

# Identifying aggression of hospitalized patients towards nurses by means of measuring tools

Identyfikacja agresji wśród hospitalizowanych pacjentów wobec pielęgniarek za pomocą narzędzi pomiaru

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## STRESZCZENIE

### IDENTYFIKACJA AGRESJI WŚRÓD HOSPITALIZOWANYCH PACJENTÓW WOBEC PIELĘGNIAREK ZA POMOCĄ NARZĘDZI POMIARU

**Cel pracy.** Identyfikacja i porównanie wyników badań mających na celu określenie częstości występowania wśród hospitalizowanych pacjentów agresji wobec pielęgniarek przeprowadzonych za pomocą narzędzi pomiarowych: Skali Przemocy i Agresji Pacjentów (VAPS) oraz Skali Percepcji Rozpowszechnienia Agresji (POPAS).

**Material i metody.** Próba składała się z 1012 pielęgniarek z wybranych placówek opieki zdrowotnej w Czechach. Dane zbierano od czerwca do listopada 2018 r. Identyfikacji występowania agresji hospitalizowanych pacjentów wobec pielęgniarek dokonano za pomocą dwóch narzędzi pomiarowych: POPAS i VAPS. Oba narzędzia opisują określone formy agresywnego zachowania.

**Wyniki.** Zidentyfikowaliśmy bardzo wysoką częstość występowania agresji wśród hospitalizowanych pacjentów wobec pielęgniarek. 97% badanych spotkało się z różnymi przejawami i formami agresji ze strony pacjentów, 61,96% z agresją fizyczną (plucie, gryzienie, drapanie, szczypanie), a 76,4% - agresją werbalną. Stwierdzono istotną różnicę między wynikami uzyskanymi za pomocą POPAS i VAPS.

**Wnioski.** Za pomocą dwóch wiarygodnych narzędzi pomiarowych zidentyfikowaliśmy różne doświadczenia z agresją hospitalizowanych pacjentów wobec pielęgniarek w tej samej grupie respondentów, co wskazuje na problem porównania wyników częstości występowania agresji pacjentów wobec pielęgniarek zidentyfikowanych za pomocą różnych narzędzi pomiarowych.

## Słowa kluczowe:

pielęgniarka, agresja, narzędzia pomiarowe, pacjent, zakład opieki zdrowotnej

## ABSTRACT

### IDENTIFYING AGGRESSION OF HOSPITALIZED PATIENTS TOWARDS NURSES BY MEANS OF MEASURING TOOLS

**Aim.** To identify and compare research results aimed at determining the incidence of aggression of hospitalized patients towards nurses using Violence and Aggression of Patients Scale (VAPS) and the Perceptions of Prevalence of Aggression Scale (POPAS) measuring tools.

**Material and methods.** The sample consisted of 1012 nurses from selected healthcare settings in the Czech Republic. Data was collected from June to November 2018.

Identification of the occurrence of aggression of hospitalized patients towards nurses was performed using two measuring tools: POPAS and VAPS. Both tools describe specific forms of aggressive behaviour.

**Results.** We identified a very high incidence of aggression of hospitalized patients towards nurses. As much as 97% of respondents encountered various manifestations and forms of aggression from patients, 61.96% of respondents encountered physical aggression (spitting, biting, scratching, pinching), and 76.4% experienced verbal aggression. A significant difference was identified between results obtained with POPAS and VAPS.

**Conclusions.** With the use of two reliable measuring tools, we identified different experiences with aggression of hospitalized patients towards nurses in the same set of respondents, which points to the issue of comparing results of the incidence patient aggression towards nurses identified by different measuring tools.

## Key words:

nurse, aggression, measuring tools, patient, healthcare facility

## INTRODUCTION

Aggression of hospitalized patients towards nurses is a worldwide, long- discussed and dealt with problem [1-7]. Nurses are most exposed to different forms of patient aggression, with verbal attacks being most prevalent [8]. Patient aggression in healthcare facilities is a complex problem that has a negative impact on the health of healthcare professionals, patients and on healthcare facilities [9]. It requires accurate measurement, monitoring, preventive interventions, and interventions to reduce aggressive patient behaviour [1]. Nurses, compared to other groups of healthcare professionals, are most at risk of aggressive behaviour of hospitalized patients [10]. Methods of collecting data on the incidence of aggression towards nurses also include measuring tools. They identify this incidence through nurses' experience of patient aggression towards them [11], or investigate the prevalence and prediction of violence [4]. For the needs of measuring the experience of nurses with patient aggression, several different measuring tools have been developed, e.g. Violent Incident Form (VIF) [12]; Overt Aggression Scale (OAS) [13]; Perceptions of Prevalence of Aggression Scale (POPAS) [14]; Violence and Aggression of Patients Scale (VAPS) [15]; Survey of Violence Experienced by Staff German Version- Revised (SOVES-G-R) [2,16], Workplace violence (WPV) [17]. Measuring tools differ in the method of administration, distribution, content, scope and method of processing. Using these tools, we examine not only the incidence of aggression and forms and types of behaviour, but also other related factors, such as the number of days missed at work due to an attack, how the incident is reported, the state of mental health, etc. These facts cause complications if we try to compare the results of research from many studies. The relevance of the measuring instrument is guaranteed by determining the exact time period for ascertaining the nurse's experience. The most commonly used period is 12 months, but this is a very long time that can result in an incorrect report with an inaccurate description of the event due to inaccurate memory of the event. Each measuring tool has its limitations. Taylor et al. [18] point to the need to use a valid and reliable measurement tool to support the quality of research on patient aggression in different clinical settings, as well as to verify the effectiveness of prevention programs and the use of different methods to reduce aggressive patient behaviour. Results obtained using measuring instruments to identify patient aggression are often the basis for further research in this area, such as determining the relationship between the incidence of aggression and job satisfaction of nurses, work stress [19,20], analysis of factors by nurses affecting the incidence of patient aggression reported by nurses [21].

## AIM

The objective of the study is to identify and compare results regarding the incidence of aggression of hospitalized patients towards nurses through the Perceptions of Prevalence of Aggression Scale and the Violence and Aggression of Patients Scale.

## MATERIALS AND METHODS

Two reliable measuring tools were used in the research: the Perceptions of Prevalence of Aggression Scale (POPAS) [14] and the Violence and Aggression of Patients Scale (VAPS) [15]. POPAS evaluates the experience of nurses with 16 types of aggressive behaviour of hospitalized patients, where the characteristics of the identified form of aggression are also given (the items of the questionnaire are listed in Table 2). Nurses comment on their experiences with different types of aggression over the last year of their clinical practice using the Likert scale (1 Never, up to 5 Many times) and also list the frequency of aggression with a specific number [14,22]. Nijman et al. [22] report the Cronbach's alpha of the tool at 0.86. VAPS [15] examines the experience of nurses with aggressive behavior of patients during the last year of their nursing practice using 11 items (Tab. 1) in three subscales: Verbal aggression, Physical aggression without the use of a weapon, and Physical aggression with the use of a weapon and a contact form of sexual aggression. Nurses record their experience with patient aggression using the Likert scale (1 Never, to 6 Constantly). Lepiešová et al. [15] report the Cronbach's alpha of the tool at 0.860. The STATA version 13.0 program was used for statistical data processing. Descriptive statistics (frequency tables, arithmetic mean, median and standard deviation) were used to describe the data. Statistical tests were evaluated at a significance level of 5%.

The sample consisted of 1012 nurses from 15 medical facilities in the Czech Republic, 24 clinical workplaces of internal medicine and surgery, inpatient departments. Data was collected from June to November 2018. All respondents had experience as a general nurse for more than 1 year. As much as 94.1% of respondents were women, 5.9 % were men. The average age of the respondents was 37.7 years ( $\pm 2.5$  years), and the length of the respondents' practice was 15.1 years ( $\pm 2.5$  years). When it comes to 57.3% of respondents, they had completed secondary medical education, 79.4% of respondents worked in continuous operation, and 73.5% of respondents did not complete a course focused on managing aggressive patient behaviour.

Respondents were informed of the anonymity of the personal data provided and signed an informed consent form before the research started. The research was approved by Ethical committee of Ostrava University Faculty of Medicine. This research was supported by a project at Ostrava University Faculty of Medicine, Department of Nursing, no. 2019 SGS OU-SGS01/LF/2019 Aggression of hospitalized patients and burn-out syndrome.

## RESULTS

In the examined group of respondents, Cronbach's alpha for VAPS was 0.853, and Cronbach's alpha for POPAS was 0.863. Table 1 shows the experience of nurses with patient aggression according to VAPS items, most often with verbal forms of aggression (VS), then with physical aggression without the use of a weapon (VT1), and least often with physical aggression with the use of a weapon and contact forms of sexual aggression (VT2). The items in the table are

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sorted according to the most frequent incidence of a certain form of aggression that the respondents listed.

■ Tab. 1. Characteristics of the group of respondents in terms of a year of starting the studies and their profession

VAPS scale items	M	SD
<b>VS Subscale of verbal aggression</b>		
3. Verbal attack insults, swearing	2.94	1.12
2. Unjustified accusations	2.50	1.14
1. Gossip	2.31	1.12
4. Verbal attack intimidation, threats	2.26	1.23
5. Comments of a sexual nature	2.02	1.16
<b>VT1 Subscale of physical aggression without the use of a weapon</b>		
6. Spitting, biting, scratching, pinching	2.42	1.25
7. Pushing, throwing objects	2.13	1.10
8. Slapping, punching, kicking	1.80	1.01
<b>VT2 Subscale of physical aggression using a weapon and a contact form of sexual aggression</b>		
10. Physical contact with sexual intent (without physical harm)	1.18	0.51
9. Strangulation, attack with a sharp object, stabbing shooting	1.14	0.49
11. Sexual assault (including physical harm)	1.08	0.39

VAPS – Violence and Aggression of Patients Scale, SD – standard deviation, m – mean, 6-point scale used: 1 – never; 2 – rarely; 3 – sometimes; 4 – often; 5 – very often; 6 – constantly

Table 2 shows the experience of nurses with patient aggression assessed by the POPAS questionnaire. The most common experience reported by nurses is verbal aggression (items 1, 5, 4, 2, 3), followed by physical violence (items 9, 7, 8, 11, 6), and the least common experience they encounter is sexual violence and violence against each other, or suicide attempts (items 15, 13, 12, 10, 14, 16). The items in the table are sorted according to the most frequent incidence of a certain form of aggression that the respondents listed.

■ Tab. 2. Experience of nurses with individual forms of patient aggression according to POPAS items

POPAS items	M	SD
1. Verbal aggression	3.43	1.10
5. Passive aggression behaviour	2.68	1.09
4. Provocative aggression behaviour	2.47	1.05
2. Threatening verbal aggression	2.42	1.22
3. Degrading aggressive behaviour	2.33	1.16
9. Mild physical violence	2.33	1.11
7. Threatening physical aggression	2.26	1.13
8. Destructive aggressive behaviour	1.76	0.92
6. Divisive aggressive behaviour	1.71	0.96
11. Mild violence against oneself	1.61	0.85
15. Sexual intimidation/harassment	1.53	0.85
13. Suicide attempts	1.32	0.71
12. Serious violence against oneself	1.22	0.57
10. Serious physical violence	1.17	0.50
14. Successful suicide	1.09	0.33
16. Sexual assault/rape	1.01	0.08

POPAS – Perceptions of Prevalence of Aggression Scale, SD – standard deviation, m – mean, 5-point frequency scale used: 1 – never; 2 – occasionally; 3 – sometimes; 4 – often; 5 – many times

Both tools detect the incidence of patient aggression toward nurses, but due to the difference in the number and content of items in measuring instruments VAPS and POPAS, we identified a different experience in the same group with the incidence of individual forms of aggression.

■ Tab. 3. Differences in the incidence of patient aggression toward nurses detected by VAPS and POPAS

Types of patient aggression toward nurses	%	%
Verbal aggression	73.2	76.4
Physical aggression	61.96	37.4
Sexual harassment	9.7	17.8

VAPS – Violence and Aggression of Patients Scale, POPAS – Perceptions of Prevalence of Aggression Scale, % – relative frequency

## DISCUSSION

Many authors acknowledge the high incidence of aggression, either physical, verbal, or sexual, that nurses experience during their practice. Dehghan-Chaloshdari [10] used the measuring tool Workplace violence [17] and confirm 100% incidence of aggressive behavior of patients towards nurses in Iran. Yenealem et al. [23] detected with the Workplace violence tool an incidence of aggression in 58.2% of nurses in northwest Ethiopia. A similar result measured by Workplace violence tool reported El-Hneiti et al. [7] in Jordan. Dimunová et al. [24] identified with the VAPS tool [15] an incidence of aggression in 97.2% of Slovak nurses in hospital. Swain et al. [25] confirm by the POPAS tool [14] that 93% of nurses experienced verbal anger from patients in New Zealand public hospital setting. Sun et al. [6] describe the results obtained with the Workplace violence tool [17], indicating that 71.1% of nurses in North Chinese hospitals experience non-physical aggression from patients.

In all available research, verbal aggression is listed as the most common form of aggressive patient attacks against nurses. In our study we also confirm the high incidence of hospitalized patients' aggression towards nurses. Via the VAPS questionnaire, 73.2% nurses from selected hospitals report this type of aggression and via the POPAS questionnaire – 76.4%. Our results point to the fact that using two tools identifying the experience of nurses with the aggression of hospitalized patients in the same group of respondents, we identified different data on this phenomenon.

Nurses working in healthcare facilities are also often exposed to the physical aggression of patients. This fact is repeatedly stated in various studies. Gillespie et al. [9] reported a physical attack experienced by 67.3% of nurses found with the SOVES tool [2], and Swain et al. [25] reported a physical attack experienced by 38% of nurses using POPAS [14]. A significantly lower incidence of physical aggression is reported to Yenealem [23], namely 22.0% found with the Workplace violence tool [17]; with the same tool, Sun et al. [6] reported an incidence of 12.5% of nurses. In our study, via the VAPS questionnaire, 61.96 % of nurses reported physical violence, and 37.4 % of nurses reported violence in the POPAS questionnaire.

In addition to verbal and physical aggression, nurses in our group also have experience with patients' sexual aggression towards them. Specifically, 9.7% of nurses reported sexual harassment in VAPS, and 17.8% of nurses reported it in the POPAS questionnaire. It is a higher incidence of this form of aggression, for example, compared to the results described by Yenealem et al. [23], who reported sexual harassment experienced by 7.2% of nurses identified by the Workplace violence tool [17]. The results of our study on nurses' experiences of physical aggression and sexual aggression in hospitalized patients again point to the fact that the tools used to identify this experience in the same group of respondents found different data.

Varying experiences with various forms of aggression in individual studies may be associated with the size of the examined sample group, the type of workplace, environmental causes, etc., as well as different measuring tools used to identify the occurrence of aggression of patients towards nurses.

This study has several limitations. It was performed only in the selected hospitals and departments; therefore, the results cannot be generalized for the entire nurses' population. Data on the incidence of patient aggression towards nurses in the last 12 months of their clinical practice was collected by means of the questionnaires and, therefore, nurses' reports about physical and verbal violence may not accurately reflect the actual incidence of violence against them by patients. Data on patient aggression towards nurses was not objectified through records in patients' medical records.

## CONCLUSIONS

The high incidence of patient aggression towards nurses is a long-lasting phenomenon in hospitals in the Czech Republic, similarly to other countries, and it requires constant evaluation in order to implement effective preventive interventions and interventions to reduce it. Measuring the experience of nurses with patient aggression towards them through measuring tools supports the objectification of the incidence of patient aggression towards nurses in clinical practice. The results of our study point to the issue of comparing results of the incidence of patient aggression in clinical practice identified by different reliable measuring instruments in the same group of respondents. For this reason, it is necessary to use one reliable measuring tool to monitor the incidence of patient aggression towards nurses in clinical practice. In our study, based on the content of the reliable tools used and the length of their administration, VAPS appears to be more suitable for rapid use in clinical practice in the Czech Republic. The results of the incidence of aggression from different studies should be compared and interpreted in the context of the measuring tool used to prevent the result of this comparison being skewed.

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