

# MOTIVES DETERMINING THE CHOICE OF NURSING MAJOR BEFORE AND DURING THE COVID-19 PANDEMIC

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A. Study design/planning • B. Data collection/entry • C. Data analysis/statistics • D. Data interpretation • E. Preparation of manuscript • F. Literature analysis/search • G. Funds collection

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## ABSTRACT

**Introduction:** Healthcare workers are facing many challenges during the COVID-19 pandemic. Therefore, especially during the pandemic, the appropriate motivation for candidates to choose the profession of nurse is extremely important due to the high social expectations.

**Aim of the study:** To present the motives that determined the choice of the profession of nurse among people undertaking studies.

**Material and methods:** The research was conducted on a group of 321 nursing students at first- and second-degree studies in two Polish universities.

**Results:** The research shows that the largest group, i.e. 40.5%, came from rural areas. As the most common reason for choosing that field of study, respondents indicated having an interest in the profession, and a willingness to help others and expand their knowledge (57.9%). 75% of respondents stated that the COVID-19 pandemic makes it easier to find a job.

**Conclusions:** The main motive for choosing the profession of nurse is having an interest in the profession and a desire to help others regardless of the pandemic. A factor that often motivated students to choose the profession is the loved ones practicing the profession of nurse. In the surveyed group of nursing students, the COVID-19 pandemic did not directly affect the choice of the field of study (profession). Positive communication in the media about the enormous importance of nurses' professional activity for society is the basic element building interest in this profession among teenagers.

**Key words:** nursing, COVID-19 pandemic, SARS-CoV-2 coronavirus.

## INTRODUCTION

A pandemic is an epidemic of large size occurring simultaneously in many countries, on different continents. The cause of the pandemic may be globalization, which undoubtedly facilitates the spread of the disease. To prevent its spread, national governments take ad hoc measures that are not always sufficient [1, 2].

The COVID-19 epidemic was caused by the SARS-CoV-2 coronavirus. It began in November 2019 in the city of Wuhan, China. On 11 March 2020, the World Health Organization (WHO) recognized it as a pandemic [3].

Healthcare workers have been facing numerous challenges during the COVID-19 pandemic. They are confronted with stressors and risks, in terms of both mental and physical health [4].

Nursing is a word that defines various types of tasks and professional activities of nurses as well as the science, knowledge, and technology related to these activities [5]. The high requirements the society imposes on people practicing the nursing profession result from the importance attributed to health and life. These requirements include both the high level of services provided and the ethical aspect of the profession, because human life is deemed the highest value [6, 7]. Proper motivation guiding candidates to choose the nursing profession is of vital importance due to high social expectations. It is crucial to skillfully combine personal goals and social motivations. Choosing the nursing profession requires a mature decision, because the provision of attentive nursing care is of great social importance [8]. Numerous researchers have already assessed the determinants of the choice of this profession [9-11]. However, the

period of the current COVID-19 pandemic is singular. Therefore, it appears significant to verify whether the current factors motivating young people to study nursing differ from those from before the pandemic.

## AIM OF THE STUDY

This paper aims to present the motives that have determined the choice of the profession of nursing among people undertaking studies. Through the analysis of variables, the research seeks to review which of the factors have determined the choice of the direction of education and whether they have changed due to the COVID-19 pandemic.

## MATERIAL AND METHODS

The research was conducted on a group of students of nursing undergraduate and graduate programs. The respondents, 305 women and 16 men, were selected from people studying at the Medical University of Lodz (147 people) and the President Stanisław Wojciechowski State Higher Vocational School in Kalisz (174 people).

The criterion for participation in the study was being enrolled in the nursing program and giving voluntary consent. The study was conducted anonymously using Microsoft Forms in December 2021.

The research tool was an original questionnaire developed specifically for the needs of the research, and it included 17 closed questions. The initial questions concerned the respondents' gender, age, place of residence and studies (Łódź, Kalisz), and in which year of the nursing program they were currently enrolled. The next questions concerned the reason for choosing this field of study and the source of information about nursing studies. In the further part of the questionnaire, the questions dealt with the COVID-19 pandemic. They concerned, among others, the impact of the COVID-19 pandemic on the choice of the field of study, whether the pandemic makes it easier to find a job in this profession, as well as the fear of working during the pandemic and the possibility of infecting relatives with the SARS-CoV-2 virus. The questionnaire also included questions about students' opinions on society's attitudes towards nurses, the importance of salary increases, and satisfaction with their choice of field of study/profession. Each of the respondents was asked to choose only one answer that was, in his/her opinion, the most important.

For the purposes of this study, all respondents were divided into 2 groups: people who started the nursing program before the pandemic (i.e. students of the 3<sup>rd</sup> year of undergraduate studies and 1<sup>st</sup> and 2<sup>nd</sup> years of graduate studies) and those who began during the pandemic (i.e. students of the 1<sup>st</sup> and 2<sup>nd</sup> years of undergraduate studies). The first group

accounted for 27% of all students starting the education process before the pandemic was announced, and the second group accounted for 33.6% of those choosing this field of study during the pandemic.

## Data analysis

Data were verified for normality of distribution and equality of variances. Student's *t*-test and the  $\chi^2$  test (on a  $2 \times 2$  table) were used to compare the 2 groups. Confidence intervals (CI) with 95% confidence limits were calculated. Results are presented as mean and standard deviation. The limit of significance was set at  $p < 0.05$  for all analyses.

Statistical analysis was performed using Statgraphics Plus software.

## RESULTS

The group of students starting education before the COVID-19 pandemic was more than 4 years older than those beginning studies during the pandemic (Table 1). The ratio of women to men in the group of people admitted to the program before and during the pandemic did not show statistically significant differences. The largest group, i.e. 40.5% of the students, were from rural areas, and the least numerous group (7.5%) were from cities of 100 to 500 thousand inhabitants. The study showed a statistically significant relationship between the groups of students surveyed and their place of residence. Among people living in a city of more than 500 thousand inhabitants, students who chose the field of study before the pandemic dominated. On the other hand, respondents living in small towns (less than 100 thousand inhabitants) mostly started their education during the pandemic. Most of the surveyed students who started the cycle of education before the pandemic were from the Medical University of Lodz, while most respondents who began their program during the pandemic studied at the Kalisz school. A relationship between research groups and the course and semester of education has been demonstrated.

The respondents indicated interest in the profession as the most common reason for choosing this major, and their motivations ranged from the desire to help others to expanding knowledge (Table 2). The large number of job offers was the second important reason for choosing the analysed field of study. The remaining reasons were cited by the respondents sporadically (5% or less). A statistically significant relationship was shown between the groups of surveyed students and the reason for choosing this field of study in terms of having interest in the profession. Students starting the cycle of education during the COVID-19 pandemic indicated interest in the nursing profession as a reason for choosing this

**Table 1.** Characteristics of respondents depending on enrolment before and during the COVID-19 pandemic ( $N = 321$ )

Parameter	Students starting their education cycle before the COVID-19 pandemic ( $n = 124$ )	Students starting their education cycle during the COVID-19 pandemic ( $n = 197$ )	All students participating in the study ( $N = 321$ )	Statistical significance
Age (years of life)	29.5 $\pm$ 10.1	25.1 $\pm$ 7.0	27.8 $\pm$ 9.3	$t = 4.3$ $p < 0.001$
Men, $n$ (%)	4 (3.2)	12 (6.1)	16 (5.0)	NS
Place of residence, $n$ (%)				$\chi^2 = 16.8$ $p = 0.001$
(a) City				
More than 500 thousand inhabitants	35 (28.2)	29 (14.7)*	64 (19.9)	
From 100 to 500 thousand inhabitants	12 (9.7)	12 (6.1)	24 (7.5)	
Less than 100 thousand inhabitants	26 (21)	77 (39.1)*	103 (32.1)	
(b) Rural area				
	51 (41.1)	79 (40.1)	130 (40.5)	
Place of study, $n$ (%)				$\chi^2 = 49.9$ $p < 0.001$
Kalisz	36 (29)	138 (70)	174 (54.2)	
Łódź	88 (71)	59 (30)	147 (45.8)	
Level of study, $n$ (%)				$\chi^2 = 321$ $p < 0.001$
(a) Before the pandemic				
1 <sup>st</sup> year of undergraduate studies	0 (0)	119 (60.4)	119 (37.1)	
2 <sup>nd</sup> year of undergraduate studies	0 (0)	78 (39.6)	78 (24.3)	
(b) During the pandemic				
3 <sup>rd</sup> year of undergraduate studies	37 (29.8)	0 (0)	37 (11.5)	
1 <sup>st</sup> and 2 <sup>nd</sup> years of graduate studies	87 (70.2)	0 (0)	87 (27.1)	

\* Statistical significance ( $p < 0.05$ ) in relation to the group of students starting the education cycle before the COVID-19 pandemic. NS – statistically insignificant differences

field of study more often than those who began the study program earlier. The least frequently cited (less than 2%) reason (among all) for choosing this major was the amount of nurses' remuneration. At the same time, approx. 60% of students answered affirmatively to another question directly related to the impact of salary increase on the increased interest in the nursing profession among candidates, regardless of the group.

Differences were shown between the analysed groups of students and the source of information about the major in nursing. The dominant source of obtaining information was one's own search for it. This form of acquiring knowledge about studies concerned to a greater extent the respondents who started their studies before the pandemic than those who began after its onset. Every fifth participant of the study learned about the field of study from family or relatives, and there was a nurse in the family of every second respondent. As opposed to the respondents who began their studies before the pandemic onset, students starting the cycle of education during the pandemic tended to gain knowledge about the nursing profession from the media. At the same

time, only 1 in 10 respondents confirmed the impact of the COVID-19 pandemic on the choice of their field of study/profession. In this respect, no statistically significant differences were found in the analysed groups of students.

Almost all the surveyed students were satisfied with their choice of profession. However, a much larger group of people satisfied with their choice comprised respondents who started their education during the pandemic.

According to 2/3 of the respondents, the pandemic makes it easier to find a job as a nurse (Table 3). One in 5 respondents believes that the current attitude of society and media coverage motivate people to work as nurses. At the same time, it has been shown that students who began studies during the COVID-19 pandemic, rather than those who started their programs earlier, are more likely to believe that an important factor motivating nurses to work in the profession is their increased authority in society.

Almost half of the cohort is concerned about the risk of working with a patient with the SARS-CoV-2 virus, and more than 3/4 of the respondents are concerned about infecting a loved one while working as

**Table 2.** Characteristics of respondents' answers in terms of the reason for choosing the major, the source of information, and the level of satisfaction with the decision made depending on enrolment before or during the COVID-19 pandemic (N = 321)

	Students starting their education cycle before the COVID-19 pandemic (n = 124)	Students starting their education cycle during the COVID-19 pandemic (n = 197)	All students participating in the study (N = 321)	Statistical significance
Reason for choosing the major (nursing profession), n (%)				$\chi^2 = 17.5$ $p = 0.02$
(a) Interest in the nursing profession	58 (46.8)	128 (65)*	186 (57.9)	
(b) A large number of job offers in wards of various characteristics	24 (19.4)	26 (13.2)	50 (15.6)	
(c) Family suggestions	8 (6.4)	8 (4.1)	16 (5)	
(d) Lack of other possibilities (failure to enter another study program)	9 (7.3)	5 (2.5)	14 (4.3)	
(e) The possibility of going to work in another country	6 (4.8)	5 (2.5)	11 (3.4)	
(f) Own and/or relatives' own and/or relatives' health experience in nursing	3 (2.4)	5 (2.5)	8 (2.5)	
(g) The possibility of scientific development	2 (1.6)	5 (2.5)	7 (2.2)	
(h) The amount of remuneration	5 (4)	1 (0.5)	6 (1.9)	
(i) Other (including the location of the university)	9 (7.3)	14 (7.2)	23 (7.2)	
The increase in remuneration increased students' interest in the nursing profession: Yes, n (%)	79 (63.7)	108 (54.8)	187 (58.3)	NS
Source of knowledge about the studies, n (%)				$\chi^2 = 21.4$ $p < 0.001$
Own research on the major	63 (50.8)	75 (38.1)*	138 (43)	
Family/loved ones	28 (22.6)	42 (21.3)	70 (21.8)	
Friends/colleagues	20 (16.1)	42 (21.3)	62 (19.3)	
Media	1 (0.8)	27 (13.7)*	28 (8.7)	
Participation in open days/classes	7 (5.7)	4 (2)	11 (3.4)	
Other	5 (4)	7 (3.6)	12 (3.8)	
In the family and/or among loved ones there are nurses: Yes, n (%)	61 (49.2)	128 (65.6)	189 (59.2)	$\chi^2 = 7.8$ $p = 0.005$
The occurrence of the COVID-19 pandemic influenced the choice of major (profession): Yes, n (%)	9 (7.3)	25 (12.7)	34 (10.6)	NS
The student is satisfied with the choice of major (profession): Yes, n (%)	100 (80.6)	186 (94.4)	286 (89.1)	$\chi^2 = 13.5$ $p < 0.001$

\* Statistical significance ( $p < 0.05$ ) in relation to the group of students starting the education cycle before the COVID-19 pandemic. NS – statistically insignificant differences

a nurse. The study has shown that a group of people who started studying nursing before the pandemic experienced the described concerns to a greater extent than those who began their education during the pandemic. At the same time, it should be emphasized that students pointed to these risks despite the fact that most of them declared having undergone training in the use of personal protective equipment applicable during the provision of nursing care for a patient with the SARS-CoV-2 virus. The study did not show statistically significant differences in terms of conducting the analysed training depending on the enrolment of students.

In the surveyed group, most people believe that greater job satisfaction would result in higher remuneration (Table 4). Simultaneously, it has been shown that this aspect was more frequently indicated by students enrolled before the pandemic rather than those who started their programs after its onset. The second factor that could increase respondents' interest in choosing this field of study and the nursing profession was the respect shown by society. In this regard, no differences were demonstrated in relation to the time of commencement of the education cycle. Another determinant that can increase interest in nursing is the possibility of enhancing one's own

**Table 3.** Characteristics of respondents' answers to individual questions regarding the impact of the COVID-19 pandemic depending on the enrolment before or during the COVID-19 pandemic ( $N = 321$ )

	Students starting their education cycle before the COVID-19 pandemic ( $n = 124$ )	Students starting their education cycle during the COVID-19 pandemic ( $n = 197$ )	All students participating in the study ( $N = 321$ )	Statistical significance
COVID-19 pandemic makes it easier for nurses to find a job in the profession: Yes, $n$ (%)	81 (65.1)	133 (67.9)	214 (66.9)	NS
The current attitude of society to/media coverage of working nurses motivates to work in the profession: Yes, $n$ (%)	15 (12.1)	49 (25.0)	64 (20.0)	$\chi^2 = 7.1$ $p = 0.008$
The student is concerned about the risk of working with a patient with the SARS-CoV-2 virus: Yes, $n$ (%)	74 (59.7)	75 (38.1)	149 (46.4)	$\chi^2 = 13.4$ $p < 0.001$
The student is afraid to infect loved ones while working as a nurse: Yes, $n$ (%)	109 (87.9)	136 (69)	245 (76.3)	$\chi^2 = 14.0$ $p < 0.001$
During the studies, the student was informed about the method of using personal protective equipment in force during the provision of nursing care to a patient with the SARS-CoV-2 virus: Yes, $n$ (%)	89 (71.8)	137 (69.9)	226 (70.6)	NS

NS – statistically insignificant differences

**Table 4.** Elements that may increase respondents' interest in choosing this field of study and the nursing profession depending on the enrolment before or during the COVID-19 pandemic ( $N = 321$ )

Student satisfaction with the choice of profession can increase, $n$ (%)	Students starting their education cycle before the COVID-19 pandemic ( $n = 124$ )	Students starting their education cycle during the COVID-19 pandemic ( $n = 197$ )	All students participating in the study ( $N = 321$ )	Statistical significance
Higher remuneration	61 (49.2)	51 (25.9)*	112 (34.9)	$\chi^2 = 29.9$ , $p < 0.001$
Respect shown by society	21 (16.9)	24 (12.2)	45 (14)	
Greater opportunities for professional or scientific development	11 (8.9)	37 (18.8)*	48 (15)	
The opportunity to acquire skills	5 (4)	20 (10.2)	25 (7.8)	
Respect shown by colleagues	8 (6.5)	15 (7.6)	23 (7.2)	
The possibility of choosing the form of employment and the system of work	4 (3.2)	13 (6.6)	17 (5.3)	
Greater legal protection	4 (3.2)	8 (4.1)	12 (3.7)	
Increased number of job offers	5 (4)	5 (2.5)	10 (3.1)	
Appropriate equipment of the workplace	2 (1.6)	6 (3)	8 (2.5)	
Respect shown by the wards	2 (1.6)	6 (3)	8 (2.5)	
The possibility of going to work in another country	0 (0)	4 (2)	4 (1.2)	
Other	1 (0.9)	8 (4.1)	9 (2.8)	

\* Statistical significance ( $p < 0.05$ ) in relation to the group of students starting the education cycle before the COVID-19 pandemic

professional or scientific development. This factor was more frequently indicated by students enrolled during the pandemic rather than those who started their studies before it began. Other factors that could boost interest in the nursing major were indicated by the respondents sporadically (a few per cent). It is worth noting that the least cited factor encouraging students to study nursing was the possibility of going to work in another country.

## DISCUSSION

When choosing a profession, people must take interest in its various aspects, including qualifications and requirements. Pro-social motivation undoubtedly contributes to the good performance of tasks resulting from exercising a given profession [12]. The main motivation in becoming a nurse is the desire to help others and care for them [8]. To have a high standard,



professional nursing care requires proper preparation for nursing, so that the focus is on people and assisting them [6]. The professional performance of procedures and the ethical attitude taking into account the ability to subordinate personal needs to the interests of others are essential elements of the expectations set for nurses.

Rachubińska *et al.* emphasize that the largest number of students came from cities with more than 100 thousand inhabitants and from rural areas [11]. The research showed that students from rural areas constituted a large group. On the other hand, people from cities with over 100 thousand inhabitants accounted for about 25% of all respondents.

In the available literature, it has been shown that the most common factor determining the choice of profession was an interest in nursing [12-14]. The current research is corroborated by the fact that the main reason for choosing this profession was the respondents' interest in it and the desire to help other people. In addition, similarly to the results already presented, the surveyed students often pointed to a large number of job offers as an incentive when choosing this major [11]. The choice of profession is also influenced by how it is perceived by society. Nurses are often said to be underappreciated [15]. In addition, their work is perceived as performing routine, uncomplicated activities [16, 17]. Previous studies on young people showed little interest in the nursing profession due to it being perceived as an auxiliary, doctor-dependent, and, very importantly, poorly remunerated profession [12]. The research shows that the attitude of society and media coverage motivate only 1 in 5 students to pursue this profession. At the same time, due to the COVID-19 pandemic, the number of positive reports about the professional activities of nurses in the media has increased. We can observe this when comparing the 2 groups of students. People who decided to study already during the COVID-19 pandemic were more likely to hear media reports on the significant role of nurses. Therefore, in the study, these students indicated that such a message to society is important twice as often as those who enrolled before the pandemic.

The authors also emphasize that failure to enter another university is rarely the reason for choosing the nursing study program [15]. Also in our study, the lack of other opportunities (not being admitted to another program) is rarely indicated as a reason for studying nursing.

Research conducted so far shows that the majority of students are satisfied with the choice of field of study [11]. In the surveyed group of students, the majority are also satisfied with the chosen major.

In the first days of the "fight against an unknown enemy", the nursing staff had to learn to work in new conditions. Due to the high risk of infection, the World Health Organization (WHO) published guidelines for

the safe provision of care to a patient infected with the SARS-CoV-2 virus [19]. In the studied group of students, the vast majority believed that they had been informed about the use of personal protective equipment in force during the provision of care to a patient with the SARS-CoV-2 virus.

The pandemic has caused many nurses to decide to live in hotels intended for the staff of dedicated COVID-19 hospitals. This was due to the fear of unintentionally infecting loved ones [19]. The current study confirms the fact that almost half of the students were concerned about the risk of working with a patient with the SARS-CoV-2 virus and infecting loved ones.

The results of the research indicate factors that may increase the interest of young people in studying nursing or the profession itself during the COVID-19 pandemic. Respondents indicate remuneration as a very important element. At the same time, the answers of the same cohort to earlier questions related to the reason for choosing this major suggest that the amount of remuneration for the work of nurses is a secondary factor when choosing this field of study to the possibility of pursuing their own interests. At the same time, it is a fundamental factor when deciding to work as a nurse, especially in the answers of the respondents who began their studies during the COVID-19 pandemic. There appears to be a need for further research in terms of factors motivating young people to choose nursing study programs and the nursing profession.

## CONCLUSIONS

The main motive for choosing the nursing profession is one's interest in it and the desire to help others regardless of the pandemic.

A factor that often motivated students to choose this profession is having nurses in the family.

In the surveyed group of nursing students, the COVID-19 pandemic did not directly affect the choice of the major (profession).

Positive media coverage about the vitality of nurses' professional activity for society and an increased number of job offers are indirect effects of the pandemic and, at the same time, basic elements raising interest in this profession among young people.

Remuneration for the work of nurses is an important, but not the most important, factor motivating nursing graduates to take up work in the nursing profession.

### Disclosure

The authors declare no conflict of interest.

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