



Analysis of the Reasons for the Decreased Interest of Prospective Students in the Nursing Profession

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Abstract:

Background: According to Eurostat, the ratio of nurses to the population in Bulgaria is the lowest in the European Union, with a third of working nurses being over 65 years of age.

Aim: This study aimed to identify the attitudes of high school graduates regarding pursuing a baccalaureate degree in nursing, as well as the attitudes of nurses already in the workforce toward their profession.

Methods: In connection with the critical minimum of graduate nurses and the lack of interest among young people in studying the nursing profession, an anonymous survey was conducted on the reasons for the "outflow" from the profession in the city of Ruse, Bulgaria. This anonymous questionnaire survey was conducted among 510 students in the final year of secondary education, as well as 112 practicing nurses. The study used descriptive statistics and frequency distribution. An analysis of the reasons for the decreased interest in the nursing profession in the city of Ruse was carried out.

Results: There was significant dissatisfaction with the profession, as more than 50% of the nurses rated it negatively and stated that they would not recommend it to their children/relatives. From the survey of 11th and 12th grade students, 93.5% (n 477) responded that they had no interest in the specialty.

Conclusion: Of the reasons cited by both groups of respondents, low pay and nurses not being respected and recognized as professionals by society and doctors stood out.

Keywords: Nursing shortage, Personnel crisis, Interest, Prospective students, Factors, Nurses, Health care.

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1. INTRODUCTION

As in every country, the nursing shortage crisis is deepening in Bulgaria, while the country is seeing an increase in the number of medical institutions. According to Eurostat, the ratio of nurses to the population is the lowest in the European Union, i.e., 6.9 per 100,000 people, with over one-third of working nurses. In the 1990s, there were 28,000 doctors and 53,000 nurses in Bulgaria. Since then, the number of nurses has almost halved, with a 9% decline in the last ten years [1]. Many authoritative figures in the

field of healthcare have, for more than 20 years, carried out analyses and published results on the problems of the profession's prestige, obsolescence, low pay, and the measures that need to be taken [2]. Professor S. Toncheva, a scientist in the field of nursing in Bulgaria, in her publication, in 2018, analyzed in detail all aspects of the crisis in nursing [3]. The Bulgarian Association of Health Care Professionals (BAPHP) has been publicly discussing data on the nursing shortage crisis for years, but this has not changed the situation and no serious legislative measures have been

taken to “save” the profession. Nurses represent the largest part of the healthcare system. According to the American Nurses Association (ANA), there will be more registered nursing jobs than any other profession in the United States. According to an article in Nursing Times, the U.S. Bureau of Labor Statistics projects that more than 275,000 additional nurses would be needed from 2020 to 2030. Employment opportunities for nurses have been projected to grow at a faster rate (9%) than all other occupations from 2016 to 2026 [4]. The reasons related to the shortage of nurses are numerous and cause serious concern regarding the quality of medical services and care provided in Bulgaria. The reasons can be classified as follows: 1) An aging population and the growing need for healthcare services are a global problem. This problem in Bulgaria is aggravated by the fact that a large number of elderly people do not rely on their children for care due to the ongoing process of emigration of young people since the beginning of the 1990s. The elderly need long-term care as they may suffer from multiple chronic diseases. This necessitates an increase in the number of nurses involved in elderly care in the home and medico-social structures. In Bulgaria, most older people with care needs reside in their own homes. As traditional multi-generational households living together have declined, the demand for nursing support has increased significantly. 2) The continuously increasing number of medical facilities has increased the need for nurses. In Bulgaria, according to the National Statistical Institute, as of 31/12/2023, there were 341 registered hospital care facilities, 2,237 outpatient care facilities, and 140 other medical and health care facilities for a population of 6.5 million. The number of long-term and home care facilities where nurses can independently manage a significant portion of patient care is extremely low and highly insufficient [5]. 3) Another reason involves the aging of nurses. Numerous publications and data from the BAPPG show that the average age of nurses is 50 years, and that more than 50% of nurses are in retirement and pre-retirement age. This problem is exacerbated by the fact that on average, 20% of student applicants in recent years have been over the age of 35, which automatically places them in the group of those working in their 40s. A study published in 2019 showed that the imbalances in the numbers of doctors and nurses will be significant if current trends continue [6]. 4) Moreover, one of the reasons concerns the “career-family” dilemma. In addition to the shortage problem, nurses are mostly women of childbearing age. This leads to issues related to making a choice between career advancement and commitment to two or more occasional jobs or starting families and taking time off work to raise children. 5) Another reason that can be pointed out is the growing aggression towards healthcare workers in Bulgaria. The discrepancies in the healthcare system and the high workload of the staff lead to serious conflicts between patients and medical professionals that often result in verbal and physical aggression, and this automatically defines the profession as high-risk and unattractive. 6) A major contributing factor to the shortage of nurses can be considered the stressful working environment and the failure to adhere to standards that define the appropriate nurse-to-patient ratio based on the caseload. The risk of

errors could be significantly reduced if appropriate staffing levels are provided, and this could increase patient satisfaction and lead to greater retention of nurses in the workplace. In hospitals with a high patient-to-nurse ratio, nurses experience burnout, frustration, and the desire to leave the system [7]. 7) A last, but not least, reason is a deepening lack of interest in the profession among young people. The growing shortage of nurses has been analysed in recent years mostly by directors of medical institutions due to the danger of closure of hospital structures. At the national level, it is suggested that the problem lies in low enrolment and the length of training. Inadequate management decisions are being taken at the national level, which also includes an increase in the number of places allocated to students studying on state orders. Around 20% of places remain unfilled by higher education institutions due to low interest from prospective students. A further 20% drop out due to poor grades and contradictions between expectations and the reality of the profession. It is reported in the public domain that the long duration of training is a reason for “de-incentivizing” young people to choose the profession. It has been suggested to reduce the current 4-year bachelor’s degree program for nurses to a 3-year training program. Here, a comparison can be made with the curriculum of other specialties in Bulgaria, where a Bachelor’s degree typically consists of 2,400 academic hours over 4 years. In contrast, the nursing specialty requires over 5250 academic hours, highlighting the significantly high workload of nursing students. Over the past 30 years, the educational status of nurses has undergone multiple changes, yet without yielding positive results. Currently, nurses perform the same duties despite holding different diplomas, including secondary special education, post-secondary education, college education, and bachelor’s degree. There is no other profession that has repeatedly undergone changes in the length of training and educational qualifications. Currently, in Bulgaria, the specialty of nursing, a bachelor’s degree in healthcare, is a regulated profession. The official documents governing nursing education include the curriculum, which is developed in compliance with the Law on Higher Education, the Ordinance on the Unified State Requirements for the Acquisition of Higher Education or Bachelor’s Degree in the Specialty of Nursing, as well as the European Directives 77/452/EEC, 77/453/EEC, 89/595/EEC, and 2005/36/EEC of 30.09.2005 that regulate this profession and the National Qualification Framework. Practical training accounts for 50% of the total academic hours, including a 1600-hour pre-degree internship in hospital settings during the final year. The purpose of this study was to determine the attitudes of high school graduates toward applying for the nursing major, as well as the attitudes of already working nurses toward their profession.

2. MATERIALS AND METHODS

2.1. Study Design

In connection with the critical minimum of nurses and the lack of interest of young people in opting for the profession of nursing, in the period from February-May 2024, a research team from “Angel Kanchev” University of Ruse

conducted an anonymous survey on the reasons for the “outflow” from the profession in the city of Ruse, Bulgaria. In order to achieve the objectives of the study, a parallel survey of 11th and 12th-grade secondary school students and working nurses from the city of Ruse was conducted.

The survey was anonymously conducted in the city of Ruse among 510 students from grade 12 and grade 11 in secondary education, covering 129 students from grade 11 and 381 students from grade 12. The survey was carried out in 3 large schools in the city of Ruse and one school in each of the towns of the Ruse region, including Kubrat, Isperih, Razgrad, Samuil, Popovo, and Tutrakan. After completing 12th grade, students have the right to continue their education with a Bachelor's or Master's degree in a specialty of their choice.

In parallel, 112 surveys were conducted among working nurses in the city of Ruse from hospital and outpatient facilities regarding their attitudes toward their profession.

All surveyed school students and working nurses were informed in advance about the purpose of this study and they voluntarily signed a written informed consent to participate.

2.2. Data Analysis

The results were analyzed using the statistical package SPSS 19.0. The study also used descriptive statistics and frequency distribution. Determining the existing correlations between the included variables and their level of significance was important to prove the hypothesis that students do not want to study nursing as a major. Pairwise correlation was used (**- significant correlation at $p = 99\%$ and *- significant correlation at $p = 95\%$). The correlation analysis did not reveal significant relationships between the examined variables (all p -values > 0.05), which may be attributed to the sample characteristics.

2.3. Ethical Consideration

This research study was conducted in accordance with the Declaration of Helsinki concerning the inclusion of human subjects in scientific research. The research ethics committee at the “Angel Kanchev” University of Ruse, Bulgaria, approved this study on January 23, 2024 (decision protocol no. 05/23.01.2024).

3. RESULTS

A total of 178 (34.9%) students from the city of Ruse were included in the study. The remaining 332 (65.1%) were from the towns of the Ruse region. We asked the students if they would choose to study nursing degree (Table 1).

Of all students surveyed, 93.5% (477) responded that they had no interest in the major.

In parallel, 112 surveys of nurses were conducted at the inpatient and outpatient facilities in the town of Ruse. A significant proportion of the nurses surveyed hospital care, accounting for 85.7% of all the participants (96). Respondents from outpatient care accounted for 3.6% (4), 1.8% (2) cared for elderly in homes, and 8.9% (10) were working for two jobs. The largest number of nurses who

participated in the survey were from the city of Ruse, and the remaining 30.6% (34) were from smaller regional areas.

Table 1. Interest of students in pursuing a nursing career.

-		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	I don't know yet	15	2.9	2.9	2.9
-	Yes	18	3.5	3.5	6.5
-	No, I have other interests	477	93.5	93.5	100.0
-	Total	510	100.0	100.0	-

Table 2 presents the work experience of the nurses surveyed. Only 17.9% of the nurses surveyed had up to 5 years of work experience, and almost half of the respondents had 11 to 20 years of work experience or 21-30 years of work experience, accounting for 48.2% (54).

Table 2. Work experience in the nursing profession.

-		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Up to 5 years	20	17.9	17.9	17.9
-	6-10 years	12	10.7	10.7	28.6
-	11-20 years	26	23.2	23.2	51.8
-	21-30 years	28	25.0	25.0	76.8
-	31 to 40 years	14	12.5	12.5	89.3
-	Over 40 years	12	10.7	10.7	100.0
-	Total	112	100.0	100.0	-

We thought it appropriate to explore the views of working nurses as to whether they would recommend their children or relatives to study the nursing profession. The results are shown in Table 3.

A significant proportion of nurses surveyed (65.2% overall) stated that they would not recommend/refer their children or relatives to study nursing as a profession. This result is very indicative of the negative assessment of the profession by the respondents.

In the questionnaire, we offered a choice of more than one negative reason related to the nursing profession. Of all the nurses surveyed, 48.2% (54) cited the intensity of the work and excessive overtime as negative aspects of the profession, as well as not seeing the nurse as an equal member of the nursing team. Lack of standard in health care was cited as a negative reason by 44.6% (50). The neglectful attitude of doctors towards nurses was cited by 37.5% (42) of the respondents. A third of all respondents suggested lack of autonomy as a negative aspect (30.4% /34), and a relatively small proportion, *i.e.*, 28.6% (32),

cited unregulated nursing activities. Poor material conditions at the workplace and the inability to provide quality and safe healthcare were cited as negative reasons by 23.2% (26) of all respondents. When the data were analyzed, it emerged that most negative reasons were cited by nurses with 21 to 30 years of experience. Table 4 presents the reasons for the negative evaluation that garnered more than 50% of the nurses' responses.

Table 3. Recommendations to others for studying nursing: survey responses.

-	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid Yes	35	31.3	31.3	31.3
- No	69	61.6	61.6	92.9
- Rather yes	3	2.7	2.7	95.5
- Rather not	4	3.6	3.6	99.1
- I can't judge	1	0.9	0.9	100.0
- Total	112	100.0	100.0	-

Table 4. Negative evaluation of the nursing profession by over 50% of surveyed nurses.

-	Frequency	Percentage
Valid Low pay	74	66.1
Missing System	38	33.9
Valid Reduced composition and high load	74	66.1
Missing System	38	33.9
Valid Unresolved professional problems for many years	58	51.8
Missing System	54	48.2
Valid The profession is considered unprestigious and unattractive	60	53.6
Missing System	52	46.4
Total	112	100.0

Low wages were cited by 66.1% (74) of the respondents. Interestingly, the response given by the same percentage of respondents indicated that the reason for the negative evaluation of the profession is the reduced staff and the high physical and emotional workload of the workers. More than half of the nurses evaluated the profession negatively (51.8%/58) due to unresolved problems in the health care system for many years. The profession was rated as neither prestigious nor attractive by 53.6% (60) of the working nurses surveyed.

In the questionnaire, we also offered a multiple choice of possible positive evaluations of the profession, such as satisfying pay, regulated work and rest, a noble profession, a profession that benefits oneself and loved ones, an opportunity for continuous learning and improvement, and assured sustainability of the profession. More than half (66.1%/74) indicated the answer "noble profession". Other possible positive aspects of the profession were mentioned by the nurses surveyed, but with a frequency not reaching 50%.

4. DISCUSSION

The statistical significance of the results was assessed by correlation analysis. The comparative analysis showed significance between the questions Would you choose a nursing specialty/Do you feel that you need to learn about the nature of the profession in a real hospital setting at $p=99\%$ sig. (2-tailed) = 0.003. We can comment on this result that the reason for not wanting to study the specialty is not that the nature of the profession is not known, but rather that the pay for the work is low, there is not enough autonomy in the profession, it is not a prestigious and attractive profession, and nurses are not respected and recognized as professionals by society and doctors. These two questions compared with the class of study yielded even greater significance at sig. (2-tailed) = 0.000, from which we can argue that the choice has already been made and it is not in favor of the nursing major.

As a result of our analysis, we can state that dealing with the problem of shortage of nurses does not only mean increasing university admissions for nursing specialty, which is the policy in Bulgaria, but also fostering a positive attitude among nurses already in the workforce and maintaining a supportive environment in healthcare facilities constitute an important step in this direction [8, 9].

The most common reasons cited for low interest in the specialty by the respondents were as follows: nursing pay is not good, there is not enough autonomy in the profession, it is not a prestigious and attractive profession, nurses are not respected and recognized as professionals by society and doctors, and that I do not want to work with sick people and it is a high-risk profession with many responsibilities. Negative influence from close acquaintances was identified as a leading cause affecting students' career choices in other studies [10-13].

Other authors have pointed out various motivating factors in choosing a career among nursing students. Among them, personal challenges, preferred working conditions, career development opportunities, and personal experience that influence the final decision stand out [14]. In our study, these and similar factors were not noted as leading to the motivation of prospective students.

Another 2022 study reported 40% of nurses to experience workplace harassment. This can ultimately negatively impact both patient outcomes and motivation to choose and practice the profession. In Bulgaria, cases of workplace harassment against nurses are frequently reported in the media. This may strongly influence both public opinion regarding the profession and the attitudes of nurses themselves. Therefore, the nurses may not recommend their loved ones to study nursing [15].

In the last two years, nurse practitioner (NP) has been reported as the most respected profession in the United States, while this is not the case in Bulgaria [16, 17]. In our study, the nursing profession was rated as unprestigious and unattractive by more than half of the working nurses. The nursing profession in Bulgaria is considered unattractive mainly due to low pay. However, studies from other countries indicate that high salaries are considered

a significant incentive that helps nurses feel that their education has value [18].

Our study included schools and hospitals from a specific region in Bulgaria, limiting the representativeness of the results. In the studied region, 2,324 students graduated from secondary education during the year, while we surveyed only 22% of them [19]. Another limitation includes the subjectivity of the answers, which may be influenced by personal experiences and momentary emotions of the respondents.

CONCLUSION

From the analysis of the data concerning the shortage of nurses and the survey of nursing students and practitioners undertaken, the following conclusions can be drawn:

- In order to establish the autonomous role of the nursing profession in Bulgaria, it is necessary to change the structure of the work and introduce standards in the nursing practice, including assessment, planning, and implementation of the nursing care plan. The nursing process has been accepted as a standard of practice for nurses in a number of European countries.
- Regulating the role of health assistants and nurses in hospitals is essential to enhancing the prestige of the nursing profession and ensuring that nurses focus on tasks within their scope of competence. Basic patient care activities, such as feeding, toileting, and pressure ulcer prevention, can be carried out by nursing assistants under the supervision of a senior nurse.
- Necessary nursing documentation must be prepared and implemented at the national level. In this way, the activity of the nurse will be accounted for and, accordingly, a nurse's work will be valued according to the relevant principle.
- The payment for the nurse's work must be ensured by the National Health Fund in hospital structures, outpatient care, and registered private practices.
- Standards of good nursing practice must be developed and the implementation of standards must be monitored.
- At the local and regional level, working conditions and payment policies must be regularized in local hospital structures.

In conclusion, the majority of the surveyed students and nurses did not show interest in choosing the profession of "nursing". The data also reflected a significant negative assessment of the conditions in the healthcare sector, especially among working nurses, which emphasizes the need for improvements in the working environment and pay in Bulgaria. For the future development of the profession, it is essential to pay attention to these factors and take concrete steps for improvement. As lecturers at a university where students from the nursing specialty are trained, and based on our extensive experience, we believe that targeted actions and collaborative efforts from all stakeholders are essential to address the current challenges, which can help achieve sustainable long-term results.

AUTHORS' CONTRIBUTIONS

The authors confirm their contribution to the paper as follows: G.K.: Drafting of the manuscript; D.G.: Conceptualization; I.H.: Methodology; D.K.: Validation. All authors have reviewed the results and approved the final version of the manuscript.

ABBREVIATION

BAPHP = Bulgarian Association of Health Care Professionals

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The research ethics committee at the "Angel Kanchev" Ruse University, Bulgaria, approved this study on 23rd January, 2024 (decision protocol no.: 05/23.01.2024).

HUMAN AND ANIMAL RIGHTS

All human research procedures followed were in accordance with the ethical standards of the committee responsible for human experimentation (institutional and national), and with the Helsinki Declaration of 1975, as revised in 2013.

CONSENT FOR PUBLICATION

Informed consent was obtained from all participants.

STANDARDS OF REPORTING

STROBE guidelines were followed.

AVAILABILITY OF DATA AND MATERIALS

The data that support the findings of this study are available from the corresponding author, [I.H.], on special request.

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CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

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