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NASILNA DEJANJA NAD ZDRAVSTVENIMI USTANOVAMI IN NJIHOVIMI ZAPOSLENIMI NA MADŽARSKEM

VIOLENT ACTS AGAINST HEALTHCARE INSTITUTIONS AND WORKERS IN HUNGARY

Povzetek Namen te presečne kvantitativne raziskave je ugotoviti, katera oblika nasilja je v madžarskih zdravstvenih ustanovah najpogostejša. Z njo želimo oceniti, ali se v teh ustanovah izvaja usposabljanje za komunikacijo, simulacijo in samoobrambo. Cilj je ugotoviti, ali bi se zaposleni udeležili takega usposabljanja, in oceniti povezanost med usposobljenostjo (komunikacija, simulacija, samoobramba) ter stopnjo samozavesti. Žrtve večine nasilnih dejanj pacientov so zdravstveni delavci. Najpogostejša oblika agresije pacientov in njihovih svojcev je verbalna agresija, vključno z zbadanjem, verbalno zlorabo in grožnjami z zlorabo. Podatki kažejo, da le usposabljanje v komunikaciji ni dovolj za dvig samozavesti pri zdravstvenih delavcih. Treba jim je zagotoviti orodje, kot so na primer praktične vaje po usposabljanju iz samoobrambe.

Ključne besede ***Agresija, zdravstvo, preventiva, usposabljanje, samoobramba, samozavest.***

Abstract The present cross-sectional quantitative research aims to gain a sense of which form of violence is the most common in Hungarian healthcare institutions. It aims to assess whether communication, simulation, and self-defence training is provided in institutions, to find out whether workers would participate in such training, and to assess the relationship between training (communication, simulation, self-defence) and confidence. Healthcare workers are affected by most acts of violence coming from patients. The most common type of aggression on the part of patients and relatives is verbal aggression, including teasing, verbal abuse, and threats of abuse. The data show that communication training alone is not enough to make health workers confident. They should have a tool in their hands, e.g., practice after self-defence education, simulation practice, as this makes it easier for the employee to communicate.

Key words ***Aggression, healthcare, prevention, training, self-defence, confidence.***

Introduction

Today, when the topic of healthcare comes up, it is almost all about the Covid-19 pandemic and the heroic struggle of the health workers who are fighting against it. One can read mainly about the situation in Europe and the United States, but there is also more and more alarming information about the African continent (Besenyő, Kármán, 2020, p 633). However, there are other very important issues in this topic, for example, violence in the health sector. This is widespread in all countries and affects all professions in the health sector. One of the most shocking forms is terrorist attacks on healthcare facilities. Boaz Ganor and Miri Halperin Wernli, two Israeli scholars, issued a working paper in 2013 that covered more than 100 terror events against hospitals in the period 1981-2013 in 43 countries (Boaz, Miri, 2013, p 4). The authors found that 775 people had lost their lives and another 1,217 were injured in the attacks. From 1 January, 1970, to 31 December, 2020, there were 961 attacks in 76 countries against healthcare facilities and healthcare workers at these institutions. In total, 3,006 people died and 4,673 were injured (Besenyő, Márton, Shaffer, 2021, p 7). The highest risk to healthcare facilities is bombing or an explosive attack, but armed attacks pose another significant threat to hospitals (Ibid, p 9). Every hospital must be prepared for these attacks with well-developed prevention plans, in which the preparation and education of the employees are not insignificant (Ráczkevy-Deák, 2020, p 98; Deák, 2011, p 130). However, due to reasons of length and the research complexity of this area, I do not intend to cover this topic extensively.

Comparative research demonstrates that violence against staff in hospitals and healthcare institutions affects both industrialized and developing countries, and that verbal violence is as present as physical violence. Violence against medical personnel damages not only the health and dignity of employees, but also the productivity of organizations. Violence in healthcare also poses a threat to patient safety and the quality of patient care. Online sites such as Google Scholar, Scopus, PubMed and so on also testify that thousands of studies have been written in recent years on this topic. We can see that studies by professionals and organizations show no reduction in the number of atrocities or verbal and physical violence: in Sweden (Arnetz, Petterson 1996, p 119), 29% of health workers have experienced violence at some point; the proportion is 25% in the US (ANA) and 44.7% in Turkey (Pinar, Acikel, Karabulut et al. 2017, pp 23-45). According to the World Health Organization (WHO), 8-38% of health workers experience some form of physical violence during their careers (WHO, 2008). In a 2019 survey of more than 5,000 nurses by the American Nurses Association (ANA), 59% said they had been verbally abused and one in four had been physically abused by a patient (ANA).

According to the Criminal Statistics System of the Hungarian Police (ENYÜBS), between 2017 and 2018 there were 18 cases of nurses with higher qualifications, 55 cases of nurses, 33 cases of doctors, and 9 cases of general health assistants in connection with bodily harm, harassment, and violence against a person performing public duties (BM document ENYÜBSZ, 2018). These are only cases according to the number of reported and known perpetrators; many more occur in Hungarian hospitals, but as there is no reporting obligation, a large number of atrocities remain

hidden. Evidently, despite the high exposure to violence in the health sector, the number is very much underestimated (ANA, Henson, 2008, p 574; Sharipova, Borg 2008, pp 574-581).

There is still very little research in Hungary dealing with this problem, although the number of these actions has not decreased.[1] Every day we see in the news nurses and doctors who have suffered minor or more serious bodily injuries. We have very little data on verbal violence, as it often remains hidden from management and the media. Hidden victims continue to work with various symptoms (such as post-traumatic stress disorder (PTSD)) after the forms of violence they have suffered, thereby endangering patient safety (Besenyő, Deák, 2011, p 22).

In Hungary, one of the first studies to assess and study how to prevent or reduce atrocities was conducted in 2010. This quantitative and qualitative research was carried out in a hospital in the capital, Budapest, and confirmed that aggressive acts are becoming more frequent in hospitals (number of respondents 85, interview subjects 50). As many as 70% of respondents had experienced verbal violence and 20% physical violence, and only 10% said they had not been affected by any form of violence. There was no reporting obligation, and very often they did not even know who to turn to after verbal or physical violence (Deák, 2012, pp 180-189). Many accepted the harm they suffered as part of their health work. This may have contributed to the large number of burnt-out (Irinyi, 2018), indifferent workers in Hungarian healthcare. A total of 95% of the respondents were not aware of or had not heard about aggression prevention training. A small number of articles providing useful data have been published since 2010, but no comprehensive research has been conducted on violence prevention training.[2]

In this article, I present some of my latest questionnaire research. The questions asked mostly concern the number and type of atrocities and their impact on the confidence of healthcare workers. In addition, the questionnaire pays great attention to violence prevention training, as only a worker who is properly trained in violence can communicate both assertively and empathetically and intervene effectively if the behaviour of a patient or relative is inappropriate.

The principle of zero tolerance and the punishment of violence against a person performing a public task is not enough to prevent it.[3] Only a combination of training in violent patient recognition and de-escalation methods and non-violent communication, assertive communication training, and their practice in simulation

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[1] *Articles and studies have been written on such topics, among others: Besenyő, J., Deák, G., Irinyi., T, Ivánka T., Németh A. Rudisch T. et al. (see bibliography).*

[2] *For communication training pre and post data see more details: Ivánka, T., Irinyi, T., Rudisch, T., et al. 2014, 27(4), pp 11-17.*

[3] *Violence against an official: Section 310 of the Criminal Code (1) Whoever obstructs an official or a foreign official in his or her lawful proceedings by force or threat, b) forces him or her to take action in his or her lawful proceedings, or shall be punishable by one to five years' imprisonment.*

exercises can lead to success. Last but not least, self-defence education can also be very helpful if security staff are not able to intervene promptly; this type of education already exists in healthcare facilities in several countries (Bugala, Reguli, 2016; Lamont, Brunero, 2012, p 313; Dickens, Rogers, 2009, p 777). The professional chambers in Hungary (Hungarian Medical Chamber (MOK), Hungarian Chamber of Healthcare Workers (MESZK)) have never held self-defence training, and many even rigidly reject it from the management, arguing that it is not the job of healthcare workers to deal with life-threatening situations. Security personnel are trained for this. However, if we look at the news, not long ago (March 20, 2021) there was an attack with very serious consequences in a hospital in the capital.[4] Although several nurses worked in the intensive care unit at the time, they were unable to protect themselves or their patients from a mentally disturbed patient who was threatening and injuring people with a cutting tool. Physical violence is also common in psychiatric wards.[5] After good quality and long-lasting self-defence education, a worker becomes more confident and experienced, and may be able to protect themselves and their patients. Forms of violence involving death and injury have also occurred in neighbouring countries. In 2019 there was serious physical violence in a Romanian psychiatry ward; four patients died and many were injured, and only the police were able to restrain the disturbed patient.[6] In the Czech Republic, there was a shooting at an outpatient clinic at the University Hospital in Ostrava, killing six people and injuring three in a traumatology department attack.[7]

1 METHODS

The research objectives were to discover which form of violence is most common in Hungarian healthcare institutions; whether physical violence is more common during outpatient or inpatient care; whether communication, simulation, and self-defence training is held in institutes and if so, in what form, and whether healthcare workers would participate in such training; and to assess the relationship of certain violence

[4] *The incident took place in the Covid ward of the Military Hospital Budapest. Arriving at the ward following the screams of one of the female patients, a nurse saw a man clutching the woman's neck with one hand and hitting her chest with the other. The disturbed patient, seeing the nurse, grabbed a pair of scissors and headed for the nurse, who backed down the hall. Meanwhile, another nurse had already arrived, so two had now tried to curb the attacker. They reached another ward while retreating. The man went in here, ripped the tubes out of the mouth of a patient under anesthesia and being ventilated, then hit the head of the patient lying there with scissors nearly 30 times. The woman did not survive her injuries. See more: https://ripost.hu/politik/insider/korhazi-keseles-kegyetlen-reszletek-honvedkorhaz-2804572/ (in Hungarian, 2021.04.06.)*

[5] *According to Hungarian 2017 research (N = 1201), in the psychiatric ward 49,4% of the respondents had suffered a mild injury fewer than 10 times. In addition to this class, the SBO (Department of Emergency Care) also had a high rate of physical violence (Irinyi T., Németh A.., Lampek K.,2017, pp 229-237)*

[6] *Five fell victim to a bloodbath in Romania organized by a patient at a neuropsychiatric hospital in Sapoca. The confused patient wounded four patients and injured nine more with an infusion stand. The incident was preceded by a series of human omissions. For example, nurses' job descriptions stated that they should not leave objects in the hands of patients that could injure them, so the infusion stand should not have been left in the ward. http://medicalonline.hu/kitekinto/cikk/verfurdo_egy_romaniai_pszichiatrian (in Hungarian, 2021.06.06)*

[7] *See more:https://www.origo.hu/nagyvilag/20191210-lovoldozes-egy-ostravai-korhazban-tobben-meghaltak.html (in Hungarian, 2021.06.06.)*

prevention and treatment training (communication, simulation, self-defence) with confidence.

In the study, the form of the aggressive actions, the correlation of training with self-confidence, and the number of atrocities suffered were examined empirically using a quantitative tool. Before the research, the literature was analyzed and an inductive research strategy was used.

The survey was conducted between 3 October 2020 and 10 January 2021. The questionnaire was prepared with the help of the online questionnaire website, and was made available online on the community page of the Hungarian Chamber of Healthcare Professionals (MESZK) and on the community pages of groups of health workers, while the National Ambulance Service (OMSZ) sent it to its members by email. Sampling was carried out by a non-random sampling procedure, including convenience sampling. The advantage of this sampling method is that many subjects can be reached in a short time. The disadvantage, however, is that it is not representative, and only health professionals who have an email address or members of the Hungarian Chamber of Healthcare Professionals and the social workers' groups could be included in the sample.

In the description at the beginning of the questionnaire, the participants were informed of the purpose of the research, the completion of the questionnaire, anonymity, and volunteering. By completing the questionnaire, the participants consented to the use of their responses. The selection criterion was at least one year's employment in healthcare, working in Hungary. A total of 740 submissions were received. Of these, those who had not worked in healthcare for at least a year or who answered only a few questions were excluded. There were 720 completed questionnaires remaining, which were later analyzed. However, not all of these 720 individuals answered all the questions either, so I will address some of the questions to the respondents.

The first part of the self-edited questionnaire included self-prepared questions on socio-demographic information and working conditions. In the second part of the questionnaire, I was curious about each form of violence as well as the number of incidents. I created my own questions, using the questions of the Overt aggression questionnaire as a sample (Yudofsky. S.C. Silver, J.M Jackson, W. Endicott,J. Williams 1986, pp 35-39). In the questionnaire, verbal and physical violence were separated, and the respondents were asked about the forms of aggression that they had experienced in healthcare and in the last 12 months of their work. The degree of coping with patients' aggression was measured using the Confidence Scale (*How confident do you feel in the presence of an aggressive patient?*) developed by Thackrey (1986, pp 57-60). The series of questions consisted of 10 items, which were evaluated on an 11-point scale. The ranges varied depending on the question: »Very disturbing« or »Not disturbing at all«, »Not helpful at all« or »Very helpful«, »I am not able to do it« or »I am able to do it«, »I am not really confident« or »I am

confident«. This measurement instrument is most commonly used to measure the effectiveness of training in violence prevention.

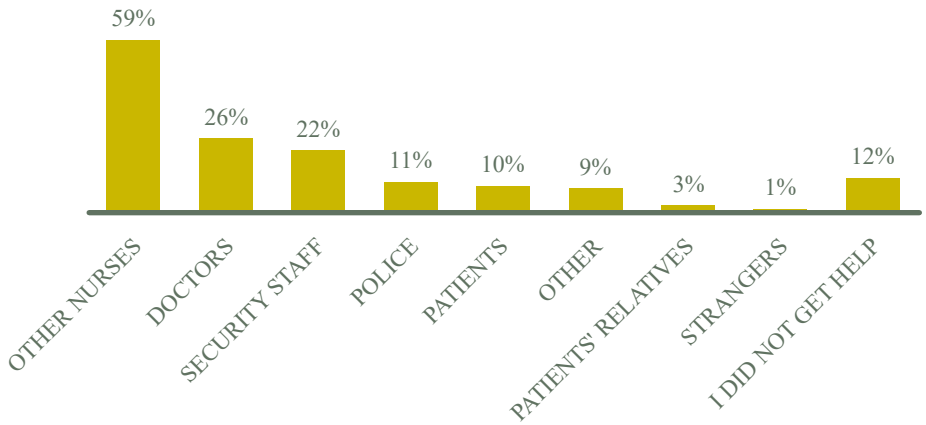
Data processing and data analysis was performed with the IBM SPSS 23.0 for Windows statistical program. Of the descriptive statistical methods, the mean, standard deviation (SD), median, minimum and maximum, and absolute and relative frequencies were calculated. Of the mathematical-statistical methods, the following tests were used: the Wilcoxon test to compare the means of non-normally distributed variables; the Spearman rank correlation to examine the correlation of non-normally distributed continuous variables; the Kruskal-Wallis test; the Mann-Whitney test; the Chi-square test; Anova; Levene; the independent pattern T-test; and Pearson's linear correlation coefficient. The results were considered significant at $p<0.05$.

2 RESULTS

Socio-demographic data: Of the 720 respondents, 700 answered the gender ratio question, which showed that 88% (616) were women and 12% (84) were men. Their mean age was 45.5 years (median = 46 years; SD (standard deviation) = 9.89; Min = 20; Max = 76). Concerning education, 56% of the sample had a high school diploma plus training from the National Training List (OKJ) (403); while graduates made up 35.84% of the sample (257). The largest number (24%) were from Budapest, and 13.6% were from Pest County, with significantly fewer responses from other counties. In terms of workplace characteristics, the survey participants had worked in healthcare for an average of 22.85 years (median = 24 years; SD = 11.47; Min = 0.5; Max: = 52). Examining the level of healthcare, of 716 respondents 10% (70) worked in primary care; 20% (144) in outpatient care; 62% (441) in inpatient care; and 8% (61 people) in ambulance services. The largest proportions of the respondents worked in internal medicine, psychiatry, basic care, intensive care, surgery, emergency care, and ambulance services. However, they worked in almost every field of healthcare, so there was also an »other« category (without claiming completeness: rheumatology, pulmonary medicine, urology, administration, diagnostics, gynaecology, etc.).

Questions about aggressive incidents: In the research, I wondered who the respondents received help from during the aggressive incidents they had experienced. For this question, the responses of 638 respondents were taken into account, as a great many gave ambiguous answers or were not affected by aggressive action. Most received help from their immediate colleagues: other nurses (59%), followed by doctors (26%) and the security service (22%), and 12% of respondents did not receive any help (Figure 1).

Figure 1: People who gave help during aggressive incidents



After the aggressive incident, most respondents turned to a head nurse (21%) or a psychologist (19%). Even the chief physician of the department (12%) was indicated.

More acts of violence occur during the day, which includes both morning and afternoon shifts, so 2/3 of each 24 hours is regarded as day, and 1/3 as night. However, while there is less patient traffic at night, as patients are sleeping, there is still a great deal of violence. There needs to be further analysis of what triggers these aggressive incidents.

The place of aggression is usually the ward or unit and the corridors of the institution. Under other categories, the patient's home and inside the ambulance appeared several times, as ambulance staff are most affected by acts of violence in these places.

Questions modelled on the Overt Aggression Scale (Yudofsky. S.C., Silver, J.M., Jackson, W., Endicott, J., Williams, D., 1986) asked which forms of violence dominated among the respondents and how many times they had been affected by them. Specifically, the respondents were asked how many times these forms of violence came from a patient, a relative, or a colleague. Several questions asked how many times the respondents had experienced that particular aggressive manifestation from a patient, relative, or colleague since they had worked in healthcare. The most common type of aggression on the part of patients was verbal aggression, including teasing, verbal insults, and threats of abuse. Among the incidence of physical aggression, physical threat (non-verbal, e.g. threatening physical movements) and abuse causing minor injury predominate, while abuse causing more severe injury is significantly less (See Table 1). Verbal aggression is most prevalent on the part of relatives.

Table 1: Frequency (%) of experiencing aggression from patients/ relatives/ colleagues

	Never	Less than 5 times	5-10 times	11-20 times	More than 21 times
	P/R/C	P/R/C	P/R/C	P/R/C	P/R/C
Verbal aggression					
Verbal threat of abuse	16.2/35.4/76.3	25.9/33/17.2	19.9/13.2/2.4	9.5/5.9/1.7	28.6/12.5/2.3
Sexual harassment	59.7/85.7/73.7	28.2/11.4/17.9	6.9/1.5/4.8	3.1/1.2/1.9	2.1/0.3/1.7
Verbal abuse	5.9/18.2/35.3	16.9/30.9/33.4	15.3/15.2/11.8	11.9/10.9/7.6	50.6/24.7/11.9
Scoffing/teasing	5.5/19.4/27.3	14.2/28.7/29.6	14.3/15.9/14.9	14.9/11/8.8	51.1/25/19.4
Threatening letters, telephone harassment	80.1/82.7/89	14.1/11.2/8.4	3.2/2.9/0.9	1.2/0.9/0.6	1.5/2.3/1.2
Humiliation	25.1/43.5/31.4	34.1/28.2/28.4	12.3/10.9/14.5	7.5/6.1/9.3	20.9/11.3/19.6
Intimidation – elevated tone, shouting	32.6/52.4/45.8	36/26.7/28.9	12.3/7.4/7.8	6.8/3.6/4.4	12.3/9.9/13.1
Harassment	61.9/78/78	27/14.2/11.9	4/2.9/3.6	3/1.8/2.4	4.1/3.1/4.1
Physical aggression					
Physical threat (non-verbal, eg. threatening movements)	20.9/47.4/84.2	31.5/30.3/11.9	19.6/9.7/2.1	9.7/4.9/0.4	18.2/7.7/1.3
Mild injury (e.g. beating) that did not require medical treatment	53.6/90.2/97.2	30.1/8.1/2.5	7.1/0.7/0.1	4.2/0.3/0.1	4.9/0.6/0
More severe injuries that required medical treatment	90.5/97.9/99	8.2/1.3/0.9	1.2/0.4/0	0.1/0.1/0.1	0/0.1/0

P=Patients;
R=Relatives;
C=Colleagues

I was also curious about what had happened in the 12 months before completing the questionnaire. A similar trend as in the previous question can be observed in the experience of each aggressive act for each type of violence. With regard to verbal aggression, the most frequently mentioned was the threat of scoffing/teasing, verbal abuse, and general abuse (Table 2).

Table 2: Frequency of experiencing aggression (%) from patients/ relatives/ colleagues in the last 12 months (2020)

	Never	Less than 5 times	5-10 times	11-20 times	More than 21 times
	P/R/C	P/R/C	P/R/C	P/R/C	P/R/C
Verbal aggression					
Verbal threat of abuse	42.9/60.5/88.6	36.5/27.4/7.2	10.5/6.9/0.9	3.8/1.7/1.2	6.3/3.5/2.1
Sexual harassment	85/94.9/91.8	11.4/4.3/5.6	2.8/0.5/1.2	0.3/0.3/0.3	0.4/0/1.1/5.5
Verbal abuse	21.6/38.5/55.9	34.2/34/28.6	18.6/12.8/7.0	9.5/6.8/2.9	16.1/8/5.5
Scoffing/teasing	21.5/37.4/45.4	32/34.6/30.5	18.7/11.4/9.5	9.6/7.8/5.2	18.1/8.8/9.5
Threatening letters, telephone harassment	89.1/89.1/95.9	8/8.1/1.7	1.4/1.4/0.9	1.1/0.8/0.6	0.5/0.6/0.9
Humiliation	50.4/61/54.5	28/23.8/30	10.1/7.5/8	5.7/3.8/4.9	5.8/3.9/8.9
Intimidation – elevated tone, shouting	62.9/70.4/66	24/19/20.4	5.6/5.3/4.4	3.9/1.6/2.7	3.7/3.7/6.5
Harassment	80.9/87.4/88.7	13.9/8.6/6.1	2.3/1.9/1.9	1.4/0.6/0.9	1.5/1.4/2.4
Physical aggression					
Physical threat (non-verbal, eg. threatening movements)	47.8/71.3/93.9	34.5/21.7/3.8	8.3/4.4/0.6	4.2/0.8/0.6	5.1/1.8/1.4
Mild injury (e.g. beating) that did not require medical treatment	75.7/96.1/98.3	18.4/3.3/1.1	2.6/0.2/0.3	2/0.3/0.2	1.4/0.2/0.2
More severe injuries that required medical treatment	96.5/99.4/99.7	3.2/0.5/0.2	0.3/0.2/0.2	0/0/0	0/0/0

P=Patients;
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Aggression means show a significant difference between patients. I examined them as types of aggression by repeated-measures analysis of variance. Various tests (Pillai's Trace, Wilks' Lambda, Hotelling's Trace, Roy's Largest Root) lead to the conclusion that there is a significant difference in verbal acts of violence (Wilks' $\lambda = 0.244$; $F(11; 412) = 116.149$; $p < 0.001$; $\eta 2 = 0.756$). Each type of aggression appears with a different frequency, the most common being scoffing/teasing, verbal abuse, and verbal threats of abuse from patients, relatives, and colleagues (Figure 2).

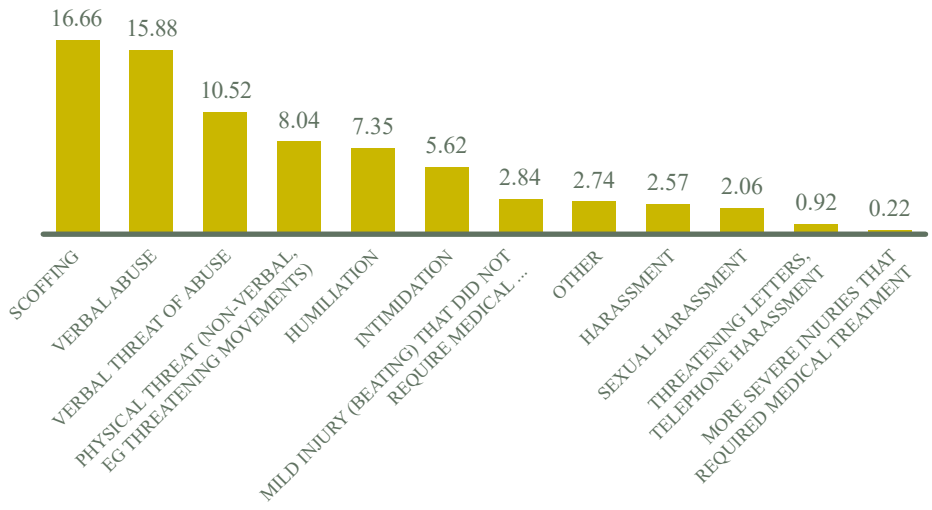


Figure 2: The average incidence of aggression types from patients in total

I replaced the Likert scale (5-point) values with the middle of the given interval: 0-5 to 3, 6-10 to 8, and so on. Projecting the number of violent acts committed by patients on an annual basis based on the length of service, it can be seen that the difference in verbal violence is significant (Wilks' $\lambda = 0.64$; $F(11; 704) = 35.980$; $p < 0.001$; $\eta 2 = 0.36$) (Figure 3).

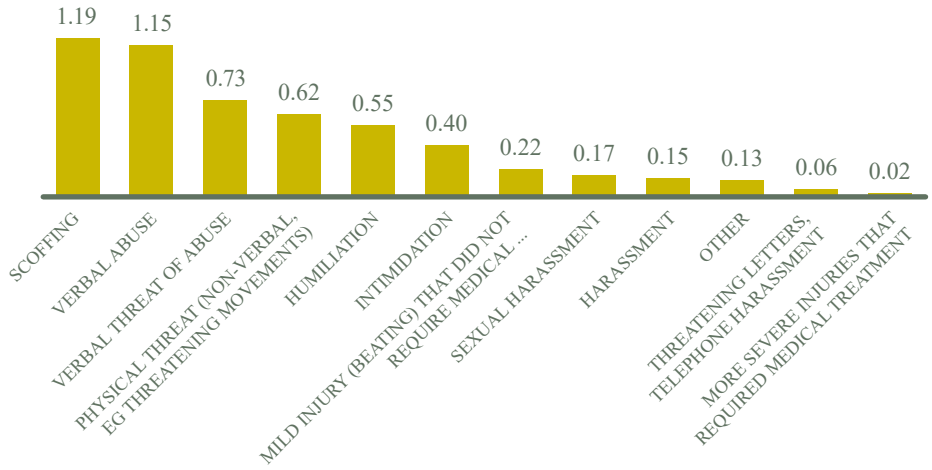
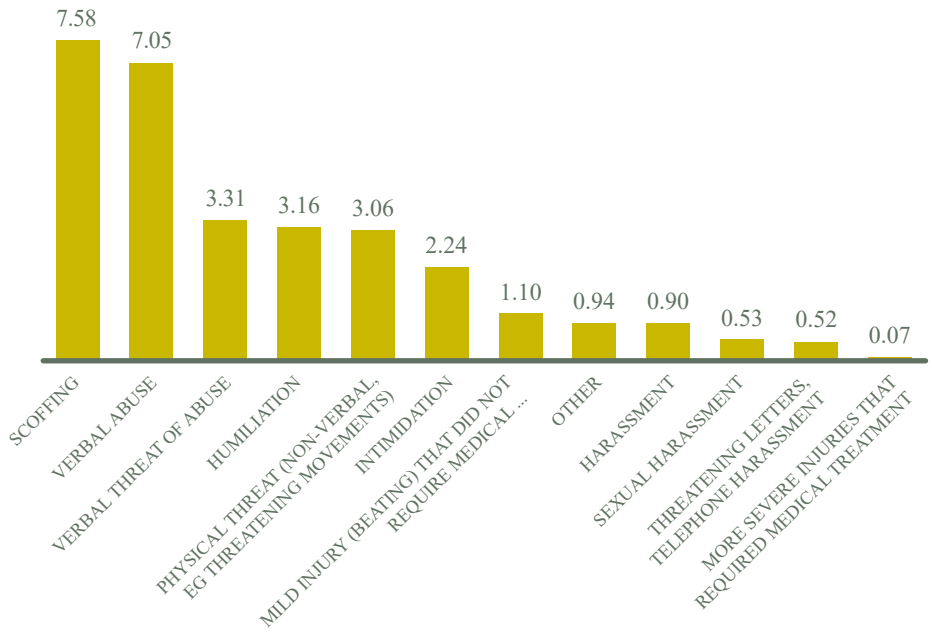


Figure 3: The average incidence of types of aggression per year committed by patients

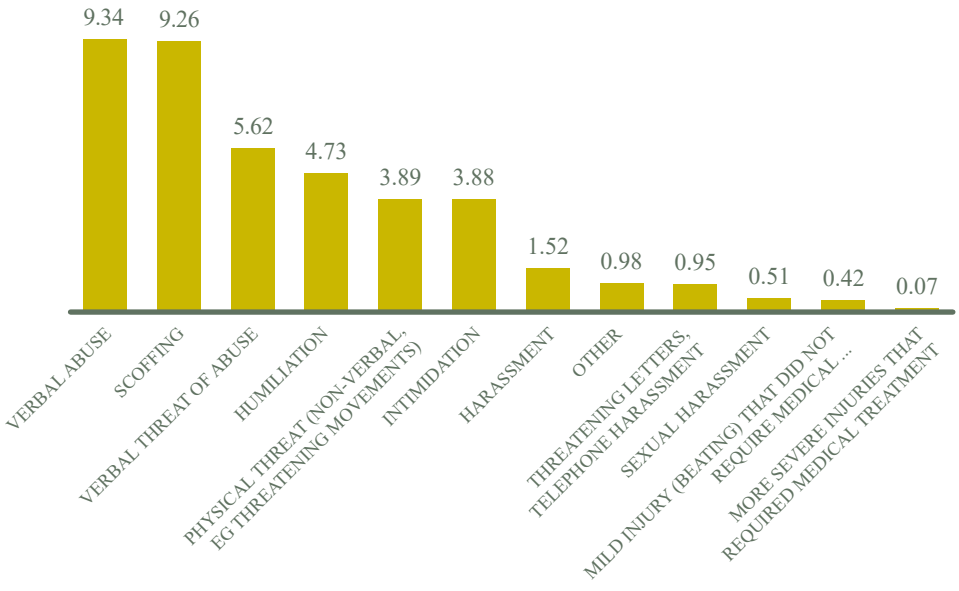
The question of the forms of violence suffered by patients also shows that the difference in verbal acts of violence is also significant among the average aggressive acts of patients in the past 12 months (Wilks' Lambda test) (Wilks' $\lambda = 0.553$; $F(11; 433) = 31.783$; $p < 0.001$; $\eta 2 = 0.447$) (Figure 4).

Figure 4: The average incidence of types of aggression committed by patients in the past year (2020)



The average incidence of types of aggression induced by relatives also shows significant differences in the forms of verbal aggression (Wilks' $\lambda = 0.492$; $F (11; 413) = 38.726$; $p < 0.001$; $\eta 2 = 0.508$). Two forms of verbal violence are much more common than the others (scoffing/teasing, verbal abuse) (Figure 5).

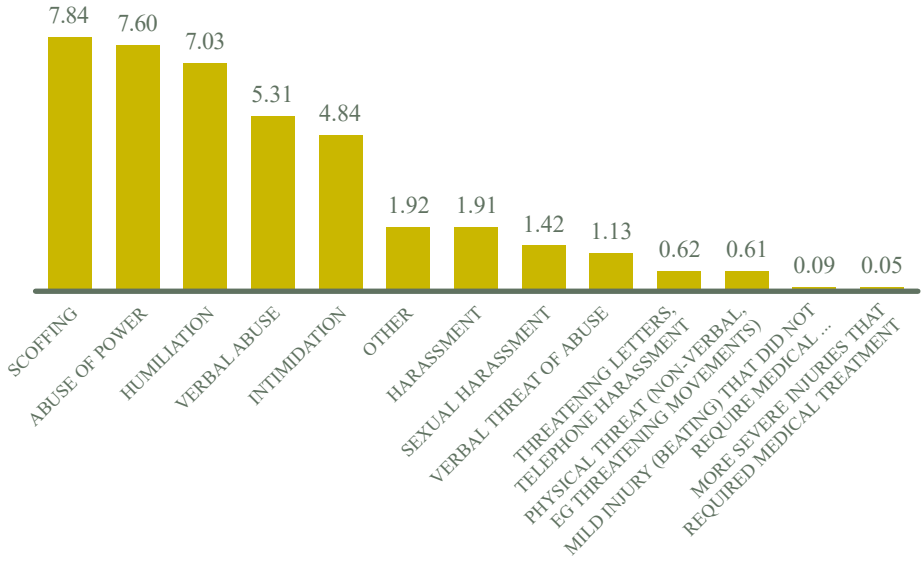
Figure 5: The average incidence of types of aggression committed by relatives (in total)



In the past 12 months, the difference of verbal aggression by relatives is also significant (Wilks' $\lambda = 0.683$; $F (11; 418) = 17.605b$; $p < 0.001$; $\eta 2 = 0.317$).

The difference in the frequency of forms of verbal violence by colleagues is also significant (Wilks' $\lambda = 0.536$; $F (12; 440) = 31.762$; $p < 0.001$; $\eta 2 = 0.464$). However, in this case, abuse of power and teasing is more common, and humiliation by colleagues also has a higher value on the graph than the forms of aggression committed by patients and relatives (Figure 6).

Figure 6: The average incidence of types of aggression on the part of colleagues (in total)



There is also a significant difference in frequency in the year preceding the completion of the questionnaire. (Wilks' $\lambda = 0.69$; $F (12; 411) = 15.404$; $p < 0.001$; $\eta 2 = 0.310$). There was almost no abuse or minor injuries suffered by colleagues; however, harassment and sexual harassment was present. There was much less sexual harassment on the part of patients and relatives.

I also examined whether certain forms of violence are more common in outpatient care, such as, for example, specialist clinics, and emergency ambulances. In outpatient care, three groups were made with outpatient clinics, emergency patient care departments (SBO), and the other wards. More aggressive acts were committed by patients and relatives in the outpatient care settings studied. The standard deviation homogeneity condition of the parametric tests for comparing the means was tested by the Levene test, and the results of the corresponding T-test were taken into account on the basis of this result. In some questions, I examined where forms of violence perpetrated by patients and relatives were more common. There was no significant

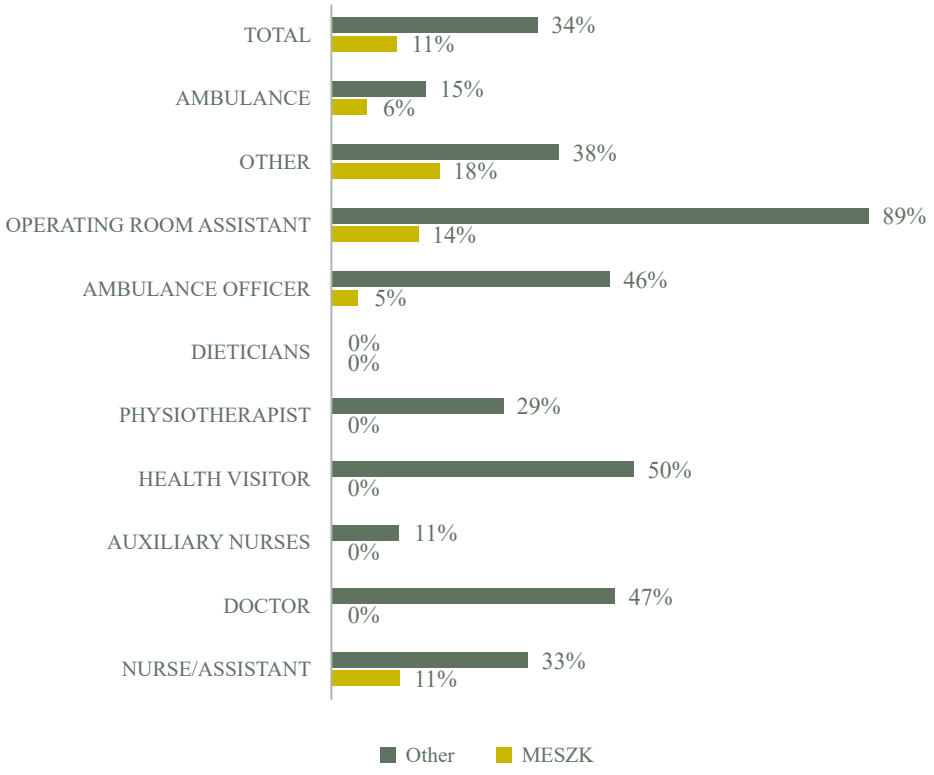
difference anywhere with an independent T-test. When comparing different forms of violence in outpatient and non-outpatient settings, I found the following significant differences: forms of violence suffered by patients: verbal threat of abuse, t (65.623) = -4.281; p=0.001, physical threat (non-verbal, e.g. threatening physical movements) t (65.628) = -2.293; p=0.022, verbal abuse t (63.618) = -3.092: p=0.030, teasing t (62.614) = -3.384; p=0.001, threatening letters, telephone harassment outpatient t (61.607) = -2.614; p=0.010. In the last 12 months, scoffing/teasing (63.599) = -2.152: p=0.035 was also significant for patients. For relatives, the forms of verbal violence were significant (verbal insult t (65.606) = -2.373; p=0.020, teasing t (63.600) = -3.314; p=0.001, intimidation t (62.584) = -2.9; p=0.02, humiliation t (59.567) = -2.309, p=0.024. I did not find a significant difference between the forms of violence caused by colleagues and outpatient/non-outpatient settings; forms of violence committed by colleagues can occur in both outpatient and outpatient care. Forms of verbal violence dominate outpatient care the most.

Questions about self-defence training: The following questions were about whether employees had participated in communication, self-defence, and simulation training. When asked how many people took part in the training by the Hungarian Chamber of Healthcare Professionals (hereinafter MESZK), the result was that 90% (641) of the respondents (N=713) had not taken part in any MESZK training. Of the 720 respondents, only 58 answered the question *What kind of aggression management MESZK training did you participate in,* and 22 of them did not remember the topic of the training. Only 1 in 20 said they had taken part in MESZK training. Without claiming completeness, MESZK training courses were designated: non-violent communication training; assertive communication training; aggression in healthcare; and communication and aggression management training. The two questions (about MESZK training) were compared by the McNemar test and the difference was significant; a higher proportion had been to non-MESZK courses ($\chi 2(1)=71.141$; $p<0.001$).

There were only 433 responses to the question: *What other communication or violence prevention training have you attended?*; 283 answered 'none', but 150 people had participated in some form of training. We can see that 20-40% of 433 responses had been on a training course, so there is a demand for it, but not for MESZK training. Again, without claiming completeness, I list a few examples here: communication training; conflict management training; communication training between patients and relatives and colleagues; stress management training; Bálint group; self-development; self-knowledge training; psychodrama; PAF training; and burnout management. A total of 430 people completed both questions (MESZK training, what other communication or violence prevention training have you attended?). Of these, 38% of respondents had, and 62% had not, participated in any training course. We can see that the difference is significant; more than half had not had any training. Figure 7 shows who had taken part in training by occupation, and whether it was MESZK training or from another source. It can be seen that nurses, operating room assistants and ambulance nurses were the most likely to have been

on a training course. Figure 7 also shows how many people did not participate in the MESZK training. There is no interest in the direction of training, which even shows that this training is not considered good, but a deeper examination of this could reveal the exact reasons.

Figure 7: The proportion of participants in training by occupation

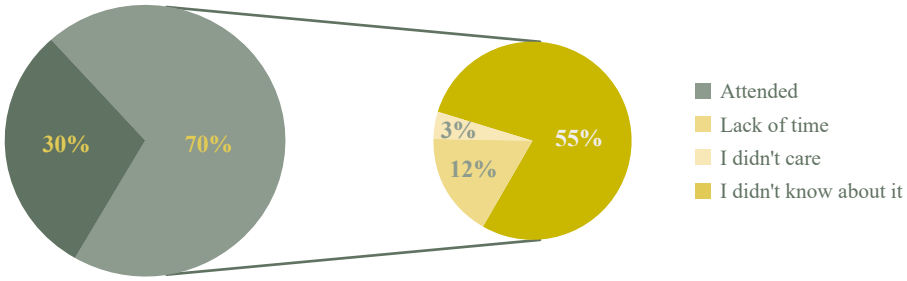


When asked if a simulation exercise had been held in their workplace, only 2% answered yes. I asked if the training listed above had been held at their workplace, and whether or not they had attended it. According to their answers, 30% had participated and 70% had not. The reason given for the lack of participation was that most of them did not know about it. By frequency (89 unanswered, 631 answered) 189 people participated in in-service training (assertive communication training, non-violent communication training, suggestive communication training, communication training), while 345 did not participate because they did not know about it, but might have been interested.

The chart below (Figure 8) shows that 70% of those surveyed had not been to any training. Of these, 3% were not interested and 12% had no time, but most of them (55%) were unaware that the training was being offered. It follows that it would be

very useful to advertise this training through several different media, as there is a demand for it.

Figure 8: The proportion of participants in training and reasons for not participating



In further questions, I wondered whether the majority of employees required communication, simulation, and self-defence training to help deal with violence. The following questions were asked: *Do you think that the use of certain communication training courses would reduce acts of violence? Do you feel it would improve the likelihood of you staying in your career if you could take part in conflict management and violence prevention communication training?* Based on the independent sample T-test of the answers to the questions ($t(426) = -2.15$ $p=0.035$), the respondents thought that violence would decrease as a result of training courses, and the difference was significant, but it would not make a difference to them staying in their profession, which was not significant ($t(427) = -1.468$, $p=0.143$). The next question was: *After completing pre-violence communication training, were the techniques taught there effective during your work?* Based on the given answers, although they had attended training course(s), the application of the techniques was not effective in their work ($t(113) = -0.288$, $p=0.774$) as the test was not significant; this may also mean that the current training is not effective enough.

When asked whether a simulation exercise had been held in their workplace, only 2% said yes. Only 126 people answered how useful it was, based on whether it was effective in their work, because the T-test ($t(125) = -4.736$, $p<0.01$) showed that the mean of the evaluations of the usefulness of the training (Mean =3.10) was significantly lower than the four-point value what representing the average level, so the average assessment of the usefulness of the training was negative rather than positive.

The questions *If you could learn self-defence, how confident would you feel, knowing self-defence techniques?* (N = 387, Mean = 4.37; Min = 1; Max = 7) and *How useful would you consider self-defence education to be in the workplace?* (N = 706, Mean = 4.74; Min = 1; Max = 7) (Likert attitude scale, 1 to 7, 1 – not really; to 7 – very) were examined by a sample T-test. It can be seen that the average was above 4, and the

difference was significant; employees would feel more confident if they could learn self-defence ($t(386) = 3.675$; $p<0.001$), and health workers would find self-defence education useful ($t(705) = 9.336$; $p<0.001$).

If you have learned self-defence, how much more confident are you knowing self-defence techniques? was a question on a 1-7 numbered scale (1 – not at all, 7 – very much) which averaged 4.41, suggesting that self-defence training gives self-confidence to the learner. An independent T-test was carried out, and the difference compared to the response marked with 1, was significant ($t(179) = 22.495$; $p<0.001$).

In the question*: If you learned self-defence how much you could use it during physical violence?* self-defence education was also significant compared to the answer marked 1 with a T-test ($t(178) = 16.410$; $p<0.001$), although the average was 3.75, compared to 1 they were able to use it.

To demonstrate that workers are more confident after pre-violence communication training, and to measure the extent to which workers cope with patient aggression, I measured the degree of confidence (*How confident do you feel in the presence of an aggressive patient?*) developed by Thackrey. For 10 questions, the answer was selected from a scale of 1-11 (1 - I can't, to 11 – I can). The Cronbach's alpha index was calculated, based on which the scale is reliable (0.810).

Only 177 people answered the question after completing pre-violence communication training, '*Were the techniques taught in the training effective during your work?'*, while 126 answered the question '*If you participated in a simulation exercise aimed at preventing violence, how effective do you feel what you learned there is in preventing and treating violence?'*. These were Likert-like attitude scale questions, answered on a scale from 1 to 7 (1– not really, 7 – very) (see Table 3 for details).

Table 3: Changes in the level of confidence and test statistics as a function of participation in different types of training.(*I have reported the results of the T-test corresponding to the Levene test result)

Training/ Education	No			Yes			Levene-test		T-test (2-side)*	
	Capita	M	SD	Capita	M	SD	F	p	t	p
Have you learned self-defence?	540	5.898	1.935	179	6.765	1.676	4.755	0.030	-5.763	<0.001
Communication training	542	6.030	1.907	177	6.371	1.900	0.686	0.408	-2.066	0.039
Simulation exercise	593	5.989	1.907	126	6.701	1.820	0.397	0.529	-3.838	<0.001

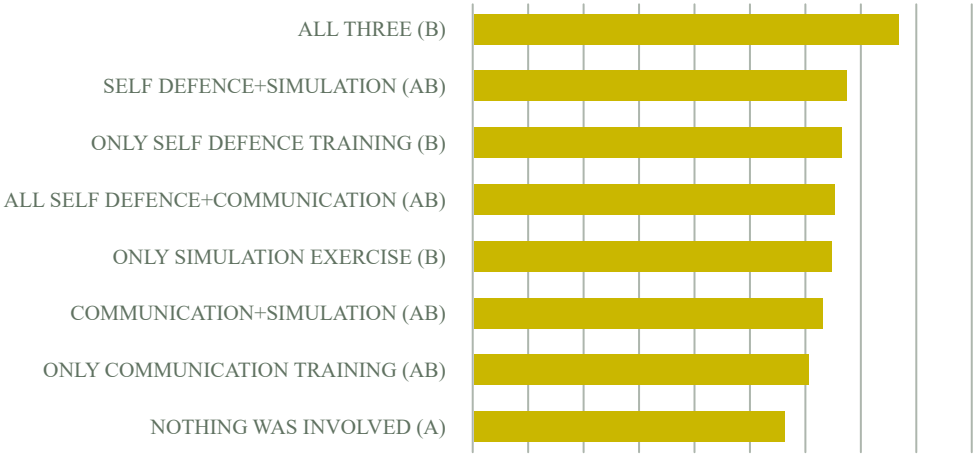
I compared how the respondents' confidence developed as a function of training, whether they did not participate in any type of training, or whether they participated in only one, two, or all three types of training courses. The level of confidence differed significantly depending on participation in the courses (Levene: F (7; 711) = 1.707; p=0.104; ANOVA: F (7; 711) = 6.941; p 0.001). Pairwise differences were examined by Bonferroni's post hoc test, which in several cases was probably not significant due to the low number of group items (see Table 4).

Table 4: Descriptive statistics of confidence based on participation in training (the letters are intended to indicate significant/non-significant differences, such as: a = ab, b = ab, a ≠ b)

Training/Education	N	M	SD
Did not participate in anything (a)	348	5.692	1.932
Communication training only (ab)	106	6.107	1.928
Simulation exercise only (b)	62	6.514	1.972
Self-defence only (b)	109	6.671	1.563
Communication + simulation (ab)	24	6.367	1.429
Self-defence + communication (ab)	30	6.537	1.958
Self-defence + simulation (ab)	23	6.796	1.644
All three (b)	17	7.728	1.725
Together	719	6.114	1.910

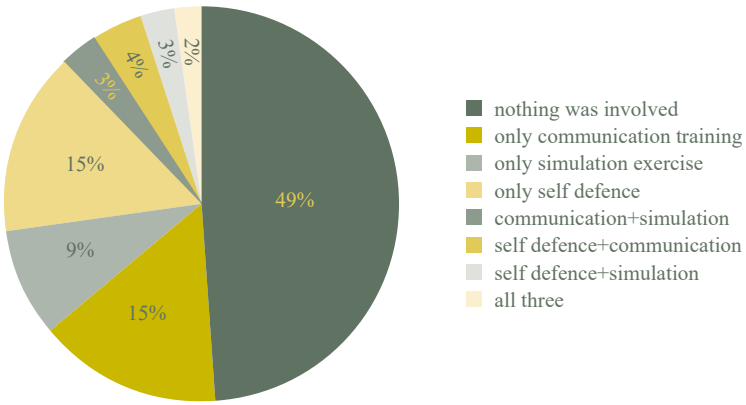
Based on the means and tests, we can see that those who did not have any training/education have the lowest confidence. This result alone confirms the role of training in increasing confidence. The trend is positive, meaning that the more training people have, the more confident they are (Figure 9).

Figure 9: The relation between training and confidence (mean value)



Only 2% of the sample participated in all three types of training (N = 719). Based on the pie chart in Figure 10, we can see the percentage of participants in each type of training. It can be seen that almost half of the respondents (49%) did not participate in any training.

Figure 10: The proportion of participants in training



I hypothesized that the more confident a healthcare worker is, the fewer violent acts they will encounter. If a healthcare professional had attended even just one training course, their confidence increased significantly (Levene: $F(2; 716) = 1.499$; $p=0.221$; t-test: $t(717) = -4.209$; $p<0.001$). However, unfortunately there was no significant change in the number of violent events (Levene: $F(2; 419) = 6.404$; $p=0.012$; t-test: $t(328,332) = 1.025$; $p=0.306$). Examining the correlation between the number of types of training the healthcare worker received (maximum three: communication, situational, self-defence) and whether this affected the number of atrocities they experienced and their level of self-confidence, the number of violent events did not correlate with the number of types of training ($r = -0.051$; $p=0.300$), but it did with the level of confidence ($r = 0.199$; $p<0.001$). Statistics also underline that the more training someone has, the more confident they feel.

3 DISCUSSION

In the foregoing description, I have presented some of my empirical research, but for reasons of length I have not detailed the entire quantitative research. I was looking for an answer to the question of which forms of violence occur in Hungarian healthcare, which are the most common ones, and when and where they occur.

According to the research, there are many more acts of violence during the day, and the most common location is the ward or waiting room. It can be stated that when an atrocity affects a healthcare worker, they turn to their colleagues during the violent

incident, and afterwards ask the head nurse or psychologist for help in processing the issue.

Based on statistical tests, the verbal threat of abuse, physical threats (non-verbal, e.g. threatening physical movements), verbal abuse, scoffing/teasing, threatening letters, telephone harassment, humiliation, and intimidation are more common in outpatient care. In outpatient wards, the healthcare worker is more exposed to violence regardless of whether it is from a patient or a relative. Verbal atrocities affect them more often.

The application of individual communication training would reduce violence, as based on the answers to the question there is a significant difference. According to those who attended a training course the number of violence events would decrease, and they think there is a need for training; they found it useful and they would attend it. Those who have ever been on any training course agree that training reduces violence. Those who learned self-defence became more confident, and those who did not would also find it useful and it would increase their confidence. The fact that 3.75 was the average response to using self-defence in their work does not show that it was not useful to learn self-defence, but that they did not have the opportunity to use it; possibly due to proper prevention, physically violent events did not occur.

Based on the data, we can also see that communication training alone is not enough to make health workers confident. They should have a tool in their hands, e.g. practice after self-defence education, or simulation (role play) practice, as this makes it easier for the employee to communicate. The results obtained may also signal that communication training is necessary but not sufficient in itself; it should be followed by simulation practice as well as self-defence training and practice.

Participation in other communication or violence prevention training increases the confidence of healthcare workers, but communication alone does not. However, participation in this training does not significantly reduce the average number of violent events experienced in a year.

I was also curious about the qualitative part of the research, so the last question was an open-ended one, asking the respondents for suggestions on violence prevention. However, based on the answers to this question, the health workers expect the aggression solution to come mostly from outside help. I divided the answers into 9 groups. The most frequently mentioned suggestions are: conducting communication training, external protection, more security guards, improving working conditions, a self-defence course, and appropriate behaviour on the part of employees. In a psychiatric ward, where verbal and physical forms of violence are commonplace, it can be helpful if the worker can defend themselves not only verbally.

Conclusion

It is a societal expectation that a healthcare worker should do everything in their power to protect the often immobile and indecisive patient. Also, according to the Hippocratic oath, it is the duty not only of a doctor, but also of nurses, to do their utmost to protect patients. However, this also applies to healthcare professionals' physical integrity, as everyone has a subjective right to self-defence. If a worker is injured in a conflict or fire, there will be no one to protect or save the patients. In addition to fire education, self-defence training should also be important and mandatory, especially for those working in wards where they are increasingly exposed to patient aggression (Emergency Care Department – SBO, psychiatric ward, psychiatric outpatient clinic). According to the present research, there is a need for such training for workers; they also undertook training (25.2% of them trained in self-defence) but they could only do this at their own expense.

The number of acts of violence in societies is growing, and institution leaders are increasingly recognizing that healthcare workers, and even patients, are at risk. Workers who have received adequate self-defence training are less likely to be attacked and suffer less serious injuries if they are attacked (Temple, 1994, p 281).

Healthcare workers can only exert a reasonable force in self-defence, although the usual response to possible violence should be to prevent it or, if possible, to escape from the situation. Educating staff on de-escalation and active listening techniques should include practice in simulated scenarios. These classes should focus on defensive skills related to de-escalation, protection, and escape, rather than the offensive techniques taught in self-defence courses. Basic self-defence courses are not adequate for a clinical setting, as the staff need a long course of training[8] (Gillespie, Gates, Howard, 2010, p 177). The healthcare aggression situation has become so bad that more and more articles and books are suggesting that healthcare professionals should learn martial arts for self-defence, which would also boost their confidence even if they are never used (HAM Nazmul, Aparna, 2014, p 106, Privitera, 2011, p 332).

Several authors have written about how self-defence training increases the confidence of health workers, as the present research supports. Statistically significant increases in confidence, safety in working with aggressive patients, and confidence levels for safe breakaways have been reported. Qualitative comments demonstrated a desire for ongoing skills workshops (Lamont, S., Brunero, S., Bailey, A., & Woods 2012, p 313). Another study found that in the UK, 60% of health workers were able to use self-defence techniques after training (Rogers, P., Ghroum, P., Benson, R., Forward, L., & Gournay, 2006, p 593). However, other articles concluded that either there was no good self-defence training, or it only lasted for a short time so it was not used

[8] *»Protective strategies for combating the negative consequences of workplace violence include carrying a telephone, practicing self-defence, instructing perpetrators to stop being violent, self- and social support, and limiting interactions with potential or known perpetrators of violence.« From: Gillespie, G. L., Gates, D. M., Miller, M., & Howard, P. K.., 2010, pp 177-184.*

effectively by the workers (Dickens, G., Rogers, G., Rooney, c., Mc Guinness, A., & Doyle 2009, p 777).

Every person has the right to defend themselves against an aggressor. However, the reaction must be proportionate to the actions of the aggressor (Dimond, 2011). Self-defence should be the last resort; where attacks are reasonably foreseeable, employers should ensure that security measures are in place to protect staff. However, if this is not enough, workers must protect themselves and their patients' physical integrity in every possible manner. But the greatest preventive tool is to give respect to each other, and to respect human dignity. Adequate treatment (medication and physical limitation) of patients with symptoms that are prone to brain depression is of paramount importance.

It should also be taken into account that 70-80% of employees in healthcare institutions are female, and thus may be more likely to be victims of verbal and non-verbal violence, and even sexual harassment. It is also characteristic that women are more likely to cause verbal violence, while men are more likely to cause physical violence. Verbal violence is much more common in healthcare than physical violence, but both can be prevented through effective communication (Deák, 2012, p.185). However, if this is not enough, self-defence may also be needed. It can be especially helpful for women to be able to protect themselves in physical and sexually violent events.

Based on the results of the research, I propose a plan for the management of violence against medical staff, consisting of the following steps:

1. *Prevention*: facility risk assessment, facility-specific risk assessment, security plans, emergency action plans, theoretical and communication training, de-escalation methods, simulation exercises.
2. *Things to do during violence*: appointing people to whom you can turn for help, holding self-defence training.
3. *After violence*: reporting obligations, psychologist, support groups, employee post-incident debriefing and monitoring, testing of theoretical knowledge. The facilities' security systems and people must have the proper knowledge and equipment to protect against external and internal threats.

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