Izzivi prihodnosti

Challenges of the Future

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Patient Safety in Primary Health Care –
the Challenges of the Present and the Future

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Abstract:

Background and Originality: Patient safety is a very important component of quality which is often emphasised by health care managers and policymakers; however, its integration in national health policies and organisational measures is not self-evident. This paper explores how frequently Slovenian Community Health Centres (CHCs) report on patient safety and whether their reporting is consistent with the OECD definition of patient safety. The originality of this research is finding the actual value of patient safety for Slovenian CHC independently of official statements at national and organisational levels.

Method: A qualitative descriptive analysis of the publicly available annual reports of twenty-six Slovenian CHCs with an integrated management system was conducted. Thematic analysis was applied to the term "safety" and related terms ("harm", "adverse" for adverse events, etc.). The frequency of these terms was reported, and the context of the words was explained.

Results: In the annual reports, 11 different keywords related to safety, harm and adverse events were found, but only 6 keywords met the OECD definition of patient safety: patient safety education or preventive activities (n = 20); patient safety measures (n = 14); general healthcare safety (n = 3); drug safety, hygiene standards (n = 7); safety culture (n = 10); and risk management (harm prevention) (n = 8). These keywords were found in only 16 of 26 CHCs annual reports.

Society: Patient safety is the responsibility of healthcare providers, both individuals and organisations. The social responsibility of CHCs is to report on patient safety in their annual reports, create a culture of safety, and take corrective action when necessary because their mission is to contribute to a higher quality of life for patients and society as a whole. This research shows that this is not always the case, even for CHCs with an integrated management system - not all have publicly available annual reports. The research is an incentive for all CHCs, not just CHCs with an integrated management system, to create a culture of safety, report on patient safety and learn from mistakes by developing safety protocols.

Limitations / further research: The research was limited to CHCs with an integrated management system (n = 34) and publicly available annual reports (n = 26). It is crucial to conduct such research for all Slovenian CHCs and encourage them to report on patient safety. A true insight into the culture of patient safety must also include an analysis of the actions taken by the CHC management in recent years.

Keywords: patient safety, health care quality, OECD dimensions of quality, adverse events, preventable harm for patients.

1 Introduction

Patient Safety is a high priority of EU health policies; however, its integration into national health policies and organisational measures is not self-evident. Various health care policies and actions are taken in the name of patient safety, but they do not always serve patient safety. Day-to-day healthcare practice and interventions result from current medical and nursing evidence, so we need to continuously monitor and assess patient safety in health care facilities. It is critical to obtain feedback on the patient safety of healthcare services, assess the impact of interventions on patient safety, and be able to take corrective action to ensure greater patient safety.

Patient safety is an important component of medical and nursing education; however, safety culture varies by country, region, and organisation. Some organisations report patient safety regularly and take corrective action monthly when needed, while others tend to cover up adverse events and not take corrective action. A culture of safety builds slowly, it cannot be implemented overnight, but the first step in this endeavour is reporting patient safety.

Many definitions of health care quality emphasise the importance of patient safety, including the definition of the Organisation for Economic Cooperation and Development (OECD), which the EU has adopted. Patient safety is also very important for Slovenian healthcare institutions: Community Health Care Centres (CHCs) and hospitals. Our study focused on the primary health care level, i.e. Slovenian CHCs. Our aim was to determine the importance of patient safety for Slovenian CHCs by analysing their annual reports. The annual reports of Slovenian CHCs with integrated quality management system were analysed to answer the following research questions:

RQ1: Do CHCs with an integrated quality management system report on patient safety?

RQ2: If yes, in what ways do they report on patient safety?

RQ3: Is their reporting consistent with the OECD definition of patient safety?

2 Theoretical framework

Most of the recommendations on quality and safety in health care date back to 2002 and the start of the OECD project on quality of health care. The main aim of the project was to assess and compare the quality of health care in different countries. The project was extended in 2014 when the European Commission recommended all member states to monitor the effectiveness of health care and facilitate access to health care for all (EUR Lex, 2014). In the same year, the EU agenda on quality of healthcare was published ("Expert panel on effective ways of investing in health (EXPH) - Future EU Agenda for Quality of Healthcare with a Special Focus on Patient Safety (2014)"). The document extended the OECD's thinking on quality to a wide range of healthcare services and specified that they must be as follows:

1. »Effective, and improve health outcomes;

2. Safe, and prevent avoidable harm related with care;

3. Appropriate, and comply with current professional knowledge as well as meeting agreed standards;

4. Patient-centred, and involve patients/people as key partners in the process of care;

5. Efficient and equitable, and lead to the best value for the money spent and to equal access to available care for equal need, utilisation and equal quality of care for all« (EC, 2014, p.8).

In this document, patient safety is seen not only as a critical dimension of quality, but also as an outcome of high quality health care delivery. The World Health Organization (WHO) emphasises that patient safety is essential to the delivery of quality essential health services. There is a clear consensus that quality health services worldwide should be effective, safe and people-centered (WHO, 2019, para. 3).

The definition of safe health care service includes the avoidance of preventable harm (EC, 2014; EC, 2017; Kelly & Hurst, 2006, p.13; WHO, 2019, para.2; Robida, 2009, p. 8). "It is estimated that 8-12% of patients admitted to a hospital in the EU suffer from adverse effects whilst receiving healthcare, such as healthcare-associated infections, errors in diagnosis, and medication-related and surgical error" (EC, 2017, p.1). WHO recognises that one of the top ten causes of death and disability in the world is due to adverse events caused by unsafe care. In low and middle income countries, 2.6 million people die each year as a result of unsafe care. In OECD countries, 15% of total hospital activity and expenditure is a direct result of unsafe care (WHO, 2019, para. 1). There are many reasons why patient safety should be a high priority for all healthcare institutions: it is estimated that medical errors cause more deaths than AIDS, motorcycle accidents or breast cancer (McFadden, Stock & Goven, 2015, pp. 24-34). Adverse events are estimated to be the fourth leading cause of death in Slovenia, just after cardiovascular disease, cancer and injuries, but are not statistically recorded (Robida, 2015, p.25).

There are various causes of adverse events; they may be due to the workplace (inappropriate design), equipment (instructions in a foreign language, unfamiliarity with equipment), the organisation of a healthcare facility, and the tasks assigned to an employee (too many tasks, incompetence) (Robida, 2013, p.10). Mitchell (2008, p.3) adds patient management (improper delegation, errors in follow-up, incorrect referral or misuse of resources) and clinical performance (before, during and after the procedure) and communication (errors between patient or patient representative and practitioner, practitioner and non-medical staff or between practitioners). According to Matthew et al. (2017, pp. 34-42), most adverse events for patients are due to inappropriate communication when conveying information about patients or even misuse of information about patients.

Not all errors in health care facilities are harmful to patients: some errors have no impact on patient health, and some errors are detected and corrected in a timely manner. "According to WHO, major patient safety concerns are medication errors, health care-associated infections,

unsafe surgical care procedures, unsafe injection practices, diagnostic errors, unsafe transfusion practices, radiation errors, sepsis, and venous thromboembolism (blood clots)" (WHO, 2019, para. 8). However, the nature of adverse events may vary depending on the care setting: in primary and ambulatory care, adverse events may include delayed diagnoses, diagnostic errors, adverse drug reactions, untimely follow-up, falls, and medication errors in patients with polypharmacy (OECD, 2020, para. 4).

This paper focuses on Slovenian primary health care. Some believe that primary health care is safer for patients than hospital care, where patients feel more vulnerable. "While much attention is given to patient safety in hospitals, about 50% of the global burden arising from patient harm originates in primary and ambulatory care" (OECD, 2019, p.4). "Globally, up to as many as 4 in 10 patients are harmed in primary and outpatient health care. Up to 80% of harm is preventable. The most detrimental errors are related to diagnosis, prescription and the use of medicines" (WHO, 2019, para.1). Primary health care has great potential to improve health outcomes by reaching patients at early stages of disease, thereby reducing illness and morbidity and prolonging life (Kontopantelis et al., 2015, p. 5).

Patient safety, then, is not just a component of health care quality but an important health care concern in its own right. "Patient safety requires continuous detection, analysis and risk management for patients with the aim to implement safe health care and reduce harm for patients to the minimum." (Kristensen, Mainz, and Bartels, 2007 in Robida, 2013, p. 25). It is extremely important to identify and report adverse events and threats to patient safety. This depends on the safety culture in the healthcare facility, which consists of three key elements (ECRI, 2019, para. 5): fair and just culture, reporting culture, and learning culture.

Our paper focuses on the reporting culture in Slovenian primary health care; it examines the importance of patient safety for Slovenian CHCs using one indicator: patient safety reporting.

3 Method

The annual reports of Slovenian CHCs with integrated management systems were collected from their websites. Those that did not publish their annual reports for 2018 were asked to provide them. Contrary to our assumption, not all CHCs have publicly available annual reports, so our sample included only 26 reports out of 34 for 2018.

Our aim was to determine the importance of patient safety for Slovenian CHCs by analysing their annual reports: how frequently they report on patient safety and whether their reporting is in line with the OECD definition of patient safety. Slovenian CHCs are not required to report on quality and safety; they are only required to report financial and management indicators (efficiency, cost-effectiveness, expenditure) to the health insurance company and the Ministry of Health. We focused on CHCs with an integrated management system (n = 34) and expected them to report on quality and patient safety. Although they report on quality, they are not required to report on the six OECD quality dimensions, which include patient safety.

Patient safety was broken down into several key concepts using the theory of patient safety adopted by the OECD and the EU. The focus was not on staff safety measures, but on patient safety measures and all other activities that improve patient safety.

The authors recognise that patient safety is an integral part of health professional (nursing, medical) education, but the complexity of health care systems brings new threats to patient safety that need to be addressed. Prevention of patient harm refers to a system of care that (1) prevents errors, (2) learns from errors that occur, and (3) builds on a culture of safety that involves health care professionals, organisations, and patients (Mitchell, 2008, p. 2). The first step in this direction is patient safety reporting. CHCs that report on patient safety can learn from errors and hopefully avoid them in the future.

A qualitative descriptive analysis of the publicly available 2018 annual reports was conducted: The occurrence of the words "safety", "harm" and "adverse" (for adverse events) was calculated and the context of these words was analysed. Vogrinc's (2008) thematic analysis was applied, a kind of qualitative analysis with a quantitative character (the results are presented in a frequency table). As these keywords are expected to occur in different contexts, the keywords in Slovenian were classified according to the meaning in which they appear in the annual reports. The frequency of these keywords was counted and presented in Table 1.
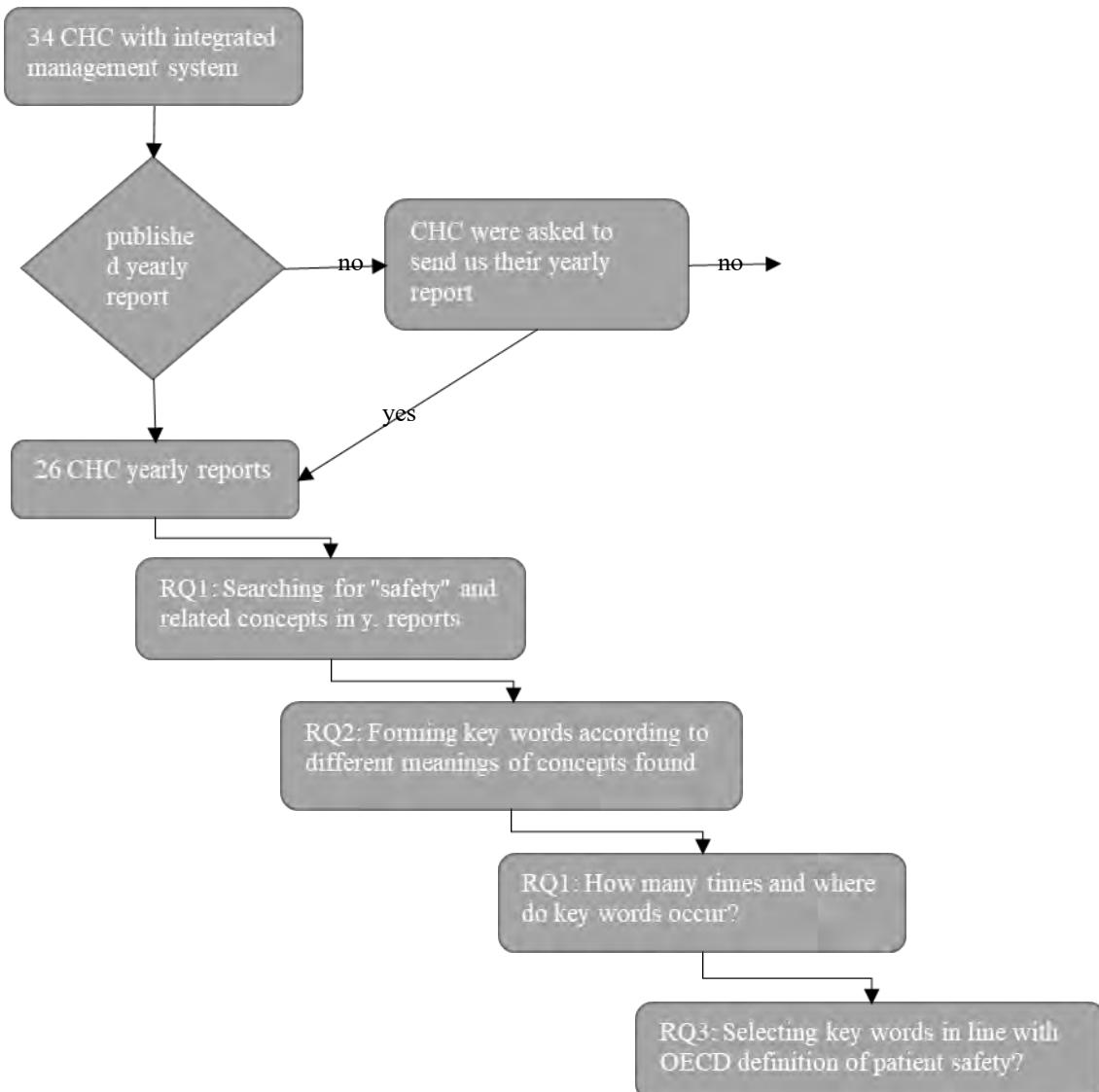
Figure 1. Research model

The validity of the study was ensured by two independent procedures performed by both authors, and a list of keywords was compared and agreed upon. The frequency of these keywords was counted in each annual report. This type of analysis is the least subjective among the different types of qualitative analysis and can be replicated by other researchers.

4 Results

In the annual reports, 11 different keywords related to safety, harm, and adverse events were found (Table 1). The most frequently found keyword was "social security", which refers to employees (n = 55). The reason for this result is the fact that there is only one term for safety and security in the Slovenian language, so many of our results refer to employees, including social security (n = 55), the safety of employees against fire and other accidents (n = 29), and safety and security of employees (n = 29).

Table 1. Keywords related to (patient) safety, harm and adverse events in CHCs annual reports

Key word/ CHC	Social security	Safety of employees against fire and other accidents	Physical safety & security of employees	Information security (also GDPR)	Patient safety – education or prevention activities	Patient safety - measures	Safety of health care - general	Drug safety, hygiene standards	Safety culture	Risk management (harm prevention)	Unwanted events	other	SUM
Ajdovščina	2	1			2								5
Celje	1	3	2				1						7
Cerknica	3									1			4
Črnomelj	3			9			1						13
Dravograd	1	1	2										4
Grosuplje	6	2								1			9
Ivančna Gorica		1							2				3
Kamnik	4	1										2	7
Koper		4	2	3				3					12
Laško	6												6
Lendava		3											3
Litija	1												1
Ljubljana	5	4	9		9	13			4	1		23	68
Medvode	3		6	2									11
Murska Sobota	4	1			7								12
Nazarje			1										1
Nova Gorica		1		1	1			4	2			2	11
Novo mesto		2								1			3
Piran		3	2						2	2			9
Ptuj	4												4
Sežana	3				1							1	5
Slovenska Bistrica	2	1		1		1							5
Slovenske Konjice	2		1										3
Trebnje	2	1	3				1			1			8
Velenje	3									1			4
Zagorje ob Savi			1										1
SUM	55	29	29	16	20	14	3	7	10	8	0	28	219

A very important issue in recent years has been the information security of patient and employee data. The General Data Protection Regulation (GDPR) was implemented in Slovenia in 2018, introducing stricter rules for collecting and using personal data; therefore, the topic of information security (n = 16) can be found in the 2018 annual reports.

The remaining keywords (grey colour in Table 1) no longer belong to 'security', but to 'safety', which relates to patients: Patient safety education or preventive measures (n = 20); Patient safety measures (n = 14); General healthcare safety (n = 3); drug safety, hygiene standards (n

= 7); Safety culture (n = 10); Risk management (harm prevention) (n = 8); There were no "unwanted events" in the annual reports. The last column refers to the term safety or security (in Slovenian this is one and the same term), which occurs in contexts other than those described in Table 1, but does not contribute to patient safety, i.e., other (n = 28).

5   Discussion

In our study, we investigated whether CHCs with an integrated management system (1) report on patient safety, (2) in what way, and (3) whether their reporting is consistent with the OECD definition of patient safety. Table 1 shows that the term safety and related terms appear 219 times in 26 annual reports.

Eleven keywords related to (patient) safety, harm and adverse events were found, but not all of them correspond to the OECD and EU definition of patient safety. Only six keywords correspond to the OECD definition of patient safety (i.e. they contribute to patient safety): patient safety education or preventive activities; patient safety measures; general healthcare safety; drug safety, hygiene standards; safety culture; risk management (harm prevention); adverse events. The "correct" keywords, i.e. keywords consistent with the OECD definition of patient safety, were found 62 times in 16 of 26 CHCs annual reports. It is difficult to comment on these results because there is no reference point: we only analysed the annual reports of Slovenian CHCs and have no information on how foreign CHCs report on patient safety. We expected that all CHCs with an integrated management system would report on quality and patient safety, as they have committed to report not only on financial indicators. They revise their processes annually in line with the standards set out in ISO and the revision is followed by a report and remedial action. The reports submitted by CHCs with integrated management systems are not structured according to the six OECD quality criteria, and CHCs are not instructed to report on patient safety.

Another interesting finding is that patient safety is not often mentioned in the annual reports of these 16 CHCs. In most cases, we find only one keyword that occurs only once (n = 8 CHCs). Only 8 CHCs mention patient safety more than once, with the largest CHC - Ljubljana CHC - taking the leading role, as patient safety is covered extensively there (n = 27). The annual report of Ljubljana CHC is not only extensive because it is very large (there are several departments of this CHC at different locations in Ljubljana), but it is also more detailed than other reports.

The results are somewhat disappointing, as we had expected all CHCs with integrated quality management systems to report on patient safety. Nevertheless, we cannot assume that CHCs that do not report on patient safety are negligent. We know that patient safety is part of the training of healthcare professionals: medicine, nursing, physiotherapy. They also have internal professional controls on patient safety and a strong mentoring system for young professionals that address patient safety.

We believe that patient safety is an important topic in CHCs' internal communications and procedures but is rarely mentioned in their reports. We believe that the safety culture in Slovenia

is not developed. Physicians in Slovenia are reluctant to report adverse events; most understand (medical) errors as moral disgrace or evidence of incompetence, even though 80% of these adverse events are a problem of the system and not caused by an individual physician (Robida, 2013, p.17). It is extremely important to build a culture of safety and encourage all healthcare workers to report on patient safety and analyse adverse events. Healthcare professionals and managers need to understand that most errors cannot and should not be attributed to any individual, but rather are due to the system's complexity. According to Mitchell (2008), the root causes of harm are identified as follows:

- "Latent failure—removed from the practitioner and involving decisions that affect the organisational policies, procedures, allocation of resources

- Active failure—direct contact with the patient

- Organisational system failure—indirect failures involving management, organisational culture, protocols/processes, transfer of knowledge, and external factors

- Technical failure—indirect failure of facilities or external resources" (Mitchell, 2008, p.3).

Health care professionals, especially physicians, feel threatened by this discussion; they are afraid of the "blame" effect and possible lawsuits. This contributes to covering up mistakes rather than bringing transparency to the system. Defensive medicine is more prevalent than safety culture (Robida, 2013), so much needs to be done in this area. Similar experiences with physicians have been seen in countries that have developed incident reporting systems (Denmark, Australia, United Kingdom), where mostly nurses report, but rarely physicians (Mitchell, Schuster, Smith, Pronovost & Wu, 2015, pp. 1-8).

This practice, however, must change. Many errors cannot be traced to a specific person; most so-called errors in the health care system are due to the complexity of the system and organisational problems. Sometimes the information system does not work as expected, sometimes there are communication errors, and sometimes a patient receives the wrong medication because of a mix- up due to similar packaging. In all of these cases, it is difficult or impossible to hold anyone responsible for the harm done. "To err is human, and expecting flawless performance from human beings working in complex, high-stress environments is unrealistic... Therefore, focusing on the system that allows harm to occur is the beginning of improvement, and this can only occur in an open and transparent environment where a safety culture prevails. This is a culture where a high level of importance is placed on safety beliefs, values and attitudes and shared by most people within the workplace" (WHO, 2019, para. 6). This study allowed us to assess awareness of the problem and willingness to talk about patient safety issues. The results show that improvements are needed in building safety culture . CHCs need to report regularly on patient safety to learn from mistakes and improve internal procedures to increase patient safety.

6 Conclusion

In our paper, the importance of patient safety for Slovenian community health centres was investigated by analysing their annual reports. Eleven different keywords related to safety, harm and adverse events were found in 26 CHCs with an integrated management system, but only six keywords met the OECD definition of patient safety: patient safety education or preventive activities (n = 20); patient safety measures (n = 14); general health care safety (n = 3); drug safety, hygiene standards (n = 7); safety culture (n = 10); risk management (harm prevention) (n = 8). These keywords were found in only 16 out of 26 CHCs annual reports.

This approach is a novelty because quality assurance procedures follow different protocols. External auditors evaluate selected processes and quality indicators. They recommend improvements, which are implemented by management. CHC's annual reports have a different purpose and structure. They reflect CHC's activities and contain certain statistical information. Nevertheless, we decided to analyse these reports to gain insight into the importance of patient safety for Slovenian CHCs. This research is an incentive for all CHCs, not only CHCs with an integrated management system, to build a safety culture, report on patient safety, learn from errors and mistakes, and develop safety protocols. Patient safety reporting is an important first step in achieving all of these goals.

Health care organisations like the CHC are accountable not only to their patients, but also to the taxpayers, so more comprehensive reports are welcome. Because CHCs have an important mission to improve the quality of life not only for patients but also for society as a whole, we encourage them to monitor patient safety in all their processes.

There are several limitations that affect the research: we did not analyse all CHCs, but only those that had an integrated management system. Contrary to our assumptions, not all CHCs had publicly available annual reports, so only 26 reports were analysed. We propose to conduct a similar research protocol that includes all Slovenian CHCs. Other important missing information relates to CHCs' reporting on patient safety: we need information on actions taken by management to improve patient safety. This data is important but was not available to us. Management practises are critical in this area - qualitative research in this area is welcomed to provide clarity on safety culture in primary health care.

This research had no sponsors.

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Povzetek:
Varnost pacientov v primarnem zdravstvenem varstvu – izziv sedanjosti in prihodnosti

Ozadje in izvirnost: Varnost pacientov je zelo pomembna dimenzija kakovosti, zato jo managerji v zdravstvenem varstvu in politiki pogosto naslavljajo, kar pa ne pomeni avtomatične integracije varnosti pacientov v nacionalne politike in ukrepe na ravni zdravstvenih organizacij. Ta prispevek raziskuje, kako pogosto slovenski zdravstveni domovi (ZD) poročajo o varnosti pacientov in ali je njihovo poročanje o varnosti pacientov skladno z OECD definicijo tega pojma. Originalnost te raziskave je v odkrivanju pravega pomena varnosti pacientov za ZD, ne glede na prevladujoče uradne izjave na nacionalni in organizacijski ravni.
Metoda: Raziskavo smo izvedli s pomočjo vsebinske analize po Vogrincu (2008, p.61) s katero smo iskali pojavnost besede varnost in sorodnih pojmov, ki poročevalcem pomenijo varnost. Analiziranih je bilo 26 poročil slovenskih ZD z integriranim sistemom kakovosti.
Rezultati: V letnih poročilih smo našli 11 ključnih besed, ki se navezujejo na pojem varnosti, a le 6 ključnih besed se je skladalo z OECD definicijo pojma varnosti: varnost pacientov – izobraževanje o tem ali izvajanje preventivne aktivnosti (n=20); ukrepi glede varnosti pacientov (n=14); varnost zdravstvene obravnave – splošno (n=3); varnost zdravil, varnostno higienski predpisi in standardi (n=7): kultura varnosti (n=10); obvladovanje tveganj (n=8).
Družba: Varnost pacientov je odgovornost tako zdravstvenih delavcev kot zdravstvenih ustanov. Družbena odgovornost ZD je poročati o varnosti pacientov v svojih letnih poročilih, graditi kulturo varnosti in sprejemati korektivne ukrepe takrat, ko je to za varnost pacientov potrebno, saj je poslanstvo ZD prispevati k višji kakovosti življenja tako pacientov kot družbe kot celote. Ta raziskava kaže na to, da celo ZD z integriranim sistemom kakovosti ne poročajo vsi o varnosti pacientov – nekateri celo nimajo javno dostopnih letnih poročil. Namen prispevka je spodbuditi vse ZD, ne le tistih z integriranim sistemom kakovosti, k rednemu poročanju o varnosti pacientov, učenju iz lastnih napak, izdelavi varnostnih protokolov ter graditvi kulture varnosti v svoji organizaciji.
Omejitve/nadaljnje raziskovanje: Raziskava je bila omejena na ZD z integriranim sistemom kakovosti (n=34), ki so imele javno dostopna letna poročila (n=26). Ključno je izvesti podobno raziskavo za vse ZD v Sloveniji in jih spodbuditi k poročanju o varnosti pacientov. Pomemben vpogled v kulturo varnosti bi predstavlja tudi analiza ukrepov vodstva ZD v zadnjih letih.

Ključne besede: varnost pacientov, kakovost v zdravstvu, OECD dimenzije kakovosti, neželeni dogodki, preprečevanje škode za paciente.

The Objective Segmentation Process of Supplier or Product Groups Using the Kraljic Matrix

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Abstract:

Background and originality: Contemporary purchasing employs methods and procedures that comprehensively enhances the competitive advantages of the organisation with their strategically oriented management. The first step in the process of designing an efficient purchasing strategy is the segmentation of suppliers or product groups according to the method Kraljic Matrix. Assuming that different situations require different activities and that the process of segmentation of suppliers or product groups is subjectively oriented, we conclude that the result of generalised segmentation leads to passive purchasing behaviour. From this point of view, we have developed a scientific research question: "What actually is an effective objective segmentation process of suppliers or product groups"? The main objective is to gain an understanding of the Kraljic Matrix and the segmentation process and to obtain key guidelines for developing an effective and objective segmentation process.

Method: In the first part of this scientific investigation, the existing literature on the topic Kraljic Matrix is studied in order to gain an understanding of the segmentation process of suppliers or product groups. In continuation, selected experts are interviewed to give their opinion on this topic and discuss the implementation of the Kraljic Matrix in practice. In a final step, we used a qualitative thematic network analysis tool based on the scope of the literature reviewed and the interviews conducted with three experts.

Results: The results show the process of developing a thematic network based on the literature reviewed and a case study of the objective segmentation process of suppliers or product groups using semi-structured interviews.

Society: Society as a whole is gaining a common organisational understanding that encompasses concepts such as sustainability, environment, society, culture, and progress. The indirect impact on the organisation is seen in lower purchase prices, a reduction in overall costs, a reduction in supply chain risk and significant innovations in the supply market.

Limitations / further research: This research is limited to the cited literature sources and a small number of interview participants. We recommend continuing the research by examining a broader range of existing literature and conducting a fully structured interview with a larger and/or homogeneous group of respondents.

Keywords: strategy, purchase function, Kraljic Matrix, segmentation, suppliers, product groups.

1 Introduction

Nowadays, organisations are forced to adapt to the rapid changes in market conditions and increase their competitiveness. Therefore, the role of purchasing is becoming more and more important. In addition to cost management and purchasing activities, they focus on cooperation with other organisational functions, management of the supply market and ultimately on objectives that represent the greatest added value for the success of the organisation.

The strategically oriented purchasing function requires active collaboration with all other functions inside and outside the organisation to manage suppliers, trends, technologies, and other key inputs. Older strategies that involve proactively "copy-pasting" outdated models, using repetitive levers, and generalising situations reduce the function's efficiency and, consequently, the organization's overall competitiveness. Contemporary purchasing strategy requires appropriate segmentation of suppliers or product groups to select the most appropriate strategy and leverage.

Several authors, e.g. Vörösmarty and Dobos (2019, p. 20), recommend the Kraljic Matrix as the most appropriate tool for segmenting suppliers or purchasing groups. They recognize the advantages of this matrix, which requires only basic mathematical knowledge and provides relatively quick results. The process of segmenting suppliers or product groups depends mainly on the subjective understanding of the matrix, the categorization process and the understanding of the supply market. The result of generalized segmentation leads to repetitive purchasing strategies and a narrower selection of purchasing levers and passive challenges.

In this research, an effective objective process of segmenting groups of suppliers or products is researched and demonstrated. The purpose was to find an effective way to classify suppliers or product groups into the Kraljic Matrix, not subjectively, but with precise segmentation. In the first part of the scientific study, the existing literature on supplier or purchasing group segmentation is reviewed. The scientific study will be continued by interviewing a selected population of professionals in strategic management of procurement functions from different industries in Slovenia, which will help us to gain an understanding of the use and implementation of the Kraljic Matrix in practice. In the next part, a qualitative analytical study of the reviewed literature and semi-structured interviews using the thematic network tool will be conducted. The aim of the latter series of studies is to master the identification of a structured and objective segmentation of product groups.

The results of the study serve as a guide for identifying processes to automate the identification of suppliers or purchasing groups using soft logic and/or the use of Artificial Intelligence. Vörösmarty and Dobos, (2019, p. 23) state that in supplier selection processes, the critical criteria must be carefully selected in the initial stages of the process to achieve effective results. The aim of this study is to develop a design that reduces the customer's subjective influence on automated system tools, thus providing an effective approach to strategy implementation activities..

2   Theoretical approach

In the past, purchasing focused on lowering purchase prices, and therefore preference was given to the cheapest supplier. Nowadays, the purchasing function focuses on many other factors and is firmly embedded in other functions within the organization and outside the purchasing market. Patel (2018) stated that small businesses should follow the larger businesses by planning and utilizing available resources, building a business structure, gaining experiential knowledge, understanding the market and industry, evaluating the purchasing situation, and carefully managing relationships with suppliers to ensure their growth. In this way, small businesses can overcome challenges such as low bargaining power in interactions and limited resources (pp. 24-25).

In recent years, buyers have become aware of the importance of meeting the needs and requirements of key suppliers in order to become a preferred buyer and thus gain a competitive advantage. Karuppusamy and Chidambaram (2019) write that enterprises today are innovating less and less on their own and are increasingly bringing in external innovation organisations or StartUp organisations. The reason for external involvement is that more and more innovations are the result of combined knowledge and technologies. Suppliers must continue to deliver products to buyers, but at the same time be aware of the importance of sharing technologies and innovations (p. 3).

Moreover, the authors refer to the individual handling of different situations, from which it is evident that even two cases are not the same. Mello, Eckhardt, and Leiras (2017, p. 5) write in their research that the main strategy defined by the organization should be in the foreground, but in addition they propose a parallel purchasing strategy as a pillar of quality, cost management, security of supply, flexibility and innovation. Trautrims, MacCarthy, and Okade (2017) emphasize the importance of aligning the purchasing and innovation strategy with the overall organizational strategy. In functions where innovation is critical, integration with innovative suppliers is paramount, and this capability of the purchasing function provides the organization with a competitive advantage (p. 5).

The status of the supplier or the product group and its categorization to determine leverage in the implementation of the purchasing strategy is increasingly reflected in modern purchasing concepts. Rachman, (2019, p. 226) mentions the implementation of the process of categorization or grouping of purchasing elements into groups in the development of the purchasing strategy. The basic tool for classifying products in the organisation is the analysis of needs with data sources from internal ERP (Enterprise Resource Planning). In order to ensure supply, the enterprise (buyer) introduces additional suppliers in parallel with the originally agreed supplier. In this case, we no longer speak of the suppliers, but of the product groups. Lisan (2018) mentions the importance of categorization of purchasing materials because in some categories we have two suppliers that have leverage to reduce prices and in other categories we have two suppliers to ensure supply. Purchasing decisions take into account the requirements of internal stakeholders and suppliers that affect the implementation of the final

product. The process of strategy development in the initial stage requires proper categorization of suppliers or purchasing groups. The forces in the dimensions of the supply market vary according to the extent of supply and demand (p. 2).

Another dimension that should be considered when classifying purchasing groups is the classification of the purchasing market into oligopolistic or monopolistic supply behaviour. To the above dimensions may be added the dimensions of buyer power and supplier power which are listed in parallel. Dabhilkar, Bengtsson, and Lakemond (2016) state that there is a power difference between suppliers and buyers resulting from their interdependence (pp. 18-21).

For the management of purchasing strategies, the so-called Kraljic Matrix method is generally used to categorize suppliers or purchasing groups. Dr Peter Kraljic introduced the matrix in a 1983 article published in Harvard Business Review, in which he clearly presented the classification of suppliers or purchasing groups into the following dimensions:
- **Supply risk** with entry barrier factors, market conditions (monopoly/oligopoly), technological innovation,
- **Profit impact** is an influencing factor that affects the supplier or product group influence factor on the enterprise profitability (p. 111)

Vörösmarty and Dobos (2019, p. 19), assess the applicability of the Kraljic method, which classifies purchasing groups into four categories depending on the strategic importance and complexity of the purchasing market. Brüning M. (2018, p. 6) says that each quadrant can be optimally exploited by different purchasing tactics. Patel (2018) presents the applicability of the Kraljic Matrix for each purchasing situation. In the **"leverage"** category, relevant activities include leveraging the buyer's purchasing power, finding the optimal cost position, and/or developing a strategic partnership. In categories where the strengths of the buyer and supplier are equal, i.e., the so-called **"non-critical"** and **"strategic"** categories, it is necessary to cultivate a strategic partnership with the supplier. The **"bottleneck"** category describes purchasing materials to which we attribute a higher degree of power on the part of the supplier, so we try to move these materials into other categories, non-critical or even better, leverage materials (p. 11).

Rezaei and Lajimi (2019, p. 433) developed a supplier segmentation model with sixteen categories, including the dimensions of impact on profit and risk in supply, as well as the dimensions of supplier's ability to supply and willingness to cooperate, in order to choose an appropriate strategy.

In practice, we recognize the versatile use of the Kraljic Matrix, which managers adapt depending on the appropriateness in each particular situation. Grimaldi and Yudoko (2019) reversed the categories of leverage of materials and bottlenecks, implying that supply risk and profit impact are inversely related.

Kraljic wrote (1983, p. 110) "from purchasing to supply management" (from purchasing as an operational function to supply management as a strategic function). Strategic thinking can create new opportunities and also protect some organizational vulnerabilities.
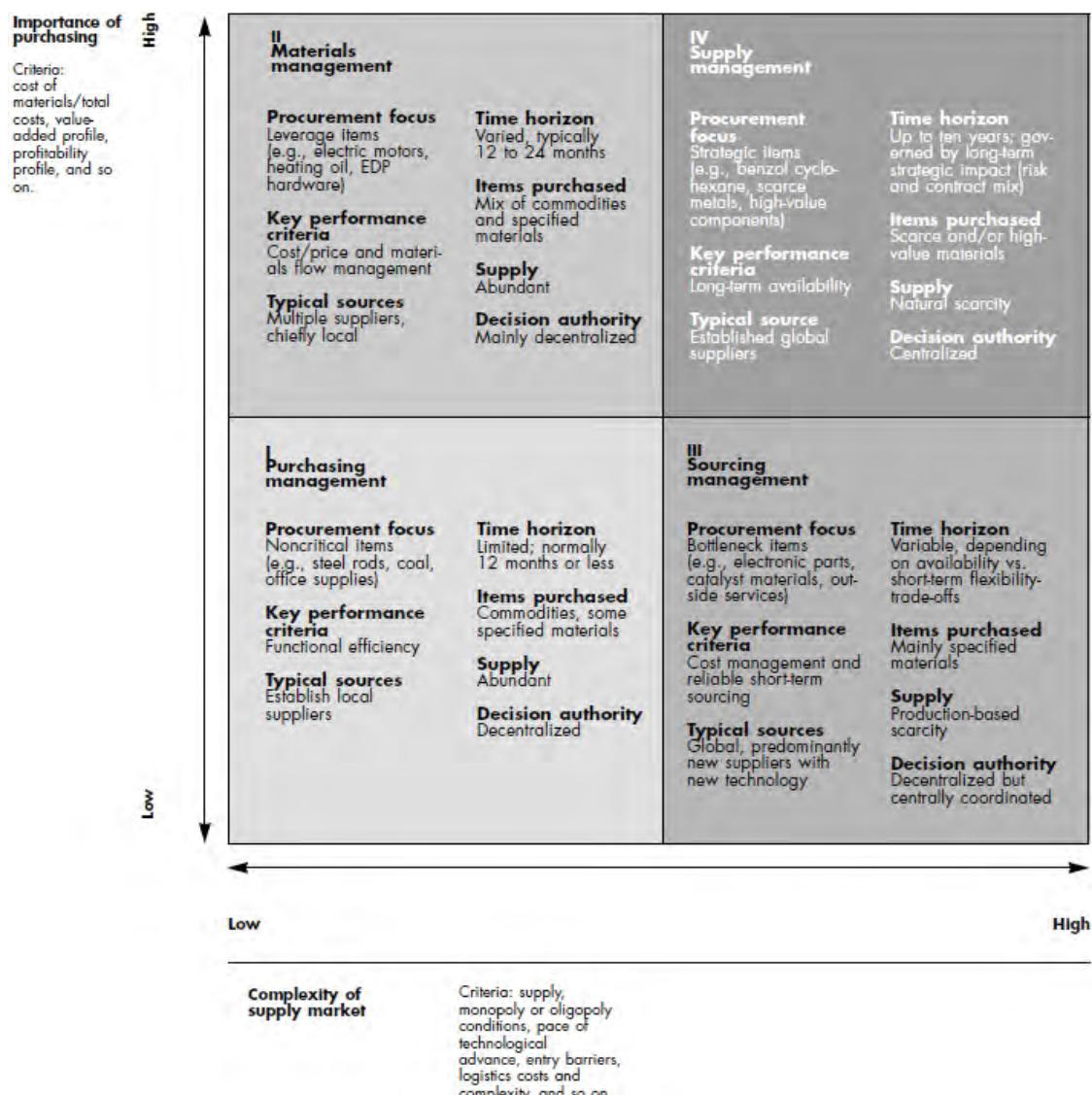
Figure 1. Kraljic Matrix

The Kraljic Matrix (Figure 1) is a model of categorizing suppliers or purchasing groups along two dimensions, supply risk and profit impact. The dimensions determine the four quadrants of categorization of purchasing materials, namely: leverage materials, strategic materials, bottleneck materials and non-critical materials. Categorization is the process of classifying purchasing materials into categories that relate to different levels of importance.

Brüning M. (2018, p. 5) writes that the supply risk dimension classifies suppliers into low or high risk. Low risk means that more suppliers and buyers have a strong position in the market. High supply risk, on the other hand, means that there are only a few suppliers and power shifts to the supplier side. Shlopak, Rød, and Oterhals (2016, p. 2) add that supply risk is also assessed in terms of the availability of a supply item, the extent of competing demand, the possibilities

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for self-supply (production or purchase), the extent of inventory risks and the possibilities for possible substitutes.

Pritandari Suliantoro , and Sari (2018) write that in the category of **"strategic"** materials are groups of purchasing materials with high supply risk. These products are offered by only a few or a few suppliers and require a high development effort for the buyer. Due to the high supply risk and high purchasing value, strategic materials are given the highest priority when choosing the right supply strategy. Material groups in the strategic material quadrant are expected to have only one supplier. The selected suppliers are also expected to be highly qualified, flexible and loyal to meet all the requirements of the buyer. It is recommended that the enterprise (the buyer) enters into a partnership with the supplier with a long-term contract that depends on the buyer's strategy. The goal of a partnership is to achieve a high level of trust and commitment so that the buyer can influence the supplier to mitigate potential risks. The group of elements in the strategic quadrant can be moved to the leverage materials quadrant through the tools of partnership relationships, reducing supply risk, and finding additional sources of supply through a thorough search and analysis of the purchase market (p. 4).

Munter (2019) believes that the **"bottleneck"** category of material purchasing is the most complex for buyers to understand. Their purchasing risk is high, while the profit impact on the enterprise is rather low. The fundamental task here is to shift materials to other quadrants that are either non-critical or have leverage. The risks of this group are mitigated by ensuring supply and vendor control, implementing safety stock and planning for alternatives. Risks must be assessed and mitigated by working with suppliers and negotiating a long-term business relationship. The risk must be thoroughly analysed to identify mitigation opportunities (p. 37).

The category of **"non-critical"** materials includes items for which we identify a low impact on the risk supply dimension and, at the same time, a negligible impact on the financial gain dimension. Rachman (2019, p. 226) writes that this category is characterized by low supply risk and low financial impact, so they are typically products with a variety of suppliers, simple technologies, and low prices. Noncritical items have product characteristics that are standardized in the marketplace. Relationships with multiple suppliers can add complexity and variability to the process, so managing multiple suppliers is a risk. The buyer does not need to partner with suppliers because building partnerships requires a large and difficult management effort. This group is characterized by annual contracts with the possibility of recall of goods. Activities are recommended to bring a group of materials into the leverage quadrant (p. 5).

The category of **"leverage"** materials defines elements for which we find a small impact on the dimension of the risk supply dimension and at the same time a large impact on financial gain. Pritandari, Suliantoro, and Sari (2018, p. 5) describe a category with high financial consumption value and low supply risk. Brüning (2018) also writes that there are many suppliers in the leveraged materials category, but the strategic impact of the material is greater than in the non-critical items group. Appropriate tactics for leveraging buyer power include selecting the right

supplier, leveraging competitiveness, and a combination of contractual and incidental purchases (p. 6).

Patel (2018) writes that the matrix also suggests different methods for each situation. The organisation should look at leverage materials by leveraging purchasing power and also look for savings in developing strategic partnerships. Similarly, for critical and strategic categories, he suggests maintaining a strategic partnership while spending as little time and effort as possible on non-critical components (p. 11).

In the literature review, we could not identify an objective process of supplier or product group segmentation in the Kraljic Matrix. As such, the following thesis was developed: T1: "There is no objective approach in practise". In academic research, we want to explore and demonstrate an effective objective process, and our research question "What actually is an effective objective supplier or product group segmentation process?" is based on this work. To find an effective way to classify suppliers or product groups into the Kraljic Matrix, not subjectively, with precise segmentation.

3 Method

A graphical representation of our research is shown Figure 2.
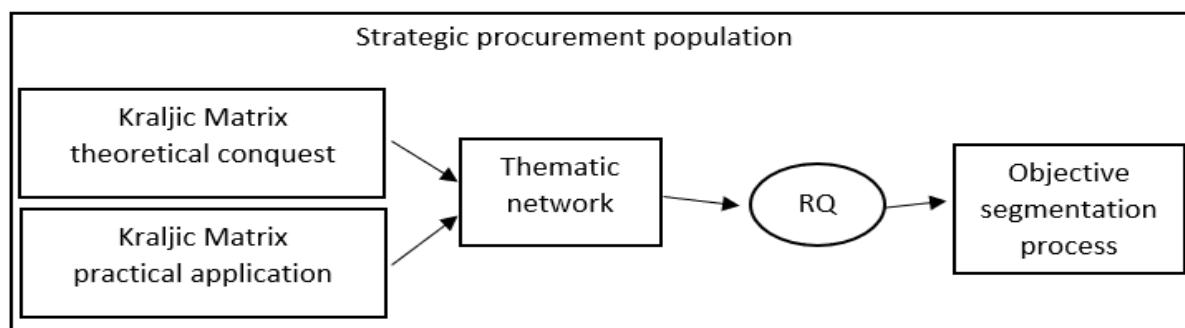
Figure 2. Research model

In a review (Figure 2) of the existing literature of 35 articles and books available in online collections (Google Scholar, SienceDirect, ProQuest, and EBSCO), we identified 23 relevant scientific research papers. We excluded the articles that, according to our subjective assessment (our research keywords), did not add value in finding answers to our research problem. In the first part of the research, we examined the selected literature in terms of the characteristics belonging to a specific category on the Kraljic Matrix: Leverage Materials, Strategic Materials, Noncritical Materials, and Bottleneck Materials. Then we interviewed three individuals from a selected population, the strategic management of purchasing in different industries in Slovenia. Below is a description of the interviewees:

- Interviewee (A): Function: CPO in a private profitable organization, Education: MBA, Age: 52 years, 30 years of experience in purchasing, managing 19 employees.

- Interviewee (B): Function: CPO in a private profitable organization, Education: Master's Degree, Age: 48 years, 14 years of experience in purchasing, managing 61 employees.
- Interviewee (C): Function: Manager in a private profitable organization, Education: Bachelor's Degree, Age : 47 years, 11 years of experience in purchasing.

The first criterion for selecting interviewees was strategic purchasers operating in organizations ranked among the top 5 by Viršek, D. (2020, July 19). Our purpose was to obtain a comprehensive description of the characteristics that describe each category in the Kraljic Matrix. For the understanding and credibility of the questionnaire, we interviewed four people who work in purchasing. Therefore, we designed the following questions for the interview:

(1) As it it is your ongoing responsibility to develop purchasing strategies, what procedures do you use in developing purchasing strategies?

(2) The Kraljic Matrix is a tool used to prepare a purchasing strategy. How often do you use it and how would you describe it?

(3) In the categorization method, we assign product groups to their own category, namely: leverage materials, strategic materials, non-critical materials and bottlenecks. What do you think are the most important characteristics of each product group that define the category?

We emailed the interviewees and asked for their cooperation. After agreeing to the interview and coordinating schedules, we conducted the interview using the application MS TEAMS because of the current situation of spreading infections during the epidemic COVID -19 constraints. Before the interview, we conducted a 10-minute interview to explain the purpose of the interview and the scope of the topic. We began by warming up the topic and then moved on to an enjoyable interview that lasted about 30 minutes on average. Below are summaries of the interviews:

(1) As it it is your ongoing responsibility to develop purchasing strategies, what procedures do you use in developing purchasing strategies?

The following is a summary of Interviewee A:

> We increasingly rely on up-to-date purchasing procedures, commercial analyses, market analysis calculations and the development of a strategy. Depending on the size of the product group, the strategy can be short and simple or more precise and complicated. In the latter case, we carry out SWOT, Porter analyses, the Kraljic Matrix and the like. We perform many procedures as a team, not only within the purchasing function, but also beyond, at the corporate level. The strategy proposal is approved within the purchasing department and then within the close circle of executives. We are always very transparent when developing scenarios and try to choose the most appropriate of the proposed options. From experience, I can say that we confirm the strategy that satisfies our internal customers because we have to sell the developed strategy internally (laughs). A strategy that is suitable is the strategy that satisfies all internal customers..

The following is a summary of Interviewee B:

> We have developed our own strategy selection process and use it regularly. To implement the strategies, we use an application to which only selected employees have access. The application

provides insight into history, impact, reports and current implementations. I am very happy with this tool because I have the right information at my fingertips whenever I need it. In the application, the analysis tools are interconnected, including supplier evaluation, supplier benefits, risks, categorization with the Kraljic Matrix, ongoing projects, and I could go on and on. We regularly implement the strategies developed and measure the impact of those strategies in terms of savings compared to the previous strategies..

The following is a summary of Interviewee C:

We have no specific procedures for formulating strategies. Strategic managers have a free hand, and we want to enhance their creativity by not formalising all processes. Once the strategy is formulated and ready, we start implementing it. I realise that some of them are challenging and require more effort to design, so in these cases we use various universal tools such as Business Requirements, Supplier Preference and the Kraljic Matrix. We are a technically oriented organisation and I can say that the strategists' work is more outward looking than inward looking. We have long term partnerships with external partners and design strategies together. I can say that all strategies used follow the general guidelines of the organisation, which is most important for this part.

In the case of interviewee A, we can identify the purchasing function and, through its strategy development, a purchasing function as a support function for other functions in the organisation. Strategy development is systemic and like other interviewees they use the tool Kraljic Matrix. Interviewee B views strategy as a process and uses a design application that is only accessible to certain people in the organisation. Interviewee C represents a development-oriented organisation. The formulation of strategies there is aligned with the politics of the organisation and involves partners.

> *(2) The Kraljic Matrix is a tool used to prepare a purchasing strategy. How often do you use it and how would you describe it?*

The following is a summary of Interviewee A:

We have been using the Kraljic Matrix for as long as I can remember, and all I can say is that it is a basic tool for categorizing purchasing groups or suppliers. When we first introduced the principle of working with product group management, we used this matrix to categorize all product groups. In subsequent years, we have found that the characteristics of product groups have changed, which means that what we once identified through the categorization process may be different today. As supplier SRM (Supplier Relationship Model) relationships change, so do the characteristics in the categorization. I would describe this matrix as a useful tool that is a basic requirement for a general view of product group management.

The following is a summary of Interviewee B:

We use them in the development of complex strategies to provide leverage to achieve the strategies' goals through categorization. For some product groups that require a quick and short "quick wins" approach that do not require a categorization process, we simply take what is offered to us. Our organisation is focused on resale, we do not have an in-house development department and we have contracts with suppliers that are structured towards commercial, i.e. business terms and supply conditions. The Kraljic Matrix is a useful tool in strategic purchasing functions for designing the complex purchasing strategies. I have been familiar with the tool in the past and still know it today. Let me say that I personally know Dr Peter Kraljic and I am proud of it. In 2016, we had external consultants from BCS (Boston Consulting Group) in the organisation, and in the training of our purchasing staff there was also a module for managing the Kraljic Matrix.

The following is a summary of Interviewee C:

> This matrix-based categorization is used all the time in our organisation, mainly to move groups from left to right, so to speak (from the strategic materials and bottleneck categories to the leverage materials and non-critical materials categories). We work closely with development suppliers, the Start-Up organisation, and patent holders to purchase materials that require certain certifications. Once we win the product and meet the terms of the contract, we begin to move the purchasing groups into other categories. Based on the given characteristics of the purchasing group, we use the Kraljic Matrix mainly to determine the levers for implementing strategies.

> Following is a sub-question: *Where do you draw ideas for creating leverage?*
> We often work with the same organisations that know our behaviour, so we draw our creativity from AT Kearney's book The Purchasing Chessboard. We apply methods aimed at forming collaborations and partnerships and becoming independent in the subsequent phase by changing the technical specification, lowering the product price, adding value, changing technologies and much more.

It is interesting to note the statement of interviewee A, who states that the characteristics of the product groups change, from which we can conclude that the product groups move within Kraljic's matrix according to the changes in the economy. He describes the matrix as a useful tool that is a basic general tool for managing product groups when monitoring the progress of purchasing strategies. Interviewee B says that the matrix is a useful tool in strategic purchasing functions for formulating purchasing strategies and that the training of purchasing staff in his company was provided by BCG. Interesting information comes from the third interviewee C who mentions another consulting firm that competes with BCG, namely AT Kearney. Another particularly interesting finding is the organisation's awareness that it is developmental and that the role of the purchasing function is to redirect categories from the right quadrant to the left quadrant in order to reduce risk.

> *(3) In the categorization method, we assign product groups to their own category, namely: leverage materials, strategic materials, non-critical materials and bottlenecks. What do you think are the most important characteristics of each product group that define the category?*

The following is a summary of interviewee A:

> Our categorization process is fairly precise; we have four other subcategories within each category. Not everything is black or white; for example, the Leverage Materials group consists of product groups that have a large financial impact and are divided into materials that are widely available in the marketplace and those that require collaboration on development with the supplier. For the strategic materials category, I would highlight characteristics such as joint development and co-ownership, and they are characterised by cooperation. Here the most important is power equality or balance in cooperation between the buyer and the supplier. The group of bottleneck materials is similar, but it differs in the greater power of the supplier and consequently our little influence on the technical knowledge of the technology or profession, ownership and the like. I would describe the category of noncritical materials simply with the following characteristics: low influence on the purchasing function, the end customer and the mass supply.

The following is a summary of interviewee B:

> In using the matrix, we classify commodity groups into the four categories mentioned above and do not use subgroups. The working method is systematic, and for the commodity groups in the Leverage

category, we use RFI / RFQ procedures, find suitable offers and choose the most appropriate strategy depending on the negotiation result. In the Strategic Materials category, we work with suppliers in a partnership relationship. This product group is characterised by long-term projects, a precise schedule, a precise definition of needs and a lot of monitoring, reporting and collaboration with the supplier. We make strategic decisions at the highest level. The non-critical materials category in our organisation includes office supplies and maintenance supplies; in these areas we use reverse auction processes that we repeat every one to two years. The characteristics I would use to describe the materials in the bottleneck category are: small values, urgently need, and strong monitoring of supply.

The following is a summary of interviewee C:

I recognize the leverage category as materials with multiple supply options in the market, our partners are mostly supplier intermediaries. In parallel, we have multiple suppliers in this category. These product groups also excel at exploiting market demand and take up 80% of the work in our purchasing function. We know our suppliers well and constantly monitor their progress. The Strategic Materials category consists of product groups that are characterized by precise demand, i.e. a precise knowledge of the requirements and a comprehensive description of the technical specification. These are long-term projects with partners, and we make decisions at the organizational level. The characteristics of Non-Critical Materials are generally: free and extensive supply, local suppliers, minimal inventory, purchasing strategy decisions are made at a lower level. The bottleneck category contains materials with the characteristics of greater supplier power; usually they are rare and produced with new technologies, and buyers are willing to pay more because supply matters. Suppliers of these materials prefer their unique products and protect them with technologies, patents or similar techniques because they maintain the influence of power over buyers. The most appropriate strategies here are avoiding technical constraints and shifting the product group to Leverage Materials.

The third question gave us a practical experience of how each interviewee described the characteristics of each category. For interviewee A, we can see the exact categorization with subgroups in each category, interviewee B uses the classical matrix with the categorization of four basic groups as presented by Dr Kraljic. In the case of interviewee C, who represents a development organisation, we recognise the contradiction in the way of working and formulating strategies compared to interviewee B, who is solely focused on reselling. The interviewees do not use an objective procedure to segment suppliers or product groups in the Kraljic Matrix, so "there is no objective approach in practise", which confirms our thesis. We are satisfied with the results of the interviews, mainly because of the differences in the orientation of the organisation and the management of the Kraljic Matrix. The common denominator of all is the understanding of the matrix and management. There are obvious differences between industries, from which we can conclude that in the tree structure of product groups, all three organisations have different dispersion of product groups. We can see that Interviewee C (as it is a development oriented organisation) has product groups on the right hand side and shifts them to the left with levers to achieve strategies, while Interviewee B finds a greater dispersion of product groups on the left hand side (because the organisation is resale oriented) and therefore shifts product groups up or to the left into leverage materials. The latter finding is related to Interviewee A who states that product group characteristics change and

shifts product groups within the Kraljic Matrix in terms of implementing activities to change product group characteristics.

The next methodological step is to use a qualitative thematic network analysis tool. (Roblek, 2009, p. 56). Our aim is to explore and explain the understanding of the topic as well as the content of the reviewed literature and the semi-structured interviews. Following Stirling (2001, p. 390) and Roblek (2009, p. 58), the key coding process used to generalize qualitative data uncovers underlying meanings and patterns of contexts. This tool is a process that Stirling (2001, pp. 390-402) presents in the following six steps:

1. Step one is to process the ***coded text*** through a data reduction process by breaking the text into manageable chunks and assigning concepts to individual chunks of text. The researcher determines where and how patterns are identified.

2. Step two is ***defining themes***, themes that have a substantive meaning for the whole set of codes are identified and defined by the identified themes. Summaries of the text from individual related codes are combined into a topic.

3. Step three is ***creating a thematic network***, content-related themes are connected and summarised into a thematic network, so that several common topics can also be created.

4. In step four, the ***description and definition of the thematic network***, we describe and research the network and present the data in the form of a report.

5. In step five, the ***summary of the thematic network***, the main themes and patterns in the description of the networks are summarised and explained in terms of a concise presentation.

6. In step six, the ***interpretation of the sample***, a complete summary of all networks is presented and compared in parallel with the findings from the literature reviewed.

In the coding process, labels were applied to all data from the relevant literature and all three semi-structured interviews that were subjectively significant in relation to our research. The essential feature of this type of study is the subjectivity of coding and criteria setting. In the next step, similar content sentences were formed in the text by selecting phenomena, assertions, statements, and ideas that appeared in our research. We proceeded to create thematic schemas requiring abstraction and synthesis. In the aggregation step, we identified the relationships between the themes we studied and interpreted them according to the research question. Through the research and data analysis process, in line with the research aim and coding process, we positively answered the following questions, summarized by Saldana (2015): What do people do? Why are we involving them? What are they trying to achieve? How exactly are they doing it? What specific tools or strategies do they use? How do people talk about and understand our topic? What assumptions do they make? How do we understand it? What have we learned (p.20-21)?

4 Results

The primary objective of our research is to explore and demonstrate an effective objective process of supplier or product group segmentation. Then, the results of the thematic network

process of the first set are presented. The results are followed by an analysis of the data obtained from the thematic network development and design process presented earlier. The results show the process of thematic network in the case of research on the objective process of segmentation of suppliers or product groups. In the research process, we conducted a process of thematic topics based on the material of the reviewed literature and semi-structured records of the interviewees in the research on objective procedures of segmentation of suppliers or product groups. As part of the research process, we defined meaningful codes (Step 1) and grouped them into groups that are related to each other in a certain subjective meaning. The formed groups, which are the subject of discussion, were grouped into newly identified themes(Step 2). In this step directions for the segmentation process of the supplier or a product group are identified. This is followed by a process of designing topics in the manner of combining "identified themes". In this way, we have created 4 themes identical to the groups in the Kraljic Matrix, all connected by a common theme, in step 3, segmentation of suppliers or product groups. The process of the thematic network continues in step 4, which shows the development of the schematic network (Figure 2). Step 2 and Step 3 are shown in Table 1. Common Theme Segmentation of suppliers or product groups includes 4 categories: Leverage Materials, Strategic Materials, Non-Critical Materials and Bottleneck Materials, as shown in Table 2. At the next level, the topics are linked in 11 identified topics, while 2 identified topics (Insurance of Supply and Long-Term Planning) are linked in two categories. Here we link to the findings of Lisan(2018, p. 2) who states that in some categories we have two suppliers to take advantage of price reductions and in another category we have two suppliers to assure supply.

Table 1. Identifying topics: the first and second step of the thematic network process

Codes (step 1)	Subject of discussion	Identified themes (step 2)
Offers	Intermediate suppliers	Exploiting purchasing power
Buyer power	Use of demands	Market research
Profit impact	Demand	
RFI/RFQ	Knowledge of suppliers	
Risk	Evaluation	
Alternatives	Strategic purchase	
Offer	Risk management	
Profit	Local or global suppliers	Long-term planning
Technical requirements	Precise demand	Strategic partnership
Innovation	Risk analysis	Moving to leverage materials
Technologies	Top management decisions	Expertise
Partners	Cooperation with the profession	
Top management	Strategic decisions	
	Demanding specifications	
Low risk	Non-demanding materials	Implementing efficiency
Low profit	Intermediate suppliers	Short win strategies
Plenty of offers	Standardized elements	
Simple technologies	Purchasing function decisions	
Office supplies	Efficiency: quantity versus price	
Lack of suppliers	Ownership of purchasing items	Controlling the supplier
Supplier's strength	Global suppliers	Supply insurance
Demanded specification	Unique products	Binding with contracts
Oligopol	Relatively low prices	
Low availability	Required knowledge	
Low profit	Level of innovation	

Table 2. Themes for the supplier or product group segmentation process

Identified themes (step 2)	Categories	Common themes (step 3)
Exploiting purchasing power	Leverage materials	Segmentation of suppliers or product groups
Market research	Strategic materials	
Long-term planning	Non-critical materials	
Strategic partnership	Bottleneck materials	
Moving to leverage materials		
Expertise		
Implementing efficiency		
Short win strategies		
Controlling the supplier		
Supply insurance		
Binding with contracts		

Figure 3 shows the eleven proposals for developing an objective procedure for segmenting suppliers or product groups into the Kraljic Matrix.
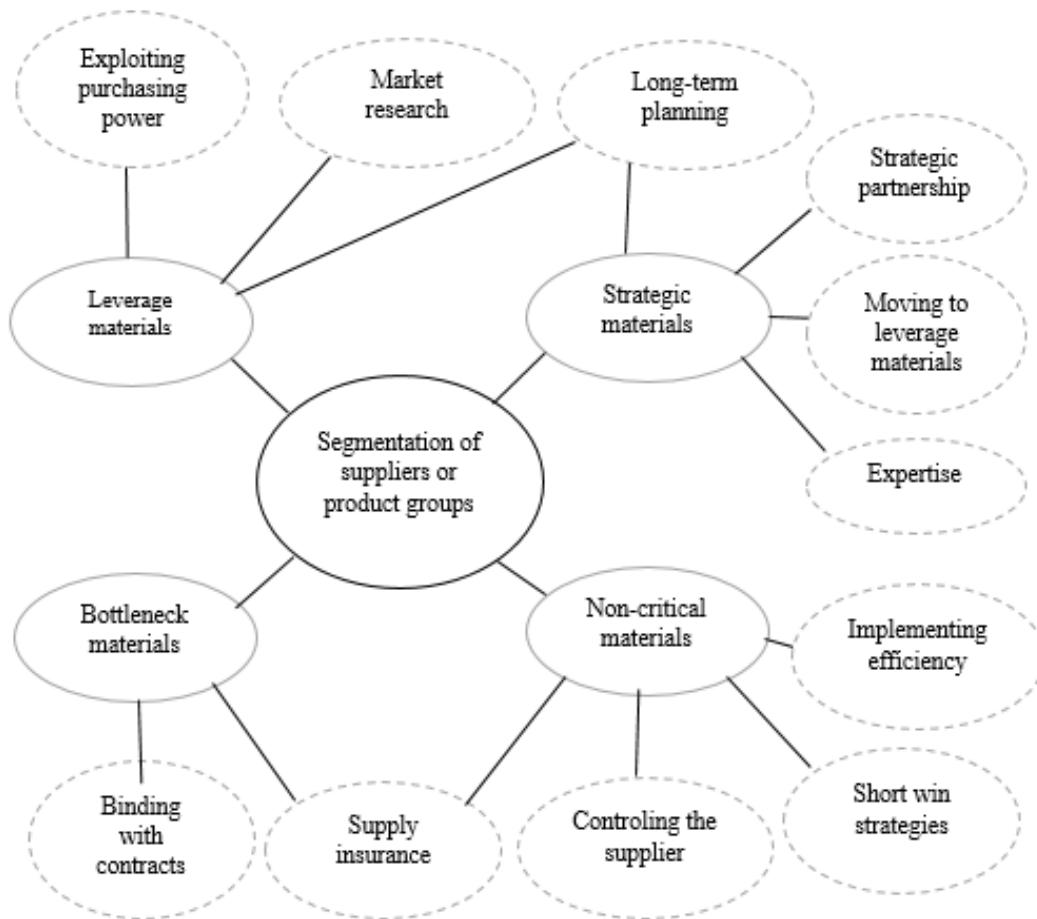
Figure 3. Thematic network (step 4): Segmentation of suppliers or product groups

5   Discussion

The central result of the research study is the design of eleven proposals (Figure 3) for the development of a categorization for the further strategic design of processes in the purchasing function, Step 6. The latter result is due to the careful selection of respondents and the relevant profession. The secondary result of the study is attributed to the transcript of the semi-structured interviews in which the reader of the research study can identify the methods, procedures, tools and ways of working of modern purchasing functions. The study shows the importance of knowing the purchasing market and how to deal with suppliers. We believe that earlier involvement of a supplier in a purchasing function is a key factor for further improvements in terms of development, cost and time at the organizational level. Similarly, Stoffers (2019, p. 63) states that strategic categories use the optimization of supplier relationships.

Furthermore, the study finds that suppliers or product groups change their position in the matrix depending on the behavior of the organization and the purchasing market. From this finding follows the recommendation to matrix managers to use a thematic scheme with objective criteria - themes in the presented scheme - when managing suppliers in the matrix. We also strongly recommend transferring product groups to other categories to avoid constraints, especially in the direction of strategic materials to leverage materials and bottleneck materials to non-critical materials. The recommended levers for changing categories are mainly recognized in the technical community, i.e., change of technical specifications, standardization or avoidance of certain technologies and patent ownership.

Comparing the sources of the data obtained, the literature review and the interviews, we can attribute a higher level of results to the interviews conducted. Finally, from the literature review and the interviews, we found that there is no objective procedure for segmenting suppliers or product groups into the Kraljic Matrix. From this finding, we derive our thesis T1: "There is no objective approach in practice". In reviewing the existing literature in the first part of the research paper, we identified a relatively large amount of literature on the topic of the Kraljic Matrix. The original article by Dr. Kraljic "Purchasing must become Supply management" was cited more than 3,300 times. In the second main part of the qualitative research, based on the results of semi-structured interviews, personal notes and observations of the network operation, we presented the research findings and interpretation of the obtained data using the analytical tool of the thematic network. By developing the principle of the thematic network (Step 5) for an efficient and objective process of supplier or product group segmentation, parallels were made with the topic of our research question, supplier or product group segmentation. The reader will see the parallels of the topics with the Kraljic Matrix categories (leverage materials, strategic materials, bottlenecks and non-critical materials).

6   Conclusion

As emphasized in the introduction, category management brings radical improvements to purchasing management, and the core of the research is the development of an efficient and objective process for segmenting suppliers or product groups. As mentioned earlier, Lisan

(2018, p. 2) says that in some categories we will have two suppliers to have leverage to reduce price and in another category we will have two suppliers to ensure supply. This study provides an additional contribution to the process of managing suppliers or product groups. We note that the management of product groups and the categorization process is the central area of the purchasing function, mainly because of the management of the costs of the organization. Bradač (2009, p. 12) writes that purchasing costs account for up to 80% of total organizational costs. By making the purchasing function work efficiently and finding opportunities for breakthroughs, the result of such studies creates added value for organizations in the form of lower purchase prices, lower overall costs, lower risk in the supply chain, or more innovation in the purchasing market. Understanding the matrix is critical for the manager of the categorization process. Understanding the matrix and categorizing suppliers or product groups into the matrix is a prerequisite for appropriate action and strategy formulation, and this part is attributed to the profession. And when we mention the contribution of the profession, we recognize the addition of the relationship with suppliers who gain additional understanding through the study to continuously improve the level of relationship management with suppliers.

This research study has limitations. The research was done at the time of COVID-19, we leave the possibility of other results in the F2F interview. However, the scope and usefulness of the study is relatively limited to a specific audience, especially those who work in the purchasing function. All interview participants are from Slovenia. We emphasize that the subjectivity of the chosen methodology (coding, developing themes into topics and creating common themes) is a feature of this type of study that has no bearing on the views that an individual develops in the study and therefore has no impact on the findings. This study is limited to the cited sources in the literature and interviews with knowledgeable experts.

We recommend that the research study be extended in the direction of exploring a range of tools and analysis, communication planning, and analysis of the power relationship between the buyer and the supplier. We also recommend another scientific study in the direction of proposing appropriate strategies and moving to the next step, the selection of appropriate communication to obtain the approval of internal customers in the implementation of the strategies. Another positive factor of the study is the identification of tools and detailed recommendations for the management of a contemporary purchasing function, mainly identified from semi-structured interviews.

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Povzetek:
Objektivni postopek segmentacije dobaviteljev ali blagovnih skupin v Kraljičevo matriko

Ozadje in izvirnost: Dandanes nabavna funkcija uporablja metode in postopke, ki organizacijam celovito dviga konkurenčno prednost s strateško usmerjenim delovanjem. Prvi korak v procesu oblikovanja nabavne strategije je segmentacija dobaviteljev ali blagovnih skupin s pomočjo orodja Kraljičeve matrike. Ob predpostavki, da različne situacije zahtevajo različne aktivnosti ter da je postopek segmentacije dobaviteljev ali blagovne skupine subjektivno naravnan sklepamo, da rezultat posplošene segmentacije vodi k pasivnem vedenju nabavne funkcije. Iz te percepcije razvijamo znanstveno raziskovalno vprašanje: »Kakšen pa je učinkovit objektivni postopek segmentacije dobaviteljev ali blagovnih skupin«? Osnovni namen je usvojiti razumevanje Kraljičeve matrike in postopek segmentacije in pridobiti ključne usmeritve za objektiven postopek segmentacije.
Metoda: V prvem delu znanstvene raziskave bomo pregledali obstoječo literaturo na temo Kraljičeve matrike in s tem usvojili razumevanje segmentacije dobaviteljev ali nabavnih skupin. V nadaljevanju znanstvene študije bomo z intervjuvanjem izbrane stroke pridobili mnenje stroke in izvajanje Kraljičeve matrike v praksi. Sledi sklop metodologije, z uporabo kvalitativno analitičnega orodja tematskih mrež na obsegu sklopov pregledane literature in pol strukturiranega intervjuja fokusne skupine treh specialistov.
Rezultati: Rezultati prikazujejo proces razvoja tematske mreže na obsegu sklopov pregledane literature in pol strukturiranega intervjuja študije objektivnega postopka segmentacije dobaviteljev ali blagovnih skupin.
Družba: Celotna družba lahko pridobi na medsebojnem organizacijskem razumevanju, ki vključuje pojme kot so trajnost, okolje, družba, kultura in napredek. Posredni vpliv na družbo se izrazi v obliki znižanja nabavnih cen, zmanjšanja skupnih stroškov, zmanjšanja tveganja dobavne verige ali zagotavljanja povečanih inovacij iz nabavnega trga.

Omejitve/nadaljnje raziskovanje: Znanstvena raziskava je omejena na navedene vire v literaturi in intervjuvancev. Nadaljevanje raziskave priporočamo v širšem zajemu obsega literature, zajemu večje in/ali homogene skupine intervjuvancu za namen strukturiranega intervjuja.

Ključne besede: strategija, nabavna funkcija, Kraljičeva matrika, segmentacija, dobavitelji, blagovna skupina.

Krizni slog vodenja v zdravstvu

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Povzetek:

Ozadje in izvirnost: Namen raziskave je podlagi empiričnih raziskav ugotoviti, kakšen je vedenjski vzorec kriznega vodje v zdravstvu in izdelati. ogrodje vodstvenega sloga v kriznih razmerah v zdravstvu. Raziskava pripomore k boljšemu pregledu vedenjskega vzorca vodij v kriznih situaciji. Rezultati raziskave so lahko v pomoč pri pripravljenosti in pravočasnem odzivanju na krizne situacije in izbiri vodstvenega sloga glede na resnost kriznih razmer. Raziskava ponuja manj izkušenim kriznim strokovnjakom ogrodje vodstvenega sloga v zdravstvu v kriznih razmerah , ki temelji na znanstveno – raziskovalnih ugotovitvah.

Metoda: Z iskanjem po ključnih besedah smo poiskali raziskovalne članke na temo vodenja v krizni situaciji v zdravstvu. Ključne besede smo izbrali z induktivno in deduktivno metodo. Našli smo 21 člankov, ki se nanašajo na krizne razmere v zdravstvu. V teoretičnem delu smo opravili sistematičen pregled literature iz področja teorij voditeljstva, ki so podlaga za povezavo s strokovno znanstveno literaturo iz področja voditeljstva v zdravstvu v kriznih razmerah. Pregledali smo empirične raziskave, strokovno literaturo in analizirali rezultate. Rezultate smo kritično ovrednotili, povezali in izdelali ogrodje vodstvenega sloga v kriznih razmerah v zdravstvu.

Rezultati: Vodstvo je ključnega pomena za učinkovito delovanje zdravstvenega osebja v kriznih razmerah. Raziskovalci so opredelili več slogov vodenja v kriznih situacijah v zdravstvu. Ugotavljajo, da noben vodstveni slog ni učinkovit v vseh kriznih razmerah in da ga je potrebno prilagajati različnim situacijam. Med najpomembnejšimi vodstvenimi slogi poudarjajo skupno odločanje. Za zagotavljanje varne in učinkovite oskrbe pacientov morajo zdravstveni delavci v kriznih razmerah izvajati visoko usklajene timske strategije. Odločno vodenje, na podlagi direktiv ima v bolj kriznih razmerah prednost pred skupnim vodenjem. Ciljno vedenje vodje motivira podrejene, jih usmerja in prilagaja načrte dinamičnim spremembam v kriznih situacijah, medtem ko je podporno vodenje učinkovito v manj resnih razmerah. V bolj kritičnih razmerah v zdravstvu je učinkovitejše vedenje vodenje usmerjeno v naloge, v manj kritičnih razmerah pa v odnose. V različnih razmerah je potrebno uporabiti različen vodstveni slog in ga prilagajati kritičnosti razmer. Če je zgrajen dober odnos med vodjo in podrejenimi ima vodja manj težav pri prehajanju med različnimi oblikami vodstvenega sloga in mu podrejeni sledijo tudi pri uporabi avtokratskega sloga.

Družba: Obvladovanje razmer v krizni situaciji v zdravstvu je neposredno povezano z družbo. Poznavanje vzorca odločanja v kriznih situacijah in oblikovanje ogrodja odločanja, ki temelji na znanstveno raziskovalnih ugotovitvah je lahko v pomoč neizkušenim kriznim strokovnjakom in v pomoč organizacijam za izdelavo osebnega kriznega načrta podjetja. Kako dobro se bodo zdravstvene organizacije odzivale v kriznih razmerah, vpliva na zdravstveno stanje prebivalstva in blaginjo družbe.

Omejitve/nadaljnje raziskovanje: Omejitev raziskave je v majhnem številu člankov vključenih v analizo. Na temo kriznega sloga vodje ni veliko preglednih člankov na področju zdravstva. Globalizacija prinaša na področju zdravstva nove izzive pri obvladovanju kriznih razmer, zato so potrebne stalne in nadaljnje raziskave glede na aktualnost razmer.

1 Uvod

Globalizacija prinaša mnoge spremembe v sodobnem svetu. Priča smo katastrofam in epidemijam, ki za seboj puščajo razdejanja, terjajo mnoga življenja in vnašajo spremembe v življenja ljudi in javno življenje. Katastrofe in epidemije so neizmerne in šokantne motnje, ki zahtevajo presoje in prizadevanja velikega števila ljudi. Izbruhi bolezni in katastrofe lahko kadar koli prizadenejo države in povzročijo veliko človeško trpljenje ter smrt in ekonomske izgube. Če so zdravstveni sistemi slabo opremljeni za reševanje takšnih situacij, so prizadete populacije lahko zelo ranljive. (Kieny, Evans, Schmets, & Kadandale, 2014, str. 850)

Krize imajo različne dejavnike: so časovno občutljive, predstavljajo velika tveganja in zahtevajo posledične odločitve. Za upravljanje v kriznih situacijah je pomembno opredeliti vzorec prakse v celotnem spektru odločanja. Poznavanje vzorca odločanja v kriznih situacijah in oblikovanje modela odločanja, ki temelji na znanstveno raziskovalnih ugotovitvah je lahko v pomoč neizkušenim kriznim strokovnjakom in v pomoč organizacijam za izdelavo osebnega kriznega načrta podjetja. (Oroszi, 2018 str. 335)

V članku bomo pregledali sodobno znanstveno literaturo iz področja zdravstva, opredelili vedenjski vzorec vodje v kriznih situacijah in na podlagi rezultatov izdelali ogrodje vodstvenega sloga v kriznih razmerah v zdravstvu.

2 Teoretična izhodišča

Za pravilno delovanje organizacij so potrebni tako menedžerji kot voditelji.

Zaleznik (1977 v Stanley, 2006, str. 31) meni, da cilji menedžerjev nastanejo bolj iz potrebe kot iz želje. Menedžerji sodelujejo pri načrtovanju in pripravi proračuna, določanju ciljev, organiziranju in kadrovanju, nadzoru, reševanju problemov in spopadanju s kompleksnostjo. Menedžerji, čeprav radi delajo z ljudmi, običajno ohranjajo nizko stopnjo 'čustvene' vpletenosti.

Dobri menedžerji vnašajo red in doslednost v kakovost in donosnost poslovanja, vodstvo pa se spopada s spremembami in celo do neke mere ustvarja kaos. Vodenje je postalo pomembno vprašanje, zlasti v zvezi s trenutnimi potrebami zdravstvenih storitev, ker s spremembami narašča potreba po vodenju. Dejansko sta upravljanje in vodenje soodvisna. (Kotter, 1990 v Stanley, 2006, str. 31)

Warren (2005 v Stanley, 2006, str. 32) meni, da je glavna razlika med menedžerjem in vodjo 'vizija'. Menedžment je sestavljen predvsem iz analiz, reševanja problemov in načrtovanja, vodstvo pa iz vizije, vrednot in komunikacije. V skladu s tem stališčem lahko voditelji pojasnijo namen dejavnosti. Lahko jih opišemo kot 'srce organizacije', bistvo vodenja pa je

spodbuditi skupine, da se združijo za skupne cilje. Voditelji motivirajo, sodelujejo z ljudmi, določajo in usmerjajo ljudi k ciljem.

Vodenje Lipovec (1987, str. 227) opredeljuje kot razvitejše sredstvo uveljavljanja organizacije in spretnost vplivanja na druge ljudi s komuniciranjem, da pridobi ljudi za sodelovanje in delovanje v smeri doseganja cilja podjetja.

Lipovec razvoj vodenja pojasnjuje na tri načine, ki so se razvili v istem časovnem zaporedju (Lipovec, 1987, str. 286):

- Posebne lastnosti vodje
- Položaj voditelja v komunikacijski strukturi
- Voditeljevo spodbujanje privržencev.

Voditelji uporabljajo vedenja, usmerjena k spremembam, za povečanje inovacij, kolektivnega učenja in prilagajanja zunanjim spremembam. Posebna vedenja zagovarjajo spremembe, oblikovanje navdihujoče vizije, spodbujanje inovacij in spodbujanje kolektivnega učenja. Vedenje usmerjeno v naloge in vedenje usmerjeno v odnose poudarjata spodbujanje voditeljev k spremembi. (Yukl, 2012, str. 462)

Voditelji uporabljajo vedenje usmerjeno v odnose, za izboljšanje odnosov vodja-član tima, identifikacijo z delovno enoto in pripadnost organizaciji. Vedenje usmerjeno v odnose vključuje aktivnost za podporo razvoja in opolnomočenja. (Yukl, 2012, str. 461)

V naloge usmerjeno vedenje je zagotoviti, da se ljudje, oprema in drugi viri učinkovito uporabljajo za uresničevanje poslanstva skupine ali organizacije. Vedenje vključuje aktivnosti, kot so: načrtovanje in organizacija dejavnosti delovne enote, razjasnitev vlog in ciljev, spremljanje delovanja delovne enote in reševanje težav, povezanih z delom. (Yukl, 2012, str. 460)

Lipičnik (1996, str. 120-122) s slogom vodenja razume različne, bolj ali manj uspešne tehnike, ki jih vodje uporabljajo, ko poskušajo na različne načine vplivati na uporabo in na razvoj človeških zmožnosti pri delu. Slog vodenja se nanaša na določen vzorec vodenja, ki ga uporablja vodja, ko dela z ljudmi v konkretni situaciji. Vodstveni slog je odvisen od načina obnašanja vodje in od konkretne naloge, s katero se vodja sooča in sprejemljivosti zaposlenih.

Slog vodenja je vzorec ravnanja voditelja, kot ga zaznavajo njegovi ljudje, in razkriva filozofijo, spretnosti in odnos voditelja do drugih (Sarla, 2020, str. 2).

Sarla (2020, str.2) navaja štiri različne vodstvene sloge v zdravstvu:

- **Avtoritarni ali avtokratski vodstveni slog** - vodje se odločajo samostojno, brez posvetovanja z drugimi. Avtokratski vodja sprejema odločitve in jih napove skupini.

- **Svetovalni vodstveni slog ali direktivni vodstveni slog** – vodje se obnašajo kot tradicionalni šefi in v izvršilnem slogu podajajo odločitve z namenom podajanja smernic za izvajanje nalog. Vodja pričakuje brezpogojno skladnost s strani podrejenih.

- **Participativni ali sodelujoč vodstveni slog** – vodja predstavi okvirno odločitev, ki se lahko spremeni. Vodstvo ekipe v celoti angažira člane ekipe z namenom skupnega odločanja. Participativno ali vertikalno vodstvo motivira zaposlene in poskrbi, da se počutijo kot del odločanja.

- **Demokratični vodstveni slog** - vodja opredeli meje in prosi ekipo, naj sprejema odločitve. Spodbuja skupinsko sodelovanje, razprave in skupne odločitve, je prilagodljiv in pomaga ustvarjati inovativne ideje.

Sprejeti slog vodenja je odvisen od značilnosti vodje, značilnosti delavcev, narave dela in pomembnosti rezultata. Noben vodstveni slog ni ves čas pravilen in vodja mora spremeniti in sprejeti slog, ki ustreza situaciji. (Sarla, 2020, str. 2)

Teorije, ki pojasnjujejo zgoraj omenjene sloge vodenja so kotigenčna teorija vodenja, housejeva teorija poti in ciljev in transformacijsko vodenje.

Kontigenčna teorija vodenja je usmerjena v proučevanje odnosa med vodjevimi lastnostmi, kot so osebnost in vedenje in njegovo uspešnostjo pri vodenju ter pri tem upoštevajo delež (lat. kontingent) situacije ali okolja. Ta teorija predpostavlja, da je za uspešno vodenje pomemben vodstveni slog. (Fiedler, 1964, str. 158)

Fiedlerjeva teorija predstavlja tri kritične situacijske komponente oz. kontigenčne spremenljivke , ki bi lahko vplivale na učinkovito vodenje voditelja: osebni odnosi vodje s člani skupine, moč in avtoriteta, ki jih zagotavlja njegov položaj in stopnja zapletenosti naloge, ki je bila dodeljena skupini.

- **Odnosi med vodjo in skupino.** Osebni odnos med vodjo in člani skupine je verjetno najpomembnejši dejavnik, ki vpliva na uspešnost ekipe. Všečen in spoštovan vodja ne potrebuje formalne moči in se lahko strinja s svojo skupino tudi v okoliščinah, ki bi v primeru neizbranega ali nezaupljivega voditelja povzročile odkrit upor.
- **Zapletenost naloge**. Druga pomembna razsežnost opisuje naravo naloge z vidika njene jasnosti ali dvoumnosti in strukturiranosti. Delo vodje je bistveno lažje, če je delo visoko strukturirano in lahko delo nadzoruje, kot če je nejasno in nespecifično. V primeru nenačrtovane naloge, vodja ne ve več kot člani in nikomur ne more naročiti, kako naj takšno nalogo izvrši.
- **Moč položaja**. Tretjo veliko dimenzijo opredeljuje moč, ki je pomembna na vodstvenem položaju in vključuje nagrade in sankcije, ki so uradno ali tradicionalno na razpolago vodji in jih uporablja, če želi uveljaviti avtoriteto nad ljudmi. V drugih situacijah pa lahko uporablja referenčno ali strokovno moč, če jo poseduje. Moč vodje je na splošno obratno povezana z močjo članov skupine. (Fiedler, 1964, str. 158)

Način vodenja je najučinkovitejši le, če je uporabljen v pravi situaciji. (Fiedler, 1964, str. 158.)

Kontigenčni model vodenja pravi, da lahko člani skupine posredno vplivajo na uspešnost drug drugega. Vodja, ki je v svojem pristopu do skupine ne ukazovalen in pozoren, spodbuja boljše odnose med skupinami in večje zadovoljstvo članov. Vodja lahko s zagotavljanjem psihološke podpore in spodbude posameznemu članu ekipe ublaži negotovost in tesnobo, ki bi sicer lahko ovirali učinkovito delovanje posameznega člana ekipe. (Fiedler, 1964, str. 186)

Popustljivi vodja v spremenjenih razmerah spodbuja večjo učinkovitost. Izvirne rešitve, ki so pogosto drugačne in po definiciji neprimerne, se pogosteje pojavijo, kadar je vodja popustljiv in sprejemljiv, kot pa, ko je kritičen in grozi. V odnosu vodje do skupine govorimo o tem ali vodjo sodelavci spoštujejo in mu pri sprejemanju odločitev ne nasprotujejo in mu ni potrebno uporabljati moči in avtoritete za uveljavljanje odločitev. (Fiedler, 1964, str. 187)

House - jev model poti in ciljev na katerem temelji teorija poti in ciljev pravi, da bodo posamezniki na vodilnih položajih učinkoviti do te mere, kolikor bodo dopolnjevali okolje, v katerem delujejo njihovi podrejeni. Da bodo podrejeni lahko dosegali delovne cilje jim mora vodja zagotoviti potrebna pojasnila. S doseganjem delovnih ciljev in prejemanjem pohvale in nagrade, bodo deležni notranjega zadovoljstva. Voditelji upravičijo svojo vlogo s tem, da zagotavljajo uspešnost in zadovoljstvo podrejenih. (House, 1996 str. 326)

Teorija poti in ciljev pojasnjuje trditve o dveh splošnih spremenljivkah vedenja vodje: vedenje, ki pojasnjuje pot doseganja ciljev, in vedenje, usmerjeno v zadovoljevanje potreb podrejenih. Voditelji so pomembni za uspešnost in zadovoljstvo podrejenih. (House & Mitchell, 1974, str. 326)

House in Mitchell (1974 str. 326) sta natančneje opredelila štiri vrste vedenja:
- **Vedenje usmerjeno k ciljem** je vedenje, usmerjeno v zagotavljanje psihološke podpore podrejenim: sporočanje podrejenim, kaj se od njih pričakuje, razporejanje in usklajevanje dela, dajanje posebnih smernic in pojasnjevanje vizije in poslanstva, pravil in postopkov.
- **Podporno vedenje vodje** je vedenje, usmerjeno v zadovoljevanje potreb podrejenih, kot je izkazovanje skrbi za dobro podrejenih in ustvarjanje prijaznega in psihološko podpornega delovnega okolja. Vedenje vodje je vir družbenega zadovoljstva ter vir blaženja stresa ali frustracij podrejenih.
- **Participativno vodenje** je vedenje vodje, usmerjeno v spodbujanje podrejenih v odločanje - posvetovanje s podrejenimi in upoštevanje njihovih mnenj in predlogov pri odločanju.
- **Vedenje usmerjeno k dosežkom**, je vedenje, usmerjeno k spodbujanju odličnosti. Vedenje vodje usmerjeno k dosežkom povzroča, da si podrejeni prizadevajo za višje standarde uspešnosti in da imajo več zaupanja v svojo sposobnost izpolnjevanja zahtevnih ciljev.

Podporno vedenje voditelja, pogojeno s ciljno usmerjenimi napori, povečuje uspešnost delavcev (House, 1996, str. 326).

Vedenje vodje je motivacijsko, tj. povečuje prizadevanje delavcev do učinkovite uspešnosti in takšno vedenje dopolnjuje z zagotavljanjem usposabljanja, usmerjanja, podpore in nagrad, potrebnih za učinkovito delovanje (House & Mitchell,1975, str. 1-2).

Transformacijski slog voditeljstva lahko opredelimo kot postopek vplivanja na večje spremembe v stališčih in predpostavkah članov organizacije in izgradnjo zavzetosti za poslanstvo ali cilje organizacije (Yukl, 1989, str. 204).

Utemeljitelj transformacijskega sloga voditeljstva je James MacGregor Burns, ki je predlagal koncept vodstvenega sloga, kjer nadrejeni in podrejeni delata za izboljšanje morale in motivacije. V transformacijskem slogu voditeljstva vodja privržencem ponuja vizijo, navdušenje, spodbudo, moralo in zadovoljstvo in deluje kot motivator, da povečajo sposobnosti in spodbujajo inovacije v celotni organizaciji. (Burns, 2004, str. 25 - 26).

Voditeljstvo zdravstvu v kriznih razmerah je bistvenega pomena za obvladovanje krize. Zdravstvo je dejavnost za katero so značilna pogosta krizna stanja. To še posebej velja za specialna področja kot sta anesteziologija in urgentna medicina (Kemp, 2014, str. 1).

Pomembno je razumeti načela pripravljenosti na krizne razmere, vključno s tem, kako aktivirati načrt, kako komunicirati v času krize, kako aktivirati obnovljive vire, verigo poveljevanja ter ocenjevanje in poročanje incidentov. Pomanjkanje virov v skupnosti in večji obseg pacientov od voditeljev zahteva, da so prilagodljivi pri načrtovanju in določanju prednosti in slabosti kriznega načrta. (Edmonson, Sumagaysay, Cueman, & Chappell, 2016, str. 164)

Da se izognejo neuspehom in zagotovijo zanesljivo delovanje tima, morajo voditelji, glede na različne situacije in cilje, uporabiti različne sloge vodenja. (Yun, Faraj & Sims, 2005, str. 1292).

Učinkoviti voditelji bi morali biti sposobni prilagoditi svoje vedenja za doseganje boljših rezultatov ekipe. To pomeni, da je prilagodljivost vodje v negotovih in nujnih razmerah zelo pomembna. (Yun, Faraj, & Sims, 2005, str. 1294)

Krize zahtevajo obsežne spremembe vedenja in posameznikom povzročajo velike psihološke obremenitve (Van Bavel, et al, 2020, str 460).

Voditelji, ki ravnajo spoštljivo z ljudmi, so bolj uspešni pri pridobivanju sodelovanja in jim ljudje bolj zaupajo. Voditelji, ki delujejo v interesu skupine kot celote, običajno pridobijo večji vpliv. (Van Bavel, 2020, str. 466)

Obstajajo dokazi, da je skupno vodenje, kjer je deljena odgovornost, v krizi učinkovito. Odgovornost podrejenih mora biti manjša kot odgovornost voditelja. Skupno odločanje je

lahko koristen okvir in podpira tako situacijski kot sočutni vodstveni slog, saj omogoča prehajanje med odločanjem na podlagi ukazovalnega in na podlagi podpornega vedenja, ki temelji na vrednotah. Pomembno je zavedanje, da bodo morali v kriznih okoliščinah mnogi zdravstveni delavci, zaradi pomanjkanja osebja ali prerazporeditve osebja, prevzeti vodstveno vlogo. Zato je bistvenega pomena, da se vsi zavedajo ključnih kompetenc za učinkovito vodenje. (Paixão, Mills, McKim, Hassanien, & Al-Hayani, 2020, str. 40)

Učinkoviti timi zahtevajo učinkovito vodstvo. Voditelji bi morali v kritičnih situacijah ohranjati celotno sliko, vodenje s cilji, povezovati ključne informacije in se prilagajati dinamičnim situacijam. S člani tima morajo ustvarjati sodelovalno okolje jih aktivno vključevati v odločanje, ob zavedanju njihovih omejitev ter vzpostaviti zaupanje, da se bodo lahko mirno in pravočasno odločali. Člani tima bi morali razumeti skupne cilje, prepoznati njihove vloge v timu, biti pripravljeni na medsebojno podporo in se počutiti pooblaščeni, da prosijo za pomoč ali izmenjavo informacij. (Lei & Palm, 2019)

Pomembno je zavedanje, da bodo morali v kriznih okoliščinah mnogi zdravstveni delavci, zaradi pomanjkanja osebja ali prerazporeditev stopiti v bolj formalne hierarhične vloge. Zato je bistvenega pomena skupno vodenje. (James & Bennett, 2020, str. 10)

Vedenje vodje v kriznih situacijah mora biti vizionarsko in navdihovati druge, da dosežejo želeni rezultat. Vedenje vodstva zdravstvenega osebja je ključnega pomena za ustvarjanje pozitivnega sodelovalnega okolja. (Edmonson, Sumagaysay, Cueman & Chappell, 2016, str. 419).

Prilagodljiv slog vodenja lahko vodi organizacije skozi najtežje čase (Edmonson, Sumagaysa, Cueman & Chappell, 2016, str. 419).

Spretnosti in vedenje vodij so odločilni, kako se bo situacija razvijala in razrešila. Voditelji morajo oblikovati vedenje, ki ga pričakujejo od drugih v organizaciji. Zaradi prekinitve običajnih rutin in praks, mora voditelj izkazovati odločno vodenje, pomirjati strahove in pomagati osebju pri odločitvah. Vodje morajo dajati priporočila v zvezi z oskrbo bolnikov in varnostjo zaposlenih. (Edmonson, Sumagaysay, Cueman, & Chappel, 2016, str. 419)

Vodstvo po direktivah je bilo učinkovitejše v bolj kritičnih situacijah, medtem ko je bilo podporno vodenje bolj učinkovito v manj resnih situacijah (Yun, Faraj & Sims, 2005, str. 1292).

Ko imajo podrejeni dovolj informacij, znanja in so visoko usposobljeni, je skupno odločanje primernejše od avtokratskega odločanja. Avtokratsko vodstvo pa je učinkovitejše, ko je čas ključnega pomena. (Yun, Faraj & Sims, 2005, str. 1292).

Raynolds (2010, str. 262) ugotavlja, da je eden od izzivov voditeljev učinkovito sporočanje ukrepov, ki so potrebni za zmanjšanje škode za posameznike in obnovo stanja v organizaciji

ali skupnosti. Posledice obremenitev posameznikov in skupin je mogoče ublažiti z učinkovitim obveščanjem o krizi in izrednih tveganjih.

Zhuravsky (2015, str. 1) je opredelil dve osnovi skupnega vodenja v krizni situaciji: vodstvo znotraj formalnih skupin vodstvenih delavcev v zdravstvu in zdravstveni negi ter sodelovanje podrejenih pri odločanju. Skupno vodenje je dinamičen proces med posamezniki v skupinah, katerih cilj je medsebojno voditi k doseganju skupinskih ali organizacijskih ciljev.

Opolnomočen vodja je tisti, ki se posvetuje s člani ekipe in nanje prenese odgovornost. Te vrste voditeljev članom ekipe dajo priložnost, da razmišljajo, svoje znanje uporabijo v dejanskem stanju in se ob tem učijo. (Yun, Faraj & Sims, 2005, str. 1290)

Zanima nas, kakšen je vedenjski vzorec kriznega vodje v zdravstvu? Namen raziskave je ugotoviti vedenjski vzorec kriznega vodje v zdravstvu in izdelati ogrodje vodstvenega sloga v zdravstvu v kriznih razmerah.

3   Metoda

Z iskanjem po ključnih besedah smo poiskali strokovne znanstveno – raziskovalne članke na temo vodenja v krizni situaciji v zdravstvu. Za določitev ključnih besed smo uporabili selektivno metodo kodiranja po Charmazu (Charmaz, 2006, str.131). Ključne besede smo izbrali z induktivno in deduktivno metodo.

Tabela 1. Ključne besede za iskanje literature

Ključne besede
»voditeljstvo«
»vodstveni slog«
»management and leadership«
»healthcare«
»leadership«
»leadership+ style«
»leadership +style +in+ healthcare«
»management in crisis«
»leadership +behaviour«
»leadership +style +in+healthcare+in+crisis«
»effectively+ leadership +style+in+crisis +in+healthcare«

Z iskanjem člankov po ključih besedah smo poiskali 21 člankov. V raziskavo smo vključili članke, ki se nanašajo na krizne razmere v zdravstvu. Uporabili smo kvalitativno raziskovalno metodo, ki temelji na zbiranju, pregledovanju in analizi obstoječe literature (glej sliko1).
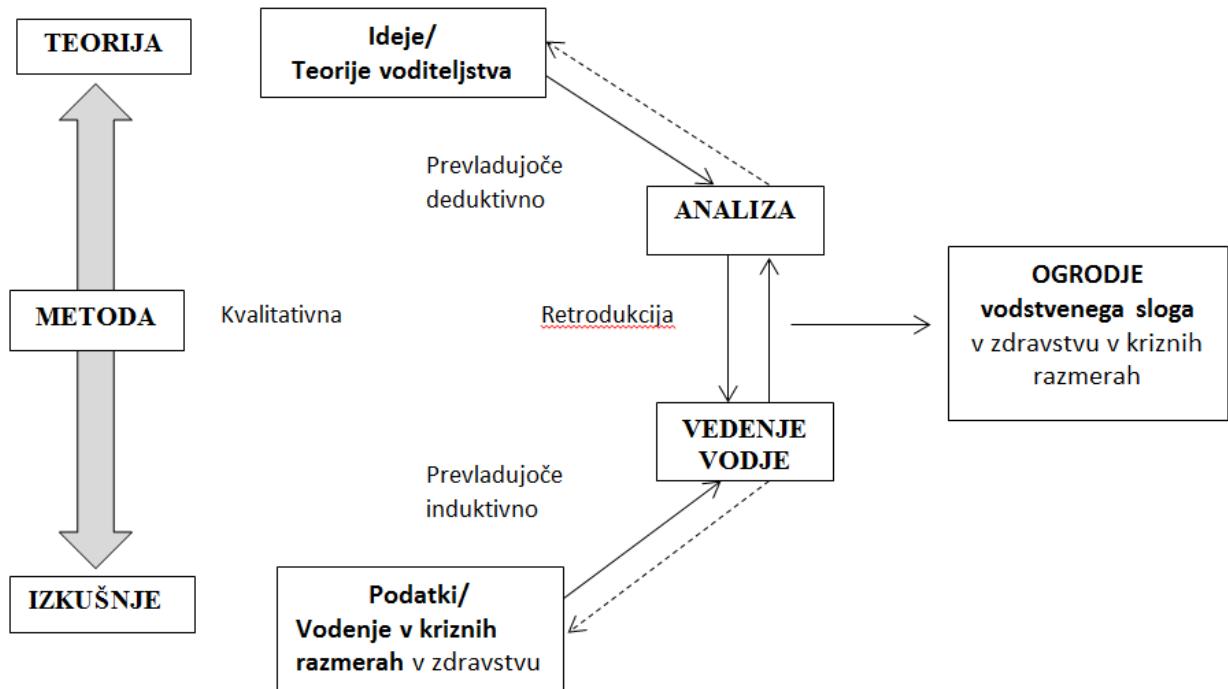
Slika1. Grafični prikaz modela raziskave

Teoretično vzorčenje smo opravili v postopku analize podatkov in kreiranja kategorij Pri keriranju smiselnih kategorij in združevanju zbranih podatkov, se je potrebno opirati na teoretične izsledke in iskati smiselne povezave novih spoznanj s teorijo (Charmaz, 2006, str. 105). V teoretičnem delu smo opravili sistematičen pregled literature iz področja teorij voditeljstva, ki so podlaga za povezavo s strokovno znanstveno literaturo iz področja voditeljstva v zdravstvu v kriznih razmerah. Iz poznanih teoretičnih ugotovitev smo pri tvorjenju kategorij oblikovali posamične sklepe (deduktivna metoda) in si pustili prostor za pridobitev novih kategorij, do katerih smo prišli na podlagi novih ugotovitev iz člankov s področja zdravstva (induktivna metoda). Zbrane rezultate smo prikazali v tabeli in izdelali ogrodje vodstvenega sloga voditeljev v zdravstvu v krizni situaciji. Raziskava je veljavna, ker so za teoretični del uporabljene temeljne teorije voditeljstva, za raziskovalni pa strokovno znanstveni članki v razponu od leta 2005 do leta 2020, od tega so trije članki starejši od 5 let. Veljavnost raziskave je zadovoljiva, ker se osredotočamo na strokovno znanstveno literaturo in ne iščemo razlag, ki bi jih posploševali. Zunanja veljavnost je večja, ker lahko izdelano ogrodje vodstvenega sloga posplošimo in je prenosljivo tudi na druga področja. Notranja veljavnost je manjša, ker je v raziskavi sodeloval en raziskovalec. V rezultatih navajamo izsledke raziskav drugih avtorjev in jih potrjujemo z teoretično razlago in ne navajamo subjektivnih sklepanj.

4 Rezultati

Raziskovalci so prišli do ugotovitev, da je v kriznih razmerah potrebno uporabiti učinkovit vodstveni slog za vodenje v kriznih razmerah. V tabeli 2 so predstavljeni učinkoviti vodstveni slogi v kriznih razmerah in rezultati kvalitativne raziskave vedenjskega vzorca vodij v kriznih razmerah.

Tabela 2. Vodstveni slog vodje in vedenjski vzorci vodje v kriznih razmerah v zdravstvu

VIR	SLOG VODENJA – teoretični del	VEDENJSKI VZOREC VODJE
Fiedler (1964)	**Vodstveni slog na podlagi moči in avtoritete -**uveljavljanje odločitev.	
Paixão , Mills, McKimm, Hassanien, & Al-Hayani (2020)		Situacijski slog vodenja, odločanje na podlagi ukazovalnega vedenja – dajanje direktiv.
Edmonson, Sumagaysay, Cueman & Chappell (2016)		Voditelj mora izkazovati odločno vodenje, pomirjati strahove in pomagati osebju pri odločitvah.
Yun, Faraj & Sims (2005)		Avtokratsko vodstvo je učinkovitejše, ko je čas ključnega pomena.
House & Mitchell (1974)	Vedenje usmerjeno k ciljem smernice in pojasnjevanje vizije in poslanstva, pravila in postopki	
Burns (2004)	Motivacijsko vedenje vodje (vplivanje, navdušenje)	
House & Mitchell (1975)	Motivacijsko vedenje vodje usposabljanja, usmerjanja,	
Lei & Palm(2019)		Med krizo ohranjati celotno sliko, Slediti ciljem in se prilagajati spremembam.
Raynolds (2010)		Učinkovito sporočanje ukrepov, obveščanje o krizi in tveganjih
Edmonson, Sumagaysay, Cueman & Chappell (2016)		Prilagodljivost načrtov dinamičnim situacijam.
Yun, Faraj S & Sims, (2005)		Učinkoviti voditelji morajo biti sposobni prilagoditi svoje vedenja za doseganje boljših rezultatov ekipe.
Fiedler (1964)	Vodstveni slog na podlagi odnosov Popustljivi vodja v spremenjenih razmerah spodbuja večjo učinkovitost	
House & Mitchell (1975)	Podporno vedenje vodje vedenje, usmerjeno v zadovoljevanje potreb podrejenih	

»se nadaljuje«

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Avgust / August 2021, leto / year 6, številka / number 3, str. / pp. 161-178.
»nadaljevanje«

Yun, Faraj & Sims (2005)		Podporno vodenje je bolj učinkovito v manj resnih situacijah.
House & Mitchell (1975)	Participativno vodenje vedenje vodje, usmerjeno v spodbujanje podrejenih v odločanje	
Paixão , Mills, McKimm, Hassanien, & Al-Hayani (2020)		Skupno vodenje - deljena odgovornost.
James & Bennett (2020)		Bistveno je skupno vodenje.
Zhuravsky (2015)		Sodelovanje podrejenih pri odločanju.
Yukl (2012)		Vedenje usmerjeno v odnose vključuje aktivnost za podporo razvoja in opolnomočenja.
Yun, Faraj & Sims (2005)		Skupno odločanje je zelo učinkovito, ko imajo podrejeni dovolj informacij, znanja in so visoko usposobljeni. Opolnomočen vodja ponuja več možnosti za učenje in dajanje predlogov kot vodja direktiv. Prehajanje med odločanjem na podlagi direktiv ali na podlagi sočutnega pristopa.

Učinkovito vodstvo zdravstvenega osebja je ključnega pomena za učinkovito delovanje v kriznih razmerah. Raziskovalci so opredelili več slogov vodenja v kriznih situacijah v zdravstvu. Participativno vedenje vodje, usmerjeno v spodbujanje podrejenih v odločanje, je zelo pomembno. Avtorji med najpomembnejšimi vodstvenimi slogi poudarjajo skupno odločanje. Za zagotavljanje varne in učinkovite oskrbe pacientov morajo zdravstveni delavci v kriznih razmerah izvajati visoko usklajene timske strategije. Odločno vodenje, na podlagi direktiv ima v bolj kriznih razmerah prednost pred skupnim vodenjem. Vedenje vodje, usmerjeno k ciljem učinkovito motivira zaposlene, jih usmerja in prilagaja načrte dinamičnim spremembam. Podporno vodenje je učinkovito v manj resnih razmerah.

Na podlagi analize podatkov in vedenja vodje v kriznih razmerah, smo izdelali ogrodje vodstvenega sloga v kriznih razmerah v zdravstvu (glej sliko 2).

Slika 2. Ogrodje vodstvenega sloga v kriznih razmerah v zdravstvu

Ogrodje vodstvenega sloga v kriznih razmerah v zdravstvu prikazuje, kateri vodstveni slog vodja izbere v določeni krizni situaciji, vedenje vodje in na kakšen način vodja dosega cilje. Pri avtoritarnem vodstvenem slogu vodja cilje dosega na podlagi ukazov, dajanju direktiv, za transformacijski slog je ključno usmerjanje k ciljem in prilagajanje spremembam, participativni vodstveni slog definira skupno odločanje in pri podpornem vodstvenem slogu preko zadovoljevanja potreb podrejenih. Ogrodje prikazuje tudi, v katerih razmerah so različni vodstveni slogi najučinkovitejši. Pri tem upošteva dva vidika – resnost kriznih razmer in vedenje vodje, ki je lahko usmerjeno v naloge ali v odnose. V bolj kriznih razmerah je bolj učinkovit vodstveni slog usmerjen v naloge in v manj kriznih razmerah je bolj učinkovito vedenje vodje usmerjeno v odnose.

5   Razprava

Kako učinkovit je odziv na krizne situacije v zdravstvu je odvisno od pripravljenosti organizacije na možne krizne situacije in učinkovitosti upravljanja organizacije med krizo (Edmonson, Sumagaysay, Cueman, & Chappell, 2016, str. 419). Voditelji v svoji vlogi so pomembni za uspešnost in zadovoljstvo podrejenih (House, & Mitchell, 1974, str. 326).

Ko razpravljamo o vodstvenem slogu govorimo o načinu obnašanja vodje, vedenju in interakciji med osebnostjo in okoliščinami (kontingenca, situacija) (Fiedler, 1964, str. 158). Chappell, Cueman, Edmonson in Sumagaysay (2016, str. 419) navajajo, da je potek in razrešitev krizne situacije odvisna od spretnosti in vedenja vodij. Voditelji morajo oblikovati vedenje, ki ga pričakujejo od drugih v organizaciji.

Raziskovalci so prišli do ugotovitev, da noben vodstveni slog ni ves čas pravilen in da morajo voditelji v zdravstvu v kriznih razmerah, uporabiti različne sloge vodenja in sprejeti slog, ki ustreza situaciji (Sarla, 2020; Faraj, Sim & Yun, 2005). Iz tabele 2 je razvidno, da so raziskovalci opredelili več vodstvenih slogov v kriznih razmerah. Vedenje vodje je v različnih vodstvenih slogih drugačno.

Glede na te ugotovitve smo izdelali ogrodje vodstvenega sloga v zdravstvu v kriznih razmerah. Ogrodje opredeljuje primernost uporabe in učinkovitost določenega vodstvenega sloga v določenih kriznih razmerah v zdravstvu in opredeljuje vedenje vodje za doseganje ciljev.

V zelo resnih razmerah v zdravstvu, kjer se je potrebno odločati hitro, je v zdravstvu najbolj primeren avtoritativni vodstveni slog. V resnih situacijah mora vodja izkazovati odločno vodenje in se odločati hitro, na podlagi ukazovalnega vedenja. (Edmonson, Sumagaysay, Cueman , & Chappell, 2016; Paixão, Mills, McKimm, Hassanien, & Al-Hayani, 2020; Yun, Faraj, & Sims, 2005) Ta oblika vodenja je usmerjena v naloge, kjer avtokratski vodja sprejema odločitve in jih napove skupini (Fiedler, 1964, str. 158).

V zelo kritičnih razmerah, ko je čas ključnega pomena, je avtokratski vodstveni slog učinkovitejši kot drugi vodstveni slogi (Yun, Faraj & Sims, 2005, str. 1292). V bolj resnih situacijah je učinkovit tudi transformacijski vodstveni slog, kjer je vedenje vodje usmerjeno k ciljem in prilagajanjem spremembam, ki so v času krize zelo pogoste in nepredvidljive (Lei & Palm, 2019). Vodstvo mora biti vizionarsko in navdihovati druge, da dosežejo želeni rezultat (Van Bavel et al, 2020 str. 466) ter z vplivanjem in navdušenjem motivirai privržence, da delajo v korist organizacije in povečajo svoje sposobnosti (Burns J. M., 2004, str. 6-7).

Vodje v zdravstvu morajo v kriznih razmerah kritično razmišljati in dajati priporočila v zvezi z oskrbo bolnikov in varnostjo zaposlenih, (Edmonson , Sumagaysay , Cueman & Chappell, 2016 str. 419), pravočasno obveščati o krizi in tveganjih (Raynolds, 2010, str. 262), prilagajati načrte in cilje dinamičnim situacijam (Edmonson, Sumagaysay, Cueman & Chappell, 2016, str. 419) in prilagajati svoje vedenje za doseganje boljših rezultatov ekipe (Yun, Faraj &

Sims, 2005, str. 1294). Ta oblika vodenja je še vedno bolj usmerjena v naloge, kot v odnose. Vključuje pripadnost in dobro seznanjenost zaposlenih z cilji, načrti in ukrepi, vendar je poudarek na sledenju podrejenih in ne na soodločanju.

Participativni vodstveni slog je usmerjen v spodbujanje podrejenih v odločanje. Avtorji med najpomembnejšimi oblikami vodenja v kriznih situacijah v zdravstvu poudarjajo skupno odločanje. (House, & Mitchell,1975; Paixão, Mills, McKimm, Hassanien & Al-Hayani, 2020; James & Bennett, 2020; Zhuravsky, 2015; Yun, Faraj & Sims, 2005) Skupno vodenje je učinkovito v kriznih razmerah v zdravstvu, ko imajo podrejeni dovolj informacij, znanja in so visoko usposobljeni (Yun, Faraj & Sims, 2005, str. 1292).

Raziskovalci so ugotovili, da vodje, ki delujejo v interesu skupine, pridobijo večji vpliv (Van Bavel et al, 2020, str. 466) blažijo in odpravljajo zdravstvene krize (Lei, & Palm, 2019) in so bolj učinkoviti (Yun, Faraj & Sims, 2005, str. 1292). Sposobnost timskega dela je bistvenega pomena za uspešno obvladovanje krize in ustvarja zaupanje. Vodje z aktivnim vključevanjem članov tima v odločanje, ob zavedanju njihovih omejitev, ustvarjajo sodelovalno okolje, vzpostavljajo zaupanje s člani tima (Lei ̦& Palm, 2019, str.), vplivajo na zadovoljstvo in uspešnost podrejenih (House & Mitchell, 1974 str. 326) in učinkoviteje blažijo zdravstvene krize (Zhuravsky, 2015, str. 1).

Al-Hayani, Hassanien, McKimm, Mills, McKimm in Paixão (2020, str. 40), ugotavljajo, da je v krizi učinkovit skupni pristop k vodenju, deljeni odgovornosti in odločanju, z manjšo porazdeljenostjo v vrednosti odločanja. Podpirajo tako formalne in neformalne oblike vodenja, z možnostjo prehajanja med odločanjem na podlagi direktiv ali na podlagi sočutnega pristopa.

Parcipativni vodstveni slog je usmerjen v odnose z možnostjo prehajanja v naloge in je najprimernejša oblika vodenja v kriznih razmerah, kjer ni potrebno zelo hitro odločanje.

Podporno vedenje vodje, usmerjeno v zadovoljevanje potreb podrejenih je učinkovito v manj kriznih razmerah (Mitchell & House, 1974 str. 326). Naloga vodje je, da predvidi, kakšne psihične obremenitve bodo imeli delavci in uporabiti ustrezne komunikacijske strategije za obvladovanje stresa med osebjem (Reynolds, 2010, str. 262).

Glede na rezultate je v različnih razmerah potrebno uporabiti različen vodstveni slog in ga prilagajati kritičnosti razmer. V bolj kritičnih razmerah mora vodja uporabljati vodstveni slog usmerjen v naloge, pri manj kritičnih razmerah pa vodstveni slog usmerjen v odnose. Najbolj zaželen vodstveni slog v zdravstvu je na podlagi skupnega odločanja, ki pri podrejenih spodbuja zavzetost za delo, ustvarja sodelovalno okolje in zaupanje v timu. Te oblike vodenja naj bi se vodje posluževale v največji meri. Če je zgrajen dober odnos med vodjo in podrejenimi ima vodja manj težav pri prehajanju med različnimi oblikami vodstvenega sloga in mu podrejeni sledijo tudi pri uporabi avtokratskega sloga.

6   Zaključek

Raziskovalci so v zdravstvu opredelili več slogov vodenja v kriznih situacijah. Na podlagi ugotovitev raziskave smo opredelili vedenjski vzorec kriznega vodstvenega sloga in pojasnili učinkovito vodenje v kriznih razmerah v zdravstvu. Ni nujno, da ima velik vodja vse vodstvene lastnosti, velik vodja mora imeti edinstven slog vodenja. Učinkovito vodstvo zdravstvenega osebja je ključnega pomena za učinkovito delovanje v kriznih razmerah. Avtokratski, transformacijski, participativni in podporni so različni slogi vodenja in noben slog vodenja ni ves čas pravilen in vodja mora spreminjati in sprejeti vodstveni slog, ki ustreza situaciji.

Raziskovalci so ugotovili, da je v zelo kritičnih situacijah, ko je potrebno hitro sprejemati odločitve, najučinkovitejši avtokratski vodstveni slog, na podlagi direktiv in usmerjen v naloge, medtem ko je v manj kritičnih razmerah učinkovitejši vodstveni slog usmerjen v odnose. Zaradi specifičnosti dela v zdravstvu je poudarek na timskem sodelovanju, skupnem vodenju (formalno in neformalno vodenje) in učinkoviti komunikaciji. Med krizo je zelo učinkovito tudi ciljno usmerjeno vedenje vodje, ki podrejene navdihuje, usmerja in se prilagaja dinamičnim spremembam med krizo. Avtorji med najpomembnejšimi slogi vodenja poudarjajo participativni, ki je usmerjen v spodbujanje podrejenih v odločanje. Skupno odločanje je učinkovito, kadar imajo podrejeni dovolj informacij, strokovnega znanja in izkušenj. V manj kriznih razmerah, ko je na razpolago več časa za odločanje, je učinkovito podporno vedenje vodje, usmerjeno v zadovoljevanje potreb podrejenih, skrb za duševno zdravje in dobro počutje zaposlenih. Participativni slog vodenja velja za boljšega, vendar v zelo kritičnih situacijah, ko se je potrebno hitro odločati, ni najbolj uspešen.

Raziskava ponuja neizkušenim kriznim strokovnjakom ogrodje, ki temelji na znanstveno – raziskovalnih ugotovitvah. Vodje v zdravstvu bi morali imeti možnost sodelovanja z drugimi strokovnjaki v organizaciji, za obvladovanje krize. Uspeh v kriznem upravljanju povečuje tudi splošni potencial organizacije za uspeh v konkurenčnem svetu.
Raziskava pripomore k boljšemu pregledu vedenjskih kompetenc vodij v kriznih situaciji v zdravstvu. Rezultati raziskave lahko pomagajo pri pripravljenosti in pravočasnem odzivanju na krizne situacije in sprejemanju vedenjskega vzorca vodje.

Obvladovanje razmer v krizni situaciji v zdravstvu je neposredno povezano z družbo. Kako dobro se bodo zdravstvene organizacije odzivale v kriznih razmerah, vpliva na zdravstveno stanje prebivalstva in blaginjo družbe.

Omejitev raziskave je v majhnem številu člankov vključenih v analizo. Na temo kriznega sloga vodje ni veliko preglednih člankov na področju zdravstva. Nadaljnja omejitev je tudi, da raziskava preučuje krizne razmere v zdravstvu v splošnem kontekstu in se ne osredotoča samo na eno vrsto krize. Narava krize lahko narekuje določen vodstveni slog.

Globalizacija prinaša na področju zdravstva nove izzive pri obvladovanju kriznih razmer, zato so potrebne stalne in nadaljnje raziskave glede na aktualne razmere. Potrebne so nadaljnje

empirične raziskave za preizkušanje predlaganih vodstvenih slogov znotraj zdravstvenih organizacij v različnih kontekstih, da se omogoči poglobljeno razumevanje dinamike vodja - zaposleni v kriznih razmerah.

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Abstract:
Crisis Management Style in Healthcare

Research question (RQ): The research aimed to find behaviour patterns of efficient crisis leaders in healthcare and, based on empiric research, develop a leadership style framework during a healthcare crisis. The study contributes to a better overview of behavioural patterns of leaders in situation of crisis. Recognition of decision-making pattern in crisis situations and use of decision model based on scientific findings can be helpful to unexperienced crisis experts, and organizations for preparation for individual crisis plan for organization. Results assist to prepare a timely response in critical situations, including choosing the most appropriate leadership approach appropriate. The study provides less experienced crisis leaders a framework of leadership pattern in healthcare crises, which is based on existing research.
Methods: We reviewed research papers on crisis leadership in healthcare using key words chosen by inductive and deductive methods. We identified 21 papers focusing on crisis in health care. We used qualitative research method based on collection, review, and analysis of the literature. In the theoretical part we performed a systematic overview of leadership theories that consisted of a platform for connecting with scientific literature about leadership in crisis. The findings were critically analyzed, connected, tabulated, and we developed a leadership style framework in crisis of healthcare. We used synthesis of general terms into a higher-level whole. The validity of the study was satisfactory as we focused on scientific literature, without looking for generalizability. External validity is higher because the backbone of the leadership style can be generalized and useful in other areas. Internal validity is lower, because a single researcher did research. We only cited other authors' findings and explained them theoretically, without subjective reasoning.
Results: Leadership is essential for the efficient performance of healthcare professionals in crises. Authors described several leadership patterns in the healthcare crisis but concluded that none of them is efficient in all conditions and should be modified according to actual situations. One of the most crucial leadership patterns is team decision making. To provide safe and efficient patient care in crises, healthcare professionals need to lead highly coordinated team strategies. Bold leadership using directives is more suited for crisis management than group decision making. Goal-oriented leadership motivates employees, orients them and changes plans according to dynamic changes in the situation. Supportive leadership is more useful in a normal situation. In critical conditions goal-oriented, and in less critical situations, supportive leadership is more appropriate. In critical situations, different leadership styles should be used and modified according to current needs. With good relations between a leader and one's subordinates, the leader has fewer troubles in transition from different leadership styles. Employees will also accept a leader's autocratic approach.
Society: Control of healthcare crisis is directly connected to society. How efficient healthcare organizations respond to crisis affects the health of the population and the prosperity of society.

Limitations/further research: There are only few published papers dealing with leadership styles in healthcare crises. Globalization brings new challenges to critical conditions. Therefore, new research is needed to explore new situations in the future. Research explores critical conditions in healthcare in a general context. The nature of the crisis can dictate a particular leadership style. Further studies are needed to test proposed healthcare leadership styles in different contexts to enable a deeper understanding of leader-employee dynamics in critical conditions.

Keywords: leadership, leadership style, leadership behaviour, team decision management, crisis, healthcare, crisis management.

Opredelitev, objavljanje in vpliv predatorskih revij

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Povzetek:

Ozadje in izvirnost: Namen raziskave je opredeliti izzive, ki obkrožajo predatorske revije; povedati, kaj predatorske revije so in kakšna so tveganja povezana s predatorskimi revijami. Zanima nas, kaj o predatorskih revijah pišejo različni avtorji.

Članek nudi vpogled v raziskave različnih avtorjev; v teoretičnih izhodiščih predstavi ozadje fenomena predatorskih revij in v rezultatih prikaže in primerja tri področja; opredelitev avtorjev do predatorskih revij, kdo in zakaj objavlja v predatorskih revijah ter kakšen je vpliv predatorskih revij na znanost. V pregledu zajema aktualno literaturo zadnjih petih let.

Metoda: Raziskava temelji na pregledu obstoječih podatkov. Članke smo iskali na Google Učenjak. Za iskanje smo uporabili ključne besede v tabeli 1 do saturacije podatkov.

Z iskanjem po ključnih besedah smo poiskali 46 člankov. Za pregled literature smo izbrali članke, objavljeno od leta 2015 naprej. Uporabili smo samo članke, ki se nanašajo na predatorske revije in izločili tiste, ki se nanašajo na ugrabljene revije (hijacked journals) ali psevdo-revije. Izločili smo tiste članke, ki se vsebinsko ne opredelijo do predatorskih revij/založnikov in/ali ne ocenijo vpliva predatorskih revij na znanost in/ali ne povejo, kdo in/ali zakaj v predatorskih revijah objavlja.

Po izvedeni filtraciji smo uporabili 30 člankov za primerjavo pogleda različnih avtorjev na predatorske revije, rezultate raziskav avtorjev kdo in zakaj v predatorskih revijah objavlja in kakšen vpliv imajo predatorske revije na znanost glede na različne avtorje. Rezultate smo prikazali v obliki tabel glede na posamezno raziskovalno vprašanje. Zanesljivost rezultatov smo preverili z intra ocenjevanjem; pregled smo izvedli v dveh ločenih časovnih točkah v razmiku sedmih dni. Razlik med prvim in drugim ocenjevanjem ni. Ključne ugotovitve so podane z induktivnim sklepanjem.

Rezultati: Vsi avtorji zavzemajo konkretno stališče do predatorskih revij. Predvsem se izpostavlja obstoj predatorskih revij s ciljem zaslužka – avtorji jih označujejo kot nepoštene, ne transparentne, izkoriščevalske, goljufive. Opozarjajo na pomanjkanje jasno definiranih kriterijev, ki revijo uvrstijo na seznam predatorskih revij. Avtorje in njihove razloge za objavo v predatorskih revijah lahko razdelimo v dve skupini; tisti, ki ne namenoma objavijo in tisti, ki namenoma objavijo. Vsi avtorji so si edini, da predatorsko založništvo negativno vpliva na znanost. Izpostavljajo, da je takšno založništvo največja grožnja za znanost od časa inkvizicije in da je ogrožena verodostojnost znanosti.

Družba: Članek doprinaša k razumevanju pomena predatorskih revij in kaj to pomeni za znanost ter posledično družbo. Družba se razvija v koraku z znanostjo – kakšen bo razvoj družbe, če znanost ni verodostojna in zanesljiva? Članek razkriva samo nekaj tem, povezanih s predatorskimi revijami, na katere pa morajo biti predvsem raziskovalne organizacije pozorne. Predvsem je potrebno izravnati pritiske na avtorje po principu »objavi ali propadi« ter poudarjati kvaliteto pred kvantiteto.

Omejitve/nadaljnje raziskovanje: Raziskava je omejena s fokusom na izpostavljena tri področja. Ne poglobi se v geografsko razpršenost avtorjev oz. v geografsko razpršenost predatorskih revij ali v znanstveno področje, kjer so predatorske revije najbolj razširjene. Za nadaljnje raziskovanje bi lahko izvedli empirično raziskavo s pregledom obstoječega seznama predatorskih revij in raziskali, od kod prihajajo avtorji, kje so revije locirane, kakšna je incidenca objav slovenskih avtorjev in podobno.

Ključne besede: predatorske revije, predatorski založniki, avtorji, vpliv na znanost, etika objavljanja, Beallov seznam, fenomen predatorskih revij, odprti dostop.

1   Uvod

Znanstvene revije igrajo ključno vlogo pri izmenjavi podatkov, zbranih z znanstvenimi metodami in izmenjavi rezultatov izvedenih raziskav s preostalo akademsko skupnostjo. Znanstvene revije si prizadevajo zagotoviti sistematičen razvoj, izvirnost, zanesljivost in natančnost znanstvenih študij, predloženih s pomočjo uredniških postopkov in postopkov strokovnih recenzij. Kakovost teh postopkov odraža tudi splošno kakovost znanstvenega znanja, pridobljenega v končnem izdelku - objavljenem članku. (Demir, 2018, str. 1296)

Od petdesetih let prejšnjega stoletja naprej število objavljenih znanstvenih del narašča, kar je mogoče pripisati hitremu razvoju na znanstvenih področjih na splošno, zlasti na medicinskem področju, ampak tudi dejstvu, da organi, ki razporejajo finančna sredstva za znanstvene raziskave in napredke, znanstvenike ocenjujejo na podlagi njihovih objavljenih del. Ta ocena temelji na več različnih parametrih, kot so h-indeks, faktor vpliva in podobni. Še posebej so pod stalnim pritiskom mladi raziskovalci, ki si prizadevajo za povečanje svojega ugleda, vpliva in si želijo zagotoviti prejemanje finančnih sredstev. Posledično je vedno več založnikov, ki želijo pritegniti in spodbuditi avtorje, da svoje znanstvene raziskave objavijo v njihovih revijah z odprtim dostopom, faktorjem vpliva, kjer so dela ustrezno podvržena strokovni recenziji. Veliko takšnih revij pa niso to, za kar se izdajajo. Marsikatere ne izvajajo ustreznih postopkov oz. ne nudijo ustrezne strokovne recenzije. Takšne revije Jeffrey Beall, bibliotekar Univerze v Koloradu, imenuje predatorske revije. (Richtig, Berger, Lange-Asschenfeldt, Aberer, & Richtig, 2018, str. 1441)

Namen raziskave je opredeliti izzive, ki obkrožajo predatorske revije; povedati, kaj predatorske revije so in kakšna so tveganja povezana s predatorskimi revijami. Zanima nas, kaj o predatorskih revijah pišejo različni avtorji.

2   Teoretična izhodišča

2.1   Pregled literature

Izraz predatorske ali plenilske revije je nastal pred dobrim desetletjem. Izraz je skoval ameriški bibliotekar in avtor Jeffrey Beall. Vse od takrat so predatorske revije vroča tema v znanstveni srenji. Kljub temu, da so takšne revije v vidnem polju raziskovalcev in da se o njih na veliko razpreda, število teh revij in število člankov, objavljenih v takšnih revijah, še vedno strmo narašča. Nekateri znanstveniki v predatorskih revijah objavijo svoje članke na podlagi prevare, medtem ko drugi na ta način dvomljivo polnijo svoj rezime. (Cobey et al., 2018, str. 3)

Fenomen predatorskih revij se je pojavil skoraj sočasno s tem, ko so pričele mnoge znanstvene revije avtorjem za objavo njihovih člankov zaračunavati za objavo. Zaračunavanje za objavo člankov se je pojavilo na prehodu iz tiskanih verzij revij v digitalne oblike kot model ustvarjanja prihodka. Eden izmed razlogov za uvedbo plačila objave članka v uglednih znanstvenih revijah je bil ta, da se omogoči odprt dostop za uporabnike oz. bralce teh revij.

Model ustvarjanja prihodka torej temelji na zaslužku iz plačila avtorja za storitev objave v reviji in ne na zaslužku na podlagi naročnin na revijo. Na ta način bi bila dela, objavljena v revijah, dostopna bralcem iz držav s slabšo ekonomsko sliko ter aktualne vsebine ne bi bile ekskluzivne le za bralce, ki si naročnine lahko privoščijo. (Vakil, 2019, str. 92)

Sprememba modela ustvarjanja prihodka znanstvenih revij pa je povzročila še drugo, manj zaželeno spremembo. Na prelomu tisočletja so se pojavile številne revije, ki so ponujale hitro objavo, visoko stopnjo sprejemljivosti in nizke stroške za avtorje. Takšna ureditev je pritegnila predvsem avtorje iz držav z nizkim ali srednjim prihodkom, ki niso imeli finančnih sredstev za plačilo honorarja za objavo v prestižnejših in uglednejših revijah, in so bili zaradi pritiskov delodajalcev primorani v čim večjo frekvenco objav. Posledično je prišlo do velikega števila revij, ki niso indeksirane v citatnih indeksih, imajo nizke akademske standarde, dela niso podvržena strokovni recenziji, vendar imajo z novim modelom visoke prihodke. (Vakil, 2019, str. 92)

Poleg novega modela ustvarjanja prihodkov pa je možen tudi drugi vzroka razmaha predatorskih revij; trenutno ni dogovorjene in natančno definirane opredelitve, kaj točno predatorska revija je v smislu začrtanih, standardiziranih in splošno sprejetih kriterijev. V pomanjkanju jasne definicije, je za deležnike, kot so organi financiranja in raziskovalne inštitucije, težavno vzpostaviti eksplicitni sistem, ki bi deloval kot požarni zid za varovanje pred objavljanjem v teh revijah. (Cobey et al., 2018, str. 3)

Leta 2012 je Jeffrey Beall objavil seznam predatorskih revij oz. založnikov teh revij, ki ga je v naslednjih letih še dopolnil z natančnejšimi merili, ki obravnavajo poslovne modele, uredniške prakse kot so pošiljanje elektronske pošte avtorjem z vabilom k objavi v njihovi reviji, stroške za objavo in transparentnost ter integriteto teh revij. (Somoza-Fernández, Rodríguez-Gairín, & Urbano, 2016, str. 731)

Prvoten kot posodobljen seznam založnikov predatorskih revij je dostopen na spletni strani https://beallslist.net/. Prav tako je Beall sestavil seznam t.i. standalone journals; revij, ki nimajo založnika.

Ocenjevanje založnikov z odprtim dostopom je proces, ki vključuje previden, natančen, temeljit ter skeptičen pregled praks, vsebine in spletnih strani založnika. Beall je oblikoval nabor kriterijev, s katerimi je določil, kateri založniki oz. revije so potencialno predatorski ter navedel primere slabih praks. (Beall, 2015, str. 1)

Beall (2015, str. 2-4) izpostavlja štiri področja, na katera se je potrebno osredotočiti pri definiranju, ali gre za predatorskega založnika:
- Uredniški odbor (npr. lastnik založbe je tudi urednik vseh revij, ki jih založba izdaja; noben posameznik ni opredeljen kot urednik določene revije; revija ne definira uradnega uredniškega odbora, o uredniškem odboru ni na voljo nobenih akademskih informacij; obstajajo dokazi, da uredniški odbor ni ustrezno akademsko kvalificiran; več revij ima isti uredniški odbor; uredniški odbor ne vsebuje dovolj članov oz. so

imena članov nepreverljiva ali izmišljena; zlasti pri revijah, ki trdijo, da so mednarodne, je malo ali nič geografske raznolikosti med člani odbora; v uredništvu ni raznolikosti po spolu).

- Poslovanje (npr. pomanjkanje transparentnosti pri poslovanju založnika; založnik nima ustaljenih pravil o digitalni hrambi revij; založnik obsega veliko število revij, po navadi z enako predlogo postavitve domačih spletnih strani posameznih revij; založnik nudi nezadostne informacije ali skriva informacije o avtorskih stroških, ponuja objavo avtorjevega članka in kasneje pošilja nepričakovane račune za plačilo stroškov; iskalnim orodjem ne dovoljuje iskanja po objavljeni vsebini; zaščiti PDF datoteke z namenom preprečevanja preverjanja plagiatorstva).

- Integriteta (npr. ime revije se ne ujema s poslanstvom revije oz. ime revije ne odraža njenega izvora; založnik na svojih spletnih straneh ali v elektronski pošti navaja, da so revije indeksirane s faktorjem vpliva in/ali navaja lažni faktor vpliva; založnik pošilja zahtevke za strokovno recenzijo znanstvenikom, ki za to niso kvalificirani oz. se dotično delo ne nanaša na njihovo strokovno področje; založnik ne namenja zadostnih sredstev za preprečevanje in odpravljanje kršitev avtorjev kot so plagiatorstvo, samo-plagiatorstvo in podobno).

- Drugo (npr. založnik objavi že objavljena dela; uporablja lažne navedbe v svojo korist (vodilni založnik); navidezno deluje v zahodnih državah iz vidika privlačnosti za neuveljavljene avtorje iz tretjih držav; zagotavlja minimalno lektoriranje člankov pred objavo ali ga sploh ne zagotavlja; objavlja dela, ki niso akademskega izvora (t.i. psevdo-znanost); kontaktni podatki ne razkrivajo prave lokacije založniške družbe).

Poleg opisanih štirih področij, je Beall (2015, str. 4-6) definiral tudi posamezne primere slabih praks, ki kažejo na to, da gre za predatorskega založnika ali revijo; v nadaljevanju navajamo le nekatere:

- založnik dobesedno ali skoraj dobesedno kopira smernice za avtorje od drugih založnikov,
- založnik objavlja revija s široko pokrito tematiko, z namenom pridobitve čim več avtorjev in s tem večji dohodek od plačila stroškov za objavo ali revije, ki pokrivajo dva ali več področja, ki po navadi ne sodita skupaj,
- založnik ima slabo vzdrževane spletne strani, katere povezave ne delujejo ali ne vodijo na nadaljnje strani; vsebujejo slovnične napake ali objavljajo materiale brez dovoljenja prvotnih virov,
- založnik pretirano uporablja elektronska sporočila z namenom privabljanja avtorjev ali članov v uredniški odbor, ki po navadi vsebujejo lažne podatke ali obljube,
- založnik ne uporablja standardnih identifikatorjev, kot so mednarodna standardna številka serijske publikacije (ISSN) ali identifikator digitalnega objekta (DOI) oz. jih neustrezno navaja.

Kriteriji po Beallu niso najzanesljivejši kriteriji določanja oz. niso edini kriteriji, po katerih lahko prepoznamo predatorsko revijo. Na voljo so še druga orodja za odkrivanje takih revij oz. preverjanje kredibilnosti revij.

Rele, Kennedy in Blas (2017) so razvili t.i. Journal evaluation tool. Gre za dvokomponentni sistem preverjanja in ocenjevanja, preko določenih rubrik in ocenjevalnega lista. Rubrike in ocenjevalni list vsebujejo kriterije, ki jih uporabnik točkuje z oceno od 1 do 3 ter navodila za interpretacijo rezultatov.

O tveganjih, povezanimi s predatorskimi revijami, ozavešča tudi kampanja Think. Check. Submit. Cilj kampanje je, da z vrsto orodji in praktičnimi primeri izobražuje avtorje in raziskovalce ter pomaga graditi zaupanje do verodostojnih raziskav in publikacij. Preko sistema vprašalnikov vodi avtorja do ocene, ali je revija, v kateri želi objaviti svojo raziskavo oz. svoj članek, vredna zaupanja. (Think.Check.Submit., 2021)

Poleg opisanih orodij so še drugi pristopi k iskanju kredibilnih, zaupanja vrednih revij. Indeksacija v prestižnih bazah podatkov, kot so Web of Science, Scopus, MEDLINE, je gotovo pokazatelj, da gre za revijo, ki je bila podvržena postopku pridobitve indeksacije in posledično pregledana in ocenjena po kriterijih, ki jih te baze zahtevajo. Indikatorji za iskanje kredibilnih revij so tudi Journal Citation Reports (JCR), Scopus (SNIP) in SCImago Journal Ranking (SJR) preko faktorjev vpliva. (Elsevier, 2020; Shrestha, Subedi, & Timsina, 2020, str. 10)

COPE (Committee on Publication Ethics) je neprofitna organizacija, katere cilj je definiranje najboljših praks v znanstvenem objavljanju kot tudi ozaveščanje in pomoč založnikom, urednikom in avtorjem za doseg teh praks. COPE definira ključne prakse na različnih področjih, ki naj bi jih znanstvene revije in kredibilni založniki upoštevali. Ta področja so (COPE, 2021a):
- prijave o kršitvah (revije morajo imeti jasno definiran postopek obravnave prijav o kršitvah, jih resno obravnavati in imeti enoten pristop k obravnavi takih prijav),
- avtorstvo in prispevki (revije morejo imeti jasne postopke, ki omogočajo preglednost glede avtorstva in prispevanja k znanstvenemu delu in pomagajo pri reševanju morebitnih sporov),
- pritožbe (revije morajo imeti jasno politiko glede obravnave pritožb do revije, uredniškega odbora, zaposlenih ali založnika),
- navzkrižje interesov (obstajati morajo jasne opredelitve navzkrižij interesov in postopki za obravnavanje navzkrižij interesov tako avtorjev, recenzentov, urednikov, revij in založnikov, ne glede na to, ali so opredeljeni pred objavo ali po njej),
- podatki in obnovljivost (revije morajo vključevati politike o razpoložljivosti podatkov in spodbujati uporabo smernic za poročanje ter registracijo kliničnih preskušanj in drugih oblik študij v skladu s standardno prakso v svoji disciplini),
- etični nadzor (vključevati mora soglasja o objavah, objavah o ranljivejših skupinah, etičnem vodenju raziskav in podobno),

- intelektualna lastnina (vse politike intelektualne lastnine morajo biti jasno opredeljene in zapisane, jasna morajo biti pravila, kaj je plagiat in podobno),
- upravljanje revije (struktura mora biti dobro opisana in izvedena, vključno s poslovnim modelom, politikami, procesi in programsko opremo za učinkovito vodenje uredniško neodvisne revije, kot tudi za učinkovito upravljanje in usposabljanje uredniških odborov ter uredniškega in založniškega osebja),
- postopki strokovne recenzije (vsi postopki strokovne recenzije morajo biti transparenti, strokovno opisani in izvedeni),
- razprave in popravki po objavi (revije morajo omogočiti objave razprav na njihovem spletnem mestu in imeti mehanizme za popravljanje, revizijo ali umik člankov po objavi).

Mnogo opozorilnih znakov, da gre za predatorsko revijo lahko prepoznamo tudi tako, da revija ne sledi načelom transparentnosti in dobrih praks v znanstvenem objavljanju. COPE, DOAJ, OASPA in WAME definirajo 16 načel transparentnosti, ki pokrivajo spletno stran revije, ime revije, recenzijski postopek, lastništvo in menedžment, upravni organ, uredniški odbor, avtorske pravice in licence, avtorske stroške, postopke za prepoznavo in obvladovanje prijav o kršitvah, etiko objavljanja, urnik objavljanja, dostop, arhiviranje, vire prihodkov, oglaševanje in trženje. (COPE, 2021b)

Poleg ravno nasprotnih lastnosti kot so navedena v načelih transparentnosti, COPE v tekoči razpravi o predatorskem založništvu navaja splošne, skupne lastnosti predatorskih revij; to so skriti ali nejasni stroški za avtorja, pomanjkljiv recenzijski postopek in zagotavljanje hitrega postopka sprejetja in objave članka. Drugi indikatorji, ki kažejo na to, da gre za predatorsko revijo so tudi pomanjkljivi postopki, ki zajemajo obvladovanje pritožb, avtorstva in drugih procesov; slaba kakovost, pomanjkanje etičnih načel, pomanjkanje postopkov popravkov, revizije ali umika članka po objavi in podobno. (COPE, 2021c, str. 4 - 5)

2.2 Raziskovalna vprašanja

RV1: Kako se različni avtorji opredeljujejo do predatorskih revij?

RV2: Kdo in zakaj v teh revijah objavlja?

RV3: Kakšen je vpliv teh revij na znanost?

3 Metoda

Raziskava temelji na pregledu obstoječih podatkov. Članke smo iskali na Google Učenjak. Za iskanje smo uporabili ključne besede v tabeli 1 do saturacije podatkov.

Tabela 1. Ključne besede za iskanje literature

Ključne besede
»predatory+publishing«
»predatory+journal«
»predatory+journalism«
»predatory+publication«
»publishing+ethics+predatory+practices«
»predatory+journal+issues«
»who+publish+in+predatory+journal«
»who+publish+in+predatory+journal+characteristics«
»why+publish+in+predatory+journal«
»predatory+journal+organization+management«

Z iskanjem po ključnih besedah smo poiskali 46 člankov. Za pregled literature smo izbrali članke, objavljeno od leta 2015 naprej. Uporabili smo samo članke, ki se nanašajo na predatorske revije in izločili tiste, ki se nanašajo na ugrabljene revije (hijacked journals) ali psevdo-revije. Izločili smo tiste članke, ki se vsebinsko ne opredelijo do predatorskih revij/založnikov in/ali ne ocenijo vpliva predatorskih revij na znanost in/ali ne povejo, kdo in/ali zakaj v predatorskih revijah objavlja.

Po izvedeni filtraciji smo uporabili 30 člankov za primerjavo pogleda različnih avtorjev na predatorske revije, rezultate raziskav avtorjev kdo in zakaj v predatorskih revijah objavlja in kakšen vpliv imajo predatorske revije na znanost glede na različne avtorje. Rezultate smo prikazali v obliki tabel glede na posamezno raziskovalno vprašanje. Zanesljivost rezultatov smo preverili z intra ocenjevanjem; pregled smo izvedli v dveh ločenih časovnih točkah v razmiku sedmih dni. Razlik med prvim in drugim ocenjevanjem ni. Ključne ugotovitve so podane z induktivnim sklepanjem.

Slika 1. Model raziskave

4 Rezultati

4.1 Pogled avtorjev na predatorske revije

V tabeli 2 so prikazani rezultati glede na prvo raziskovalno vprašanje (RV1) o opredelitvi avtorjev do predatorskih revij. Predstavljeni so pogledi avtorjev iz 15 člankov. Ključne ugotovitve so podane pod tabelo 2.

Tabela 2. Prikaz pogleda različnih avtorjev glede na opredelitev do predatorskih revij

Avtorji	Opredelitev do predatorskih revij
Frandsen (2017)	Predatorske revije se pojavljajo v različnih oblikah, vendar imajo vse samo en skupni cilj; t.j. **kovanje dobička na račun avtorjev**.
Beall (2016)	Založniki predatorskih revij so **nepošteni, niso transparentni in ne sledijo standardom znanstvenega objavljanja.**
Ferris & Winker (2017)	Edini cilj predatorskih revij je **zaslužek**.
Clark & Smith (2015)	Predatorske revije so še ena izmed **težav, ki ogroža ljudi in države s slabo ekonomsko sliko**.
Perlin, Imasato, & Borenstein, (2018)	Predatorsko založništvo **je problem v svetovnem merilu**, z različnimi mednarodnimi in medkulturnimi viri.
da Silva, Dobránszki, Tsigaris, & Al-Khatib (2019)	Vse revije, obtožene »predatorstva«, niso predatorske revije. Mnoge so **izkoriščevalske v smislu visokih stroškov za avtorje**. Potrebna je konkretna definicija in ustaljen način izražanja, kadar govorimo o predatorskih revijah.
Cortegiani, Manca, & Giarratano (2020)	Predatorske so tako revije kot avtorji, če je glavni namen le-teh samo **dobiček ali hitra pot do napredovanja**.
Vakil (2019)	K trenutnemu stanju; tj. razmahu predatorskih revij, je poleg modela ustvarjanja prihodkov pri odprtem dostopu prispevala predvsem akademska usmeritev **»objavi ali propadi«**, kar vrši pritisk predvsem na avtorje v začetku svoje kariere.
Richtig, Berger, Lange-Asschenfeldt, Aberer, & Richtig (2018)	Podjetja, ki objavljajo predatorske revije, so **problem na področju znanstvene literature**. Delujejo le z namenom odvajanja sredstev avtorjev, ne da bi avtorjem in bralcem zagotovili ustrezne storitve.
McLeod, Savage, & Simkin (2018)	Predatorske revije obstajajo predvsem zato, da **zaslužijo denar za svojega urednika – lastnika**. Obstajale bojo tako dolgo, kolikor dolgo bojo obstajali avtorji, ki bojo plačevali za objavo v teh revijah.
Eriksson & Helgesson (2018)	Preveč se govori o predatorskih revijah in premalo se naredi, da bi se definiralo **konkretne kriterije**, ki bi razlikovali med slabo kakovostnimi in zavajajočimi revijami.
Strong (2019)	Predatorsko založništvo uporablja **izkoriščevalni poslovni model**, podstandardne ukrepe za nadzor kakovosti in zavajajoče prakse objavljanja.

»se nadaljuje«

»nadaljevanje«

Avtorji	Opredelitev do predatorskih revij
Beall (2017)	Predatorski založniki uporabljajo zlati model odprtega dostopa in si prizadevajo ustvariti **čim več prihodkov**, brez ustreznih praks strokovne recenzije.
Safraz et al. (2020)	Predatorsko založništvo je **izkoriščevalski, goljufivi model založništva z odprtim dostopom.** Večina predatorskih revij ne sledi politikam, ki jih določajo organizacije, vključno s Svetovnim združenjem medicinskih urednikov (World Association of Medical Editors, WAME), Odborom za etiko objav (Committee on Publication Ethics, COPE), Uredniki Sveta znanosti (Council of Science Editors, CSE) in Mednarodnim odborom urednikov medicinskih revij (International Committee of Medical Journal Editors, ICMJE).
Krawczyk & Kulczycki (2020)	Prekomerno posploševanje napak nekaterih revij z odprtim dostopom do posploševanja napak celotnega gibanja odprtega dostopa je privedlo do **neupravičenih predsodkov akademske skupnosti do odprtega dostopa** Veliko raziskovalcev čuti potrebo po raziskovanju revij s slabimi ali neprisotnimi standardi objavljanja. Če želimo danes razumeti akademski svet, je raziskava teh problemov resnično ključnega pomena.

Ključne ugotovitve:
- vsi avtorji zavzemajo konkretno stališče do predatorskih revij,
- edini namen predatorskih revij je zaslužek; so nepoštene, izkoriščevalske, goljufive,
- predstavljajo globalni problem, ogrožajo ljudi in države s slabšo ekonomijo,
- predatorski založniki niso edini krivci za nastanek dane situacije – akademski pritiski, avtorji, ki objavljajo v predatorskih revijah, posledično omogočajo obstoj le-teh,
- potrebne so konkretne definicije, kriteriji in raziskave za opredelitev predatorskih revij.

4.2 Kdo in zakaj v predatorskih revijah objavlja

V tabeli 3 so prikazani rezultati glede na drugo raziskovalno vprašanje (RV2) o tem, kdo in/ali zakaj v predatorskih revijah objavlja. Predstavljeni so pogledi avtorjev iz 18 člankov. Ključne ugotovitve so podane pod tabelo 3.

Tabela 3. Pregled različnih avtorjev glede na ugotovitve kdo in zakaj v predatorskih revijah objavlja

Avtorji	Kdo in/ali zakaj objavlja v predatorskih revijah
Bagues, Sylos-Labini, & Zinovyeva (2019)	- **Avtorji nekakovostnih raziskav**, ki odgovarjajo nadrejenim, ki ne znajo razločiti med kakovostno in predatorsko revijo, - **neizkušeni ali naivni raziskovalci**, ki se ne zavedajo goljufive narave nekaterih založnikov - **mlajši raziskovalci**, ki delujejo na oddelkih z nižjo kakovostjo raziskav, - glavna motivacija za objavo v teh revijah je **možnost pozitivnega**

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	-	vpliva na napredovanje oz. pri iskanju zaposlitve (pomembnost objavljanja).
Frandsen (2017)	-	Gre za **mlade, neizkušene avtorje**, ki prihajajo iz azijskih držav (Indija, Bližnji Vzhod) in afriških držav (Nigerija).
Dadkhah, Maliszewski, & Jazi (2016)	-	V večini držav s slabo ekonomijo je kvantiteta pomembnejša od kvalitete – avtor z več objavami ima boljše možnosti napredovanja oz. študent z več objavami ima boljše možnosti za nadaljevanje študija na višji stopnji,
	-	**avtorji so prevarani** z navajanjem lažnega faktorja vpliva ali z navajanjem revije, da je le-ta del prestižnih citatnih indeksov kot so Scopus, Web of Science.
Wallace & Perri (2018)	-	Število objavljenih člankov je pogoj za napredovanje raziskovalcev, ne glede na to, če so le-ti objavljeni v predatorskih revijah, zato **nekateri avtorji namenoma objavljajo v teh revijah**,
	-	avtorji so geografsko razpršeni; prihajajo tako iz držav Bližnjega Vzhoda, Azije, Afrike kot iz ZDA.
Beall (2016)	-	Nekateri avtorji **izkoristijo lahkotnost objave** v predatorski reviji, saj se od njih pričakuje veliko število objav – tako imajo korist avtorji in predatorske revije.
Ferris & Winker (2017)	-	**Avtorji zavestno objavljajo v predatorski reviji**, da bi lahko objave navedli v svojem strokovnem življenjepisu.
Clark & Smith (2015)	-	**Avtorji iz držav z nizkim ali srednjim dohodkom**, ki so pod enakimi pritiski objavljanja, kot avtorji iz držav z visokim prihodkom,
	-	velikokrat **ni namera avtorjev**, da objavijo v predatorski reviji, vendar so zaradi pomanjkanja usmeritve, znanja ali mentorstva prepuščeni sebi in lahko nasedejo vabilom k objavi s strani predatorske revije.
Perlin, Imasato, & Borenstein, (2018)	-	Avtorji moškega spola prevladujejo na področju objavljanja v predatorskih revijah,
	-	najnižji delež objav je s strani raziskovalcev s pridobljenim doktoratom,
	-	nekateri avtorji v predatorskih revijah objavljajo **zavedno**, z namenom višanja števila objavljenih del in ni nujno, da gre vedno za **neizkušene in mlade avtorje**.
Xia (2015)	-	Predatorske revije **privabijo avtorje z nizki stroški** za objavo članka v reviji.
Cortegiani, Manca, & Giarratano (2020)	-	Največkrat v predatorskih revijah objavljajo n**aivni avtorji in avtorji v zgodnji fazi raziskovalnega razvoja**,
	-	**izkušeni avtorji namenoma objavljajo** v predatorskih revijah za izboljšanje možnosti napredovanja.
Demir (2018)	-	Avtorji objavljajo v predatorskih revijah **zaradi pritiskov** s strani inštitucij, ohranitve zaposlitve, napredovanja, predvsem kadar je najbolj pomembna kvantiteta in ne kvaliteta,
	-	avtorji objavljajo v predatorskih revijah, ker so **dodatno plačani**

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		glede na število objav in ne glede na to, ali gre za objave v prestižnih ali predatorskih revijah,
	-	avtorji objavljajo v predatorskih revijah, ker jim n**i uspelo objaviti članka v revijah, indeksiranih v bazah Web of Sciences, Scopus**,
	-	avtorji, ki so objavili v predatorski reviji, so bili **zapeljani in prevarani**, predvsem z množico vabil v obliki elektronske pošte.
Duc et al. (2020)	-	Predvsem **neizkušeni raziskovalci** so žrtve predatorskih revij.
Shen & Björk (2015)	-	Večina avtorjev, ki objavlja v predatorskih revijah, prihaja iz področja **Azije** (večina iz Indije) in **Afrike** (večina iz Nigerije), manjši delež iz ZDA.
Richtig, Berger, Lange-Asschenfeldt, Aberer, & Richtig (2018)	-	**Avtorji, ki ne zaupajo kakovosti svojega dela**, raje objavijo članek v predatorski reviji kot pa da so zavrnjeni iz strani prestižnejše revije.
Ward (2016)	-	Najbolj ogroženi so **mladi in neizkušeni avtorji**, ki so pod pritiskom »objavi ali propadi«.
Xia et al. (2015)	-	Avtorji, ki objavljajo v predatorskih revijah, so **mladi, neizkušeni in pogosto prihajajo iz držav v razvoju** in nimajo ali imajo zelo skromno zgodovino objavljanja ali citiranja,
	-	največ avtorjev prihaja iz Indije in Nigerije,
	-	do objav prihaja predvsem zaradi **pritiska na avtorje**, da objavijo čim več člankov v čim več revijah.
Kurt (2018)	-	Številni avtorji iz držav v razvoju menijo, da jih bojo »zahodne« revije **zavrnile**, zato iščejo alternativne rešitve, ki so pogoste predatorske revije,
	-	številni avtorji so pre**malo podkovani v raziskovalnih metodologiji**, zato dvomijo v kakovost svojega dela in ga ne morejo objaviti v prestižni reviji,
	-	večina takšnih avtorjev prihaja iz Indije,
	-	nekateri avtorji so prisiljeni objavljati vsaj enkrat letno zaradi pogodbenih obveznosti, zato to storijo po **najlažji poti** v predatorski reviji,
	-	večina avtorjev v predatorskih revijah objavi **ne namenoma**, ampak ker nasedejo agresivni propagandi s strani predatorskih založnikov.
Frandsen (2018)	-	Avtorji, **željni hitrega napredovanja**, namenoma objavljajo v predatorskih revijah,
	-	avtorji, ki objavljajo v predatorskih revijah imajo **premalo znanja**, da bi prepoznali nevarnost.

Ključne ugotovitve:

- avtorji, ki v predatorski reviji svoje članke ne objavijo namenoma - ogoljufani, prevarani, zapeljani; neizkušeni ali mladi raziskovalci,

- avtorji, ki v predatorski reviji svoje članke objavijo namenoma – izkušeni in neizkušeni avtorji, razlogi so strah pred zavrnitvijo prestižnejših revij ali dvom v kakovost dela oz. pritisk »objavi ali propadi«.

4.3 Vpliv predatorskih revij na znanost

V tabeli 4 so prikazani rezultati glede na tretje raziskovalno vprašanje (RV3) o vplivu predatorskih revij na znanost. Predstavljeni so pogledi avtorjev iz 15 člankov. Ključne ugotovitve so podane pod tabelo 4.

Tabela 4. Pregled različnih avtorjev glede na ugotovitve o vplivu predatorskih revij na znanost

Avtorji	Vpliv predatorskih revij na znanost
Bagues, Sylos-Labini, & Zinovyeva (2019)	Širjenje predatorskih revij je **zaskrbljujoč simptom pomanjkanja natančnosti mnogih znanstvenih ocen.**
Beall (2016)	Založniki predatorskih revij **škodujejo znanstvenikom, znanosti in znanstvenemu komuniciranju**. Gre za nizko kakovostne revije, ki znanost **onesnažujejo**. Znanstveniki so lahko zaradi objave v predatorski reviji **stigmatizirani**.
Ferris & Winker (2017)	Predatorske revije **nimajo standardov in najboljših praks**, ki jih je vzpostavilo znanstveno založništvo, da ocenijo raziskave in izboljšajo kakovost objavljenega dela. Predatorske revije izpostavljajo mnoga **etična vprašanja** v znanstvenem svetu. Avtorji in inštitucije so dolžne ravnati skladno s postavljenimi standardi, etikami objavljanja in se izogibati podpori predatorskim revijam z objavljanjem v le-teh.
Clark & Smith (2015)	Gre za problem **»izgubljene znanosti«**. Ni nujno, da so vsi objavljeni članki v predatorski reviji nekakovostni. V primeru, kadar gre za kakovostno delo, le-ta dela niso vidna, nimajo zadostnega priznavanja – so izgubljena.
Perlin, Imasato, & Borenstein, (2018)	Predatorsko založništvo **negativno vpliva** na akademski svet.
Cortegiani, Manca, & Giarratano (2020)	Predatorske revije **resno in etično ogrožajo kredibilnost znanosti**. Prav tako **ogrožajo sloves odprtega dostopa** z zanemarjanjem upoštevanja uredniških standardov in etike objavljanja.
Duc et al. (2020)	Predatorske revije so se razširile tudi v **prestižne baze podatkov** kot so PubMed, PubMed Central, MEDLINE, SCOPUS in Web of Science, zato morajo biti znanstveniki še posebej pozorni na morebitne opozorilne znake.
Shrestha, Subedi, & Timsina (2020)	Predatorske revije predstavljajo **globalno grožnjo znanosti** z zmanjševanjem zanesljivosti, natančnosti in veljavnosti objavljenih znanstvenih del.
Revés et al. (2018)	Vprašanja nelegitimnega založništva zadevajo vse deležnike znanstvenega založništva, ki moralo razvijati **lokalne in globalne pobude za zagotavljanje kakovosti znanstvenega komuniciranja**.
Dobusch & Heimstädt	Predatorske revije **ogrožajo področje raziskovanja v menedžmentu**,

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(2019)	ker se lahko legitimno uporabijo za širjenje menedžerskih ideologij, moralno vprašljivih poslovnih modelov in diskriminatornih praks kadrovanja.
Richtig, Berger, Lange-Asschenfeldt, Aberer, & Richtig (2018)	Objava članka v predatorski reviji je **škodljiva tako za znanost kot za samega avtorja**. Avtor je pogosto **stigmatiziran**, prav tako pa je **oškodovan doprinos znanosti** – članek ni ustrezno pregledan in ovrednoten in kot takega ga lahko uporabijo drugi raziskovalci. Kljub temu ni nujno, da so vsi objavljeni članki nekakovostni – v primeru nenadnega zaprtja strani, na kateri predatorska revija objavlja, je **znanje izgubljeno**.
Ward (2016)	Najbolj zaskrbljujoče v kontekstu predatorskih revij je to, da **trdijo, da so objavljeni članki strokovno recenzirani**.
Strong (2019)	**Prepoznavanje predatorskih revij in posledic objavljanja** v njih je ključno za prakso, ki temelji na dokazih, izobrazbo in osebnostno rast znanstvenika.
Beall (2017)	Predatorski založniki predstavljajo **največjo grožnjo znanosti od časa inkvizicije**.
Frandsen (2018)	Strokovna recenzija je temelj znanstvenih objav, zato se zdi, da predatorske revije **ogrožajo verodostojnost znanosti**, saj recenzijskih postopkov ne izvajajo ali so le-ti nekakovostni.

Ključne ugotovitve:
- predatorsko založništvo negativno vpliva na znanost,
- predatorske revije predstavljajo grožnjo za znanost,
- škoda je povzročena tako znanosti kot znanstvenikom,
- etično ogrožanje kredibilnosti znanosti,
- dvom, komu in kaj verjeti,
- stigma za avtorje, ki objavijo v predatorski reviji,
- pojem »izgubljene znanosti«.

5   Razprava

Na prvo raziskovalno vprašanje lahko odgovorimo na podlagi pregleda v tabeli 2. Povzamemo lahko, da vsi avtorji zavzemajo konkretno stališče do predatorskih revij. Predvsem se izpostavlja obstoj predatorskih revij s ciljem zaslužka – avtorji jih označujejo kot nepoštene, ne transparentne, izkoriščevalske, goljufive (Beall, 2016; Ferris & Winker, 2017; Frandsen, 2018). Take revije ne upoštevajo etike objavljanja in ne sledijo standardom v znanstvenem objavljanju. Predstavljajo globalni problem in ogrožajo predvsem ljudi in države s slabšo ekonomsko sliko (Clark & Smith, 2015; Richtig, Berger, Lange-Asschenfeldt, Aberer, & Richtig; 2018; Safraz et al., 2020; Strong, 2019).

Vsi avtorji (glej Tabelo 2) vidijo predatorske revije kot grožnjo, vendar se pojavljajo nekateri, ki predatorskih založnikov ne vidijo kot edinih povzročiteljev dane situacije. Še več, poraja se vprašanja, če so vse revije, označene kot predatorske, res takšne. Opozarjajo na pomanjkanje

jasno definiranih kriterijev, ki revijo uvrstijo na seznam predatorskih revij. Zaradi tega pride do posploševanja, predvsem za označevanje mnogih revij z odprtim dostopom, da so predatorske. Prav tako menijo, da krivda ne leži izključno na lastnikih/založnikih v smislu kovanja dobička, ampak je problem obsežnejši in bolj kompleksen – pritisk akademske skupnosti na avtorje po nenehnem stalnem objavljanju za potrebe zadržanja zaposlitve, napredovanja, štipendije in podobno. Prav tako obsojajo avtorje, ki z namenom, predvsem za dosego kvote objave vsaj enkrat letno, objavljajo v predatorskih revijah in s tem omogočajo njihov obstoj. (Cortegiani, Manca, & Giarratano, 2020; da Silva, Dobránszki, Tsigaris, & Al-Khatib, 2019, Eriksson & Helgesson, 2018; Krawczyk & Kulczycki, 2020, McLeod, Savage, & Simkin, 2018; Vakil, 2019)

V odgovoru na drugo raziskovalno vprašanje ugotavljamo, da lahko avtorje, ki v predatorskih revijah objavljajo razmejimo na tiste, ki to storijo namenoma in tiste, ki to storijo ne namenoma. Delitev lahko naredimo tudi glede na izkušenost avtorjev in sicer, da predvsem neizkušeni avtorji v predatorski reviji objavijo svoje delo ne namenoma, medtem ko izkušeni avtorji in tudi neizkušeni avtorji izkoristijo priložnost za objavo v takšni reviji zaradi različnih razlogov, kot so nizki stroški, hitrost objave, neuspeh pri objavi v prestižnejši reviji in podobno.

Predatorske revije imajo agresivni pristop k propagandi svojih storitev, tj. možnost hitre objave predanega dela. Mnogi avtorji (glej Tabelo 3) tako ne namenoma, v dobri veri, svoj članek predajo v objavo k taki reviji. Avtorji so ogoljufani, prevarani, zapeljani. Predvsem gre za neizkušene, naivne oz. mlade raziskovalce v začetni fazi svoje raziskovalne kariere. Večina jih ima premalo znanja, da bi prepoznali, da gre za predatorsko revijo. (Bagues, Sylos-Labini, & Zinovyeva, 2019; Clark & Smith, 2015; Cortegiani, Manca, & Giarratano, 2020; Dadkhah, Maliszewski, & Jazi, 2016; Demir, 2018; Duc et al., 2020; Frandsen, 2017; Frandsen; 2018; Kurt, 2018; Ward, 2016)

Na drugi strani pa gre za avtorje, ki svoja dela namenoma objavijo v predatorski reviji (glej Tabelo 3). Gre tako za izkušene kot za neizkušene avtorje; skupno jim je, da se zavedajo dejstva, da gre za objavo v predatorski reviji. Razlogi neizkušenih avtorjev so predvsem strah pred zavrnitvijo članka iz strani prestižnejših, »zahodnih« revij ali dvom v kakovost svojega dela, zato uberejo lažjo pot za objavo svojega članka. Izkušeni in neizkušeni avtorji pa v predatorskih revijah objavljajo zaradi pritiska nadrejenih, inštitucij oz. akademskega sveta v obliki »objavi ali propadi«. Ker so prisiljeni v dosego določene kvantitete objav in ne nujno kvalitete, je zaradi hitrosti objave ali nizkih stroškov za avtorja, objava v taki reviji zanje smiselna. S številom objav naraščajo možnosti za zadržanje zaposlitve, nadaljevanje študija, napredovanje in v nekaterih primerih tudi prejemanje finančnih nagrad. (Beall, 2016; Cortegiani, Manca, & Giarratano, 2020; Demir, 2018; Ferris & Winker, 2017; Frandsen, 2018; Kurt, 2018; Perlin, Imasato, & Borenstein, 2018; Richtig, Berger, Lange-Asschenfeldt, Aberer, & Richtig, 2018; Wallace & Perri, 2018; Xia; 2015; Xia et al., 2015)

Splošno gledano je glede na pregled v tabeli 3 večina avtorjev, ki v predatorskih revijah objavljajo, moškega spola in prihajajo iz področja Azije in Afrike, tudi iz ZDA. Posebej izpostavljeni sta državi Indija in Nigerija oz. države s slabšo ekonomijo. (Frandsen, 2017; Shen & Björk, 2015; Wallace & Perri, 2018; Xia et al., 2015)

Odgovor na tretje raziskovalno vprašanje je, da so si vsi avtorji edini, da predatorsko založništvo negativno vpliva na znanost (glej Tabelo 4). Izpostavljajo, da je takšno založništvo največja grožnja za znanost od časa inkvizicije in da je ogrožena verodostojnost znanosti. Gre za onesnaževanje znanosti in predstavlja globalno grožnjo zanesljivosti, veljavnosti in natančnosti v znanstvenih strokah. Škoda je povzročena tako znanstvenikom kot znanstvenemu komuniciranju. (Bagues, Sylos-Labini, & Zinovyeva, 2019; Beall, 2016; Beall, 2017; Perlin, Imasato, & Borenstein, 2018; Shrestha, Subedi, & Timsina, 2020)

Izpostavljajo etična vprašanja – etično ogrožanje kredibilnosti znanosti zaradi neupoštevanja etike objavljanja, trditev, da so objavljeni članki strokovno recenzirani in ogrožanje slovesa odprtega dostopa (glej Tabelo 4). (Cortegiani, Manca, & Giarratano, 2020; Ferris & Winker, 2017, Frandsen, 2018; Ward, 2016)

V smislu kredibilnosti se opozarja predvsem na možno razširitev predatorskih revij v prestižne indekse – poraja se dvom, komu verjeti in v kaj verjeti (glej Tabelo 4). Opozarja se na posebno pozornost raziskovalcev na znake, ki lahko nakazujejo, da gre za objavo v predatorski reviji. Zavzemati se je potrebno za lokalne in globalne pobude za zagotavljanje kakovosti v znanstvenemu komuniciranju in prepoznavati nevarne prakse. (Duc et al., 2020; Revés et al., 2018)

Poudarjajo, da so avtorji, ki v teh revijah objavljajo, lahko stigmatizirani – izgubijo svojo kredibilnost (glej Tabelo 4). (Beall, 2016; Richtig, Berger, Lange-Asschenfeldt, Aberer, & Richtig, 2018)

Predatorske revije prav tako ogrožajo področje raziskovanja v menedžmentu. Uporabijo se lahko za legitimno širjenje ideologij, vprašljivih poslovnih modelov in diskriminatornih kadrovskih praks (glej Tabelo 4). (Dobusch & Heimstädt, 2019)

Pojavlja se pojem »izgubljena znanost«. Avtorji navajajo (glej Tabelo 4), da ni nujno, da so vsa objavljena dela slabe kakovosti. V primeru, ko gre za kakovostno delo, raziskavo, odkritje, objavljeno v predatorski reviji, ki lahko vsak trenutek izgine iz spleta, postane to znanje za druge nedostopno, izgubljeno. (Clark & Smith, 2015; Richtig, Berger, Lange-Asschenfeldt, Aberer, & Richtig, 2018)

6 Zaključek

Znanstvene revije igrajo ključno vlogo pri izmenjavi podatkov, zbranih z znanstvenimi metodami in izmenjavi rezultatov izvedenih raziskav s preostalo akademsko skupnostjo. (Demir, 2018, str. 1296)

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Predatorske revije ravno to ključno vlogo, vlogo znanstvenega komuniciranja, ogrožajo. Iz rezultatov vidimo, da vsi avtorji, zajeti v raziskavi, zavzemajo konkretno stališče do predatorskih revij. Kot glavni namen obstoja revij izpostavljajo dobiček lastnikov. Navajajo, da so te revije nepoštene, goljufive in da avtorje izkoriščajo. Ob enem opozarjajo na pomanjkanje jasno definiranih kriterijev, ki so lahko za potencialnega avtorja ali bralca opozorilni znak, za kaj dejansko gre.

Glede na rezultate smo avtorje razmejili na tiste, ki ne namenoma objavijo v predatorski reviji – so prevarani, zapeljani; in tiste, ki obstoj predatorskih revij izkoristijo v svoj prid na račun kvantitete objav in temu pripadajočim ugodnostim.

Prav tako v raziskavi izpostavljamo vpliv predatorskih revij na znanost. V rezultatih vidimo, da predatorsko založništvo negativno vpliva na znanost, še več, znanost ogroža. Ogrožena je verodostojnost, zanesljivost, natančnost in kredibilnost.

Raziskava razkriva samo nekaj tem, povezanih s predatorskimi revijami, na katere pa morajo biti predvsem raziskovalne organizacije pozorne. Predvsem je potrebno izravnati pritiske na avtorje po principu »objavi ali propadi« ter poudarjati kvaliteto pred kvantiteto.

Vprašati se moramo tudi, kaj predatorske revije pomenijo za družbo. Družba se razvija v koraku z znanostjo. Na kakšni poti smo kot družba, če se zanašamo na znanost, ki ni verodostojna, natančna, kakovostna? Ali vemo, da so kanali znanstvenega komuniciranja neonesnaženi?

Raziskava je omejena s fokusom na izpostavljena tri področja. Ne poglobi se v geografsko razpršenost avtorjev oz. v geografsko razpršenost predatorskih revij ali v znanstveno področje, kjer so predatorske revije najbolj razširjene. Za nadaljnje raziskovanje bi lahko izvedli empirično raziskavo s pregledom obstoječega seznama predatorskih revij in raziskali, od kod prihajajo avtorji, kje so revije locirane, kakšna je incidenca objav slovenskih avtorjev in podobno.

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Abstract:
Definition, Publication and Impact of Predatory Journals

Background and Originality: The purpose of the research is to identify the challenges surrounding predatory journals; examine what predatory journals are and what are the risks associated with predatory magazines. We are interested in the opinions of various authors regarding predatory journals. The article provides insight into the research of various authors; presents the background of the phenomenon of predatory journals in the literature review, and presents and compares three areas in the results; definition of predatory journals, who publishes and why in predatory journals and what is the impact of predatory journals on science. The review covers current literature of the last five years.

Method: The research is based on a review of existing data. We searched for articles on Google Scholar. We used the keywords in Table 1 to search until data saturation. Using the predetermined keywords, we found a total of 46 articles. To review the literature, we selected articles published from 2015 onwards. We used only articles relating to predatory journals and excluded those relating to hijacked journals or pseudo-journals. We excluded those articles that do not comment on the content of predatory journals/publishers; do not assess the impact of predatory journals on science; do not state who publishes or why they publish in predatory journals. After filtering, we used 30 articles to compare different authors' views on predatory journals, the results on who publishes in predatory journals, and the impact of predatory journals on science in relation to different authors. The results were presented in the form of tables according to each research question. The results' reliability was checked by intra-rater reliability; the review was performed at two separate time points seven days apart. There are no differences between the first and second intra-rater reliability. Key findings were made by inductive reasoning.

Results: All authors from the literature review take a concrete position on predatory journals. The existence of predatory journals with the aim of making money is especially emphasized - the authors describe them as dishonest, not transparent, exploitative, and fraudulent. They point to the lack of clearly defined criteria for placing a journal on the list of predatory journals. Authors and their reasons for publication in predatory journals can be divided into two groups: those who do not intentionally publish and those who intentionally publish. All authors state that predatory publishing has a negative impact on science. They point out that such publishing is the greatest threat to science since the Inquisition time and that the credibility of science is at stake.

Society: The article contributes to understanding the importance of predatory journals and what this means for science and, consequently, society. Society is evolving in step with science - what will society develop if science is not credible and reliable? This article reveals only a few topics related to predatory journals, to which research organizations in particular need to pay attention.

Above all, it is necessary to balance the pressures on authors on the principle of 'publish or perish' and to emphasize quality over quantity.

Limitations / further research: The research is limited by focusing on the three areas highlighted. It does not delve into the authors' geographical dispersion or into the geographical dispersion of predatory journals or into the scientific field where predatory journals are most prevalent. For further research, we could conduct an empirical study by reviewing the existing list of predatory journals and investigating where the authors come from, where the journals are located, the incidence of publications by Slovenian authors, and the like.

Keywords: predatory journals, predatory publishers, authors, impact on science, publishing ethics, Beall's list, predatory journal phenomenon, open access.