

# Perfectionistic Work Style and a Sense of Loss of Control as Elements of Occupational Burden Among ICU Nurses

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## Abstract

**Introduction:** The work of nurses in intensive care units is associated with a high level of psychological and organizational burden. A demanding work environment may influence professional functioning, including the intensity of perfectionism and the sense of loss of control over performed duties.

**The aim of the study** was to assess the perfectionistic work style and sense of loss of control as components of occupational burden among ICU nurses, as well as to analyze the relationships between KONOP questionnaire results and age and length of service.

**Material and methods:** The study was conducted among 162 nurses employed in anesthesiology and intensive care units. An original sociodemographic questionnaire and the standardized KONOP questionnaire were used, including the following scales: Loss of Control over Work (UKP), Perfectionistic Work Style (PSP), General Views on Work (OPP), and Perceived Organizational Oppressiveness (SOO). Statistical analysis was performed using descriptive statistics, Cronbach's alpha coefficient, Kruskal–Wallis/ANOVA tests, and Spearman correlations ( $p < 0.05$ ).

**Results:** The highest values were obtained on the Perfectionistic Work Style scale ( $M = 71.22$ ), indicating its high intensity in the studied group. Loss of control over work reached a moderate level ( $M = 38.39$ ), similar to general views on work ( $M = 52.26$ ). Perceived organizational oppressiveness was low ( $M = 29.62$ ); however, the reliability of this scale was very low ( $\alpha = 0.16$ ). Age and length of service significantly differentiated most analyzed scales — younger age and shorter work experience were associated with higher levels of perfectionism and a greater sense of loss of control.

**Conclusions:** ICU nursing staff are characterized by a high level of perfectionistic work style and a moderate level of loss of control over work. Age and professional experience significantly influence the perception of occupational burden, highlighting the importance of adaptive support for younger and less experienced nurses.

**Keywords:** Nurses. ICU. Workload. Perfectionism. Loss of control. KONOP.

## Introduction

Intensive Care Units (ICUs) are among the most demanding areas of hospital care. The work of nurses in intensive care involves the need for continuous monitoring of patients in life-threatening conditions, performing numerous nursing and therapeutic procedures, and responding quickly to the dynamically changing clinical condition of the patient. High responsibility, time pressure, and the complexity of clinical situations contribute to an increasing occupational burden in physical, cognitive, and emotional dimensions, which may result in psychophysical overload among staff.

Workload in the intensive care environment is multidimensional. It includes not only the number of tasks performed, but also the psychological burden resulting from the need to make decisions in critical situations and to function for prolonged periods under stress. The literature indicates that excessive workload may lead to a deterioration in the quality of care through an increased risk of missed nursing care, i.e.,

omission or delay of nursing activities. Among the main causes of this phenomenon are, among others, insufficient staffing levels, sudden clinical events, and an increased number of patients [1–3]. From an organizational perspective, measures aimed at ensuring safe staffing standards are also important, as emphasized in European recommendations as crucial for maintaining the quality of care and protecting the health of nursing staff [4].

The COVID-19 pandemic further intensified the workload among healthcare workers, especially in intensive care units. In a meta-analysis on nurse burnout during the pandemic, risk factors were identified such as younger age, working in a high-risk environment, increased workload, and shortages of human and material resources [5–7]. Reports from subsequent years confirm the persistence of a high level of overload and an ongoing risk of burnout among intensive care staff [8,9].

In the analysis of occupational workload, it is important to consider not only organizational conditions but also psychological factors. A perfectionistic work style may contribute to excessive engagement in duties, increased internal pressure, and difficulties in maintaining a balance between work demands and psychophysical resources. At the same time, a sense of loss of control over work—resulting, among others, from limited autonomy, dynamic work organization, and the need to perform tasks under time pressure—may deepen the perceived workload and increase the risk of psychological overload.

Objective instruments include the Nursing Activities Score (NAS), which is considered useful for estimating workload and planning nursing staffing levels [10–12]. Subjective tools, on the other hand, make it possible to capture the psychosocial dimension of professional functioning.

In this context, the use of the KONOP questionnaire constitutes a valuable approach to assessing workload from a psychological and organizational perspective, enabling the analysis of areas such as a perfectionistic work style and a sense of loss of control over work [13–15]. Understanding the mechanisms underlying occupational overload provides the basis for designing preventive and organizational interventions aimed at protecting staff health and improving the quality of care for critically ill patients.

**Aim of the study:** The aim of the study was to assess the perfectionistic work style and the sense of loss of control as components of occupational burden among ICU nurses, as well as to analyze the relationships between KONOP questionnaire results and age and length of service.

**Material:** The study was conducted among 162 nurses employed in anesthesiology and intensive care units in the Podkarpackie Voivodeship. Participation was voluntary and anonymous, and a convenience sampling method was used.

**Methods:** A diagnostic survey method was applied, with a questionnaire used as the research technique. Two research tools were employed to collect data: an original survey questionnaire and the standardized KONOP questionnaire.

The original questionnaire was used to obtain sociodemographic data. Additionally, it included questions concerning the subjective assessment of occupational stress in the Anesthesiology and Intensive Care Unit, including the presence of stress at work and its intensity rated on a numerical scale from 1 to 10, where 1 indicated no stress and 10 indicated the highest level of stress.

The second research tool was the standardized KONOP questionnaire, designed to assess workload among nursing staff. The questionnaire enables analysis of selected aspects related to occupational overload, including areas such as pressure of constant availability, worrying about work outside working hours, difficulties detaching from professional duties during leisure time, and the consequences of overload for functioning in private life. The instrument also allows consideration of elements related to a perfectionistic style of task performance, enabling assessment of the relationship between occupational stress and work style. Questionnaire results were analyzed in accordance with the methodological assumptions of the instrument and subsequently used to evaluate workload levels in the studied group [13]. Interpretation of KONOP results was based on

the analysis of total scores in individual scales according to the authors' guidelines, where higher values indicate greater intensity of the measured construct.

**Statistical analysis:** Basic descriptive statistics were calculated for the KONOP scale scores (mean, standard deviation, median). Distribution normality was assessed using the Shapiro–Wilk test, and homogeneity of variance using Levene's test. Comparisons of scale scores between age and length-of-service groups were performed using one-way analysis of variance (ANOVA) when parametric test assumptions were met, or the Kruskal–Wallis test as its nonparametric equivalent. For each scale, test selection depended on meeting assumptions of normality and homogeneity of variance. The level of statistical significance was set at  $p < 0.05$ . Analyses were performed using the Python environment.

**Ethical aspects:** The study was conducted in accordance with the Declaration of Helsinki and was approved by the Bioethics Committee - approval No. 24/2024. The present paper reports a subgroup analysis of nurses as part of a project investigating stress and occupational burnout among healthcare workers.

## Results

### Characteristics of the study group

A total of 162 nurses employed in the Intensive Care Unit participated in the study. Participation in the study was voluntary and anonymous, and a convenience sampling method was used. Women predominated among respondents—128 individuals (79.0%), while men accounted for 34 individuals (21.0%). The largest age group consisted of individuals aged 30–40 years—74 respondents (45.7%), followed by those under 30 years of age—51 respondents (31.5%), those aged 41–50 years—23 respondents (14.2%), and those aged 51–60 years—14 respondents (8.6%). Most respondents lived in rural areas (90 individuals; 55.6%), while 72 respondents (44.4%) lived in urban areas.

The most frequently reported education level was a Master's degree in nursing (103 respondents; 63.6%), followed by a Bachelor's degree (54 respondents; 33.3%), while secondary education was reported by 5 respondents (3.1%). The largest group of respondents had work experience of less than 5 years (69 individuals; 42.6%); 48 respondents (29.6%) reported 5–10 years of experience, 16 respondents (9.9%) reported 11–20 years, and 29 respondents (17.9%) reported 21–30 years.

The vast majority of respondents worked in a shift system (155 individuals; 95.7%). In addition, 144 respondents (88.9%) indicated that working in an intensive care unit is associated with stress, and the most frequently reported stress level ranged between 5 and 7 points on a 1–10 scale.

### Results – analysis of KONOP questionnaire scales

In the analysis of the KONOP questionnaire results, four scales were included: Loss of Control over Work (UKP), Perfectionistic Work Style (PSP), General Views on Work (OPP), and Perceived Organizational Oppressiveness (SOO). For each scale, basic statistical measures were calculated (mean, median, score range, and standard deviation), and reliability was assessed using Cronbach's alpha ( $\alpha$ ).

### Loss of Control over Work (UKP)

The mean value for the UKP scale was 38.39, and the median was 41, indicating an average level of perceived loss of control over work in the study group. The obtained scores ranged from 21 to 48 points, demonstrating variability in the perceived influence over the organization and course of professional duties. The standard deviation (SD = 6.304) indicates a moderate dispersion of results, meaning that respondents assessed their sense of control over work in a non-uniform manner. The reliability of the UKP scale was acceptable ( $\alpha = 0.70$ ), indicating sufficient internal consistency of the tool in the analyzed sample.

### Perfectionistic Work Style (PSP)

For the PSP scale, the mean was 71.22, and the median was 73, which reflects a high level of perfectionistic work style among ICU nurses. The score range was broad, from 42 to 82 points, suggesting that despite the predominance of high results, some individuals also demonstrated lower levels of this trait. The standard deviation (SD = 7.022) indicates moderate variability within the group. The PSP scale showed good reliability, as Cronbach's alpha was 0.80, which confirms high internal consistency of the items included in this scale.

### General Views on Work (OPP)

The mean score for the OPP scale was 52.26, and the median was 53, which may suggest a neutral or moderate attitude toward

work in the study group. Scores ranged from 32 to 65 points, indicating the presence of both more negative and more positive perceptions of work. The standard deviation (SD = 6.044) reflects moderate variation in responses. Reliability assessed with Cronbach's alpha was lower ( $\alpha = 0.64$ ), which may indicate limited internal consistency of the scale in the study sample and the need for more cautious interpretation of the obtained results.

### Perceived Organizational Oppressiveness (SOO)

For the SOO scale, the mean value was 29.62, and the median was 29, indicating a low level of perceived organizational oppressiveness in the study group. Scores ranged from 21 to 38 points, suggesting a moderate spread of responses; however, the standard deviation (SD = 3.498) indicates relatively small differences between respondents. The reliability of the SOO scale assessed with Cronbach's alpha was very low ( $\alpha = 0.16$ ). Such a low alpha value may indicate limited internal consistency of the scale items in this sample or insufficient homogeneity of the measured construct. Therefore, the results obtained for this scale should be interpreted with caution. Due to the very low reliability of the SOO scale, results of group comparisons involving this scale should be interpreted as exploratory. In interpretation, attention was primarily focused on the scales with acceptable reliability (Table 1).

Table 1 Descriptive statistics and reliability of the KONOP questionnaire scales (N = 162)

KONOP questionnaire scale	mean (M)	median (Me)	standard deviation (SD)	Min.	Maks.	$\alpha$ Cronbacha
UKP	38,39	41	6,304	21	48	0,70
PSP	71,22	73	7,022	42	82	0,80
OPP	52,26	53	6,044	32	65	0,64
SOO	29,62	29	3,498	21	38	0,16

Source: own.

### Relationship between KONOP results and respondents' age

A comparative analysis of KONOP scale scores by age demonstrated statistically significant differences for all analyzed scales. For UKP, a significant age effect was observed ( $H = 13.79$ ;  $p = 0.003$ ), with the highest scores recorded in the 30–40 age group and the lowest in the 51–60 group. Post-hoc analyses indicated that respondents aged 30–40 achieved significantly higher scores than those aged 41–50 and 51–60. PSP also differed significantly across age groups ( $H = 23.55$ ;  $p < 0.001$ ). The highest values were noted among individuals

under 30 years of age, whose scores were significantly higher than those of older groups.

Significant differences were also found for OPP ( $H = 12.95$ ;  $p = 0.005$ ), with the highest scores observed in the 41–50 age group. Post-hoc analyses revealed significantly higher values in this group compared with younger respondents.

For SOO, analysis of variance demonstrated a significant age effect ( $F = 13.55$ ;  $p < 0.001$ ). The highest scores were obtained by respondents aged 51–60, who differed significantly from the remaining groups (Table 2).

Table 2 KONOP questionnaire scale scores by respondents' age (N = 162)

Scale	Under 30 years	30-40 years	41-50 years	51-60 years	Test	Statistic	p
UKP	37.81 ± 8.35	40.54 ± 3.70	36.50 ± 4.20	32.33 ± 6.73	Kruskal-Wallis	13.793	0.003
PSP	74.25 ± 5.38	70.35 ± 8.70	68.93 ± 1.54	68.44 ± 3.91	Kruskal-Wallis	23.548	<0.001
OPP	51.47 ± 3.98	51.13 ± 7.05	56.00 ± 2.69	55.00 ± 7.83	Kruskal-Wallis	12.949	0.005
SOO	28.50 ± 2.64	29.11 ± 3.41	30.14 ± 2.38	35.44 ± 2.51	ANOVA	13.546	<0.001

Source: own.

### Relationship between KONOP results and respondents' length of service

Analysis of the relationship between KONOP scale scores and length of service revealed significant differences for all scales. Loss of control over work varied depending on job tenure ( $H = 10.14$ ;  $p = 0.017$ ). The highest scores were observed among respondents with the shortest professional experience (<5 years), who differed significantly from those with the longest tenure (21–30 years).

Perfectionistic work style showed a strong effect of length of service ( $H = 29.99$ ;  $p < 0.001$ ). The highest values were recorded

among individuals with less than 5 years of experience, whose scores were significantly higher than those of all other groups.

Significant differences were also found in general views on work ( $H = 16.05$ ;  $p = 0.001$ ). The most positive attitudes toward work were observed in the group with 11–20 years of experience, which differed significantly from respondents with shorter job tenure.

Perceived organizational oppressiveness was higher among individuals with longer work experience ( $H = 15.16$ ;  $p = 0.002$ ). Post-hoc analyses indicated that respondents with 11–20 and 21–30 years of experience achieved significantly higher scores than those with the shortest tenure (Table 3).

**Table 3** KONOP questionnaire scale scores by respondents' length of work experience ( $N = 162$ )

Scale	Less than 5 years	5 do 10 years	11 do 20 years	21 do 30 years	Test	Statistic	p
UKP	39.21 ± 7.61	39.20 ± 3.75	37.70 ± 5.64	35.44 ± 6.14	Kruskal–Wallis	10.142	0.017
PSP	74.51 ± 4.69	68.13 ± 10.05	71.10 ± 2.42	68.56 ± 2.94	Kruskal–Wallis	29.990	<0.001
OPP	51.91 ± 3.58	49.57 ± 8.20	56.10 ± 1.79	55.44 ± 5.85	Kruskal–Wallis	16.046	0.001
SOO	28.42 ± 2.44	29.30 ± 3.93	31.00 ± 2.36	32.28 ± 3.94	Kruskal–Wallis	15.164	0.002

Source: own.

The study results indicate that nurses working in the intensive care unit are primarily characterized by a moderate workload, an average sense of influence over work organization, and a moderate attitude toward their duties. At the same time, an elevated level of perfectionistic work style was observed, especially among younger individuals and those with shorter professional experience. Age and length of work experience significantly affected the results of most scales, suggesting that professional experience and life stage may play an important role in how work in the intensive care environment is perceived.

To assess the relationships between the intensity of psychosocial components of occupational workload and demographic-professional variables, Spearman's rank correlation analysis was applied. Spearman's correlation coefficient ( $\rho$ ) was used due to the ordinal nature of the data and the lack of requirement to meet assumptions of a normal distribution. Relationships between KONOP questionnaire scale scores (UKP, PSP, OPP, SOO) and age as well as work experience were analyzed. Perfectionistic work style showed a significant negative correlation with both age and length of work experience, meaning that younger individuals and those with shorter work experience report higher levels of perfectionism at work. Loss of control over work was significantly higher among individuals with shorter work experience. For age, the relationship was at the borderline of statistical significance. For the scales General Attitudes Toward Work and Perceived Organizational Oppressiveness, no significant correlations with age or work experience were found (Table 4).

**Table 4** Spearman's rank correlations (age and work experience vs. KONOP scales)

Scale	Age ( $\rho$ )	p	Length of work experience ( $\rho$ )	p
UKP	-0,20	0,057	-0,26	0,020
PSP	-0,47	<0,001	-0,52	<0,001
OPP	0,10	0,370	-0,18	0,097
SOO	-0,09	0,420	0,05	0,626

Source: own.

### Discussion

Work performed by nurses in intensive care units is among the most demanding professional environments in healthcare. High responsibility for patients' lives, the need for rapid decision-making, and frequent exposure to critical situations contribute to chronic stress and psychological overload among staff [16–18]. The results of the present study confirm this work environment profile — most respondents reported the presence of occupational stress at a moderately high level, consistent with international findings on the prevalence of burnout and psychological burden among ICU nurses [17–19].

Analysis of the KONOP questionnaire results indicated a moderate level of loss of control over work, which may reflect the specific organization of intensive care practice. Rapid changes in patients' conditions, strict procedural requirements, and multitasking may limit the subjective sense of control over work processes while not eliminating professional competence [18,19]. Thus, the moderate level of loss of control observed in the study may suggest relative staff adaptation to a high-risk environment.

The highest mean scores were obtained for the perfectionistic work style scale, highlighting the importance of individual traits in the structure of occupational burden. In intensive care settings, accuracy, diligence, and attention to detail are essential for patient safety; however, excessive perfectionism may increase emotional tension and susceptibility to mental fatigue [15,19]. These findings are consistent with studies by Gao et al., which demonstrated that professional perfectionism is associated with increased stress and workaholism among nurses [20]. Similarly, Miley et al. emphasize that perfectionism as a personality trait may affect well-being and clinical decision-making, particularly in high-responsibility environments [21].

In the present study, general views on work reached moderate values, which may indicate the coexistence of job satisfaction and elements of overload. Such ambivalent perceptions are characteristic of ICU nurses, among whom a sense of purpose and engagement coexists with stress and fatigue [16,18,19]. Scores

for perceived organizational oppressiveness were predominantly low; however, the very low reliability of this scale limits clear interpretation and suggests the need for further validation of the instrument in the nursing population [22,23].

An important finding was the influence of age on all analyzed scales. The lowest level of loss of control over work was observed among the oldest respondents, which may be related to greater experience, higher self-confidence, and more effective coping strategies in intensive care settings [18,19]. At the same time, the highest level of perfectionism was found among individuals under 30 years of age. This result may be interpreted as part of professional adaptation, in which younger staff strive to meet high standards and confirm their competencies. Literature indicates that younger age is a risk factor for burnout and emotional overload among healthcare workers, particularly in high-risk units [16,20].

Analysis of the relationship between length of service and KONOP results revealed a similar pattern. The highest levels of perfectionism were observed among individuals with the shortest professional experience, which may indicate a greater need for control and error avoidance early in a career. Interpretation of findings involving the SOO scale should be cautious due to its low reliability. These results align with reports suggesting that ICU environments are particularly demanding in terms of adaptation, and prolonged functioning under stress may contribute to psychological overload and burnout [18,19].

An important interpretative aspect is the coexistence of a perfectionistic work style and a sense of loss of control. Perfectionism promotes maintaining high standards, excessive responsibility, and difficulty delegating tasks; in the unpredictable ICU environment, this may increase the sense of overload and limited influence over work processes. Such a mechanism may lead to emotional exhaustion and increase the risk of burnout, as supported by studies demonstrating links between perfectionism, stress, and nurses' well-being [20,21].

From a practical perspective, the obtained results indicate the need for targeted support for younger nurses and those with shorter job tenure. Mentoring programs, clinical supervision, and training in stress management and communication may support adaptation and reduce overload risk. At the same time, organizational measures that enhance staff autonomy, improve information flow, and stabilize team functioning may reduce the sense of loss of control over work. This approach is consistent with recommendations aimed at improving staff well-being and quality of care in intensive care settings [16–19].

## Conclusions

1. Among ICU nursing staff, a predominantly moderate workload was observed; however, the workload structure was dominated by psychosocial factors, such as loss of control over work and negative attitudes toward work organization, which may constitute an important predictor of occupational burnout.
2. Perfectionistic work style was the most strongly expressed functioning pattern, especially among younger and less experienced individuals, which may indicate greater vulnerability of this group to emotional overload, fear of making mistakes, and self-destructive behaviors (over-responsibility).
3. Age significantly differentiated results across all scales,

confirming that the way occupational workload is perceived in the ICU depends on the stage of professional development and may change with the acquisition of competencies and psychological resilience.

4. Length of work experience differentiated perfectionism, the evaluation of the organization, and general attitudes toward work, which may suggest a gradual accumulation of frustration-related factors connected with the work system, regardless of subjective control over task performance.
5. The obtained results indicate that assessing psychosocial components of occupational workload may form part of a quality and patient safety management strategy in intensive care. Interventions aimed at reducing loss of control and perfectionistic pressure may support the stability of nursing teams and contribute to limiting the phenomenon of missed nursing care.

## Study limitations

The study has several limitations that should be considered when interpreting the results:

- A cross-sectional design was used, which makes it impossible to draw conclusions about cause-and-effect relationships between workload and the analyzed factors (e.g., age or length of work experience). The findings indicate only the coexistence of the analyzed phenomena.
- The study was based on a diagnostic survey method, and the applied tools involved subjective self-assessment. This may entail the risk of bias resulting from, among others, social desirability effects, a tendency to underreport or overreport responses, or the respondents' temporary psychophysical condition at the time of questionnaire completion.
- The analysis was based on the KONOP questionnaire and an author-designed survey, without the use of objective tools measuring nursing workload (e.g., NAS, TISS-28). Therefore, the results mainly concern the psychosocial and perceptual aspects of occupational burden rather than the actual number of performed clinical activities.
- Another limitation is the sampling method, which may not have been random, limiting the generalizability of the results to the entire population of ICU nurses. Additionally, respondents came from a specific organizational environment, and working conditions and workload may differ depending on the hospital type, unit profile, and level of care reference.
- It should also be noted that the author-designed questionnaire included a limited number of organizational variables, which does not allow for a full assessment of factors influencing occupational workload (e.g., number of patients per shift, number of highly specialized procedures, availability of psychological support, staff turnover, sickness absence rates, or team structure).
- An additional limitation was the very low reliability of the perceived organizational oppressiveness scale, which restricts the interpretation of results in this area.

### Implications for nursing practice and staff management

The results indicate the need to treat ICU nurses' workload not only as a quantitative issue, but also as a phenomenon involving psychosocial components, such as perfectionistic work style and a sense of loss of control over performed tasks. In clinical practice, this means that supportive actions should be implemented at both the individual and organizational levels.

First, it seems important to introduce solutions aimed at increasing staff members' sense of influence and autonomy, for example through clear task distribution, greater involvement of nurses in decision-making regarding work organization, effective communication within the interdisciplinary team, and reducing organizational chaos during shifts.

The results also suggest the importance of providing special care and support to younger nurses and those with shorter work experience, among whom a perfectionistic approach to duties may occur more frequently. In practice, this may require the development of adaptation programs, mentoring, clinical supervision, and training in stress management and building psychological resilience. Such measures may reduce the risk of overload and occupational burnout in this group.

In the context of ICU nursing staff management, it is also important to monitor signs of occupational overload and implement preventive measures such as optimizing staffing levels, rational shift planning, limiting overtime, and ensuring adequate recovery breaks. This may contribute to improved job satisfaction and reduced risk of staff turnover.

It is also worth considering the introduction of periodic workload assessments using tools such as the KONOP questionnaire as part of internal quality control and occupational safety management, enabling the identification of areas requiring intervention. Recognizing areas such as loss of control over work may provide a basis for implementing organizational changes that improve team functioning and work comfort.

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