

„Just culture” From the Perspective of Nursing Personnel

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Abstract

Purpose: „Just culture” is an element of safety culture, and in a broader sense – a part of quality culture. It is the subject of studies, especially in healthcare. This phenomenon is almost unknown in Polish medical facilities. For this reason, the aim of the article is to present the essence and significance of „just culture” in healthcare. The other aim of the research is to present the results of the validation of „just culture” assessment instrument used to recognize the „just culture” maturity level and evaluate the nurses’ beliefs and behaviours in the light of „just culture” criteria.

Methodology/Approach: The verified questionnaire consisted of 28 statements in relation to which respondents expressed their opinion on a 5-point Likert scale. The questionnaire was distributed among nurses in one of the largest hospitals in Pomorskie Voivodship, in Poland. The results based on 68 responses were statistically processed with Statistica 13.1 software.

Findings: The obtained results allowed to confirm the reliability of the assessment tool, to recognize the level of „just culture” as wisdom (68%) and to indicate strengths and weaknesses of observed beliefs and behaviours. On this basis, improvement actions were proposed.

Originality/Value: We use the original, own prepared questionnaire. This is the first study on „just culture” in healthcare in Poland. There are only few studies devoted to patient safety culture in Poland and no research addressed to „just culture” phenomenon, as well in Poland as in Central Europe. The results in this area allow to recommend the assessment tool for other hospitals and seem to help in understanding the essence of „just culture” implementation.

Keywords: quality; „just culture”; patient safety; nurses; hospital; measuring instrument validation

Introduction

K. J. Arrow was the first who noticed that the demand for healthcare services does not involve any need or willingness to use, but with a necessity that can not be avoided (Hass-Wilson, 2001). And this is why the quality of this care should not raise any objections. The quality of healthcare services depends on many factors and conditions. It results from the fact that this care is a kind of carrier of basic and auxiliary values serving health, both directly and indirectly. It is a collection of benefits, which include: improvement of mental and physical health, elimination of pain, saving lives, preventive care, elimination of risk, anxiety or stress. The basic values are those that result from the specifics of health care, such as diagnosis and treatment, while auxiliary ones are those that facilitate their implementation, eg registration, keeping medical records, and laboratory tests. It should be

emphasized that according to the World Health Organization – WHO, „health is a state of complete physical, mental and social well-being, not just a lack of disease or infirmity” (WHO, 2014). In economic terms, health is a special good that has a significant value for the patient, resulting both from its direct and indirect impact on the level of satisfaction achieved by the patient (Aksman, 2000). The area of healthcare services in many countries around the world operates on the borderline of the public area of the healthcare and business system. These services are provided in accordance with the idea of social mission and corporate social responsibility and are subject to the same economic challenges as typical enterprises. Interest in the issues of the quality of healthcare appeared at the turn of the 1970s and 1980s. Among the pioneers of this topic are: J. Övretveit (1992), W.E. Sasser, P.R. Olsen and D.D. Wyckoff (1978), Ch. Gronroos (1978), U. Lehtinen and J. Lehtinen (1991), R.J. Maxwell (1984) or A. Donabedian (1988). Very important role in this regard was also played by a group of researchers - A. Parasuraman, V. Zeithaml and L.L. Berry, the authors of the quality gaps model and the Servqual method (1988), so widely used today to measure the quality of medical services (Talib et al., 2015; Teshnizi et al., 2018; Fatima et al., 2019). The perception of the desired dimensions of the quality of healthcare has been systematically growing over the years (Fatima et al., 2019). This is evidenced by the history of medicine, which confirms that the concern for quality in this area has accompanied almost all activities related to human health and life from the very beginning (Jackson, 2014). The examples of this are, among others, the provisions on liability for inept treatment, derived from the Code of Hammurabi (1728-1686 BC) (Halwani and Takrouri, 2006), or the Visigothic Code (300 BC) (Schmitt, 2006). The observation of the conditions in which medical procedures were performed and in which the patients were staying, led to the elimination of ineffective methods of treatment and care over the centuries, to improving the conditions of providing health services and the gradual development of treatment standards (Jackson, 2014). For the first time, the category of quality in this area was introduced by Hippocrates from Chios, which in the current leading motto - *Primum non nocere* – „first do no harm” (Smith, 2005), expressed the concern for the patient and the quality and safety of healthcare. The development of interest in the quality of healthcare was accelerated by the activities of sister Florence Nightingale, forerunner of the nursing profession, and by statistician William Farr, whose reports from the Crimean War indicated the importance of washing the hands of staff in reducing infections in maternity wards (Wiśniewska, 2016). This aspect, directly related to patient safety, has become the most important attribute and condition for proper and safe patient care. The need to ensure patient safety, as the foundation for the quality of healthcare services, has been inscribed by the WHO to the basic quality categories in this area, in addition to effectiveness, efficiency, accessibility, patient-centred and equity, wherein (Quality of care..., 2006):

- safety means delivering healthcare which minimizes risks and harm to service users,
- effectiveness means delivering healthcare that is adherent to an evidence base and results in improved health outcomes for individuals and communities, based on need,
- efficiency means delivering healthcare in a manner which maximizes resource use and avoids wast,
- accessibility can be understood as delivering healthcare that is timely, geographically reasonable, and provided in a setting where skills and resources are appropriate to medical need,
- patient-centred means delivering healthcare which takes into account the preferences and aspirations of individual service users and the cultures of their communities,
- equity is delivering healthcare which does not vary in quality because of personal characteristics such as gender, race, ethnicity, geographical location, or socioeconomic status.

This article focuses on the phenomenon of patient safety culture, and especially - „just culture”, which is its element, conditioning the broadly understood healthcare safety. The aim of the article is to present the essence and significance of „just culture” in healthcare, and the aim of the research is to present the results of the validation of „just culture” assessment instrument used to recognize the maturity level of „just culture” in the studied hospital, and evaluate the nurses’ beliefs and behaviours

in the light of „just culture” criteria. After the introductory part, the authors described the essence of patient safety culture and the phenomenon of „just culture”, then, in the research part - presented a measurement tool for „just culture” assessment and the results of its statistical validation, allowing to draw conclusions in the understanding and perception of this problem by nurses working in a hospital in Pomorskie Voivodship, in Poland. Several instruments are available to assess safety culture (Smits et al., 2018), above all the method elaborated and promoted by AHRQ - The Agency of Healthcare Research and Quality (U.S. government agency that functions as a part of the Department of Health & Human Services to support research to help improve the quality of healthcare) (<https://www.ahrq.gov>). Although successfully started by Petschonek et al. (2013), there are still too few studies devoted to „just culture” measurement. Therefore, the undertaken subject fills the research gap over the issue of this problem. According to the authors’ knowledge, this is the first article devoted to this aspect in relation to the experience of hospitals in Poland as well as in Central Europe.

Patient safety culture and the phenomenon of „just culture”

The phenomenon of the patient's safety culture is generally consistent with understanding and shaping the organizational culture of a specific medical facility, and above all, the safety culture prevailing in it. It can be argued that all human behaviors are closely dependent on culture as such, and on the other hand, culture is a factor that shapes these behaviors equally. The experts of the subject claim that the concept of culture in general is related, among other things, to the fact that its understanding and experience leads people to think - what is a human being and what is his place in the world? (Hańderek, 2015). For the first time the word „culture” (Latin *cultura*), was used by Cicero, who related it with making efforts, treating something with concern, devotion, with love. He transferred this term directly from agriculture, recognizing that „without this civilizing „cultivation” - without cultivating - and the fields and minds would remain poor and barren, regardless of their natural capabilities” (Cyceron, 1961). Nowadays, one can meet with different definitions of organizational culture. For example, E. Schein (2004) defines it as a pattern of shared basic assumptions that the group acquired them while solving problems during external adaptation and internal integration. These patterns have worked well enough to be considered valid and, therefore taught to new members as the correct way to perceive, think, and feel in relation to those problems (Schein, 2004). Another classic, G. Hofstede, recognizes that culture is „the collective programming of the mind which distinguishes the members of one group or category of people from another” (Hofstede, 1991). Because patient safety understood, according to WHO “as the absence of preventable harm to a patient during the process of health care” (WHO, 2009), is a critical component of healthcare quality, therefore in healthcare organizations continuously working to improve, there is increasing recognition of the importance of a culture of patient safety. Safety culture is a performance shaping factor that guides healthcare professional behaviour toward viewing patient safety as one of their highest priorities (Nieva and Sorra, 2003). Achieving a culture of safety requires an understanding of values, beliefs and standards regarding what is important in an organization and which behavior and attitudes related to patient safety are supported, rewarded and expected (Paese et al., 2013). For the authors of this article, the opinion on the patient safety culture presented by AHRQ seems to be very universal. According to AHRQ the patient’s safety culture is “the product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, an organization’s health and safety management. Organizations with a positive safety culture are characterized by communications founded on mutual trust, by shared perceptions of the importance of safety, and by confidence in the efficacy of preventive measures (<https://psnet.ahrq.gov>)”. What important this opinion is very close to another, created in 2006 by the European Society for Quality in Health Care, who adopted the following definition: „the culture of safety is an integrated pattern of individual and organisational behaviour, based upon shared beliefs and values that continuously seeks to minimise patient harm, which may result from the processes of care delivery” (Use of Patient Safety..., 2010). The concept

of safety culture, in general, originated outside healthcare services and can be traced back to the nuclear accident at Chernobyl in 1986 (Wiegmann et al., 2002). After that it appears in different studies of high reliability organizations, organizations that consistently minimize adverse events despite carrying out intrinsically complex and hazardous work (<https://psnet.ahrq.gov>). More recently, the focus on building a culture of safety has moved to the healthcare domain. According to the prestigious PubMed database, which, among others, gathers publications on quality and safety management in healthcare services, the first article on this subject was published in 2005 (Anon., 2005). The number of articles on this topic is growing year by year. Already at the beginning of 2019 (as of March 2019) in the same database, four articles have already been published regarding this issue (Nussenbaum and Chole, 2019; David, 2019; Kobe et al., 2019; Burns et al., 2019). Importantly, according to the research results, institutions with patient safety culture potentially provide safe care of better quality to their patients. The best scores on dimensions regarding safety culture were related to the lower incidence of surgical site infection in hospital, reduction of injuries, reduction of critical adverse events and risk-adjusted mortality (Fan et al., 2016). One can also observe significantly higher percentage of problematic responses (David, 2019). Maintaining such a trend obliges to collect productive investigative data that can be analyzed and acted upon to improve patient safety. Based on P.G. Boysen, this process is not possible unless members of the organization remain vigilant and mindful and maintain continuous surveillance. Similarly, people within the organization must believe that they are obligated to report errors. However, medical institutions cannot afford a blame-free culture, for some errors do warrant disciplinary action. Finding a balance between the extremes of punishment and blamelessness is the goal of developing a „just culture” (Boysen, 2016). The concept of „just culture”, generally attributed to James Reason, was first applied to healthcare by David Marx (Edwards, 2018), the American risk management specialist, who was the first in the second half of the 90s of the twentieth century to pay attention to the far-reaching consequences of medical errors committed during complicated procedures carried out by medical teams (Wiśniewska, 2018). Marx describes “just culture” as follows: „On one side of the coin, it is about creating a reporting environment where staff can raise their hand when they have seen a risk or made a mistake. On the other side of the coin, it is about having a well-established system of accountability. A „just culture” must recognize that while we as humans are fallible, we do have control of our behavioral choices” (Marx, 2009; 2012). It can therefore be said that „just culture” is a culture where, on the one hand, it is about creating a reporting environment so that employees can report that they have seen the threat or made a mistake themselves. On the other hand, it is having an established system of responsibility. According to J. Reason, thanks to „just culture”, we know what the difference is between allowed and unlawful activities, and also that the vast majority of misleading behaviors can be reported without fear of punishment. In creating „just culture”, an atmosphere of trust is important in which those who provide basic information about the safety risk are encouraged and even rewarded, but in which employees know where the boundary between acceptable and unacceptable behavior is (Reason, 1998). In simple words, it is a culture that allows to distinguish between responsible and irresponsible acts (Havinga and Dekker, 2014).

Summarizing, a „just culture” focuses on identifying and addressing systems issues that lead individuals to engage in unsafe behaviors, while maintaining individual accountability by establishing zero tolerance for reckless behavior. It distinguishes between human error (eg, slips), at-risk behavior (eg, taking shortcuts), and reckless behavior (eg, ignoring required safety steps), in contrast to an overarching „no-blame” approach still favored by some. In a just culture, the response to an error or near miss is predicated on the type of behavior associated with the error, and not the severity of the event. For example, reckless behavior such as refusing to perform a „time-out” prior to surgery would merit punitive action, even if patients were not harmed (<https://psnet.ahrq.gov>). „Just culture” creates an atmosphere of trust between the employee and employer, and this presence of trust has a positive impact regarding the willingness to report outcomes when results are not as expected (Agim and

Sheridan, 2013). Importantly, without a „just culture” in healthcare services, real progress in quality and safety assurance will be limited (Mayer and Cronin, 2008).

Evaluation of the reliability of the measuring instrument

The study to validate the scale used to assess just culture was carried out in March 2019 in one of the large hospitals in the Pomeranian Voivodship. In the hospital, there are the following departments: general surgery, vascular surgery, trauma and orthopedic surgery, neurology, internal medicine, urology, neurological rehabilitation, intensive care, pediatric, cardiological, otolaryngological and maxillofacial and emergency surgery. The study involved nursing staff employed in the hospital. The survey was anonymous. Questionnaires (see Table I) consisting of 28 items (one A4 sheet) were given to respondents after a short explanation of the subject and purpose of the study by suitably instructed superiors in individual hospital departments. As a result, 73 completed questionnaires were received, 5 of which did not contain opinions on all statements. Thus, the number of questionnaires used to validate the measurement scale and develop the test results was 68. Before performing a statistical analysis of the obtained results, it was necessary to assess the quality of the scale used in the questionnaire. For this purpose, an assessment of the reliability of the “just culture” measurement scale was carried out.

Table I. Questionnaire to measure „just culture” – before validation

1- strongly disagree, 2 – disagree, 3 – not disagree and not agree, 4 – agree, 5 – strongly agree
R – reverse questions

1.	Medical staff underwent the necessary training to do the work in a safe way for the patient	1 2 3 4 5
2.	Patient safety is a priority regardless of costs	1 2 3 4 5
3.	Medical staff receives the necessary equipment, auxiliary materials, to perform work in a safe way for the patient	1 2 3 4 5
4.	Medical staff receives the necessary help from supervisors if they have doubts about the safety rules	1 2 3 4 5
5.	Improvements to patient safety are systematically introduced	1 2 3 4 5
6.	When there are incidents that can affect / affect the patient's safety, this is mainly due to system or technological reasons (R)	1 2 3 4 5
7.	When incidents occur that can affect / affect patient safety, they usually result from human error (R)	1 2 3 4 5
8.	Medical personnel can report comfortably for themselves mistakes / incidents that threaten the patient's safety, committed by others	1 2 3 4 5
9.	Medical personnel can report comfortably for themselves mistakes / incidents threatening the patient's safety, committed by themselves	1 2 3 4 5
10.	Medical personnel can report comfortably for themselves any deviations that may lead to mistakes / incidents, even if no harm has been done to the patient	1 2 3 4 5
11.	Staff do not have enough time to report the above mentioned errors / incidents (R)	1 2 3 4 5
12.	The main obstacle in reporting the above mistakes / incidents is fear of punishment (R)	1 2 3 4 5
13.	The main obstacle in reporting the above mistakes / incidents is a fear of accusing others of informing (R)	1 2 3 4 5
14.	Medical staff discourage each other from reporting errors / incidents (R)	1 2 3 4 5

15.	If the medical personnel violates the procedures, the rules contributing to the threat to the patient's safety they are immediately disciplined by the superiors	1 2 3 4 5
16.	If the medical personnel violates the procedures, safety rules, it is immediately disciplined by the superiors, even when it does not have a direct impact on the patient	1 2 3 4 5
17.	If the medical personnel violates the procedures, rules, contributing to the threat to the patient's safety, it is immediately disciplined by other personnel	1 2 3 4 5
18.	Disciplining personnel by supervisors does little to improve the violation of procedures and security rules (R)	1 2 3 4 5
19.	Disciplining personnel by other personnel does little to improve the violation of procedures and security rules (R)	1 2 3 4 5
20.	If an incident occurs, first of all they are looking for a guilty one (R)	1 2 3 4 5
21.	The medical staff immediately reacts to problems concerning the patient's safety	1 2 3 4 5
22.	If the medical staff reports problems related to patient safety, appropriate decisions and actions are taken	1 2 3 4 5
23.	If there is an error / incident, both the superiors and the employees take this very seriously	1 2 3 4 5
24.	If an error / incident occurs in our branch, the explanatory team looks at each step in the process to determine how they could have occurred	1 2 3 4 5
25.	Positive conclusions are drawn from errors	1 2 3 4 5
26.	I am convinced that the reaction of our superiors to a given problem is always fair to a given employee	1 2 3 4 5
27.	Supervisors discuss with us all the problems that arose concerning the patient's safety	1 2 3 4 5
28.	We know nothing about any errors / incidents and their consequences (R)	1 2 3 4 5

Reliability defines the precision of a research tool, in this case a multi-position measuring scale, in providing specific information. Formally, reliability is defined as the proportion of the variance of true results to the variance of results obtained. The measurement is reliable if the results obtained on a given scale in the subsequent measurements are the same or very similar. The most frequently mentioned methods of assessing reliability are the method of repeating the measurement (test-retest) and the method of determining the internal consistency (homogeneity) of the scale using the α -Cronbach coefficient. The first one is based on the estimation of the inter-period compliance of results. The method of determining internal consistency using the α -Cronbach coefficient allows to determine the degree to which the elements forming the scale ("just culture" aspects) are correlated and coherent in relation to the measurement of the concept they represent.

The α -Cronbach coefficient is calculated according to the formula:

$$\alpha = \left(\frac{k}{k-1} \right) \left(1 - \frac{\sum_{i=1}^k \sigma_i^2}{\sigma_s^2} \right)$$

where: k - number of scale items (here 28 items);

σ_i^2 - variance of the i -th position;

σ_s^2 - total scale variance.

This coefficient takes values from 0 to 1. The high reliability of the scale is indicated by the

α values greater than 0.7 (Van Der Wiele and Brown,1998).The calculations were carried out using the appropriate procedure of the STATISTICA 13.1 package. Table II presents the results of statistical analysis of survey data on the 28 questions forming the “just culture” construct in order to assess the reliability of this scale. It should be emphasized that in order to determine the values of the α -Cronbach coefficient, all 28 statements were treated as elements of one scale - without separating the subscales marking specific sub-areas within this scale.

Table II. Results of the analysis of the reliability of the “just culture” scale obtained in the STATISTICA 13.1 program.

Summary for scale: Mean=97,9853 Std.Dv.=8,45266 Valid N:68 (Internal consistency) Cronbach alpha: ,671319 Standardized alpha: ,737049 Average inter-item corr.: ,098550					
variable	Mean if deleted	Var. if deleted	StDv. if deleted	Item-Totl Correl.	Alpha if deleted
P1	93,61765	72,23615	8,499186	-0,252781	0,684908
P2	93,98529	68,98508	8,305726	0,093814	0,670945
P3	93,95588	66,83629	8,175346	0,369005	0,657288
P4	93,76471	68,26817	8,262455	0,285576	0,663437
P5	93,88235	66,30968	8,143076	0,365520	0,655721
P6	94,82353	66,99828	8,185247	0,276654	0,660325
P7	95,29412	67,17820	8,196231	0,241767	0,662086
P8	93,98529	70,07331	8,370980	-0,002957	0,675781
P9	93,82353	68,64533	8,285248	0,166731	0,667173
P10	93,92647	65,03871	8,064658	0,344406	0,653286
P11	96,13235	61,29131	7,828876	0,666951	0,628930
P12	95,97059	60,88149	7,802659	0,540837	0,632308
P13	95,80882	64,53698	8,033491	0,214613	0,664044
P14	95,67647	56,10121	7,490074	0,634734	0,611183
P15	93,58823	59,21280	7,694985	0,126500	0,713527
P16	94,07353	64,24459	8,015272	0,263025	0,658439
P17	94,45588	63,01276	7,938058	0,291890	0,655244
P18	95,17647	67,88062	8,238970	0,051816	0,681280
P19	95,64706	67,28719	8,202877	0,101078	0,674658
P20	95,83823	63,72383	7,982721	0,305045	0,654149
P21	93,69118	69,50757	8,337120	0,089721	0,670658
P22	93,80882	65,83111	8,113637	0,517064	0,650990
P23	93,55882	68,86418	8,298445	0,144877	0,668223
P24	93,77941	69,52487	8,338158	0,066819	0,671848
P25	93,92647	70,24459	8,381205	-0,021966	0,677049
P26	93,89706	69,70999	8,349251	0,065762	0,671584
P27	93,73529	68,57699	8,281122	0,227612	0,665362
P28	95,77941	64,14252	8,008903	0,294648	0,655369

As shown in Table II, the obtained value of the α coefficient for the adopted scale consisting of 28 positions (variables P1 ÷ P28) of the research tool was 0.613. In the “Alpha if deleted” column of the table, the values of the α -Cronbach coefficient for individual scale positions are calculated in accordance with the principle – “will the α coefficient for the scale increase if one of the elements with the weakest correlation with the scale is eliminated?” It can be stated that item P15 does not meet the condition of consistency in relation to other items of the scale. After removing the position number 15, α -Cronbach coefficient will increase to an acceptable value of 0.714. Therefore, further analysis and conclusions obtained as a result of the research presented in this article will be based on 27 positions of the just culture scale, i.e. statements 1÷14 and 16÷28.

Considering above, “just culture” level was calculated as follows: average value from the answers of all respondents was calculated for each question. Then the average of these values was calculated.

The answers to the reverse questions (P6, P7, P11, P12, P13, P14, P18, P19, P20 and P28) were adequately recalculated in order to obtain just culture value in the scale 1-5. “Just culture” value of studied organisation is 3.40 ($\sigma = 0.92$), which corresponds to 68% of maximum expected value (see Table III).

Table III. “Just culture value”

Question no.	Average (reverse questions included)	σ	Just culture value (average of averages) (1-5 scale)	Just culture value [%]
1	4.35	0.48	3.40	68
2	3.99	0.64		
3	4.04	0.54		
4	4.21	0.41		
6	2.83	0.65		
7	3.32	0.69		
8	4.00	0.59		
9	4.15	0.52		
10	4.06	0.82		
11	1.92	0.87		
12	2.01	0.99		
13	2.13	1.21		
14	2.33	1.32		
16	3.93	1.13		
17	3.54	1.24		
18	3.21	1.21		
19	2.39	1.16		
20	2.20	1.14		
21	1.72	0.45		
22	4.17	0.50		
23	4.42	0.52		
24	4.21	0.53		
25	4.06	0.60		
26	4.08	0.44		
27	4.24	0.43		
28	2.32	1.16		

Basic statistics are presented in Table IV.

Table IV. Analysis of surveys. Basic statistics

Question no.	Frequency of answers [%]				
	1	2	3	4	5
1	0	0	0	65	35
2	0	4	9	72	15
3	0	2	8	75	15
4	0	0	0	79	21
5	0	2	11	65	22
6	0	11	63	23	3
7	4	32	55	9	0
8	0	3	8	75	14
9	0	1	3	75	21
10	3	4	1	68	24
11	35	49	12	4	0
12	35	42	11	12	0
13	39	32	4	24	19
14	37	21	21	13	8
16	9	2	0	60	28
17	13	7	13	49	18
18	6	55	6	21	12
19	28	32	18	21	1
20	33	36	13	15	3
21	0	0	0	72	28
22	0	2	1	76	21
23	0	0	1	56	43
24	0	0	6	68	26
25	0	0	15	64	21
26	0	0	3	80	14
27	0	0	0	76	24
28	25	52	0	22	1

Research results and discussion

The fact and the nature of the validation of the proposed assessment tool made it possible to indicate the overall level of „just culture” maturity in the examined hospital. Bearing in mind Ph. Crosby maturity grid (Nwabueze, 1995), by analogy, it can be stated that this level is 68% and corresponds to wisdom, assuming that 1%-20% corresponds to uncertainty, 21%-40% corresponds to awakening, 41%-60% corresponds to enlightenment, 61%-80% corresponds to wisdom, and 81%-100% corresponds to certainty.

In addition, the data obtained also allowed to gather valuable knowledge about certain beliefs and behaviours in the analyzed hospital, from the perspective of individual statements. Bearing in mind P1 statement, it turned out that all nurses (100%) confirmed and definitely confirmed that they had the necessary training on how to work in a safe way for the patient. This state can be considered very positive, because the importance of training and their impact on the correctness of daily work performed by nursing staff and on patient safety has long been emphasized in many scientific reports (Gregory et al., 2007; Sherwood, 2011; Vaismoradi et al., 2012; Steven et al., 2014; Pawłowski et al., 2018). Most respondents agree and strongly agree (P2 - 87%) that patient safety is a priority, regardless of costs. It is well known that safety, regardless of the sphere of human life, is the basis

for the existence and development of each individual, and is inscribed in a set of elementary rights and obligations (Leroy et al., 2012). In the case of the patient, WHO specialists clearly articulated that its safety is a global priority. At the same time, they recognized that the role of nurses in providing it is undisputed (Langlois, 2015). As many as 90% of nurses agree and strongly agree with P3 - that they receive the necessary equipment and materials to work in a safe way for patients. This result can be considered very satisfying. Researchers point out that the lack of access to appropriate equipment and equipment is a high risk of losing patient safety, regardless of the type of care. Medical equipment is an essential health intervention tool used by nurses for prevention, diagnosis and treatment of disease and for rehabilitation of patients (Moyimane, 2017). A fairly high consistency of responses was observed in the case of a similar issue included in the P5 statement, as 87% of respondents reacted positively to the fact that the hospital uses facilities that improve the patient's safety. It is known that improving the condition and number of facilities is an important element of health care, regardless of its specificity. They are essential for modern healthcare delivery (Blandford et al., 2014). A very positive sign is that 100% of respondents agree and strongly agree with P4 saying that the staff receives the necessary help and support from the superiors in case of doubts as to the safety rules. It should be noted that in the situation of any uncertainty arising during the care of the patient, it is necessary for the hospital management to provide nurses with the conditions for effective and fast communication with the superiors, because, as the researchers argue, communication, as a key element in providing high-quality health care services, leads to patient satisfaction and health (Norouzinia et al., 2016). What's more, researchers point out that this type of support is effective if: is approachable and safe, cares, „walks the talk”, motivates development of self-confidence, gives genuine feedback, provides adequate and competent staffing, „watches our back”, promotes group cohesion and teamwork, and resolves conflicts constructively (Kramer et al., 2007). Regarding P6 and P7, it was established that more than half of the respondents have no opinion on whether incidents affecting the patient's safety in the examined ward stem from systemic or technological reasons (63%) or from human error (55%). This situation can be considered as worrying, as it may indicate lack of sufficient knowledge of nurses on the causes of potential threats, or that no cause-and-effect analysis is considered as a basic tool to reduce or minimize the occurrence of adverse events of different origins (Hooker et al., 2019). As to P8, 89% of respondents agree and strongly agree that they can easily report errors affecting patient safety committed by others. In addition, 96% of respondents agree and strongly agree that there is a possibility of comfortable reporting of mistakes made by themselves (P9). This fact is also confirmed in response to P10, as up to 92% of respondents admitted that they could easily report any observed deficiencies that may lead to errors, even if they did not cause any harm to the patient. The reactions to the P8-P10 statements are surely an indication of the atmosphere of trust that has been created in the surveyed facility. They also prove that the psychological barrier that accompanies reporting, often perceived as whistleblowing, was dealt fairly well. It should be added that the trust and the possibility of reporting adverse events and mistakes freely are the basic pillars of just culture (Force et al., 2006; Rogers et al., 2017). As a result of research carried out by Paradiso and Swenney (2017) it was confirmed strong positive correlation between trust and „just culture” alignment. As the level of trust among direct care nurses and nurse leaders increased, the alignment with „just culture” principles also increased. Important issues that were examined were also sufficient time to report possible incidents, dangerous for the patient and the issue of fear of such notification. For example, the results of research conducted by Stergiopoulos (2016) and by Khamarnia (2015) indicates that lack of time and fear of punishment are some of the major obstacles in this regard. Additionally, according to Copping (2005) it is estimated that about 95% of medication errors are not reported due to the fear of punishment. Appropriately 84% (P11) and 79% (P12) nurses disagree and strongly disagree that these factors constitute any barriers. Slightly more cautious, however, the nurses referred to the issue of informing (P13), because only 71% agree and strongly agree that the main obstacle to reporting errors could be fear of being denounced by other employees. However, 24% of people were diagnosed with this fear. This is quite a serious

problem and for this reason the management should be aware that when employees decide to report organizational wrongdoing, they might face dilemmas concerning to whom and in what way to report their concern and observations. The lack of sense of safety may affect the value of the reporting and type of retaliation (Vozir & Yurtkoru, 2017). Another problem seems to be that only 58% of respondents disagree and strongly disagree that the personnel are discouraged from reporting errors or incidents of a negative nature (P14), and as many as 21% admit that such a situation happens. A similar impression is made by the fact that only 88% of respondents (P16) agree and strongly agree that in the examined hospital personnel violating safety rules are immediately disciplined by superiors. According to the research results, as many as 12% of people have opposite experience, which means that there are cases of lack of response and commitment on the part of the management, and as you know, managers' response to errors is an important determinant of safety culture in healthcare organisations (Alahmadi, 2010). A similar situation occurs when there is a need for mutual disciplining by the staff (P17), and people with such experience are already more (20%). In addition, which raises serious concerns, as many as 33% of respondents agree and strongly agree that the discipline of personnel by supervisors does not translate into an improvement in compliance with safety procedures and rules (P18). This may mean that management does not conduct adequate and systematic supervision in this regard, is inconsistent or has no authority among a certain group of staff. Taking into account the recommendations of The American College of Healthcare Executives, it should be emphasized that the actions of leaders must be consistent over time and throughout the organization. Behavioral standards and expectations should apply to everyone, everytime, without exception (Anon., 2017). The response to the P19 statement was to allow recognition of the role of personnel in mutual discipline. Although 60% of respondents felt that mutual discipline was effective, 22% of respondents said that it contributed little to improving safety behavior. An important element of „just culture” is proper management behavior when an error occurs (Morello et al., 2012; Boysen, 2013). This aspect is already mentioned in the introductory part to the article. According to the results of the research (P20), nearly 70% of nurses denied that when the mistake occurred first of all, he was looking for a guilty one, however 18% of the respondents said that this is unfortunately the case. However, all respondents admitted that the personnel immediately responded to problems concerning patient safety (P21), and 97% declared decisively and very strongly that in the case of irregularities, immediately appropriate decisions and actions are taken (P22). An equally positive reaction (99%) concerned the statement P23, saying that both employees and supervisors treat all errors very seriously. Moreover, as stated (P24), in the event of such an error, the appointed team explains its origin and cause (94% of respondents agree and strongly agree). 85% admit that positive conclusions are drawn from the mistakes made (P25). This is an important declaration, because the benefits of teams in reducing errors and improving the quality of patient care have been recognised in a number of studies (Reith, 1998; Firth-Cozens, 1998; Firth-Cozens, 2001), and learning from mistakes, own and others, as well as drawing conclusions from them for the future is proof that the conditions for learning culture are also created in the hospital (Boysen, 2013). It is important that as many as 94% of the respondents recognized (P26) that the reaction of the superiors to a given problem is always fair to a given employee. This belief builds trust (Vinagre and Marques, 2018), promotes reporting and gives a sense of security to the employee (Ballangrud et al., 2012). Equally positive is the reaction to P27 confirming in 100% that the superiors discuss with employees the arising problems that concerned the patient's safety. However, this answer is not consistent with the reaction to the P28, as 18% of nurses admitted that their knowledge of errors occurring in the hospital is unsatisfactory. This means that it would be necessary to pay more attention to feedback, which in the case of just culture and in general - patient safety culture, is perceived not only as an important element of education and also as a motivational factor (Kim and Newby-Bennett, 2012).

Conclusions

The instrument for assessing attitudes in relation to “just culture” presented in this article has been verified in terms of the reliability of the measurement. After removing one of the items of the pre-proposed diagnostic scale of “just culture”, the coefficient of internal consistency (α – Cronbach) has an acceptable value in the light of the views presented in the scientific literature. Therefore, this instrument can be used for further research eg. to compare attitudes in different groups of medical staff in the same hospital or to compare “just culture” in two different organizations that provide medical services.

Taking into consideration the results of the research and the level of „just culture” maturity recognized as wisdom, there is a need to indicate some strong and some weak aspects of „just culture” in the studied hospital. The fact that the staff employed in the facility undergoes various appropriate trainings and can count on the support of superiors if they have doubts about compliance with the patient's safety rules, can be considered very positive. Certainly, a very important issue is the fact that in the surveyed institution there is a climate conducive to reporting errors, which proves trust in the management. The next is the fact that every such mistake is taken seriously, and that patient safety is a priority. However, it is noted that there are still many areas for improvement. First of all - it seems necessary to broaden the subject of training to include issues such as cause and effect analysis of errors and their consequences. It also seems important to conduct a series of trainings with a specialist in psychology on the subject of error reporting and mutual disciplining of employees, during which the problem of whistleblowing codex will be raised. Important is the problem of insufficient consistency and reaction of the superiors in situations of emerging exceptions, as well as the need for more effective than ever sharing information with the staff on the mistakes made in the hospital, steps that have been taken to prevent mistakes, as well as the effects of remedial actions. As it has been shown, the priority in this respect seems to be education and constant, undisturbed communication and exchange of knowledge. This is a pre-requisite for the success of any change, including changes in beliefs and behaviors that constitute „just culture”.

Compliance with Ethical Standards

– Conflict of Interest:

The authors declare that they have no conflict of interest.

– Research involving Human Participants:

The study was based on anonymously expressed opinions of nursing staff in the unidentified hospital. All procedures performed in studies involving human participants were in accordance with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

– Informed consent:

Not applicable

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