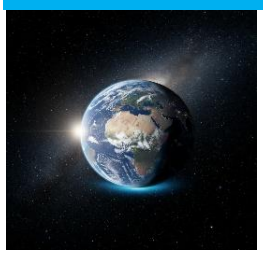
Journal of Education, Health and Sport. 2026;88:69155.
eISSN 2391-8306.

https://doi.org/10.12775/JEHS.2026.88.69155



Journal of Education, Health and Sport. eISSN 2450-3118

Journal Home Page
https://apcz.umk.pl/JEHS/index

ZIEMIAŃSKA, Joanna and KRAWCZYK, Bożena. Assessment of the relationship between the type of motivation to study and the sense of generalized self-efficacy among nursing students. Journal of Education, Health and Sport. 2026;88:69155. eISSN 2391-8306.
https://doi.org/10.12775/JEHS.2026.88.69155

The journal has had 40 points in Minister of Science and Higher Education of Poland parametric evaluation. Annex to the announcement of the Minister of Education and Science of 05.01.2024 No. 32318. Has a Journal's Unique Identifier: 201159. Scientific disciplines assigned: Physical culture sciences (Field of medical and health sciences); Health Sciences (Field of medical and health sciences).
Punkty Ministerialne 40 punktów. Załącznik do komunikatu Ministra Nauki i Szkolnictwa Wyższego z dnia 05.01.2024 Lp. 32318. Posiada Unikatowy Identyfikator Czasopisma: 201159. Przypisane dyscypliny naukowe: Nauki o kulturze fizycznej (Dziedzina nauk medycznych i nauk o zdrowiu); Nauki o zdrowiu (Dziedzina nauk medycznych i nauk o zdrowiu).
The authors declare that there is no conflict of interests regarding the publication of this paper.
Received: 19.02.2026. Revised: 21.02.2026. Accepted: 25.02.2026. Published: 28.02.2026.

Assessment of the relationship between the type of motivation to study and the sense of generalized self-efficacy among nursing students

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Abstract

Introduction The choice of a field of study is one of the key moments in a person's life, determining not only their future professional career but also shaping their personal and social identity as well as their position in the labor market. Motivation plays a significant role in educational and career decision-making, particularly with regard to choosing a nursing career path, which involves high social responsibility and specific psychological and emotional demands.

Aim of the Study

The aim of the study was to assess the relationship between the type of motivation for studying and the level of generalized self-efficacy among nursing students.

Material and Methods

The study included 238 undergraduate nursing students from the Faculty of Health Sciences at the University of Bielsko-Biala. The research was conducted between November 2024 and January 2025. Data were collected using the diagnostic survey method with an original questionnaire and standardized research tools: the Academic Motivation Scale (AMS) and the Generalized Self-Efficacy Scale (GSES).

Results

The most frequently indicated type of motivation among nursing students was "external motivation – identified regulation" (mean = 5.72), followed by "external motivation – external regulation" (mean = 5.3) and "intrinsic motivation – to know" (mean = 5.3).
The study group demonstrated a high level of generalized self-efficacy (mean ± SD: 31.98 ± 4.37). A high level was observed in 73.11% of participants, a moderate level in 23.11%, and a low level in only 3.78% of students.

Conclusions

The decision to undertake nursing studies among students of the University of Bielsko-Biala was mainly based on external motivation—identified and external regulation—as well as intrinsic motivation resulting from the need for knowledge. A significant relationship was found between the type of motivation and the level of self-efficacy.

Keywords

motivation, nursing, Academic Motivation Scale (AMS), Generalized Self-Efficacy Scale (GSES)

Introduction

Today, nursing constitutes one of the key elements of the healthcare system, and its importance is growing in the face of dynamic socio-demographic changes. In the context of an aging society, an increasing number of patients with chronic diseases, and a growing shortage of qualified medical staff, nurses play a fundamental role not only in providing direct care but also in preventive and educational activities. They are essential for ensuring effective and continuous care, as well as for addressing contemporary health challenges [1].

Choosing a field of study is one of the pivotal moments in every person's life, determining not only their future professional career but also shaping personal and social identity and their position in the labor market. For this reason, analyzing the motivations of young people deciding to pursue education in a demanding and responsible profession—yet one that allows for a tangible impact on the life and health of others, such as nursing—is of great importance. This topic is significant not only from the perspective of health sciences but also from the viewpoints of pedagogy, sociology, and education [2,3].

The phenomenon of motivation has been the subject of numerous empirical studies and theoretical analyses, focusing on identifying the determinants of students' academic choices. The literature emphasizes that decisions regarding the choice of a particular field of study are

influenced by many factors, not only interests and predispositions but also social, economic, and cultural aspects [4]. In the field of nursing, factors such as altruism, the desire to help, a sense of mission and vocation, and interest in medicine are particularly important, alongside pragmatic values like employment prospects, job stability, opportunities to work abroad, and possibilities for professional development [5].

The main aim of this study was to assess the relationship between the type of motivation for studying and the sense of generalized self-efficacy among nursing students

Material and Methods

Material

The study included 238 students from the Faculty of Health Sciences at the University of Bielsko-Biała, enrolled in the Nursing program at the first-cycle level. The vast majority were women, numbering 222, which accounted for 93.28% of the total sample (n = 238). Men constituted only 6.72% of the studied group. This gender structure is consistent with trends observed in the nursing profession, where women represent the dominant group, indicating a strong gender disparity.

The average age of the respondents was 22.19 years (SD = 5.43). Among the surveyed students, the largest group lived in rural areas, comprising 143 people (60.08%). Those living in towns with 100,000–250,000 inhabitants made up a smaller proportion (20.59%, n = 49) compared to those living in towns with up to 100,000 inhabitants (17.23%, n = 41). The smallest group consisted of residents of large urban agglomerations with over 250,000 inhabitants – 5 people (2.1%).

The vast majority of respondents were single (unmarried), totaling 202 people (84.87%). Students who were married accounted for 13.03% of the sample (n = 31). The least numerous group, 2.10% (n = 5), were divorced individuals. The distribution of respondents according to the year of study was relatively even, with a slight predominance of first-year students, numbering 86, second-year students also 86, and third-year students 67.

Methods

In this study, the diagnostic survey technique was applied using both standardized research tools and an original questionnaire.

The research was conducted using the following tools:

Academic Motivation Scale (AMS) questionnaire

Generalized Self-Efficacy Scale (GSES)

Original questionnaire

Characteristics of the research tools used:

Academic Motivation Scale (AMS)

The Academic Motivation Scale (AMS), titled "Why do you study?", is a tool used to assess the level of students' motivation to start and continue higher education and is applied in many countries. The tool was developed in 1992 by Robert Vallerand and his team, based on the assumptions of the self-determination theory. The Polish adaptation of the AMS was conducted by Ardeńska M., Agnieszka A., and Rajmund T. in the process of adaptation and validation in 2019 [6].

The scale consists of 28 statements. Respondents indicate how well each statement reflects their feelings. Each item is rated on a seven-point Likert scale, where: 1 – strongly disagree, 2 – disagree, 3 – somewhat disagree, 4 – neutral, 5 – somewhat agree, 6 – agree, 7 – strongly agree. Higher scores indicate greater acceptance and agreement of the statement with the respondent's feelings [7].

The AMS divides motivation into three main types, each with subtypes:

Intrinsic motivation: need for knowledge, need for achievement, need for stimulation
Extrinsic motivation: identified regulation, introjected regulation, external regulation
Amotivation

This research tool was used with the consent of Ardeńska, who translated and validated the scale in Polish.

Generalized Self-Efficacy Scale (GSES)

The Generalized Self-Efficacy Scale (GSES), developed by R. Schwarzer and M. Jerusalem, in the Polish adaptation by Z. Juczyński, is used to assess an individual's belief in their ability to achieve goals, solve problems, and cope with adversity. The scale was designed for adults, both healthy and ill, and can be administered individually or in groups. The Polish version of the scale was developed in 1998, based on the original tool created by Schwarzer and Jerusalem in 1992.

The tool is short, consisting of 10 statements covering various situational and personal factors. Respondents choose one of four responses for each statement, indicating the extent to which it applies to their life: 1 – not at all, 2 – rather not, 3 – rather yes, 4 – yes. Responses are summed and then transformed into standardized sten scores. The possible score range is 10 to 40 points (Table I). Higher scores indicate a higher level of generalized self-efficacy. Self-efficacy is also an important motivational factor, as it influences the strength and willingness to act, as well as persistence in achieving goals [8,9].

Original questionnaire

The original questionnaire collected sociodemographic data.

Statistical methods

All statistical analyses were performed using the R statistical package, version 4.5.0. Quantitative variables were described using the mean, standard deviation, and quartiles, while qualitative variables measured on a nominal scale were presented as counts and percentages. Correlations between quantitative variables were analyzed using Spearman's rank correlation coefficient. In all analyses, the significance level was set at $p < 0.05$.

Research Results

The identification of the highest type of motivation for studying was carried out using the Academic Motivation Scale (AMS) Questionnaire, *Why do you study?*. The analysis of the

results was divided into seven types of motivation, in accordance with the questionnaire instructions. Detailed data are presented in Table I.

Table I. Presentation of statistical analysis results according to types of motivation based on the Academic Motivation Scale (AMS)

AMS	N	Missing Data	Mean (M)	SD	Median	Min	Max	Q1	Q3
Intrinsic motivation – **knowledge**	2380		**5.3**	1.095.5	1.5	7	4.756		
Intrinsic motivation – **achievement**	2380		4.65	1.244.75	1	7	4	5.44	
Intrinsic motivation – **stimulation**	2380		**3.99**	1.194	1	7	3.254.75		
Extrinsic motivation – **identification**	2380		**5.72**	0.975.88	2	7	5.256.5		
Extrinsic motivation – **introjected**	2380		4.75	1.475	1	7	4	5.75	
Extrinsic motivation – **external regulation**	2380		**5.3**	1.115.5	1.757		4.5	6.25	
Amotivation	2380		**2.07**	1.231.62	1	6.5	1	2.75	

Legend: N – number of participants, M – mean, SD – standard deviation, Min – minimum, Max – maximum, Q1 – lower quartile, Q3 – upper quartile **Source:** own elaboration

To assess participants' beliefs in their ability to achieve goals, solve problems, and cope with challenges, the **General Self-Efficacy Scale (GSES)** was used. Analysis of the results in the study group indicated a high level of perceived self-efficacy, with a mean score of 31.98 (SD = 4.37). Detailed data are presented in **Table II**.

Table II. Presentation of the statistical analysis results of the GSES questionnaire

GSES – points	Interpretation	n	%
10–24	Low sense of self-efficacy	9	3.78%
25–29	Moderate sense of self-efficacy	55	23.11%
30–40	High sense of self-efficacy	174	73.11%

N	Missing data	Mean	SD	Median	Min	Max	Q1	Q3
238	0	31.98	4.37	31	19	40	29	35

n – number of participants in the group (238), % – percentage of participants, SD – standard deviation, Q1 – lower quartile, Q3 – upper quartile.

Source: own research

Assessment of the relationship between the type of motivation for studying and the sense of generalized self-efficacy among nursing students

Correlations between quantitative variables were analyzed using Spearman's correlation coefficient. A significance level of $p<0.05$ was adopted for the analysis. Detailed data are presented in Table III.

Table III. Comparison of the relationship between types of motivation and the level of generalized self-efficacy

AMS	GSES Spearman's correlation coefficient
Intrinsic motivation – need for knowledge	r = 0.334, **p < 0.001 ***
Intrinsic motivation – need for achievement	r = 0.284, **p < 0.001 ***
Intrinsic motivation – need for stimulation	r = 0.307, **p < 0.001 ***
Extrinsic motivation – identified regulation	r = 0.234, **p < 0.001 ***
Extrinsic motivation – introjected regulation	r = 0.149, **p = 0.021 ***
Extrinsic motivation – external regulation	r = 0.032, p = 0.62
Amotivation	r = -0.238, **p < 0.001 ***

Notes:r – Spearman's correlation coefficient p – statistically significant relationship ($p < 0.05$)
Source: authors' own research

Factors Influencing the Choice of Education

Relationships between quantitative variables were analyzed using Spearman's rank correlation coefficient. The level of statistical significance was set at $p < 0.05$. Detailed results are presented in Table IV.

Table IV. Comparison of the relationship between factors influencing the choice of education and the level of generalized self-efficacy

Factors influencing the choice of education	GSES Spearman's rank correlation coefficient
Willingness to help others	r = 0.053, p = 0.418
Personal interest in the field of study	r = 0.166, **p = 0.01 ***
Family traditions	r = -0.014, p = 0.825
Family influence	r = -0.131, **p = 0.043 ***
Labor market situation	r = -0.108, p = 0.095
Possibility of finding employment in Poland	r = -0.088, p = 0.175
Possibility of finding employment abroad	r = 0.088, p = 0.178
Opportunities for professional development	r = 0.115, p = 0.078
Independent and conscious choice	r = 0.247, **p < 0.001 ***
Career counselor	r = -0.006, p = 0.926
Teachers	r = -0.014, p = 0.829
Parents	r = -0.107, p = 0.099
Volunteering	r = -0.083, p = 0.199
Peers	r = -0.079, p = 0.226
Personal experiences with the healthcare system	r = 0.052, p = 0.425
University Open Days	r = -0.054, p = 0.405
Social media	r = -0.044, p = 0.497

r – Spearman's rank correlation coefficient; p – statistically significant relationship (p < 0.05) Source: authors' own research.

Discussion

Motivation to act has many aspects; it not only initiates the decision to undertake studies but also shapes the future quality of work. There are different types of motivation—intrinsic and extrinsic—which influence students' approaches to learning and professional practice. In the light of motivation theory, particular attention is paid to intrinsic motivation, associated with the desire to act for personal satisfaction, and extrinsic motivation, which focuses on striving for external benefits such as salary, social status, or job stability [10]. Many authors emphasize that motivation is the "engine" of educational achievement and a prerequisite for success in learning. A literature review and qualitative study conducted by Rafii et al. [11] present academic motivation among nursing students as a multidimensional phenomenon determined by personal, family, social, educational, and professional factors. This motivation supports

academic performance, quality of learning, creativity, educational satisfaction, and anxiety reduction, which translates into the education of competent personnel and improvement in the quality of care. The authors also indicate the dependence of motivation on situational context and personality traits [11,12,13].The Academic Motivation Scale (AMS), widely used in academic research, was applied to identify the type of motivation among students. The present study demonstrated varying levels of intensity across particular types of motivation. The highest scores among the surveyed students were recorded in the areas of extrinsic motivation—identified regulation (mean = 5.72) and extrinsic motivation—external regulation (mean = 5.3), as well as intrinsic motivation—to know (mean = 5.3). Zawiślak et al. also indicated the highest levels for "extrinsic motivation—identified regulation" (mean = 5.68), "extrinsic motivation—external regulation" (mean = 5.23), and "intrinsic motivation—to know" (mean = 5.48) among 203 nursing students at the Jagiellonian University [14]. Similar results were obtained by Atalay et al. in a study among medical students at Baskent University School of Medicine in Ankara, Turkey, and by Orsini et al. among 989 dental students in Chile [15,16].Raźnikiewicz, in a group of 206 undergraduate nursing students from various universities in Poland, demonstrated that students most frequently indicated "extrinsic motivation—identified regulation," "intrinsic motivation—to know," and "extrinsic motivation—external regulation" as motives for choosing the nursing profession [17]. Torkani et al., in a study group of 261 nursing students from the School of Nursing and Midwifery at Shahid Beheshti University of Medical Sciences in Tehran, Iran, reported the highest level of extrinsic motivation [18] A study by El-Sayed et al. among 410 students from two nursing schools in Egypt—El-Mansoura University and Alexandria University—showed results different from those reported by Torkani et al.; among the surveyed students, the predominant types were "intrinsic motivation—to accomplish" and "intrinsic motivation—to know." Motivation was based on the desire to gain knowledge, self-fulfillment, and personal development rather than on external rewards [19]. Elbasuony M. conducted a study among 239 female nursing students at the College of Applied Medical Sciences, King Khalid University in Saudi Arabia and found the highest levels in "extrinsic motivation—introjected regulation" (mean 4.39), "extrinsic motivation—external regulation" (mean 4.37), and "extrinsic motivation—identified regulation" (mean 4.39) [20]. Nguyen et al., conducting research among 237 nursing students at a university in southwestern Vietnam, identified "intrinsic motivation—to know" (mean 5.61), "extrinsic motivation—external regulation" (mean 5.60), and "intrinsic motivation—to accomplish" (mean 5.58) as the main motives for undertaking nursing education [21]. To assess belief in one's own ability to achieve goals, solve problems, and cope with adversity, the General Self-Efficacy Scale (GSES) was

used. In the present study, the mean score among students was 31.98 points (range 10–40), clearly indicating a high level of self-efficacy (73.11%). Bahari et al. conducted a cross-sectional quantitative study among undergraduate nursing students at a higher education institution in Saudi Arabia. The group consisted of 340 students, and the results indicated that the overall level of self-efficacy ranged from moderate to high, with a mean score of 31.5 ± 5.4 (range 10–40). Over 65% of students achieved results indicating a high level of self-efficacy [22]. Gacek et al., in a study conducted in Kraków among 269 women in the field of nursing—174 nursing students at the Jagiellonian University and 95 professionally active nurses—reported a high level of self-efficacy (mean 30.35 ± 3.94) [23]. The study by Naderi et al., conducted among 337 undergraduate nursing students attending two faculties of nursing and midwifery in Shiraz and Rafsanjan (Iran), showed that the mean GSES score in the study sample was 3.56 ± 0.55 (on a 1–5 scale), indicating a moderate to high level of perceived self-efficacy among nursing students [24]

Conclusion

The highest types of motivation for undertaking first-cycle (Bachelor's degree) studies in Nursing at the Uniwersytet Bielsko-Bialski were "external motivation – identified regulation," "external motivation – external regulation," and "intrinsic motivation – need for knowledge." Statistically significant relationships were demonstrated for six out of the seven analyzed types of motivation. It was also shown that self-efficacy is associated with factors influencing the choice of education, including making an independent and conscious decision, the influence of personal interest in the field of study, and the influence of family.

Author's contribution: Conceptualization: Joanna Ziemiańska, Bożena Krawczyk; Formal analysis: Joanna Ziemiańska, Bożena Krawczyk; Investigation: Joanna Ziemiańska; Data curation: Joanna Ziemiańska, Bożena Krawczyk; Writing - review and editing: Joanna Ziemiańska, Bożena Krawczyk; Visualization: Joanna Ziemiańska, Bożena Krawczyk; Supervision: Bożena Krawczyk; Project administration:. Joanna Ziemiańska,;
All authors have read and agreed with the published version of the manuscript.

Funding statement

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for profit sectors.

Institutional review board statement

Not applicable.

Informed consent statement

Not applicable.

Data availability statement

Not applicable.

Conflict of interest statement

The authors declare no conflict of interest.

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