.1% believed that, in order to launch a successful business, entrepreneurs had to have a thorough understanding of the industry in which they planned to operate. 77.8% had high knowledge scores. Regard the total of knowledge scores by characteristics groups, it has been clearly seen in the study that the gender, economic, and educational variables had an impact on general knowledge ($p<0.05$); in which the college pharmacist category (429.76), along with the rich and the well-off (429.76) had the highest average rankings among the characteristic categories.* ***Conclusions:*** *The majority of young pharmacists in the Mekong Delta were aware of and fairly knowledgeable about entrepreneurship.*

Keywords: *entrepreneurship, startup information, Mekong Delta.*

I. INTRODUCTION

Entrepreneurship is popularly a topic with different concerns from the people, especially the surveyed young; however, at any age when starting a business, businesspeople will encounter various issues. For the youngsters starting a business, it is essential to have knowledge and understand the factors affect the start-up. However, entrepreneurship-related knowledge and skills are the keys to enhance a range of health services in the community and the hospital sectors. In the United States, pharmacies have also adopted community services for improving patient medication adherence such as medication management programs that allow pharmacists to advise patients about medications [1]. In Vietnam, the proportion of higher education institutions tailoring entrepreneurship as a mandatory or optional subject increased from 30% at the end of 2020

to 33% of training institutions at the end of 2021, with a minimum accreditation of 1 credit/subject; 75% of the training establishments have organized short-term skill-training activities for students in entrepreneurship classes, and 100% of training establishments have built programs to inspire students through entrepreneurship forums and the weeks of civic activities at the beginning of the term [2]. In the pharmaceutical industry, starting a business has hardly been an easy task, and is frequently a challenge for young pharmacists. In fact, in the Mekong Delta, there are still few studies evaluating the entrepreneurship-related knowledge and factors for pharmacists to start a business. As a result, the study was carried out with the two goals: (1) Assessing the entrepreneurship knowledge of young pharmacists; (2) Identify entrepreneurship-related factors affecting young pharmacists in the Mekong Delta in 2023.

II. MATERIALS AND METHODS

2.1. Research subjects: Young pharmacists aged from 20 to under 40 years old, residing or temporarily living in some Mekong Delta provinces and voluntarily participate in the study from May 2023 to November 2023.

2.2. Research methods

Research design: Use the cross-sectional descriptive study; data were collected through a pre-prepared questionnaire (the print or google form).

Sample size: To assess the knowledge base of early-career pharmacists, the sample size calculations were determined using the following formula:

$$n = \frac{Z^2_{1-\alpha/2} \cdot p(1-p)}{d^2}$$

Where:

Z: 1.96 corresponds to a 95% confidence level; d: The margin of error is set at 0.05; p: Represents the proportion of young pharmacists with knowledge of startups. Given the absence of prior research, p was conservatively estimated at 0.5.

Given the absence of comparable studies within the Vietnamese context, a conservative value of p = 0.5 was utilized. Resultantly, the calculated sample size (n) was determined to be 384. However, being a part of a research carried out on the entrepreneurial intention of young pharmacists via a set of questions about achievement needs (3 questions), attitude (7 questions), subjective norms (8 questions), perception of behavioral control (8 questions), challenges (12 questions), and intention (5 questions). The sample size must be sufficient to conduct the EFA test. Serena Carpenter stated that the ideal observation/variable ratio is 5:1, meaning that one measurement variable needs at least five observation samples [3].

Subjects-to-Factors Ratio: Another suggestion is to have at least 100 subjects per factor being extracted [4]. This helps ensure adequate statistical power for identifying meaningful factor structures. With six independent factors, it is minimally required 600 samples. In this study, we collected 815 samples, which is in line with conditions. Thus, the study sample size was renewed and summarized into one questionnaire totaling 14 completed questions to assess knowledge startup, each scored based on correctness.

Due to the discrepancy in minimum required sample sizes for the two research objectives (815 and 384 samples, respectively), the decision was made to adopt the larger sample size of 815 for both objectives.

Sampling method: Convenient random sampling in accordance with sampling standards in the 13 Mekong Delta provinces.

Research content: Assess the knowledge and factors related to entrepreneurship of young pharmacists in the Mekong Delta 2023 through a set of interview questions, including the 14 knowledge questions with three options (True, False, Not Know): the True was given 1 point, and the False/Not Know were given 0 point.

Total general knowledge score ranges from 0-18 points, classified into the three levels: Poor knowledge: Score less than 50% of total score (less than 9 points); Average knowledge: Score ranges from 50% to 70% of the total score (from 9 to 12 points); Good knowledge: Score over 70% of total score (over 13 points) [5].

Identify the factors, related to starting a business of the research subjects, such as gender, economy, education, economic status, father's occupation, mother's occupation, salary and current residence.

Techniques used in research: We used SPSS 20.0 and Excel 2010 for data analysis. Frequencies and percentages were used to express categorical variables. The standard deviation and mean were used to display continuous values. The respondents' characteristics determined the total general knowledge score, which was presented using the Interquartile range (IQR) and Average rank. P-values below 0.05 were regarded as significant.

III. RESULTS

3.1. General information about research subjects

Table 1. General information about research subjects

Characteristics		Frequ-ency (n)	%	Characteristics		Frequ-ency (n)	(%)
Gender	Male	252	30.9	Father's occupati-on	Private business owner	73	9.0
	Female	563	69.1		Small business people	43	5.3
Current residence	Urban	316	38.8		Farmers	340	41.7
	Countryside	499	61.2		Workers	18	2.2
Economic status	Wealthy - Well-off	379	46.5		Government officer	125	15.3
	Sufficient	351	43.1		Job seekers	0	0
	Financially Underprivileged	85	10.4		Retired	1654	20.1
Education	Vocational/ College Pharmacists	379	46.5		Others	52	6.4
	University Pharmacist	351	43.1	Mother's occupati-on	Private business owner	65	8.0
	Master's/Ph.D (Postgraduate) Pharmacist	85	10.4		Small business people	65	8.0

Characteristics		Frequ-ency (n)	%	Characteristics		Frequ-ency (n)	(%)
Occupation	Pharmacist at Hospital Pharmacy	199	24.4		Farmers	394	48.3
	Clinical Pharmacist	29	3.6		Workers	10	1.2
	Pharmacist at Pharmacy/Drugs tor-e Counter	347	42.6		Government officer	50	6.1
	Pharmacy Technicians	45	5.5		Job seekers	0	0
	Factory Pharmacist	8	1.0		Retired	162	19.9
	Pharmacists in other government agencies	49	6.0		Others	69	8.5
	Postgraduates in Pharmacy	42	5.2	Salary	Under 3 million VND	88	10.8
	Job seekers	96	11.8		3 – 5 million VND	345	42.3
	Others	0	0		> 5 - 10 million VND	315	38.7
					> 10 – 20 million VND	53	6.5
					> 20 – 40 million VND	9	1.1
					> 40 million VND	5	0.6

Among 180 patients at drug retailing establishments, women made up the majority at 69.1%. The majority of pharmacists in the Mekong Delta in the survey had college pharmacist qualifications (46.5%). Most of the occupations of pharmacists in the survey were Pharmacist at pharmacy/drugstore counter (42.6%), the highest salary range was from 3 million to 5 million, accounting for 42.3%.

3.2. Results of the survey on entrepreneurial knowledge of the young pharmacists in the Mekong Delta in 2023

Table 2. Entrepreneurial knowledge of pharmacists

Questions	True		False	
	n	%	n	%
Entrepreneurship is building a new business.(T)	649	79.6	166	20.4
Entrepreneurship is the process of creating a new field of activity for oneself. (T)	670	82.2	145	17.8
Entrepreneurship is a purposeful activity, aimed at generating, maintaining or optimizing profits by producing and proposing new business ideas. (T)	87	10.7	728	89.3
Entrepreneurship and Startup are the same concept. (T)	609	74.7	206	25.3

Questions	True		False	
	n	%	n	%
Entrepreneurship helps increase employment and contributes to solving unemployment. (T)	608	74.6	207	25.4
Entrepreneurship contributes to lessening the load on the economy, social allowances and helping the country develop more. (T)	748	91.8	67	8.2
You must have a thorough understanding of the knowledge related to the field in which you plan to start a business in order to do it successfully. (T)	734	90.1	81	9.9
Market research and strategic planning skills are necessary for startup. (T)	667	81.8	148	18.2
Knowledge and experience from successful local and international entrepreneurs are necessary for you to start a business. (F)	731	89.7	84	10.3
Knowledge and skills combined with experience help you recognize and respond to business opportunities more effectively. (T)	642	78.8	173	21.2
Experience and skills have a beneficial impact on business ability to raise money. (T)	597	73.3	218	26.7
A business outlook is a combination of a business plan and options for self-employment. (T)	637	78.2	178	21.8
Entrepreneurial orientation is a combination of self-assessment of business interests, business skills and business characteristics. (T)	712	87.4	103	12.6
A wide network of relationships is a good condition for you to start a business. (T)	712	87.4	103	12.6

** The responses for Not Know was none during the survey.*

According to Table 2, people who are aware of starting a business is 80.0% while 20.0% of the surveyed individuals are unaware of this process. Most people though that start a business successfully need to have thorough knowledge related to the field; in which those being about to start up accounted for 90.1%, around 9 times as many as those who thought starting up was not necessary.

Table 3. Overall score for general knowledge

The classification results					
		Frequency	Percentage	Percentages are only calculated on valid values	Cumulative percentages are only calculated on valid values
Value	Poor	77	9.4	9.4	9.4
	Average	104	12.8	12.8	22.2
	Good	634	77.8	77.8	100.0
	Total	815	100.0	100.0	

Most pharmacists had good knowledge or higher (77.8%). There were 104 people with average knowledge (12.8%) fewer than the people with good knowledge (77.8%). The lowest percentage (9.4%) was represented by the 77 consumers with poor knowledge.

3.3. Factors related to pharmacists' knowledge of entrepreneurship

Table 4. Total general knowledge score according to the characteristic of the subjects

Characteristics		Interquartile range (IQR)	Average rank*	P
1. Consumer characteristics				
Gender	Male	16 (5)	377.38	0.011
	Female	16 (3)	421.71	
Economic status	Wealthy - Well-off	16 (1)	429.76	0.041
	Sufficient	16 (4)	387.36	
	Financially Underprivileged	16 (2)	396.23	
Education	Vocational/College Pharmacists	16 (1)	429.76	0.041
	University Pharmacist	16 (2)	387.36	
	Master's/Ph.D (Postgraduate) Pharmacist	16 (1)	396.23	
Occupation	Pharmacist at Hospital Pharmacy	16 (2)	424.48	0.303
	Clinical Pharmacist	16 (5)	391.22	
	Pharmacist at Pharmacy/Drugstore Counter	16 (3)	415.86	
	Pharmacy Technicians	15 (5.50)	344.67	
	Factory Pharmacist	11.50 (3.50)	395.00	
	Pharmacists in other government agencies	16 (1.50)	440.50	
	Postgraduates in Pharmacy	16 (4.25)	386.25	
	Job seekers	16 (4)	374.18	
	Others	0 (0)	0	
Father's occupation	Private business owner	16 (2.50)	416.12	0.978
	Small businesspeople	16 (3)	420.62	
	Farmers	16 (2.75)	411.45	
	Workers	16 (1.75)	399.22	
	Government officer	16 (5.50)	392.96	
	Job seekers	0 (0)	0	
	Retired	16 (4)	401.72	
	Others	16 (1.75)	422.63	
Mother's occupation	Private business owner	16 (5)	397.45	0.701
	Small businesspeople	16 (4.50)	400.06	
	Farmers	16 (2)	410.41	
	Workers	11 (0.50)	472.00	
	Government officer	16 (5)	368.21	
	Job seekers	0 (0)	0	
	Retired	16 (3)	404.46	
	Others	16 (1.50)	439.51	
Salary	< 3 million VND	16 (7)	360.97	0.201
	3– 5 million VND	16 (2)	416.10	
	> 5 – 10 million VND	16 (2)	418.71	
	> 10– 20 million VND	16 (6.50)	369.74	
	> 20 – 40 million VND	11 (5)	359.83	
	> 40 million VND	11 (7)	494.50	

Characteristics		Interquartile range (IQR)	Average rank*	P
2. Facility characteristics in survey				
Living area	Urban	16 (4)	399.11	0.383
	Countryside	14 (2)	413.63	

** The average rank was the average value of the ranks for all observations in each sample. Whichever group's value score was higher, that group had more influence on knowledge.*

Regarding the total general knowledge score according to the characteristics of the research subjects, gender, finance and education had $p<0.05$, so there was a difference between these characteristics and these all affect general knowledge. From table 3 section 3.3, the finance of the group classified as wealthy- well-off (429.76) and the vocational/college diploma in pharmacy group (429.76) had the highest rate among the characteristic groups. Therefore, these two groups had more influence on knowledge.

IV. DISCUSSION

4.1. The general characteristics of the research subject

Entrepreneurship is defined as an opportunity-determining process in the market, action-taking plans and resources needed to exploit long-term opportunities personal interests. According to Al-Harrasi et al., entrepreneurship is "the process of creating something new valuable by spending the necessary time and effort, assumes the accompanying financial, psychological and social risks, and receive profit from it" [6]. The entrepreneurial spirit is crucial for the development and welfare of society because it creates jobs, promote and shape innovation, and accelerate it structural changes in the economy. Research results showed that a considerable disparity between 2 gender, females made up the majority at 69.1% and males only 30.1%. This can be explained that women may exhibit entrepreneurship traits such as problem-solving skills, adaptability, empathy and emotional intelligence, creativity… than men. Traditionally, males have been more likely than women to pursue entrepreneurship, but this pattern is shifting, suggesting cultural movements towards greater gender parity and equality in thought. Next is the educational level, where 46.5% are at the college/intermediate level. This suggests that a considerable number of pharmacy professionals have attained at least a moderate level of education within their field. Moreover, a substantial portion of these pharmacists work in pharmacies or drugstores, comprising 42.6% of the surveyed population. It highlights the significance of these establishments as primary workplaces for pharmacists. Additionally, the highest salary range reported falls between 3 million to 5 million VND, representing 42.3% of respondents. This indicates the prevailing salary range among pharmacists surveyed, emphasizing the financial landscape within the profession.

4.2. The entrepreneurial knowledge of young pharmacists in the Mekong Delta

Entrepreneurship in pharmaceutical practice tends to be popular because it involves innovation and creativity for pharmacists, with schools emphasizing risk-taking, creativity, and innovation in pharmacy education. [7]. Our research shows that 77.8 % young pharmacists today had good knowledge about entrepreneurship, and that the remaining 22.2% had average or poor knowledge. It seems that young pharmacists with self-sufficient startup knowledge and understanding about startups can help guide the future, which is a good sign given the current situation of fear of challenges and failure. In addition, both pharmacy education and pharmacists need to recognize the demand for entrepreneurship and the identification and ability to take advantage of opportunities to create goods and

services to meet today's challenges [8]. According to research on the decisive factors affecting young people in preparing to start a business in East Java, Indonesia, the attitude towards entrepreneurship and entrepreneurial intention of young people in Indonesia are determined by several variables, such as the need for achievement, risk perception, and locus of control. Moreover, the results of this study have confirmed a close relationship between the attitude towards entrepreneurship and motivation to start up among young people. This study suggests that state-owned organizations and universities should pay attention to entrepreneurship programs to promote young entrepreneurs [9]. Researching the knowledge of young pharmacists aims to evaluate their level of knowledge, create premises and conditions for them to develop that spirit of entrepreneurship, start businesses, develop businesses and create jobs; which contributes to economic growth and development [10].

4.3. Factors related to entrepreneurship of young pharmacists in the Mekong Delta

The results showed that the factors of gender, financial status, and education have $p<0.05$, which are statistically significant. Thus, in this particular context, it suggests that education, gender, and financial standing have a significant role in influencing the probability that young pharmacists will pursue startups. Given their importance, it is likely that these variables have a substantial impact on how young pharmacists behave or intend to behave in an entrepreneurial manner. In general, research shows that women have a higher intention to start a business than men. According to Varghese and Hassan, women desired to establish a business more than men because women were more creative and had ideas - new for a niche business [11]. In terms of education, subjects with vocational/college degrees had a higher intention to start a business than subjects with other qualifications in the study. Economic factors were also one of the factors related to entrepreneurship. According to research by Punam Bhattarai, financial issues were one of the factors that had a significant influence on the the development of young startups ($p=0.028$) [12]. According to research on the impact of age differences among young entrepreneurs in China, entrepreneurial intention was influenced by youth passion, opportunities, family and society. Young people had stronger passion and less stress from family and society than older youth, so their motivation was high and they liked to be self-employed (Schmitt-Rodermund & Vondracek, 2002). The passion for entrepreneurship faded with age, and stress increased with life, which then affected entrepreneurial aspirations and behavior [13].

V. CONCLUSION

The study evaluated the knowledge and factors related to entrepreneurship of young pharmacists in the Mekong Delta in 2023 and from the results showed that all of them had good knowledge about entrepreneurship. However, there were still some pharmacists who still did not understand much about starting a business, which showed the importance of educating entrepreneurship knowledge right from the undergraduate stage. At the same time, research shows that factors related to starting a business for pharmacists includeed a higher proportion of women than men, and people with wealthy and well-off economic backgrounds had more intention to start a business, presenting more information. Education level was also one of the factors affecting entrepreneurship. From the prompting conclusion, we can come up with measures to contribute to supporting and developing the entrepreneurial spirit of pharmacists in the Mekong Delta in particular and Vietnam in general.

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