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Motivational Factors Shaping Lithuanian Nurses' Professional Development

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Abstract: Continuing professional development (CPD) is essential for sustaining nurses' competence and ensuring high-quality patient care. While its importance is widely recognised, little is known about the motivational factors influencing Lithuanian nurses' engagement in CPD. To address this gap, the study draws on Self-Determination Theory, Herzberg's Two-Factor Theory, and Maslow's Hierarchy of Needs, providing a multidimensional perspective that captures both intrinsic drivers (e.g., autonomy, competence, self-actualisation) and external influences (e.g., organisational requirements, job security). This study explored nurses' motivations, their interrelationships, and links with sociodemographic and work environment characteristics. A cross-sectional survey of 378 nurses from hospitals and primary healthcare institutions was conducted, with three scales of motivation—career-related, formal work-related, and personal motives—demonstrating good reliability (Cronbach's alpha = 0.694–0.874). Analysis of 364 valid responses showed that personal motives were strongest ($M = 4.4$), followed by career-related ($M = 4.3$) and formal work-related motives ($M = 4.1$). Nurses in primary care and those with less than five years of work experience reported significantly higher motivation than hospital-based and more experienced colleagues ($p < 0.001$). Strong correlations were found among all three motivational domains. These findings highlight the need for tailored strategies that strengthen intrinsic motivation and sustain CPD engagement throughout nurses' careers. From a psychological point of view, nurses' involvement in CPD is strongly influenced by internal motivation related to self-realisation, strengthening professional identity, and job satisfaction. The results show that personal motives are closely related to psychological well-being, so CPD can affect not only the improvement of competencies, but also the psychological resilience and professional satisfaction of nurses. The study's findings should be interpreted with caution due to several limitations. Self-reported data may reflect social desirability bias, the voluntary and non-representative sample limits generalisability, and the study did not examine the effectiveness of specific CPD support mechanisms. These constraints indicate the need for future research using larger representative samples and intervention-based designs.

Keywords: CPD; career-related motives; formal work-related motives; motivational factors; nurses' professional development; personal motives.

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1. Introduction

Continuing professional development (CPD) is a key element of modern nursing practice, combining initial education with ongoing competence maintenance throughout a lifetime in an increasingly complex healthcare system. As global healthcare systems face rapid technological change, changing patient needs, and evolving disease trends, continuing education for nurses has become more important than ever (Kurtović, et al., 2024; Tsirigoti, et al., 2024; Bit-Lian, et al., 2022).

Contemporary professional bodies and reviews emphasise CPD and lifelong learning as core to professional practice and to maintaining standards of care (Lewis et al., 2022; Mlambo, et al., 2021). Therefore, CPD together with lifelong learning serve as important mechanisms for improving the professional knowledge and skills of nursing professionals, which ultimately improve the quality of patient care and raises standards of care. Research shows that structured learning not only promotes career opportunities for nurses, but also has a positive impact on patients, healthcare professionals, and organisations (Roy & Graebe, 2025; Lyman et al., 2022). Recognising the importance of this process, the European Commission has declared CPD as a key political priority, which is further reinforced by the updated Directive 2013/55/EU (EFN, 2025).

CPD is not only a legal and professional requirement for nursing professionals. It is also an important factor for professional identity and job satisfaction (Amir et al., 2024; Pool et al., 2021). Studies show that nurses who actively participate in continuing professional development activities are more satisfied with their work, demonstrate better clinical competence, and have greater professional confidence (Amir et al., 2024; Kurtović et al., 2024; Minna, 2019).

2. Problem

Although the importance of continuing professional development for nurses' professional competence and the quality of healthcare services is widely recognised, studies show that the level of nurses' participation and active involvement in such activities remains uneven (Sušilović et al., 2025; Kurtović et al., 2024; Tsirigoti et al., 2024). This unevenness reveals that nurses' decisions to engage in professional development processes are influenced by a multitude of interrelated factors, ranging from personal motivational drivers and career aspirations to organisational conditions, regulatory requirements, and cultural and professional environment characteristics (Sušilović et al., 2025; Ait Ali et al., 2023; Bit-Lian et al., 2022). Such a multifaceted interaction of factors necessitates a thorough investigation of how internal and external forms of motivation and contextual factors intertwine to shape nurses' attitudes towards professional development opportunities.

There are not many studies on the motivation of nurses for professional development in Lithuania, and there is a particular lack of studies analysing the interrelationships between different motivational factors and their dependence on sociodemographic and work environment characteristics. Such data are necessary in order to develop evidence-based CPD promotion strategies tailored to a specific context.

This study seeks to reveal the motivational factors for professional development among Lithuanian nurses, their interrelationships, and their connections with sociodemographic and work environment characteristics. To achieve the aim, the following objectives are formulated:

1. To identify the motivational factors that determine the professional development of nurses.
2. To identify the relationships between motivational factors and the sociodemographic characteristics of nurses (type of workplace, education, work experience).
3. To analyse the interrelationships between different motivational factors.

The study is significant both theoretically and practically. It contributes to the international nursing science discussion on the role of motivation in professional development and provides data that can help healthcare institutions and policy-makers make decisions that improve the conditions for nurses' professional development.

3. Theoretical Background

Understanding the motivational factors that shape nurses' engagement in continuing professional development (CPD) requires an integrated theoretical perspective capable of explaining both individual-level psychological processes and structural, work-related influences. Although numerous models of motivation exist, three theoretical frameworks—Self-Determination Theory (SDT), Herzberg's Two-Factor Theory, and Maslow's Hierarchy of Needs—have been most relevant in research on healthcare professionals' learning and competence development. The following section critically reviews these theories, discusses their complementarities and limitations, and outlines the rationale for their selection in this study.

Self-Determination Theory. Self-Determination Theory (SDT) is one of the most comprehensive models for understanding motivation in the context of professional development. SDT asserts that human motivation is determined by the satisfaction of three basic psychological needs: autonomy (a sense of volition and self-direction), competence (feeling capable and effective), and relatedness (feeling connected and valued by others) (Ryan & Deci, 2019). When these needs are met, individuals experience inner satisfaction and are more inclined to learn and improve due to intrinsic motivation - out of interest, personal value, or enjoyment—resulting in deeper learning and long-term professional growth.

SDT distinguishes between **intrinsic** and **extrinsic** motivation. Intrinsic motivation stems from personal interest and enjoyment, whereas extrinsic motivation is driven by rewards, recognition, or workplace requirements (Deci & Ryan, 2008). Prior research indicates that although extrinsic factors may trigger initial participation in CPD, they are insufficient to sustain long-term and meaningful engagement (Ganotice et al., 2023; Tranquillo & Stecker, 2016).

Importantly, SDT conceptualises extrinsic motivation as a continuum of regulatory styles, ranging from externally controlled to more internalised forms. Along this continuum:

- **Formal work-related motives** (e.g., licence renewal, employer expectations) correspond to external or introjected regulation.
- **Career-related motives** (e.g., improving care quality, career planning) align with identified regulation.
- **Personal motives** (curiosity, self-development) are most closely associated with intrinsic motivation.

This framework helps explain why nurses who perceive CPD as personally meaningful demonstrate stronger and more consistent engagement. When the workplace supports autonomy, competence, and relatedness, even mandatory training can gradually become internalised, fostering more sustainable motivation (Tranquillo & Stecker, 2016).

Integrating SDT into the analysis of nurses' professional development offers valuable insight into how organisational culture and learning environments can promote lifelong learning and support high standards of nursing practice.

Herzberg's Two-Factor Theory. Herzberg's Two-Factor Theory, also known as the Motivation-Hygiene Theory, distinguishes between two categories of factors shaping job satisfaction: motivators and hygiene factors (Alrawahi et al., 2020). Motivators such as achievement, recognition, responsibility, and opportunities for advancement are intrinsic to the nature of the work and directly increase job satisfaction and motivation. Hygiene factors, including salary, job security, working conditions, organisational policies, and supervision, relate to the work environment and prevent dissatisfaction, although they do not in themselves enhance true motivation (Rai et al., 2021; Alrawahi et al., 2020).

In healthcare settings, this model is frequently used to explain the difference between factors that trigger participation in professional development and those that sustain it. For example, salary, job security, or organisational requirements may encourage nurses to engage in CPD initially (external, hygiene-related drivers), but long-term engagement is more strongly influenced by motivators such as professional growth, recognition, and the development of competence (Alrawahi et al., 2020).

Herzberg's framework aligns closely with Self-Determination Theory, as motivators correspond to intrinsic or internalised forms of regulation, while hygiene factors reflect more external or controlled forms. Applied to CPD, this distinction helps clarify the motive categories used in this study: **career-related motives** combine both motivators (e.g., advancement, recognition) and certain hygiene-related considerations (e.g., job stability), whereas **formal work-related motives** primarily reflect hygiene factors such as mandatory training or licensing requirements. Understanding this differentiation is essential for interpreting why nurses may begin CPD for external reasons but sustain meaningful engagement only when intrinsic motivators are present.

Maslow's hierarchy and needs-based perspectives. Maslow's hierarchy of needs is one of the foundational models explaining how human motivation progresses from basic physiological and safety needs towards higher-level psychological needs, including esteem and self-actualisation. In the context of nursing, this perspective highlights that adequate remuneration, job security, safe working conditions, and a supportive environment are necessary prerequisites for nurses to pursue higher professional development goals (Hayre-Kwan et al., 2021; Hazanov et al., 2021; Kim & Shin, 2020). Only when these basic needs are met do favourable conditions emerge for continuous professional development, fostering competence growth, self-esteem, and ultimately self-actualisation through lifelong learning.

Maslow's framework also complements both Self-Determination Theory (SDT) and Herzberg's Motivation-Hygiene Theory. Lower-level needs correspond to Herzberg's hygiene factors, which prevent dissatisfaction but do not create sustained motivation, while higher-level needs align with motivators and with SDT's core psychological needs—autonomy, competence, and relatedness. This alignment provides a deeper understanding of how motivational structures shift across different stages of a nurse's career and in varying clinical contexts. As nurses' fundamental needs are increasingly satisfied, their motivational priorities evolve, transitioning from compliance-driven participation in CPD towards more intrinsic and developmental goals aimed at professional and personal excellence (Hayre-Kwan et al., 2021).

Comparative and integrative theoretical perspective. Although conceptually distinct, these three theories share important intersections. Autonomy in SDT parallels self-actualisation in Maslow's hierarchy, while competence corresponds to esteem needs (Deci & Ryan, 2000; Gagné & Deci, 2005). Herzberg's motivators reflect intrinsic and internalised motivational forms, whereas hygiene factors resemble Maslow's lower-level needs (Peter, 2025). Together, the theories provide a multi-dimensional view (Alrawahi et al., 2020; Kim & Shin, 2020; Ryan & Deci, 2019):

- **SDT** explains the *quality* of motivation and its internalisation;
- **Herzberg's theory** differentiates between environmental conditions and true motivators;
- **Maslow's model** outlines the *hierarchical structure* of needs underlying motivation.

This integrative approach is particularly suitable for analysing CPD motivation among nurses, whose learning behaviours are shaped by both personal aspirations and organisational constraints.

Rationale for theory selection and consideration of alternative models. SDT, Herzberg's Two-Factor Theory, and Maslow's hierarchy were selected due to their relevance to professional learning, strong empirical grounding in healthcare research, and ability to explain the coexistence of internal and external motives in CPD (Hayre-Kwan et al., 2021; Rai et al., 2021; Alrawahi et al., 2020; Kim & Shin, 2020; Ryan & Deci, 2019; Tranquillo & Stecker, 2016).

Other influential theories—such as *Expectancy Theory*, *Goal Setting Theory*, or *Social Cognitive Theory*—also offer valuable insights into motivation but place stronger emphasis on short-term performance outcomes, task-specific expectations, or self-efficacy (Heintalu et al., 2025; Thwe & Kalman, 2024; Fang, 2023; Kismihók et al., 2020; Schunk & DiBenedetto, 2020). Although relevant, these models offer a more limited perspective on lifelong learning, the internalisation of motivation, and the coexistence of intrinsic and extrinsic motives, which are

central to CPD. Therefore, the three selected frameworks provide the most coherent foundation for categorising and interpreting nurses' motivations in this study.

Critical considerations. Each model has limitations. SDT has been criticised for insufficiently addressing structural constraints (Vansteenkiste et al., 2006; Gagné & Deci, 2005); Herzberg's two-factor theory has been questioned for methodological rigidity (Gimpl, 2024; Diana-Cosmina et al., 2023), Maslow's hierarchy has limited empirical validation regarding the strict ordering of needs (Hazanov et al., 2021). Recognising these limitations is important for nuanced interpretation. Nevertheless, when combined, these frameworks provide a strong, integrated basis that is consistent with current evidence on CPD motivation and supports grouping motives into personal, career-oriented, and formal work-related categories.

4. Materials and Methods

4.1. Study Design and Ethical Considerations.

The study was conducted in two inpatient hospitals, two primary healthcare centres, and a nursing home, and the participants were Lithuanian nurses employed in one of these institutions. In the first question of the survey, nurses were asked if they agreed to participate in the study. Those who answered "no" were automatically excluded from further participation. The study protocol was approved by the Institutional Ethics Committee of Kaunas College (protocol No. 13-46, February 24, 2025).

4.2. Sample Size

The sampling was conducted using convenience and purposive sampling methods, including nurses from several Lithuanian healthcare institutions of different profiles. In total, 378 nurses participated in the study, representing various healthcare institutions in Lithuania that provide different types of services: two hospitals offering inpatient and diagnostic–consultation services, two primary health care centres, and one nursing and long-term care hospital. The majority of whom (98.9%) were women. The distribution of the respondents by education was even: 26.7% indicated that they had further education, 31% had higher non-university education, 17.5% had a university bachelor's degree, and 24.8% had a master's degree (Table 1).

Table 1. Sociodemographic data of nurses, N=378

Characteristics	Groups	Number	Percentage
Gender	Female	374	98.9
	Male	4	1.1
Education	Further (medical school)	101	26.7
	Higher non-university (professional bachelor's degree)	117	31.0
	University (bachelor's degree)	66	17.5
	University (master's degree)	94	24.8
Length of work	Up to 5 years	101	26.7
	5-10 years	74	19.6
	11-20 years	63	16.7
	21-30 years	69	18.3
	31 and more years	71	18.8
Type of institution	Polyclinic or healthcare centre	108	28.0
	Hospital	266	72.0

The respondents had varying degrees of professional experience. 26.7% of nurses had up to 5 years of work experience, 19.6% had 6–10 years, 16.7% had 11–20 years, 18.3% had 21–30 years, and 18.8% had 31 years or more.

Almost one-third of respondents worked in primary healthcare institutions, such as polyclinics or family medicine centres, while the rest (72%) worked in inpatient healthcare institutions: hospitals, nursing homes (Table 1). In Lithuania, nursing hospitals are classified as hospitals because they provide inpatient and hospice healthcare services to patients. Patients in these institutions are hospitalised and receive continuous nursing and medical care, so according to the current classification of healthcare institutions, they are considered hospitals rather than outpatient or social care institutions. Nurses working in inpatient wards and nursing hospitals were classified into a single group as hospital-based nurses.

4.3. Development of the Questionnaire and the Psychometric Quality of the Questionnaire

To assess construct validity, an exploratory factor analysis (EFA) was conducted using the principal components method. The suitability of the data for factor analysis was confirmed by good sampling adequacy indicators ($KMO = 0.841$), and Bartlett's test of sphericity was statistically significant ($\chi^2 = 3282.709$; $df = 120$; $p < 0.001$).

Factors were extracted based on eigenvalues greater than 1 and inspection of the scree plot, in line with the theoretical model of the construct. Varimax orthogonal rotation with Kaiser normalisation was applied. Items with factor loadings ≥ 0.40 were considered significant. Items exhibiting cross-loadings ≥ 0.40 on more than one factor were excluded from the final factor solution.

Three factor components were retained, corresponding to the theoretical structure of the motives and supporting the construct validity of the scales. The results confirmed the structural soundness of the construct, indicating that the subscales were supported both theoretically and empirically.

This article presents the motives for developing the professional competencies of nurses, categorised into three scales: career-related, formal work-related, and personal motives. The Cronbach's alpha coefficient was calculated for each scale to assess their internal reliability.

Table 2. Psychometric quality of the scales

Scales	Items	N	Cronbach's alpha
Career-related motives	● Improvement of nursing care quality ● Career planning perspectives ● Ensuring a higher salary ● Enhancement of professional confidence ● Guaranteed employment	5	0.694
Formal work-related motives	● Job position requirements ● Meeting employer expectations ● It is regulated and necessary to renew the licence ● Compliance with employer requirements	4	0.742
Personal motives	● Striving for personal development ● Desire to explore unknown areas ● Inner curiosity ● Broadening one's horizons and perspectives ● Strengthening self-esteem ● Lifelong learning is a value that must be nurtured ● Opportunity to share acquired knowledge with colleagues	7	0.874

There are five statements on the career-related motivation scale, covering improving the quality of nursing care, career planning prospects, striving for higher pay, strengthening professional self-confidence, and ensuring guaranteed employment. The Cronbach's alpha coefficient for this scale was 0.694, indicating satisfactory internal consistency.

Four statements were assigned to formal work-related motives: compliance with job requirements, meeting employer expectations, the need to regularly renew one's licence, and compliance with employer requirements. The Cronbach's alpha for this scale was 0.742, indicating sufficient reliability.

The personal motivation scale consisted of seven statements related to personal development, the desire to explore new areas, inner curiosity, broadening horizons, strengthening self-esteem, cherishing lifelong learning as a value, and the opportunity to share acquired knowledge with colleagues. The Cronbach's alpha coefficient for this scale was high at 0.874, indicating good internal consistency (Table 2).

Cronbach's alpha depends on the number of statements (questions) – the more statements there are, the greater the likelihood that the average level of intercorrelation will even out and the overall reliability value will increase. Therefore, after calculating Cronbach's alpha for all statements, a very high value of 0.904 was obtained.

The categorisation of motives is based on theoretical and empirical data and the discussed frameworks for explaining CPD motivation: the dichotomy of internal and external motivation (Self-Determination Theory), Herzberg's two-factor theory (motivators–hygiene factors), and needs-based perspectives (Maslow's hierarchy).

Career-related motives (e.g., improving service quality, seeking higher pay, strengthening professional confidence, career planning perspectives) are mainly associated with external motivational factors, but also feature elements of internal motivation. For example, the desire to improve the quality of services provided may imply strengthening professional identity and internal satisfaction. According to Herzberg's theory, some factors (salary, job security) are classified as "hygiene" factors, while others (recognition, sense of achievement) are considered "motivators."

Motivations related to formal aspects of work (e.g., licence renewal requirements, employer standards and expectations) are essentially classified as external motivational factors. These motivations are necessary to ensure a minimum level of engagement and compliance with professional standards, but research shows that they do not usually lead to long-term engagement unless they are successfully internalised through perceived benefits and meaning.

The range of personal motivations (e.g., curiosity, self-development, lifelong learning, desire to share knowledge with colleagues) reflects internal motivation, often arising from the need for self-improvement, strengthening of professional identity, and personal values. According to SDT, they are most often classified as intrinsic motivation or integrated regulation types, which are associated with the highest level of engagement and learning quality.

The motivation system used in this study is based on the results of international CPD studies, which show that involvement in professional development is most often determined by a mixed motivation structure, including both external (regulatory requirements, employer policy) and internal (curiosity, professional identity, sense of meaning) factors, and is considered to be the most effective motivation structure for professional development. External factors provide the impetus to participate in professional development activities, while internal factors support long-term and deep engagement in professional development and encourage active knowledge sharing (Pool et al., 2021; Deci & Ryan, 2000). This classification of motives implies a systematic analysis of different sources of motivation, an assessment of their interaction, and allows us to identify which factors are most appropriate to strengthen at different stages of professional development in nursing (Hakvoort et al., 2022; Tranquillo & Stecker, 2016).

In addition, international studies emphasise that organisational and demographic factors—the work environment (primary or inpatient care), education, and work experience—can also influence motivation for professional development (Edwards et al., 2009). In view of this, it is

important to include organisational and demographic aspects in the analysis of motivation for professional development. These are particularly relevant in the context of Maslow's hierarchy of needs theory, as this theory helps to understand how different working conditions, experience, and education relate to CPD motivation priorities and their hierarchy.

4.4. Data Analysis

Statistical analysis of the data was conducted using SPSS 30 (Statistical Package for the Social Sciences). To determine the normality of the data distribution and justify the application of the selected statistical methods (parametric or non-parametric), an analysis of the Skewness and Kurtosis coefficients was performed (Table 3).

Table 3. The normality of the data distribution based on Skewness and Kurtosis

Statistical parameters	Career-related motives	Formal work-related motives	Personal motives
Skewness	-0.267	-0.205	-0.299
Std. Error of Skewness	0.128	0.128	0.128
Kurtosis	0.631	-0.291	-0.772
Std. Error of Kurtosis	0.255	0.255	0.255

The normality of data distribution was assessed using skewness and kurtosis indicators. The values of these indicators for all three scales fell within the range of -1 to $+1$, which indicates an approximately normal data distribution (Table 3). Based on this assessment, parametric statistical methods were applied. ANOVA and t-tests were used to determine the differences in means between groups. Statistical significance was considered to be $p \leq 0.05$. Pearson's correlation coefficient (r) was used to analyse the relationships between the scales, allowing the strength and direction of the relationship to be assessed.

To ensure the assumptions for applying parametric tests, statistical outliers were removed from the dataset. Therefore, the results of 364 respondents are presented below (Figures 1–3 and Tables 4–7).

Outliers were identified based on boxplot diagrams using Tukey's criterion ($1.5 \times \text{IQR}$) for each examined variable. Values that fell outside the whiskers were considered outliers and were excluded from further analysis. In total, 14 cases were removed. To assess the stability of the results, the main statistical analyses were repeated using the original dataset (without outlier removal), and the overall trends remained unchanged. This decision did not affect the representativeness of the sample or the interpretation of the results but improved the symmetry of data distributions and the assumptions for applying parametric tests.

5. Results of Research

Figures 1–3 presents nurses' motives for developing professional competencies, expressed as percentages ranging from completely disagree to completely agree.

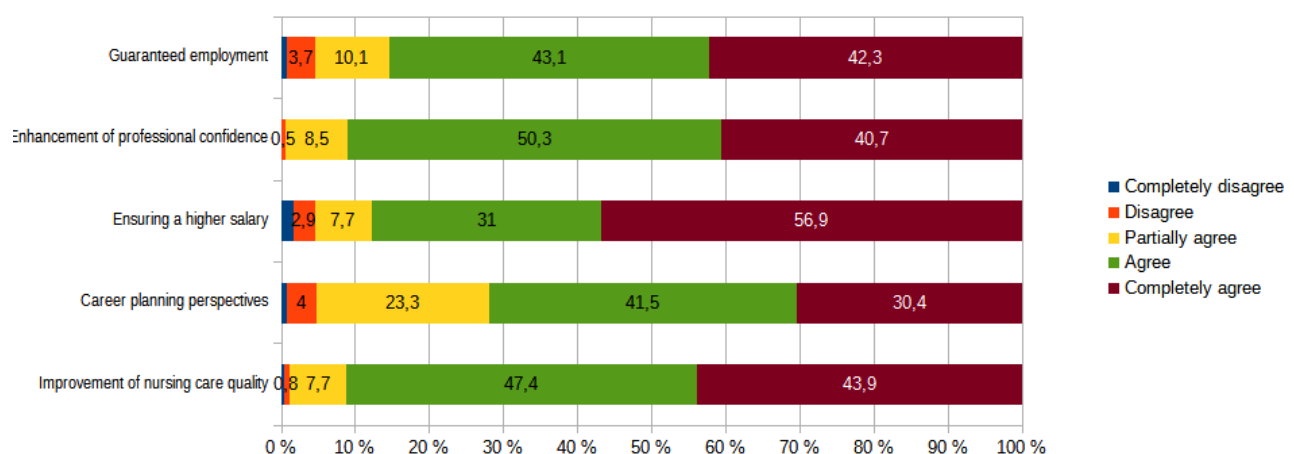


Figure 1. Career-related motives for nurses' professional competency development

Career-related motives received particularly strong support from the nurses who participated in the study. The majority of nurses fully or partially agreed that the improvement of competencies is driven by the desire to improve the quality of nursing care (91.3 percent), to receive a higher salary (87.9 percent), and to strengthen professional self-confidence (91.0%). The desire for job security (85.4%) and career planning prospects (71.9%) were also frequently mentioned. Details are presented in Figure 1.

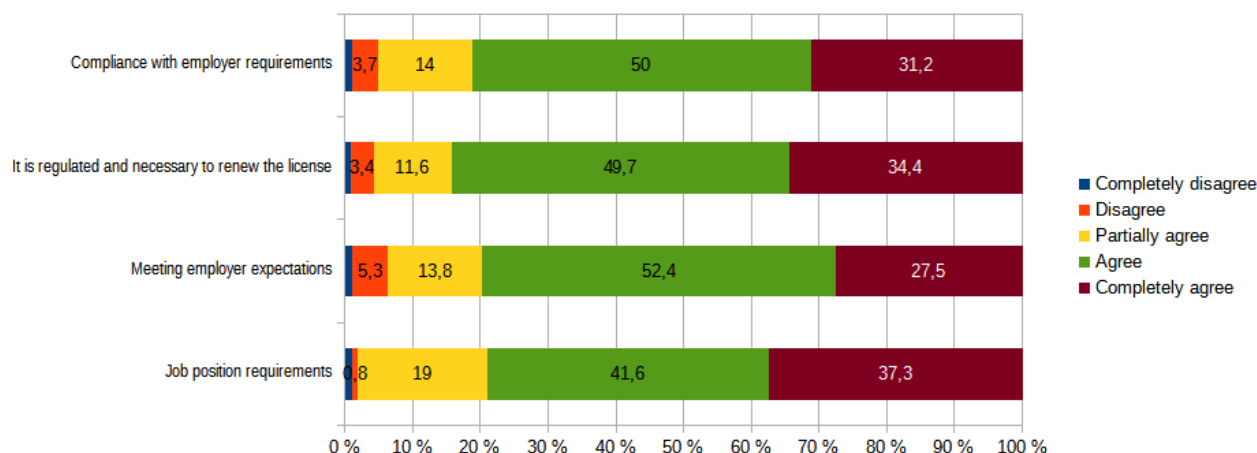


Figure 2. Formal work-related motives for nurses' professional competency development

Formal work-related motives are also significant, but the responses are more evenly distributed. Most respondents indicated that the requirements of the position (78.9%), the need to renew their licence (84.1%), and compliance with employer requirements (81.2%) encourage them to improve their competencies. Slightly less support was expressed for the motive of meeting employer expectations (79.9%). Details are presented in Figure 2.

Personal motives received the highest level of approval. Most nurses fully or partially agreed that the desire to improve is a motivating factor for improving their skills (92.3%), as is the understanding that lifelong learning is a value (85.2%), the desire to broaden one's horizons (91.2%), strengthen self-esteem (90.7%), and share knowledge with colleagues (87.0%). Details are presented in Figure 3.

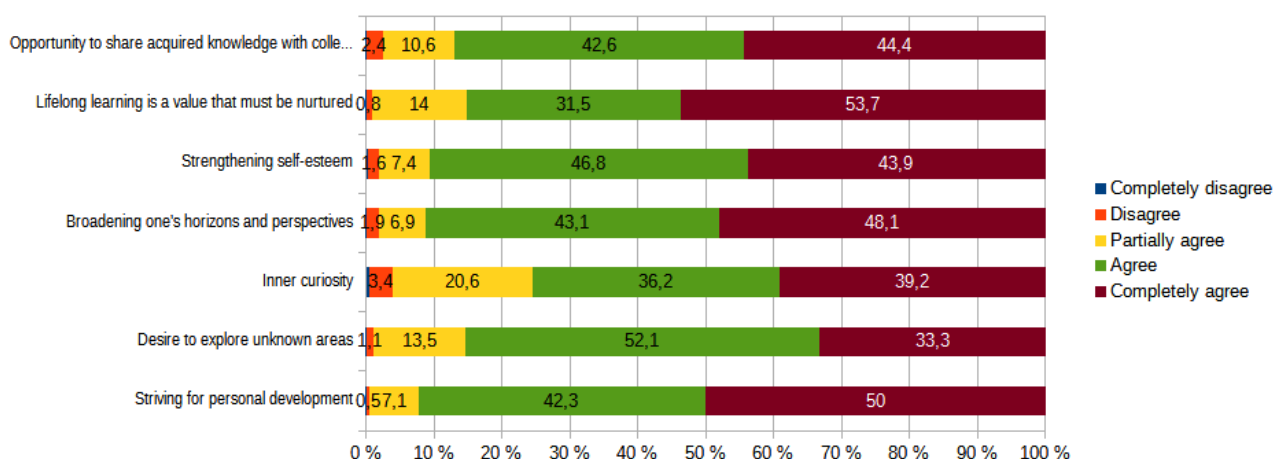


Figure 3. Personal motives for nurses' professional competency development

Using mean comparison tests, Tables 4, 5, and 6 present the average scores of motivational factors for professional development among nurses according to their sociodemographic characteristics. The results reveal differences in motivation levels across various groups,

highlighting how personal and professional backgrounds influence nurses' willingness to develop their competencies.

Table 4. The link between nurses' motivation to develop their professional competencies and the type of institution

Scales	Type of institution	n	Mean	Std. Deviation	t	df	Sig.
Career-related motives	Polyclinic or healthcare centre	104	4.4	0.45	4.012	212.964	p≤0.05
	Hospital	260	4.2	0.51			
Formal work-related motives	Polyclinic or healthcare centre	104	4.2	0.53	1.617	205.398	p≥0.05
	Hospital	260	4.1	0.58			
Personal motives	Polyclinic or healthcare centre	104	4.5	0.46	4.849	223.980	p≤0.05
	Hospital	260	4.2	0.54			

Assessing the motivational factors for improving professional competencies by type of institution, it can be seen that the averages on two scales (career-related and personal motives) are higher for nurses working in polyclinics or healthcare centres than for nurses working in hospitals ($p \leq 0.05$). An independent sample t-test showed that the average score on the "Career-related motives" scale for nurses working in polyclinics or healthcare centres was 4.4, while for those working in hospitals it was 4.2 ($t=4.012$, $df=362$, $p<0.001$). Also, nurses working in polyclinics or healthcare centres are more likely to have personal motives to improve their professional competencies than nurses working in hospitals (Table 4). The average score on the "Personal motives" scale was 4.5, while for nurses working in hospitals it was 4.2. These differences are statistically significant ($t=4.849$, $df=223.980$, $p<0.001$). Although the average score on the formal work-related motives scale was higher among nurses working in polyclinics or healthcare centres than among those working in hospitals, these differences are not statistically significant ($p \geq 0.05$).

Table 5. The link between nurses' motivation to develop their professional competencies and education level

Scales	Education	n	Mean	Std. Deviation	F	Sig.
Career-related motives	Further (medical school)	96	4.2	0.51	1.614	p≥0.05
	Higher non-university (professional bachelor's degree)	113	4.3	0.46		
	University (bachelor's degree)	65	4.3	0.45		
	University (master's degree)	90	4.2	0.58		
Formal work-related motives	Further (medical school)	96	4.1	0.50	1.572	p≥0.05
	Higher non-university (professional bachelor's degree)	113	4.2	0.55		
	University (bachelor's degree)	65	4.2	0.54		
	University (master's degree)	90	4.0	0.65		
Personal motives	Further (medical school)	96	4.2	0.53	4.738	p≤0.05
	Higher non-university (Professional bachelor's degree)	113	4.5	0.48		
	University (bachelor degree)	65	4.3	0.53		
	University (master degree)	90	4.3	0.57		

An assessment of nurses' motivation to improve their professional competencies based on their education revealed that only the average scores on the personal motives scale differed statistically significantly, while the differences on the career and formal motives scales were not statistically significant (Table 5).

The mean values on the career-related motives scale ranged from 4.2 to 4.3 in different education groups. A slightly higher average was found among nurses with higher non-university (professional bachelor's) education, $M = 4.3$ ($SD = 0.46$), and those with a university bachelor's degree, $M = 4.3$ ($SD = 0.45$). However, these differences were not statistically significant ($p \geq 0.05$).

The means on the „Formal work-related motives“ scale were also similar across all groups, ranging from $M = 4.0$ to $M = 4.2$. Despite these differences, they are not statistically significant ($p \geq 0.05$).

In contrast to the above-mentioned scales, statistically significant differences ($p \leq 0.05$) were found on the "Personal motives" scale between groups of nurses with different levels of education ($F = 4.738$, $p < 0.001$). The highest average was recorded among nurses with non-university (professional bachelor's) education, with $M = 4.5$ ($SD = 0.48$). Other groups – those with university bachelor's or master's degrees – rated personal motives slightly lower ($M = 4.3$). The lowest expression of personal motives was found among nurses with further (medical school) education ($M = 4.2$).

After performing the Bonferroni post hoc test, a statistically significant difference was observed only between nurses with medical school education and those with higher non-university (college) education in the personal motives scale. Nurses with higher non-university education reported higher mean scores for personal motives compared to nurses with medical school education (mean difference = -0.316 , 95% CI [-0.510 , -0.122], $p < 0.001$).

Table 6. The link between nurses' motivation to develop their professional competencies and work experience

Scales	Work experience	n	Mean	Std. Deviation	F	Sig.
Career-related motives	Up to 5 years	97	4.4	0.48	5.398	$p \leq 0.05$
	From 5 to 10 years	71	4.2	0.48		
	From 10 to 20 years	59	4.3	0.60		
	From 20 to 30 years	67	4.1	0.51		
	30 years or more	70	4.1	0.41		
Formal work-related motives	Up to 5 years	97	4.3	0.54	5.230	$p \leq 0.05$
	From 5 to 10 years	71	4.0	0.58		
	From 10 to 20 years	59	4.2	0.65		
	From 20 to 30 years	67	4.0	0.53		
	30 years or more	70	4.2	0.46		
Personal motives	Up to 5 years	97	4.5	0.55	11.871	$p \leq 0.05$
	From 5 to 10 years	71	4.4	0.51		
	From 10 to 20 years	59	4.4	0.46		
	From 20 to 30 years	67	4.1	0.50		
	30 years or more	70	4.1	0.49		

Work experience of nurses is a significant factor related to their motivation to improve their professional competencies (Table 6). The averages on all three motivational factor scales differ statistically significantly ($p \leq 0.001$).

On the "Career-related motives" scale, the highest motivational averages were recorded among nurses with up to 5 years of work experience ($M = 4.4$, $SD = 0.48$), while the lowest were among those with more than 20 years of work experience ($M = 4.1$). The results of the ANOVA test suggest that these differences are statistically significant ($F = 5.398$, $p < 0.001$). The Bonferroni post

hoc test showed that nurses with up to 5 years of work experience had higher career-related motivation compared to nurses with the following work experience: 5–10 years ($p = 0.031$), 20–30 years ($p = 0.003$), and more than 30 years ($p = 0.001$).

The mean scores on the formal work-related motives scale ranged from 4.0 to 4.3, with the highest mean score found in the group of nurses with up to 5 years of work experience ($M = 4.3$, $SD = 0.54$). ANOVA analysis showed statistically significant differences ($F = 5.230$, $p < 0.001$). According to the Bonferroni test, significant differences were found between nurses with up to 5 years and 5–10 years of work experience ($p = 0.009$) and nurses with up to 5 years and 20–30 years of work experience ($p < 0.001$).

Even more pronounced differences were found on the "Personal motives" scale. The averages on this scale ranged from $M = 4.1$ to $M = 4.5$, with the highest scores observed among nurses with up to 5 years of work experience ($M = 4.5$, $SD = 0.55$), while the lowest was among those with more than 20 years of work experience ($M = 4.1$).

Dispersion analysis showed statistically significant differences ($F = 11.871$, $p < 0.001$). Based on the Bonferroni test, statistically significantly higher personal motivations were found among: up to 5 years and 20–30 years ($p < 0.001$), up to 5 years and 31+ years ($p < 0.001$), 5–10 years and 20–30 years ($p = 0.006$), 5–10 years and 31+ years of working nurses ($p = 0.012$), 10–20 years and 20–30 years ($p < 0.001$), 10–20 years and 31+ years ($p < 0.001$).

Table 7 shows Pearson's correlation coefficients describing the relationships between the three groups of motives: career-related motives, formal work-related motives and personal motives.

Table 7. Correlation between scales of motivation to develop professional competencies

Scales and statistical indicators		Career-related motives	Formal work-related motives	Personal motives
Career-related motives	Pearson's Correlation	1	0.736**	0.704**
	Sig. (2-tailed)		<0.001	<0.001
	N	364	364	364
Formal work-related motives	Pearson's Correlation	0.736**	1	0.607**
	Sig. (2-tailed)	<0.001		<0.001
	N	364	364	364
Personal motives	Pearson's Correlation	0.704**	0.607**	1
	Sig. (2-tailed)	<0.001	<0.001	
	N	364	364	364

** . Correlation is significant at the 0.01 level (2-tailed).

The data presented in Table 7 show a moderate to strong positive correlation between the scales. A strong positive correlation ($r = 0.736$) was found between career-related and formal work-related motives, indicating that these groups of motives often occur together. Career motives also correlate strongly with personal motives ($r = 0.704$), suggesting that the pursuit of personal improvement is closely related to expectations of professional growth. A slightly weaker but still significant positive correlation was found between formal work motivations and personal motivations ($r = 0.607$).

Career-related motives for CPD were additionally assessed using multiple linear regression analysis to determine the relationship between education and work experience and the expression of career motives (Table 8).

Table 8. Multiple linear regression model predicting career motivation to develop professional competencies

Predictor	B	Std. Error	Beta	t	p
Constant	4.689	0.122	–	38.479	<0.001
Type of institution	–0.108	0.060	–0.094	–1.803	0.072
Education	–0.029	0.023	–0.066	–1.271	0.205
Work experience	–0.066	0.018	–0.193	–3.694	<0.001

The results of regression analysis showed that work experience was significantly associated with career motivation to develop professional competencies ($\beta = -0.193$; $p < 0.001$). This indicates that nurses with longer work experience tend to have weaker career motivation to improve their professional competencies. Meanwhile, education ($\beta = -0.066$; $p = 0.205$) and type of institution ($\beta = -0.094$; $p = 0.072$) did not have a statistically significant effect on career motivation. The regression model was statistically significant, $F(3,360) = 7.017$; $p < 0.001$, explaining 5.5% of the variance ($R^2 = 0.055$).

Table 9. Multiple linear regression model predicting formal work-related motivation to develop professional competencies

Predictor	B	Std. Error	Beta	t	p
Constant	4.317	0.139	–	31.162	<0.001
Type of institution	0.019	0.068	0.015	0.287	0.775
Education	–0.026	0.026	–0.052	–0.989	0.323
Work experience	–0.051	0.020	–0.134	–2.519	0.012

The regression analysis model presented in Table 9 did not reach statistical significance, $F(3,360) = 2.325$; $p = 0.075$, and the proportion of explained variance was very small ($R^2 = 0.019$), meaning that only 1.9% of the variance in formal motivation was explained. In this model, only work experience was significant ($\beta = -0.134$; $p = 0.012$), indicating that greater work experience is associated with weaker formal work-related motivation to develop professional competencies. Meanwhile, education ($\beta = -0.052$; $p = 0.323$) and type of institution ($\beta = 0.015$; $p = 0.775$) did not have a statistically significant effect on formal motivation to improve professional competencies.

Table 10. Multiple linear regression model predicting personal motivation to develop professional competencies

Predictor	B	Std. Error	Beta	t	p
Constant	4.808	0.126	–	38.189	<0.001
Type of institution	–0.149	0.062	–0.122	–2.412	0.016
Education	0.022	0.024	0.045	0.902	0.368
Work experience	–0.101	0.018	–0.279	–5.504	<0.001

The regression analysis model presented in Table 10 was statistically significant, $F(3,360) = 14.449$; $p < 0.001$, and the proportion of explained variance was 10.7% ($R^2 = 0.107$), meaning that this model explained the largest share of motivation variance compared to the other examined motivation groups. Among the independent variables, the strongest predictor was work experience ($\beta = -0.279$; $p < 0.001$) – greater work experience was associated with weaker personal motivation to develop professional competencies. The type of institution also had a statistically significant, though weaker, negative effect on career-related and personal motivation to develop professional competencies. Nurses working in hospitals exhibited less pronounced personal motivation to improve professional competencies ($\beta = -0.122$; $p = 0.016$). Meanwhile, education did not have a statistically significant effect on personal motivation ($\beta = 0.045$; $p = 0.368$).

6. Discussion

The findings of this study demonstrate that Lithuanian nurses' motivation to develop professional competencies is complex, encompassing career-related, work-related, and personal factors. Such complexity not only reflects individual career aspirations but also contributes to the improvement of healthcare services. As noted by Roy & Graebe (2025) and Lyman et al. (2022), professional development among healthcare workers adds value to the healthcare system as a whole.

Our study, which involved 378 nurses from Lithuania, found that the motives for Continuing Professional Development (CPD)—career-related, formal work requirements, and personal motives—were expressed at a high level. This result reflects the cultural and national context and contributes new empirical data from Lithuania to the international body of literature. A meta-analysis of 25 studies conducted by Mlambo et al. (2021) revealed that nurses' motivation for CPD globally is primarily driven by the desire to improve the quality of care and professional competence; this trend is further supported by findings from a study conducted in Greece (Tsirigoti et al., 2024).

Our results indicate that nurses' motivation is strongly driven by career-related aspirations, including the improvement of care quality, the pursuit of higher salaries, and the strengthening of professional self-confidence. These findings are consistent with the principles of Motivation–Hygiene Theory, which categorises pay and job security as hygiene factors, while professional growth and recognition are considered intrinsic motivators (Alrawahi et al., 2020; Rai, 2021). The fact that our results are consistent with international findings indicates that the CPD motivation profile of Lithuanian nurses aligns with global trends. This represents a valuable contribution to international knowledge, as Lithuania has so far been underrepresented in this research context.

Within the Lithuanian scientific literature, several studies have examined strategies for developing nursing professionals' competencies in the context of social partnership (Mažionienė and Žydžiūnaitė, 2009). Jurgutis et al., (2012) explored the need for professional development among nurses working in primary healthcare settings. The study by Istomina et al., (2011) aimed to assess the preconditions and areas of CPD among surgical ward nurses. Research has also been conducted on nurses' work-related motives in intensive care units (Tkačenko et al., 2021) and on the leadership roles and opportunities for strengthening leadership among oncology nurses (Marcinkevičienė and Žydžiūnaitė, 2025).

However, in Lithuania, there is still a lack of studies specifically addressing nurses' motivation to develop their professional competencies (CPD). A review of available research shows that while several scientific papers have analysed issues related to professional competency development and the structure of competencies in Lithuania, there is a lack of empirical studies directly assessing nurses' CPD motivation using validated research instruments. This suggests that Lithuania remains insufficiently represented in the international context of CPD motivation research. Personal motives such as curiosity, lifelong learning, the desire to broaden horizons, and the willingness to share knowledge with colleagues received the strongest endorsement from participants. This aligns with Self-Determination Theory (SDT), which emphasises the central role of intrinsic motivation in sustaining long-term professional development (Ryan and Deci, 2019; Tranquillo and Stecker, 2016). In line with our results, personal motives were found to be strongly correlated with both career-related and formal work-related factors, reinforcing the view that professional growth is not driven by a single factor but emerges from the interplay of multiple motivations.

Our study also revealed significant differences in motivation depending on the workplace. Nurses employed in primary care institutions demonstrated stronger career and personal motives compared to hospital-based nurses ($p < 0.001$). This may be explained by greater autonomy and opportunities to apply diverse competencies in primary care, echoing Edwards et al. (2009), who argue that professional environments exert considerable influence on motivation.

The level of education was also statistically significantly associated with motivation: nurses with a college degree expressed the strongest motivation for professional development, while those who had graduated from medical schools demonstrated the lowest motivation ($p < 0.001$). In our study, the category of “further education” included nurses who had completed medical school programmes in nursing during the Soviet and post-Soviet periods up to the year 2000, representing 26.7% of the total study sample.

Work experience emerged as another critical factor. Nurses with less than five years of professional experience showed the highest levels of motivation across all domains, while those with more than 20 years reported the lowest ($p \leq 0.001$).

Although international studies also indicate that younger generations of nurses tend to be more motivated to engage in professional development (Pool et al., 2016; Tan and Chin, 2023), in the Lithuanian context this pattern is not merely the result of a universal age effect but rather reflects a shift in professional culture. Lithuania joined the European Union only in 2004, and the professional socialisation of older nurses took place within the Soviet and post-Soviet health care systems, which were characterised by limited professional autonomy and low expectations regarding CPD. In contrast, the professional identity of younger generations of nurses has been shaped by the EU framework for nursing education and Continuing Professional Development (Directive 2013/55/EU). The Directive of the European Parliament and of the Council (2013/55/EU) explicitly emphasises that the recognition of health professionals' qualifications within the European Union is directly linked to ongoing professional competence development. Within this framework, CPD is defined not as an optional activity but as an essential requirement to ensure patient safety, quality of care, and the continuity of professional qualifications across the EU.

Therefore, our findings—showing particularly high motivation for professional development among younger nurses—reflect not only individual attitudes but also the broader European regulatory context in which continuous professional development is regarded as both a professional duty and a standard of practice. These results, demonstrating stronger CPD motivation among younger generations of nurses, may thus be viewed as evidence of the ongoing transformation of the nursing profession in Lithuania.

The provisions of Directive 2013/55/EU on continuous competence renewal and qualification maintenance provide the legal foundation for ensuring that the engagement of younger generations of nurses in CPD is not merely encouraged but also systematically supported at the national level. This is particularly relevant in light of our study results, which revealed that nurses with less than five years of work experience demonstrated the highest motivation to develop their competencies.

This legal logic has already been translated into national policy: the Action Plan for the Attraction and Retention of Health Care Professionals 2024–2029 (Order No. V-704, Ministry of Health, 2 July 2024) includes measures such as funding for tuition, payment for non-formal CPD programs, and scholarships. These initiatives can serve as concrete instruments to help this younger and highly motivated group of nurses to realise their professional growth plans.

Our study results revealed that nurses with lower levels of education (those who graduated from medical schools) expressed weaker personal motives for professional development, making them more vulnerable within the CPD system. This group tends to rely more on workplace requirements than on self-directed learning or career aspirations. The national measures outlined in the Action Plan for the Attraction and Retention of Health Care Professionals 2024–2029 may be particularly important for this group, as funding for qualification improvement courses could provide tangible financial support that helps transform external (formal) motivation into internal learning drive. In other words, national financial instruments may convert “obligatory” qualification renewal into a personally meaningful investment, thereby enhancing the engagement of nurses with lower educational qualifications in CPD. Overall, our findings highlight that nurses' professional development is a multifaceted process shaped by career goals, workplace demands, and personal aspirations. For this reason, healthcare organisations should foster both extrinsic and intrinsic

motivational mechanisms by ensuring supportive working conditions, recognition, career prospects, and opportunities for continuous learning and knowledge sharing. Such measures are essential to sustain long-term engagement and competence development (Pool et al., 2021; Deci and Ryan, 2000; Hakvoort et al., 2022).

In addition, CPD is closely related to psychology, as it helps meet nurses' internal needs—competence, autonomy, and relatedness—which are essential for maintaining motivation and well-being. By meeting these psychological needs, CPD not only promotes professional growth but also strengthens nurses' resilience and job satisfaction.

Our study has several important limitations that should be acknowledged. First, the data were collected using a self-assessment questionnaire, which may have been influenced by social desirability bias—nurses might have portrayed themselves as more motivated than they actually are. Second, although the sample size was relatively large ($N = 378$), it is not representative of the entire population of nurses in Lithuania, as participation was voluntary and the sample was dominated by nurses employed in a few healthcare institutions. Furthermore, while the study identified the motivational factors associated with professional competency development, it did not assess which specific CPD promotion mechanisms (e.g., financial incentives, paid study time, or mentorship) would be the most effective.

From the perspective of future research, it would be valuable to conduct a larger-scale, nationally representative study to allow for more objective comparisons of CPD motivation across types of institutions, regions, and professional generations. We also recommend applying interventional research designs (e.g., pilot CPD promotion programmes, models of paid study time, or mentorship initiatives) to evaluate their actual impact on motivation and participation in CPD.

7. Conclusions

1. Nurses are most motivated by career-related factors, particularly the desire to improve the quality of nursing services, earn a higher salary, and strengthen their professional self-confidence. Although formal work-related motives are also important, their ratings were more consistent, and the fewest respondents agreed with the motive of meeting employer expectations. Personal motives received the highest approval from nurses, especially the desire to improve, lifelong learning as a value, and to broaden their horizons, strengthen their self-esteem, and share knowledge with colleagues.

2. Assessing the motivational factors for improving professional competencies by type of institution, it was found that the average career and personal motivation scores of nurses working in polyclinics or healthcare centres were statistically significantly higher than those working in hospitals ($p < 0.001$). Based on the nurses' education, statistically significant differences were found only on the personal motivation scale—the highest averages were recorded among nurses who graduated from college, and the lowest among medical school graduates ($p < 0.001$). Nurses' work experience is statistically significantly related to their motivation to improve their professional competencies – significant differences were found in all three motivation scales ($p \leq 0.001$). The highest motivation averages – on the career, formal, and personal motivation scales – were among nurses with up to 5 years of work experience, while the lowest were among those who had been working for more than 20 years.

3. Nurses' motivations for improving their professional competencies are closely related – the strongest correlation was found between career-related and formal motivations, as well as between career and personal motivations. This suggests that professional development for nurses most often stems from several interrelated groups of motivators, in which personal growth is linked to career aspirations and work environment requirements.

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