

**STEPHEN KUMI**

**ORGANIZATIONAL CULTURE, WORKPLACE MOTIVATION AND  
INNOVATIVE WORK BEHAVIOUR IN THE HEALTHCARE SERVICE  
DELIVERY: A SYSTEMATIC REVIEW**



UNIVERSITY OF ALGARVE  
FACULTY OF ECONOMICS

2023

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DELIVERY: A SYSTEMATIC REVIEW**

**Master's Degree in Healthcare Management  
Dissertation Report made under the supervision of  
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**Work Authorship Declaration**

I declare to be the author of this work, which is unique and unprecedented. The author and work consulted are properly cited in the text and are included in the listing of references.

**Stephen Kumi**

.....

Signature

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## **ABSTRACT**

COVID-19 and the Russia-Ukraine war have profoundly transformed organisational cultures, restructured work behaviour and impacted workers' motivation. The underlying values and assumptions of many organisations seem to have shifted from exploration and creativity towards safety and resilience. This profound change represents a major challenge for managers in all aspects of service delivery including the health sector. This study aims to reveal the thematic evolution of the scientific literature and, in a second instance, whether the variables (organizational culture, workplace motivation, and innovative work behaviour) are related to the benefit of current investments in healthcare service. We performed a systematic literature review and also summarized the relationship between these variables in 25 selected articles. The search of articles from WoS yielded a total of 5893 publications, 426 articles were selected for bibliometric analysis. We found a total of 203 articles from 588 authors published by 156 journals to have been produced before the crisis period, while a total of 200 articles from 578 authors published by 155 journals we found to have been produced during the crisis period. Also, themes based on keywords Plus have evolved throughout time. Out of the 14 articles that studied the association between these variables using different types of analysis and sampling research techniques, eight studies investigated the association between organizational culture and workplace motivation with that there is a relationship between organizational culture and workplace motivation. The general conclusion from all six articles that accessed the associations between organizational culture and innovative work behaviour is that organizational culture has a direct effect on work motivation. This shows it is important for organizations to understand the type of organizational culture that exists within their firm to be able to use that as a tool to motivate employees to make them innovative at work.

**Keywords:** Systematic Literature Review, Organizational culture, Workplace motivation, Innovative work behaviour, Healthcare delivery

## RESUMO

Devido ao rápido aumento na procura de cuidados de saúde e aos avanços nas tecnologias da saúde, as organizações hospitalares estão actualmente sob pressão para melhorar a prestação de cuidados de saúde através de melhorias em áreas como o comportamento inovador no trabalho. Várias ideias adicionais, tais como cultura organizacional, motivação no local de trabalho e comportamento de trabalho inovador, são relevantes para moldar a mão-de-obra e melhorar a prestação de serviços numa variedade de sectores. A COVID-19, a guerra Russo-Ucraniana e o Grande Choque Social e Económico alteraram profundamente as culturas organizacionais, reestruturaram o comportamento laboral e afectaram a motivação dos trabalhadores. Símbolos bem conhecidos da vida organizacional, tais como locais de trabalho abertos com pessoas em fatos e uniformes, foram substituídos por telas Plexiglas e equipamento de protecção pessoal. Rituais tais como falar no refrigerador de água e no corredor foram substituídos por chamadas de zoom. Os valores e pressupostos subjacentes de muitas organizações parecem ter mudado da exploração e criatividade para a segurança e resiliência. Esta mudança profunda é um grande desafio para os gestores em todas as áreas de prestação de serviços, incluindo os cuidados de saúde. Esta é também uma excelente oportunidade para os académicos examinarem de que forma uma mudança social tão ampla afecta a cultura organizacional, a motivação no local de trabalho e o comportamento inovador no trabalho. Isto irá ajudar-nos a compreender melhor as consequências sociais dos problemas da COVID e da guerra russo-ucraniana. Este estudo visa mostrar o desenvolvimento temático da literatura académica e, numa segunda fase, investigar se as variáveis (cultura organizacional, motivação no local de trabalho e comportamento de trabalho inovador) estão relacionadas entre si, a fim de fazer uso dos actuais investimentos em cuidados de saúde no contexto da crise e guerra em curso na Ucrânia na última década. Numa tentativa de aumentar os conhecimentos sobre cultura organizacional, motivação no local de trabalho e comportamento de trabalho inovador nos cuidados de saúde e de analisar a literatura científica publicada, foi realizada uma revisão sistemática da literatura. Também resumimos a relação entre estas variáveis em 25 artigos seleccionados. Para a análise bibliométrica, foi utilizado o programa estatístico R *studio* de fonte aberta juntamente com o pacote Bibliometrix 3.0.1 e a função Biblioshiny. Estatísticas descritivas e indicadores bibliométricos tais como o crescimento anual da publicação, autores, citações, análise da fonte, palavras-chave e palavras-chave+ foram utilizadas para criar uma visão geral dos dados. A pesquisa das palavras-chave "cultura organizacional", "motivação laboral",

"comportamento laboral inovador" e serviços de saúde na WoS resultou num total de 5893 publicações. Após aplicar os critérios de elegibilidade em combinação com os operadores "Booleans", obtivemos um total de 426 artigos. Encontrámos um total de 203 artigos de 588 autores publicados em 156 revistas e com origem antes da crise, com uma tendência crescente nos artigos publicados ao longo dos anos, com um crescimento anual de 30% e uma média de 18,6 citações por ano. Um total de 200 artigos de 578 autores foram publicados em 155 revistas e foram publicados durante a crise, com uma tendência decrescente nos artigos publicados durante a crise, com um crescimento anual de -25,55% e uma média de 5,04 citações por ano. Oito estudos examinaram a relação entre a cultura organizacional e a motivação no local de trabalho, enquanto seis estudos examinaram a relação entre a cultura organizacional e o comportamento inovador no trabalho. Nenhum destes estudos examinou a relação entre a motivação no local de trabalho e o comportamento inovador no trabalho. Os resultados mostram que um total de 203 artigos de 588 autores publicados em 156 revistas foram escritos antes da crise, com um aumento anual de 30%. Enquanto um total de 200 artigos foram publicados por 578 autores em 155 revistas, descobrimos que foram publicados a uma taxa de crescimento anual decrescente de -25,55% durante o período de crise. Estes resultados indicam também que o número de artigos publicados nas 156 revistas registou uma tendência gradual durante o período de 2012 a 2018. Esta investigação mostra também uma taxa de crescimento anual global de 30%, que é muito mais rápida do que em outros domínios. Esta expansão pode ser devida ao número crescente de investigadores e ao aumento das publicações. Quando analisámos as colaborações específicas por país e a distribuição internacional de artigos, verificámos que os EUA, o Reino Unido e o Brasil tinham o maior número de publicações e citações de um total de 61 países pré-pandémicos. Durante a pandemia, os EUA são o país com o maior número de publicações, seguidos pela China e Turquia. Foi encontrada uma forte colaboração entre a França e o Reino Unido, assim como o Paquistão e a Malásia. Os 14 artigos examinaram a associação entre estas variáveis, utilizando diferentes métodos analíticos e de amostragem. Nos oito estudos que examinaram a relação entre cultura organizacional e motivação no local de trabalho, as conclusões gerais sugerem que existe uma relação entre cultura organizacional e motivação no local de trabalho. A conclusão geral dos seis artigos que examinaram a relação entre a cultura organizacional e o comportamento inovador no local de trabalho é que a cultura organizacional tem uma influência directa na motivação no trabalho. Isto mostra que a cultura organizacional tem uma relação significativa com a motivação no trabalho e

o comportamento inovador no trabalho. Contudo, é importante que as organizações compreendam o tipo de cultura organizacional que existe na sua organização, a fim de a utilizarem como instrumento para motivar os trabalhadores a serem inovadores no trabalho. Os gestores de saúde devem, portanto, compreender que a capacidade do pessoal para desenvolver soluções inovadoras depende do conhecimento e experiência do pessoal na aplicação deste conhecimento para resolver novos problemas, e que é importante desenvolver uma cultura organizacional forte e favorável, a fim de tirar o melhor partido do pessoal. Recomendamos que mais investigação se deve concentrar no tipo de cultura organizacional existente nas organizações de saúde e na forma como estas motivam o pessoal a inovar.

Palavras-chave: Revisão Sistemática da Literatura, Cultura organizacional, Motivação no local de trabalho, Comportamento inovador no trabalho, Prestação de cuidados de saúde

## Chapter 1. INTRODUCTION

Owing to the fast-paced growth of demands for healthcare and the advancements of health technology, hospital organizations now face increased demands for improved healthcare services delivery with improvements in areas such as innovative work behaviour. Several other concepts such as organizational culture, workplace motivation and innovative work behaviour have become important in shaping work force and improving service delivery in many sectors.

Culture broadly encompasses the scientific and humanistic descriptions of a group of people or objects with a shared identity. Organisational culture is a system of values, beliefs and behaviours that unconsciously guide the decisions of organisational members (Simorangkir, Sibuarian and Rahman, 2018; Nasir *et al.*, 2019; Uloli, Akbar and Kadir, 2019; Gorzelany *et al.*, 2021; Kundu, Kumar and Lata, 2021). Work Motivation on the other hand is a decision-making process in which a person selects the desired outcome and takes appropriate action to achieve it (Dartey-Baah, 2010; Simorangkir, Sibuarian and Rahman, 2018; Nasir *et al.*, 2019; Uloli, Akbar and Kadir, 2019; Gorzelany *et al.*, 2021; Kundu, Kumar and Lata, 2021). While, Innovative behaviour in the workplace is defined as everyday innovation and depends on the efforts of employees to share and implement unique ideas in the workplace (Prieto and Pérez-Santana, 2014). Innovative behaviour describes the process of identifying an individual's problem and developing new ideas and solutions to the problem. These concepts have become important in shaping work force and improving service delivery in many sectors.

According to research, organizational culture, work motivation, and innovative work in healthcare delivery consisted of several factors including communication, work-internal balance, leadership style professional growth, employee satisfaction, reward system, organizational performance and the psychological process that gives meaning and direction to behaviour. When any of those factors are compromised, it can negatively affect an organization's productivity and profits (Prieto and Pérez-Santana, 2014; Gorzelany *et al.*, 2021). The available empirical evidence suggests that a lack of cultural integration between participating communities is one of the main reasons for group failure. Thus, a better corporate culture can lead to better business performance. Therefore, the development of an effective organisational culture is considered an important area of research to improve business performance.

COVID-19, Russia-Ukraine war and the large scale social and economic shock which it brought has already profoundly transformed organisational cultures, restructured work behaviour

and impacted workers motivation. Well known symbols of organisational life such as open plan workplaces filled with people wearing suits and uniforms have been replaced by Perspex screens and personal protective equipment. Rituals such as water cooler chat have been replaced with zoom calls. The underlying values and assumptions of many organisations seem to have shifted from exploration and creativity towards safety and resilience. This profound change represents a major challenge for managers in all aspects of service delivery including the health sector (Kniffin *et al.*, 2020). This also presents a significant opportunity for researchers to investigate how such a large-scale transition in society unsettles organisational culture, workplace motivation and innovative work behaviour. This will enhance our understanding of the impact of the COVID crises and the Russia-Ukraine war on society.

This study aims to make known the thematic evolution of the scientific literature and, in a second instance, whether the variables (organizational culture, workplace motivation and innovative work behaviour) are related in order to benefit the current investments made in healthcare service, in the context of an ongoing crisis and war in Ukraine through bibliometric techniques, in the last decade. This article addresses the need for new insights, enhancing our understanding of the impact of the COVID crises and the Russia-Ukraine war on organizational culture, workplace motivation and innovative work behaviour in healthcare service. The study will contribute in several ways to enhance knowledge stock in this area and also provide the foundation for future studies, particularly effective intervention amid COVID and the war between Russia and Ukraine which has affected all works of life including health delivery services.

The objectives of this study are, at first, to make known the thematic evolution of the scientific literature in the context before and an ongoing crisis and war in Ukraine; and, in a second instance, whether the variables (organizational culture, workplace motivation and innovative work behaviour) are related in order to benefit the current investments made in healthcare service.

The structure of the current study consists of five chapters. Chapter one presents the background information needed for the study and explains its relevance, rationale, and related issues. This chapter also explains the purpose of the problem statement.

Chapter two reviews the existing information related to the topic and explains concepts based on existing literature. Chapter three is the main chapter that systematically conducts a bibliometric analysis and a literature review to identify the findings of the research questions. In addition, this chapter provides a summary of the findings as well as a list of articles included in the study.

Chapter four examines the results concerning other relevant literature that could not be included in the themes. Finally, Chapter five discusses the results and relates it to other literature. Chapter six concludes the overall objectives of the study and concludes with recommendations and limitations.

## **Chapter 2. THEORETICAL FRAMEWORK**

This chapter presents a framework related to the current study. Specifically, the chapter presents the following: definition of the key constructs (organisational culture, work motivation and innovative work behaviour), the relationship between organisational culture, the relationship between organisational culture and innovative work behaviour, and organisational culture, innovative work behaviour and work motivation.

### **Organisational Culture**

Organisational culture can be defined in many different ways. Nevertheless, there is consensus in the literature that organisational culture plays an important role in organisational practice and performance; a general definition of organisational culture is that it "reflects the beliefs and norms of behaviour that people in an organisation use to understand the situations they encounter" (Luthans, Luthans and Luthans, 2021). In other words, CSR policy reflects the beliefs and values of the people who work in the organisation and influences their thinking and behaviour.

Loh *et al.*, (2019) define organisational culture as "the collective understanding of the ways of working in an organisation". Hofstede (2011) define organisational culture as "members' interpretations of a particular work environment". It is defined as "a system of shared working practices characterised by meaningful symbols, signs and rituals". Hofstede (2011) also says that values are not an element of organisational culture because they are formed in the first decade.

The authors (Allameh, Zamani and Davoodi, 2011; Chang and Lin, 2015) point out that organisational culture is a set of values, beliefs, assumptions, meanings and expectations shared by all members of an organisation, group or unit, which are used to guide actions and solve problems.

Organisational culture is a system of values, beliefs and behaviours that unconsciously guide the decisions of organisational members (Ortega-Parra and Sastre-Castillo, 2013). According to (Abreu-Cruz *et al.*, 2019), organizational culture is the norms that organizational members perceive as their work environment, and these norms influence their behaviour and adaptation to achieve organizational goals. Organizational culture is the way in which members of an organization interact with each other and with other stakeholders (Simoneaux and Stroud, 2014). According to (Yirdaw, 2016), organizational culture connects the non-human and human

resources of an organization and is the glue that creates teamwork and good performance; it is the glue that creates performance.

### **Work Motivation**

Motivation is giving a person a stimulus or inducing him to behave in a certain way. Motivation is the sum of all factors that motivate a person (Nadliratul *et al.*, 2019). Motivation is a concern of all employees and organisational leaders (Ateş and Yilmaz, 2018). Motivation can increase the productivity of employees. If an organisation motivates its employees, it can provide quality services (Nadliratul *et al.*, 2019). Work motivation refers to psychological processes that influence human behaviour. The effects of work motivation are complex because these psychological processes are influenced by many organisational and environmental factors (Bennell and Akyeampong, 2007). They are processes that facilitate, guide and encourage people to work towards specific goals and increase their focus and motivation for work (Luthans, Luthans and Luthans, 2021).

Motivation can be defined as the set of forces that increases people's desire and willingness to demonstrate their performance potential at work to achieve organisational goals (Almutairi, 2022).

Zainal, (2017) defines motivation as "the process that determines the intensity, direction and persistence of a person's efforts to achieve a goal" (page?). He also states that "motivation is the willingness to exert considerable effort to achieve organisational goals, provided that the effort satisfies certain personal needs". Motivation has been scientifically defined as changing and directing a person's behaviour towards the desired work pattern, activating a person's behaviour, maintaining behaviour over time, and increasing the level of performance on a given task or all of the above (Reeve, 2018). In general, most management schools define a motivated person as one who is motivated to engage in respectable behaviours to satisfy desires (Shafritz *et al.*, 2022). (Ryan, 2012) defines work motivation as the ability to motivate work-related behaviour, which he defines as "the mental processes that guide, motivate and sustain an individual's behaviour".

## **Innovation Work Behaviour**

Innovative behaviour in the workplace is defined as "everyday innovation" and depends on the efforts of employees to share and implement unique ideas in the workplace (Prieto and Pérez-Santana, 2014).

Innovative behaviour in the workplace is a highly desirable outcome for organisations as it is critical to the economic performance of groups and organisations (Sung and Choi, 2012). At the same time, innovative behaviour in the workplace creates uncertainty (Mueller, 2019) and can lead to negative reactions from others, where positive evaluations can be thwarted by entrenched resistance to change. Despite this possibility, we argue that innovative practices tend to be evaluated positively because they aim to improve existing processes and practices. Performance appraisal is "an evaluation of employee performance in which the evaluator assesses the extent to which the desired behaviour has been observed or achieved" (DeNisi and Sonesh, 2011).

The concept of innovative working behaviour is based on alternative thinking, the continuous search for innovations, and finding new ways of doing things. The concept of the insider web is based on alternative thinking, the continuous search for innovations, finding new ways of doing things, finding new technologies, using different strategies and ways of working, and providing the resources needed to implement new ideas (Namono *et al.*, 2022). Strategizing for innovative work behaviour in higher education institutions. Several studies have addressed a number of underlying factors, recognizing that IWB can improve organizational efficiency and performance and increase employee satisfaction. The factors examined include individual personality characteristics, group characteristics, internal workplace factors, organizational factors, intra-organizational relationships, and various strategies. All these factors have been studied as important determinants of inland navigation (Nasir *et al.*, 2019).

Innovative work behaviour goes beyond the development of new products in the R and D environment and affects the whole organisation. As in the UK, the National Endowment for Science, Technology and the Arts (NESTA) defines innovation as "the change that takes place in the world, country or region, industry and business through the creation and adaptation of new ideas" (Stoffers *et al.*, 2015, page?). The creativity involved in generating new ideas depends on the management of the organisation and, in particular, on the people who generate the new ideas. The ability to generate innovative solutions depends on people's knowledge and experience in applying this knowledge to solve new problems (Stoffers *et al.*, 2015).

## **Organisational Culture and Work Motivation**

Cucu-Ciuhan and Guită-Alexandru (2014) identified the nature of organisational culture in Romanian public universities, how employees perceive this culture and what type of organisational culture and work motivation employees desire. The research population consisted of 102 university professors between the ages of 25 and 57, who were evaluated using the ESA questionnaire on work motivation and the questionnaire on organisational culture. Organisational culture is formed through repeated interactions between members of an organisation and includes the beliefs and values of individual members of the organisation. Organisational culture is individualised by strong paradigmatic factors such as management and decision-making styles, degree of formalisation, organisational structures and virtually all systems that create value and support a particular type of work and behaviour. The organisation satisfies a wide range of human needs: a sense of belonging (explained by peer sympathy), psychosocial well-being, social recognition and self-actualisation. In terms of work motivation, teachers' motivation for self-development in the organisation was examined, followed by financial motivation and underdeveloped social motivation. From the point of view of work-related motivational values, the university is a way of satisfying low self-actualization needs, low economic needs and low social needs. There is no difference between teachers' motivational values and their job expectations.

Pham Thi *et al.* (2021) examined the impact of organisational culture on employee satisfaction and commitment in small and medium enterprises. Data were collected from a sample of 240 employees. A structural equation model was used to examine the impact of organisational culture dimensions such as open work environment, rewards and recognition, empowerment, leadership style and company values on employee satisfaction and commitment. The results showed that all five dimensions of organizational culture have a positive impact on employee satisfaction, while job satisfaction has a significant impact on organizational commitment. Thus, job satisfaction is a relationship between organizational culture and commitment.

Isa, Ugheoke and Noor (2016) studied the impact of organisational culture on employee performance in public sector organisations. A questionnaire based on a well-known and widely used measurement tool developed by Wallach was used to collect data from 250 employees. The results showed that two of the three culture dimensions identified in the study, namely bureaucratic culture and motivational culture, have a significant positive impact on employee performance.

Lolowang and Aisjah (2019) examined the impact of leadership and organisational culture on employee motivation. The results showed that firstly, direct leadership has no significant effect on employee performance, secondly, organisational culture has a significant effect on employee performance, thirdly, leadership has a significant effect on work motivation, fourthly, organisational culture has a significant effect on work motivation, fifthly, work motivation has a significant effect on employee performance, and sixthly, work motivation completely negates the effect of leadership on work performance.

Pathirana, Jayatilake and Abeysekera, (2020) focused on conceptualising, measuring and investigating the impact of different dimensions of organisational culture on organisational performance. After a thorough literature review, they concluded that organisational culture has a significant impact on organisational performance. Empirical evidence also shows that lack of cultural integration between participating communities is one of the main reasons for group failure. Thus, it can be concluded that a better corporate culture can lead to better business performance. Leaders are encouraged to create an effective organisational culture to improve business performance. Therefore, the development of an effective organisational culture is considered an important area of research to improve business performance.

### **Organisational Culture and Innovative Work Behaviour**

Stoffers, Neessen and van Dorp (2015) investigated the degree of innovative work behaviour, the type of organisational culture and the relationship between innovative work behaviour and organisational culture. Employees believed that they could improve their innovative work behaviour, which is reflected in higher-than-average scores on innovative work behaviour compared to current scores. Respondents believed that family culture is the most appropriate organisational culture. The literature confirms that family culture promotes innovative work behaviour. However, the study found no significant relationship between family culture and innovative work behaviour in the organisation. Employees perceive the current organizational culture as a market culture. According to the literature, market culture promotes innovative behaviour in the workplace. Furthermore, the results show that there is a significant relationship between market culture and innovative work behaviour.

Gorzelany *et al.* (2021) investigated the relationship between organisational culture and innovation in universities using an original questionnaire. The results show that Polish and Austrian universities have a hierarchical and market-oriented culture. In contrast, German and

Ukrainian universities embraced all cultures but were dominated by clan and ad hoc cultures. The analysis also showed that the democratic culture was the least represented in the organisations studied, but was the most conducive to academic innovation.

Khan *et al.* (2020a) report on the influence of leadership style on innovative work behaviour and the mediating and coordinating role of organisational culture and university leadership on organisational and citizen behaviour. In order to examine how the leadership style of university leaders affects the performance of university employees, data were collected from 160 respondents through a survey. The results of the statistical analysis showed that leadership style has a significant positive influence on employees' innovative work behaviour, highlighting the mediating and coordinating role of organisational culture and OCB in this regard.

### **Organisational Culture, Innovative Work Behaviour and Work Motivation**

Bicocca *et al.* (2020) studied the relationship between organizational culture, innovation and bank performance. Data were collected from 186 employees in the Palestinian banking sector. The collected data were analyzed using PLS-SEM method. The results showed that organizational culture and marketing innovation had a positive impact on bank performance. In addition, marketing efforts partially moderated the relationship between organizational culture and bank performance.

Vanesa *et al.* (2019) studied the effects of organizational culture, work environment, and work motivation on employee discipline. The sample included 67 employees. Data were collected through observation and questionnaires. The data were subjected to validity and reliability tests and had to satisfy classical assumptions. Data were also analysed using multiple regression analysis, t-test, F-test and coefficient of determination. The results show that organizational culture has a positive and significant effect on employee discipline. The work environment has a positive and significant effect on employee discipline. Motivation has a positive and significant effect on employee discipline. Organizational culture, work environment and motivation have a positive and significant impact on employee discipline. Organizational culture, work environment and motivation accounted for 61.8% and 38.2% respectively, which were not included in the model of this study.

Uloli, Akbar and Kadir (2019) studied the impact of organizational culture and work environment on employees' work motivation. 115 employees of the General Secretariat of the

Ministry of Defense participated in the study. The results showed that organizational culture has a significant positive effect on job motivation. Workplace discipline also had a significant positive impact on work motivation.

Sokro (2012) studied the relationship between organisational culture, motivation and performance. The study looked at organisational culture (organisational values, personal beliefs, work environment and employee relations) and employee motivation and performance. A mixed method of data collection and analysis was used to investigate the relationship between culture and motivation. Pearson's and Spearman's correlation methods were used to identifying positive correlations between variables. The results showed that organizational culture has a direct effect on employee motivation and an indirect effect on organizational performance. The better the organizational culture, the more motivated employees are. Employee motivation and productivity have been shown to increase significantly when organisations create a culture where employee efforts are highly rewarded and recognised.

Nasir *et al.* (2019) used SEM analysis to investigate the impact of intrinsic motivation and innovative behaviours on productivity in a 230-question survey, and the results showed that intrinsic motivation and innovative behaviours have a significant impact on productivity. Innovative behaviours in the workplace partly influenced the impact of intrinsic motivation on job performance.

## **Problem Statement**

The COVID-19 pandemic has put health systems worldwide under pressure and tested their resilience. The World Health Organization (WHO) acknowledges the health workforce as one of the six building blocks of health systems. Organizational culture, healthcare workers' motivation and innovative work behaviour are key to a health system's ability to respond to external shocks such as outbreaks. As the world tries to return to normality and resume its activities after the COVID Pandemic, governments of all countries need to operationalize political strategies to encourage the recovery of the economy in essential areas such as tourism and improved healthcare delivery. However, we are unaware of the evolution of these topics before and during the world crisis experienced.

On the other hand, although the scientific literature has focused on organizational culture, work motivation, and innovative work behaviour, the results emanating from most previous studies have

been mixed and inconclusive. Empirical evidence (Pathirana, Jayatilake and Abeysekera, 2020; Kaseger, Pangkey and Dilapanga, 2021) also show that a lack of cultural integration between participating communities is one of the main reasons for healthcare delivery. Leaders are encouraged to create an effective organisational culture to improve performance at work. Effective organisational culture is therefore considered an important area of research to improve business performance and service delivery. It is clear from the arguments put forward that there is a need to explore if organizational culture, work motivation and innovative behaviour are related with performance by reviewing existing literature on healthcare service delivery. This review output if available can contribute tremendously to policy, practices and theory in the area of organizational culture, workplace motivation, innovative work behaviour, and improved healthcare delivery.

#### **Specific objectives:**

1. Know the thematic evolution of scientific literature, before and during these critical moments of ongoing crisis and war in Ukraine over the last decade;
2. Investigate whether the variables (organizational culture, workplace motivation and innovative work behaviour) correlate.

#### **Research Questions**

According to these considerations, the following research questions were addressed:

1. Was organizational culture, workplace motivation and innovative work behaviour in health service delivery a pivotal topic in the academic literature of the post-Covid-19?
2. Do variables (organizational culture, workplace motivation and innovative work behaviour) correlate?

### **Chapter 3. METHODOLOGY**

In an attempt to enlarge knowledge, and analyze published scientific literature, on organizational culture, workplace motivation and innovative work behaviour in healthcare service delivery, a systematic literature review was performed. The review started with a literature search on the Web of Science (WoS) database from Clarivate Analytics and proceeded with bibliometric analysis. The study was strategized into three phases: implementation plan, data collection, and bibliometrics. There were two stages in the bibliometric analysis. The first, focuses on the domain, with three analytical levels—sources, authors, and documents—and on a variety of metrics, such Bradford's Law and Lotka's Law, offering unbiased and quantifiable information to analyze the trends of the scientific area before and during the ongoing pandemic. The second, focused on knowledge structures which use factorial analysis and scientific mapping to evaluate the social, intellectual, and conceptual structure utilizing bibliometric approaches like cooperation, co-citation, or co-word (Cuccurullo, Aria and Sarto, 2016). Science mapping enables statistical investigation and the creation of a worldwide overview of scientific knowledge over the chosen periods. According to (Cuccurullo, Aria and Sarto, 2016) these three knowledge structures are usually used to describe the dynamic and structural characteristics of scientific research. The conceptual framework to define what science is considering, which are the primary topics and trends, and the intellectual structure to describe how a certain author's work impacts a certain scientific community both contribute to a whole perspective of knowledge (Aria and Cuccurullo, 2017).

#### **Data collection and search strategy**

We retrieved data from Web of Science (WoS) database from Clarivate Analytics. WoS was chosen because it is one of the most all-encompassing electronic information references, with a scientific and multidisciplinary nature which is required for this study. In October 2022, database searches and data collection were carried out via a virtual private network (VPN) connection from the University of the Algarve.

The data used in the analysis included all publications from 2012 to 2022, even though the year had not yet ended. The resulting data from the search were exported as text files which included information such as citations, abstracts, bibliographic information, and keywords. We then used EndNote X8.2 software to disregard matching articles and manage the data retrieved.

### **Bibliometric Data Analysis and Visualization**

For the bibliometric analysis, the open-source statistical program R was utilized, along with the Bibliometrix package 3.0.1 and the Biblioshiny function (Aria and Cuccurullo, 2017). We used descriptive statistics and bibliometric indicators, such as annual publication growth, authors, citations, analyses of sources, keywords and keyword-plus were used to produce a data overview. We also used plots to visualize knowledge structure elements such as conceptual structure, intellectual structure and social network resulting from collaborations networks of authors' countries, keywords and keyword plus. Some of these metrics were presented using the methods described by (Sweileh *et al.*, 2017).

### **Literature Data Coding and Analysis**

In an attempt to analyze published scientific literature, on organizational culture, workplace motivation and innovative work behaviour in healthcare service delivery we summarized in a table the relationship between these variables in 25 selected published articles. We adopted a system developed by Teixeira *et al.*, (2012) to classify the associations between these variables in published literature as follows: positive (++) or negative (--) for percentages  $\geq 75\%$  and (+) or (-) for percentage between 50–75% showing direct associations between variable and (0) when there is no association between variable; 0/+ or 0/- when the evidence was split between no association (0) and positive or negative associations, respectively; and (?) for results indicating inconsistent findings or indeterminate results due to a small number of studies available.

## Chapter 4. PRESENTATION OF RESULTS

The analysis of the findings provided from the selected papers is discussed under each theme in this chapter. The themes are generated using the deductive approach which entails forming the themes based on the preconceived notion of what is expected from the investigation. The themes in other words are generated from the objectives of the study. It is an indication that it is an effective method of generating themes for the systematic literature review (Xiao and Watson, 2019). The articles obtained through the selection criteria are discussed in relation to the theme.

### Search Outcome

The search of keywords; "Organisational culture", "work motivation", "innovative work behaviour" and healthcare services in WoS, yielded a total of 5893 publications. We obtained after applying the eligibility criteria, combined with the “booleans” operators a total of 426 articles, according to Table 1 and the PRISMA flow diagram. The bibliometric data were then exported for further analysis in R using the package bibliometrix and the command biblioshiny().

**Table 1- Number of articles found per search.**

Search Criteria	WoS articles
Organizational culture OR workplace motivation OR Health Care OR innovative work behaviour and healthcare service Timespan = All years   language = All	5893
Booleans operators   Timespan = 2012-2022   language = English	2246
Top-20 sources, NOT systematic OR “literature review” OR review	1728
Organizational culture OR workplace motivation OR Health Care OR innovative work behaviour AND healthcare service	1294
Remove duplications (articles used in the bibliometrix analysis)	426
Search results after viewing the Abstract and Title and applying Inclusion and exclusion criteria	182
Articles included in the review	25

## Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Flowchart

The PRISMA flow diagram for the systematic literature review which included searches of Web of Science database.

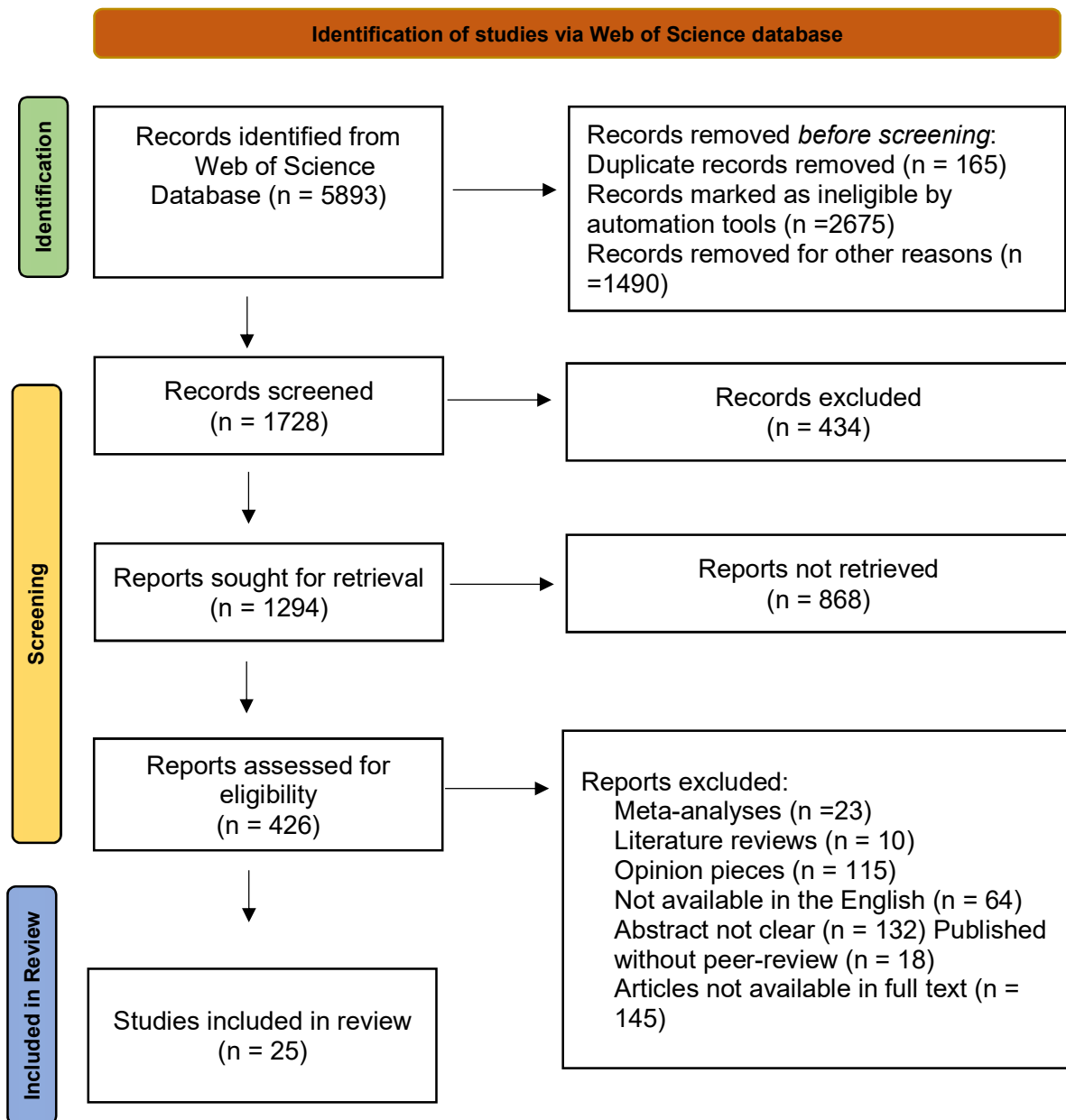


Figure 1: The PRISMA flow diagram for the systematic literature review which included searches of Web of Science database

## Authors and Sources

We found 1204 authors with an average of 0.3 articles each. Each publication had an average of 2.83 co-authors. A total of 59 papers (13.8 %) had a single author, while 367 publications (86.2 %) had multiple authors. Following an examination of Lotka's Law (Lokta, 1926) (Fig. 2), 1148 authors were discovered to be occasional authors who had only written one paper, 56 authors who had published two articles, and seven authors who had published three or more publications. The 426 articles were published in 20 peer-reviewed journals.

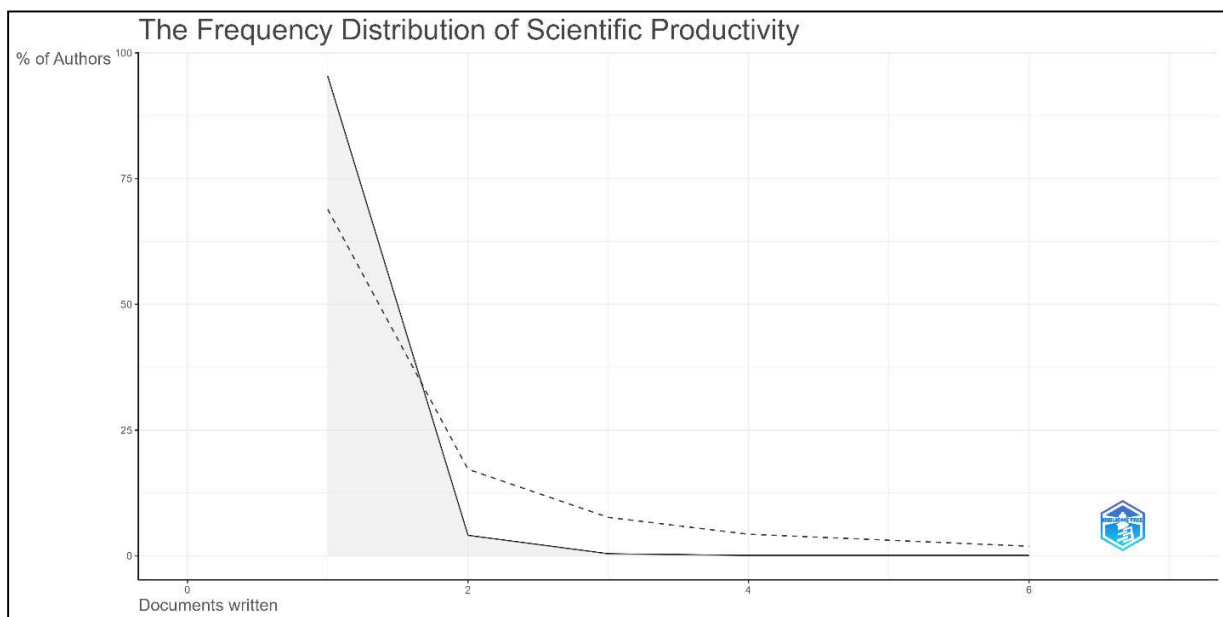


Figure 2: The frequency distribution of scientific productivity according to Lotka's Law

## Annual Scientific production

The Bibliometric analysis of the 426 articles reviewed an increasing trend in an article published over the years peaking in 2020 (Fig. 3) with 62 publications, an annual growth rate of 19% and an average of 3.2 citations per year (Fig. 4).

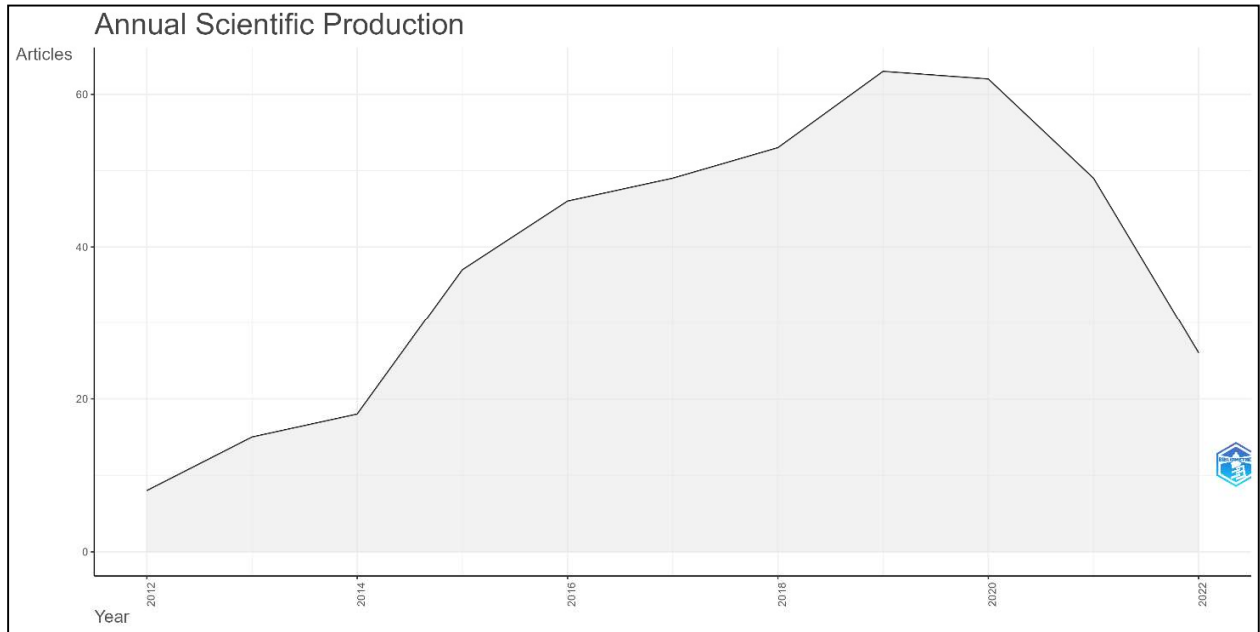


Figure 3: Annual scientific production

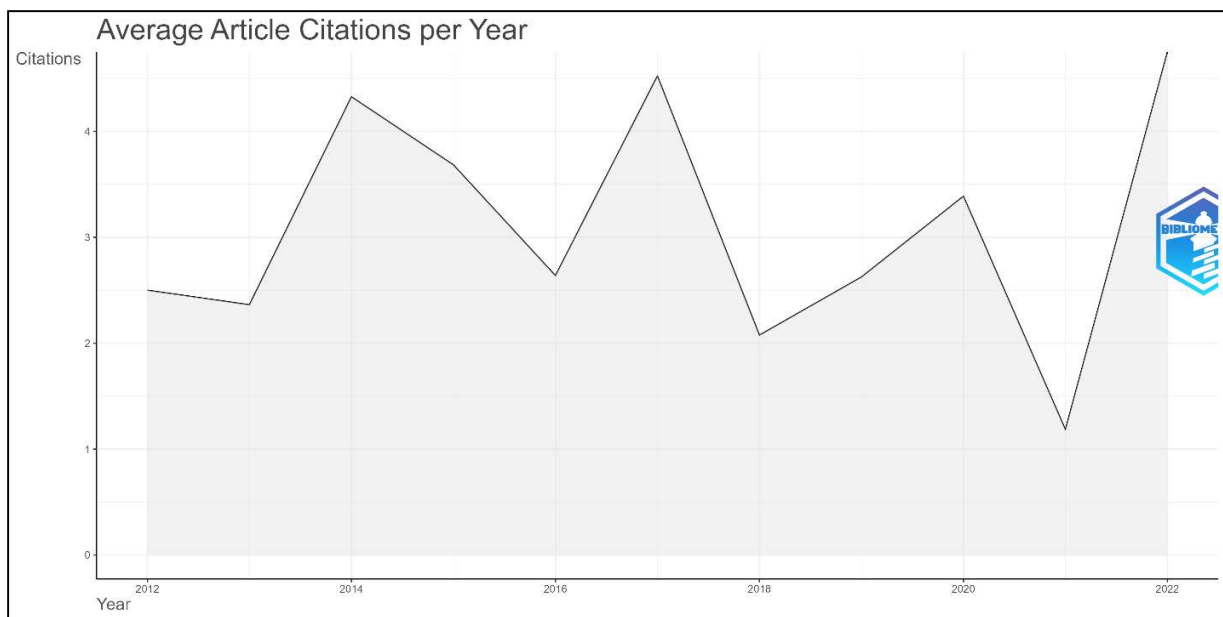


Figure 4: Average article citation per year

### Countries Scientific Productivity

We identified the contribution of 73 countries. The USA is the country with the highest number of publications with 255 publications, followed by the United Kingdom and China with 109 and 64

publications representing 33.10%, 21.20%, and 15.80% respectively. Brazil, Spain, Turkey, and Poland occupied the fourth, fifth, sixth and seventh position with 60, 58, 56, and 50 citations respectively. Portugal appears in 18th position with 28 citations as shown in Fig. 5.

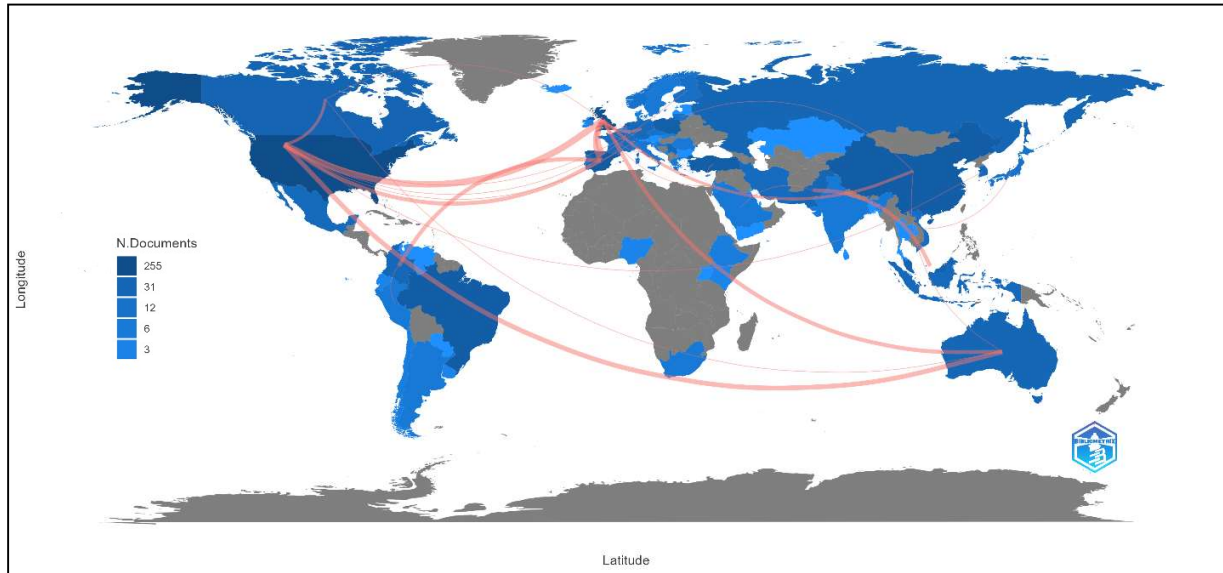


Figure 5: Countries and collaborative country Scientific Productivity from 2012 to 2022. Red lines show the networking countries. The deeper the line the stronger the collaboration.

### **Corresponding authors country**

In the United States of America, out of the 54 articles produced 43 are Single Country Publications (SCP), and 11 were Multiple Country Publications (MCP). In Poland, Russia, Indonesia, and Iran all articles produced were single-country publications with no country collaborations as shown in Fig. 6.

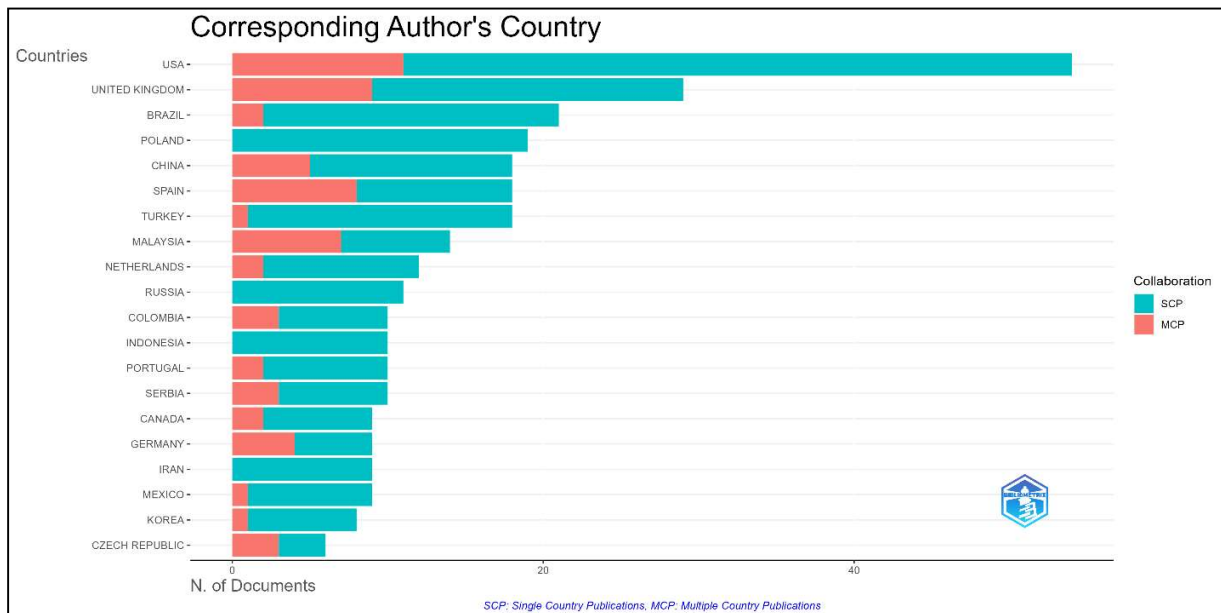


Figure 6: Trends and comparison between Single Country Publications (SCP) and Multiple Country Publications (MCP) for Corresponding author's country

### Keywords and Keywords-Plus

The authors listed 426 articles with 1384 keywords and with 952 keywords plus by WoS. Keywords-plus are more efficient than the author's keywords for bibliometric analysis purposes when looking into scientific fields' knowledge structure, but it is less comprehensive in representing an article's content (Zhang *et al.*, 2020). The spotlight is the keyword from WoS keyword-plus was performance with 90 occurrences. Then, impact, management, innovation and leadership stood out with 57, 55, 30 and 21 occurrences respectively. To understand easily the crucial phrase and compare the various origins, two tag clouds (Fig. 7) with the top-20 keywords and keywords-plus were generated.

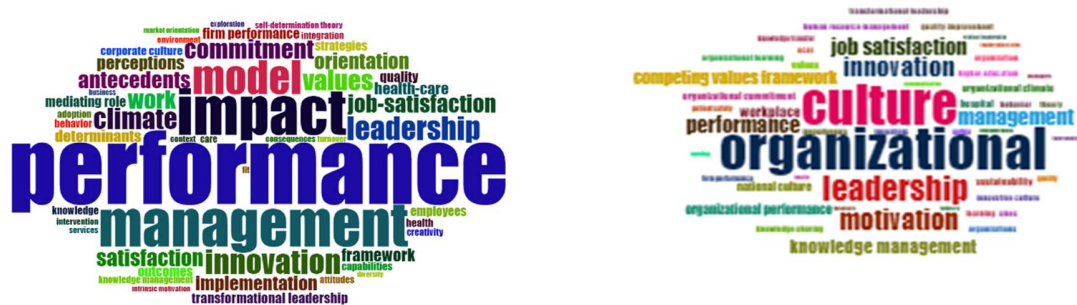


Figure 7: Two tag word clouds of the top-20 keywords-plus (on the left) and keywords (on the right).

### Thematic evolution of scientific literature, before and during the crises period (COVID-19 and war in Ukraine)

Although we know that the period under analysis is between 2012 and 2022, in order to better understand the evolution of the scientific literature, at the moment before and during COVID-19 and the war in Ukraine without any doubts, we highlight two periods: 2014 to 2018, which represents the period before the pandemic and 2019 to 2022 which represent the crisis period.

Figure 8 with the evolution of the author's keywords before and after the pandemic, shows the evolution in the use of keywords-plus, which has changed over the years.

As we can see, themes based on keywords Plus have evolved throughout time. Thematic evolution of keyword plus shows four primary topics between 2012- 2018, which then transitioned to a series of new themes between 2019-2022. Specifically between 2012-2018, "Organizational culture" was prevailing, and it has remained a key area of research. Between 2019-2022, the subject "organizational culture" continued to prevail but split into other areas such as "ethical leadership", "knowledge transfer", "empirical studies", and "higher education". In 2018-22, the so-called "national culture" gave way to "innovation" in the period 2019-2022. In the period 2012-2018, the themes highlighted as “hospital” began to focus on “organizational culture” and knowledge management”. And, in turn, the subject that in 2012-2018 focused on “nursing” in 2019-22 started to focus on “motivation”.

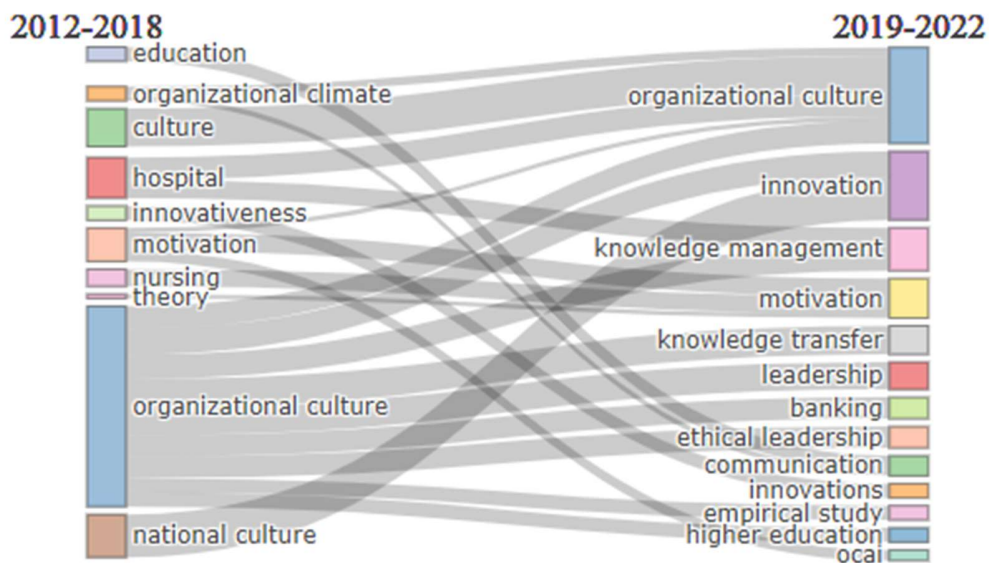


Figure 8: Thematic evolution of Key Words Plus

Figure 9 shows the cumulative occurrence of these words over the years and the growth in the use of these words. This shows that the dynamic of the time-dependent occurrences of author keywords is on the increase usage. The number of all main-term occurrences per year increased over time, but some grew more dynamically than others. The terms with the highest increase in occurrences over time were 'performance'. Keywords-plus such as 'model', 'impact' and 'management' also had an increasing cumulative occurrence. The word growths that often appear have started to develop and are used since 2012 and continue to increase every year.

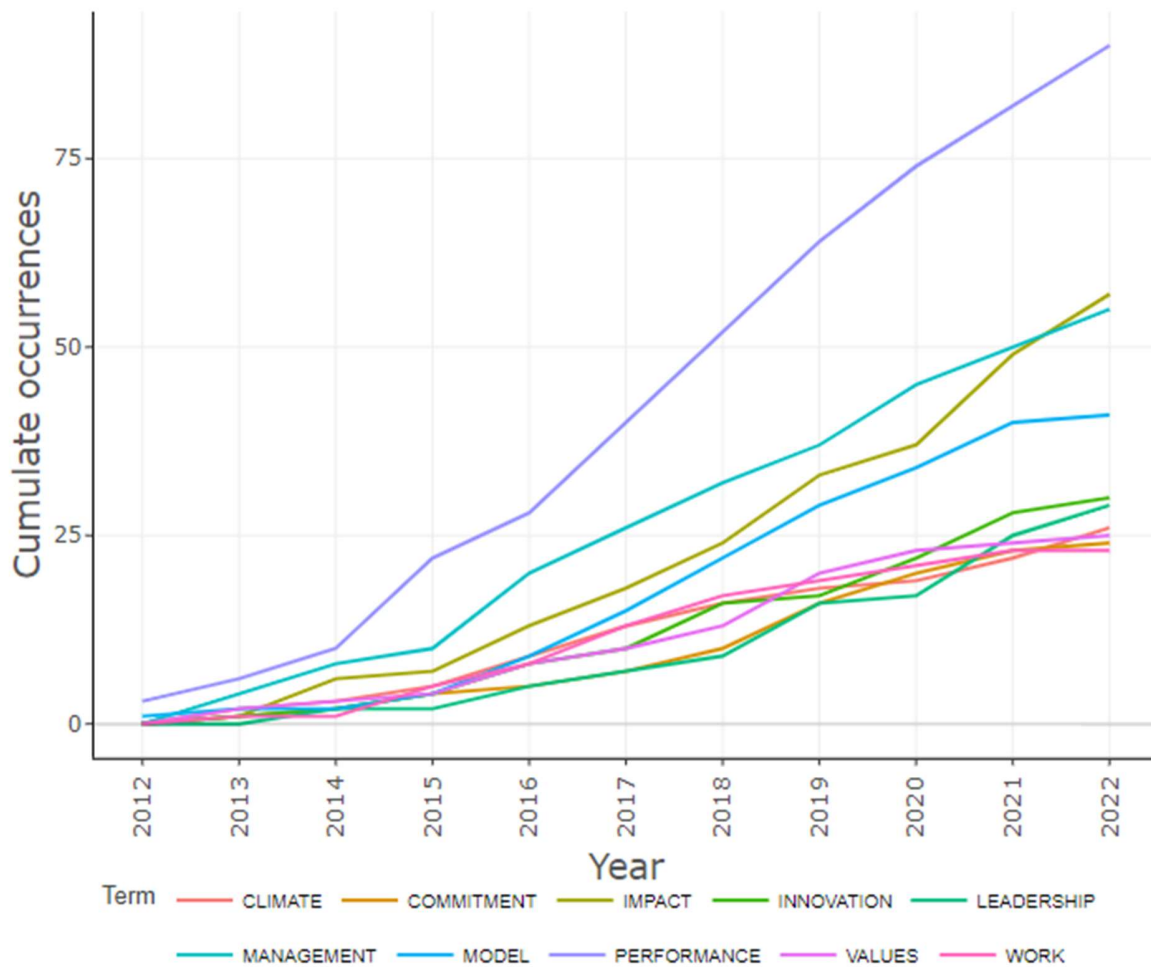


Figure 9: Cumulative occurrence and growth of Key Words Plus over the years

***Annual Scientific production before and after the crises***

A total of 203 articles from 588 authors were published by 156 journals we found to have been produced before the crisis period. The Bibliometric analysis of these articles reviewed an increasing trend in an article published over the years with an annual growth of 30% and an average of 18.6 citations per year (Fig. 10).

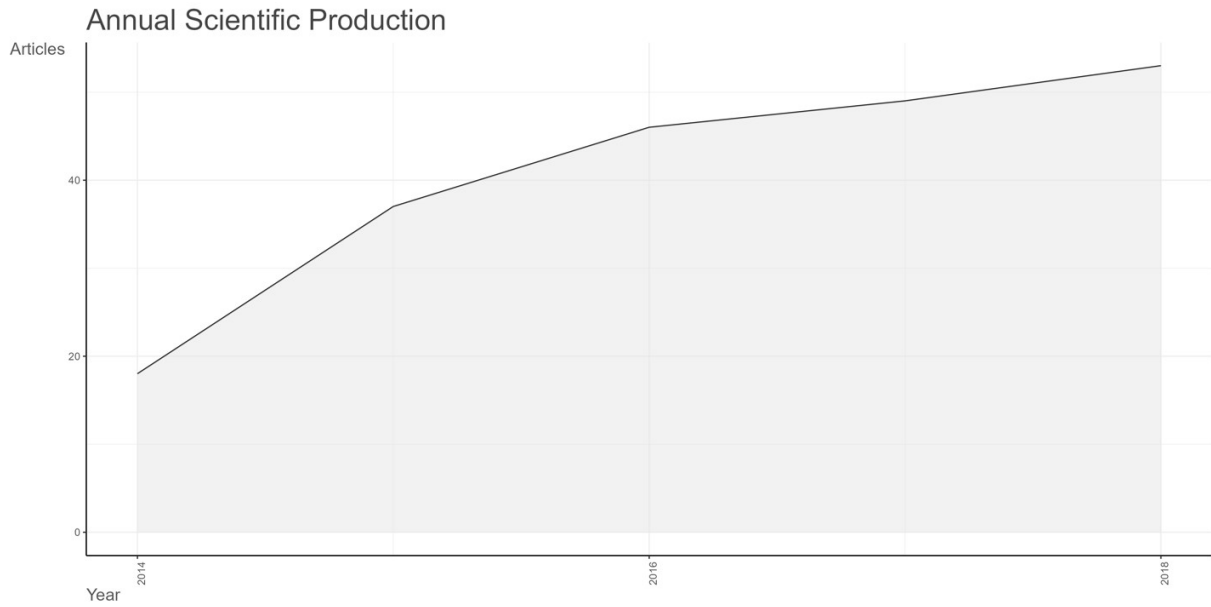


Figure 10: Annual Scientific production before the crises

Also, a total of 200 articles from 578 authors published by 155 journals we found to have been produced during the crisis period. The Bibliometric analysis of these articles reviewed a decreasing trend in an article published over the years with an annual growth of -25.55% and an average of 5.04 citations per year (Fig. 11).

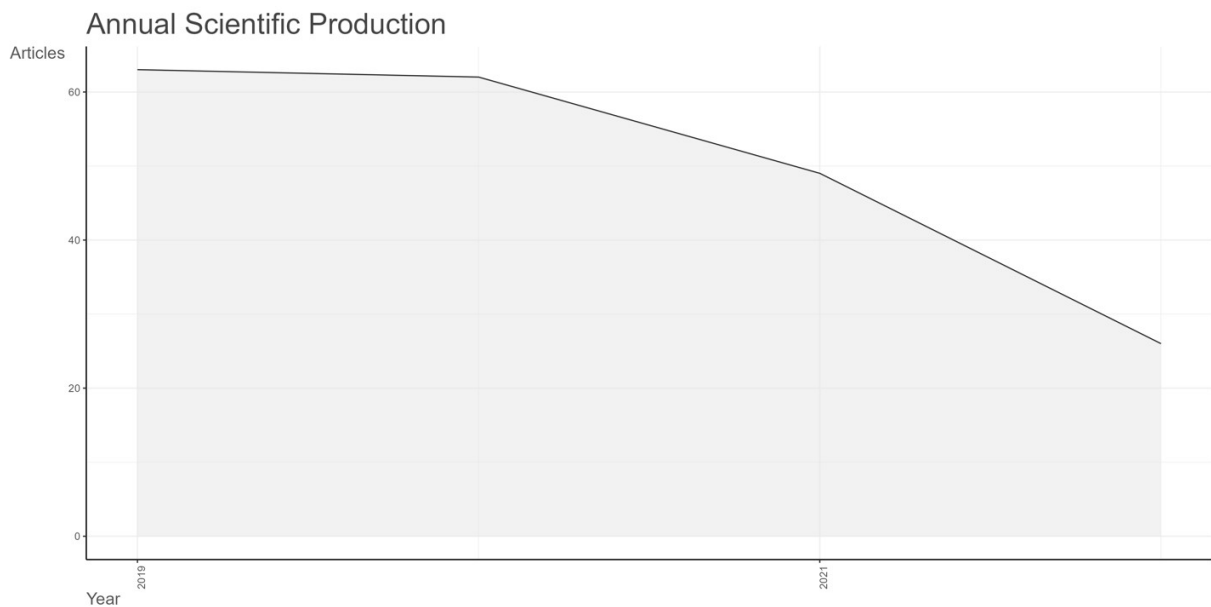


Figure 11: Annual Scientific production during the crises.

Annual Scientific production before the crisis was on the increase with an annual growth rate of 30%, However, there has been a decline in annual scientific publications from 2018 to 2022 which marks the crisis period with an annual growth rate of -25% per annum.

### ***Countries' Scientific Productivity before and after the crises***

We identified the contribution of 61 countries. The USA is the country with the highest number of publications with 171 publications, followed by the United Kingdom and Brazil with 70 and 33 publications representing 30.20%, 18.20%, and 14.50% respectively. Spain, Malaysia, Netherlands and China occupied the fourth, fifth, sixth and seventh positions with 26, 25, 22, and 19 publications respectively. We also found a strong collaboration between the USA and United Kingdom with 8 publications as well as Australia and USA with 5 publications as shown in Fig. 12.

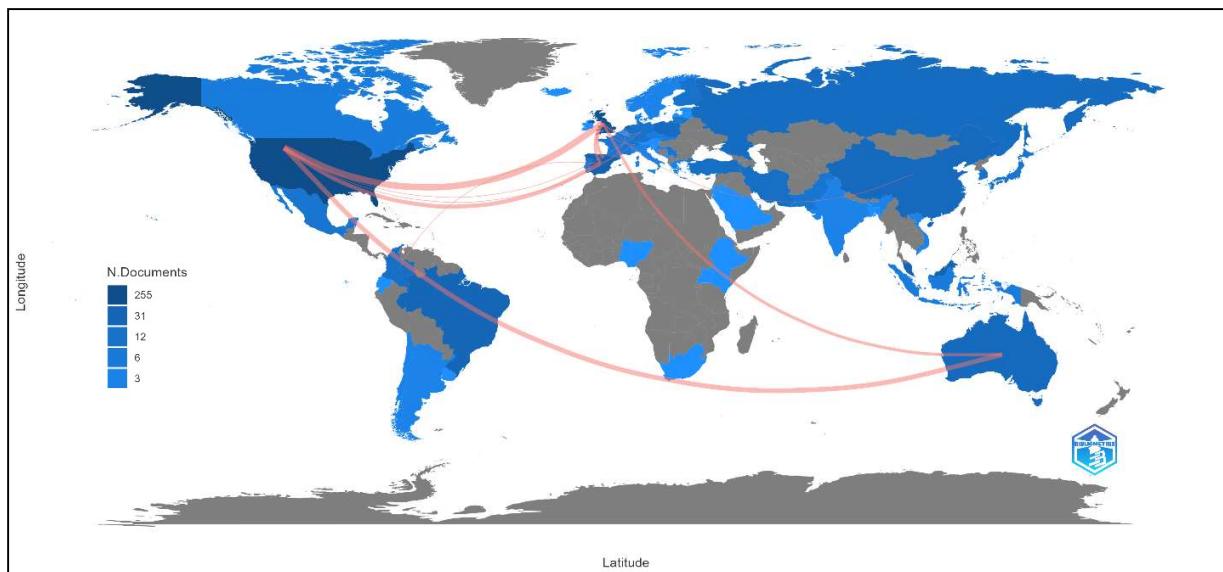


Figure 12: Countries and collaborative country Scientific Productivity from 2012 to 2018. Red lines show the networking countries. The deeper the line the stronger the collaboration.

Also, we identified the contribution of 63 countries. The USA is the country with the highest number of publications with 71 publications, followed by China, and Turkey with 41 and 40 publications representing. Poland, United Kingdom, and Spain occupied the fourth, fifth, sixth and seventh positions with 40, 34, 33, and 29 citations respectively. We also found a strong collaboration between France and United Kingdom With 3 publications as well as Pakistan and Malaysia with 3 publications as shown in Fig. 13.

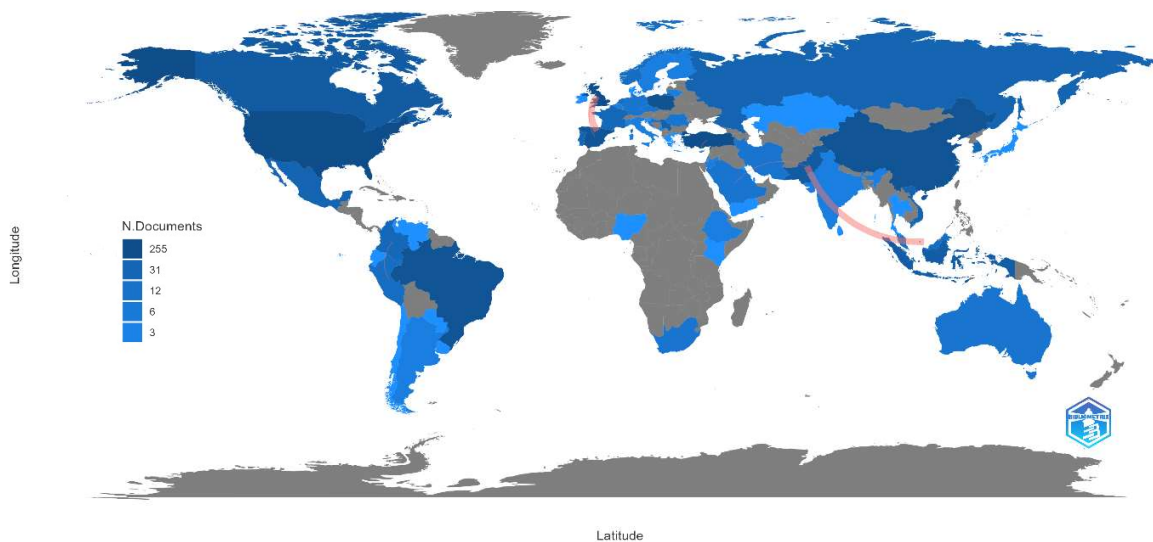


Figure 13: Countries and collaborative country Scientific Productivity from 2019 to 2022. Red lines show the networking countries. The deeper the line the stronger the collaboration.

Although fewer countries were researching in this space before the pandemic, there was a strong collaboration between countries. However, there has been an increase in the number of countries researching in this space but there is no or limited collaboration between these countries and fewer publications are being produced as a result.

### **Structures of knowledge**

To identify the structure of knowledge in this bibliometric analysis, we examine the conceptual, intellectual, and social structure of knowledge over the past decade.



There are two clusters of terms, each represented by a different hue and representing a separate theme. The conceptual structure of the keywords linked with the articles included in this study compresses large amounts of data with various variables into a low-dimensional space to generate a comprehensible two-dimensional graph that employs plane distance to show keyword similarity. Keywords towards the center point have gotten a lot of attention in recent years (Lozano *et al.*, 2020). The findings are interpreted based on the relative placements of the points and their distribution along the dimensions; the closer words are depicted in the map, the more similar their distribution is (Aria and Cuccurullo, 2017). The conceptual structure of the keywords linked with the articles included in this study compresses large amounts of data with various variables into a low-dimensional space to generate a comprehensible two-dimensional graph that employs plane distance to show keyword similarity. Keywords towards the center point have gotten a lot of attention in recent years (Lozano *et al.*, 2020). The findings are interpreted based on the relative placements of the points and their distribution along the dimensions; the closer words are depicted in the map, the more similar their distribution is (Aria and Cuccurullo, 2017). Cluster 1 (red) contains 55 keywords related to "Organisational culture," "work motivation," "innovation work behaviour," and healthcare services, explaining 21.63% of the variance. Cluster 2 (blue) has 5 terms ("services", "attitudes", "intervention", "context" and "turnover", which explains 13.87% of the variance. These clusters suggest that the keywords co-occur together in the articles indexing. We seek terms that appear together on each page and are then associated using the Co-words network visualization. This framework was utilized to learn about the topics covered and to discover the most essential and latest research fields.

The mapping of authors' keywords (Fig. 15) revealed that keywords such as organizational and cultural are closely related and frequently co-occur. A cluster of terms such as learning, motivation, satisfaction, citizenship, and conduct may also be observed.

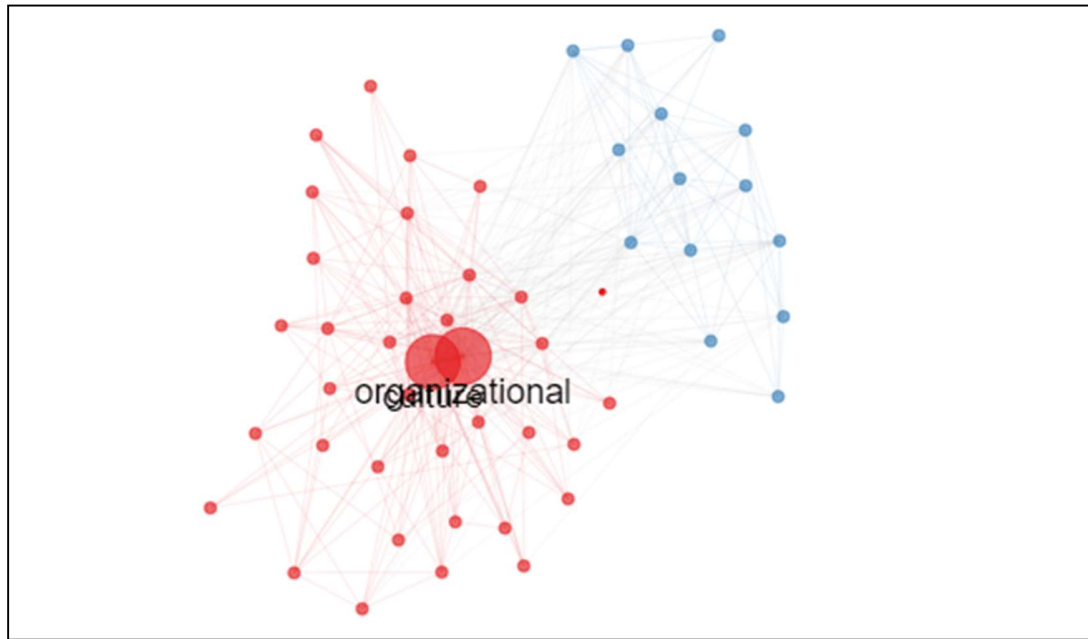


Figure 15: Authors co-word network

In the map's visualization by titles (Fig. 16), we identified organizational culture as one important phrase with five other clusters of phrases.



bibliographic references are: “Successful lean implementation: Organizational culture and soft lean practices” (Bortolotti et al., 2015), “Organizational climate and culture: Reflections on the history of the constructs (Abreu-Cruz *et al.*, 2019), “Ambidextrous organizational culture, Contextual ambidexterity and new product innovation: a comparative study of UK and Chinese high-tech Firms (Liu, Wang and Chen, 2019). As we can see through the below figure, Schein is the most outstanding author.

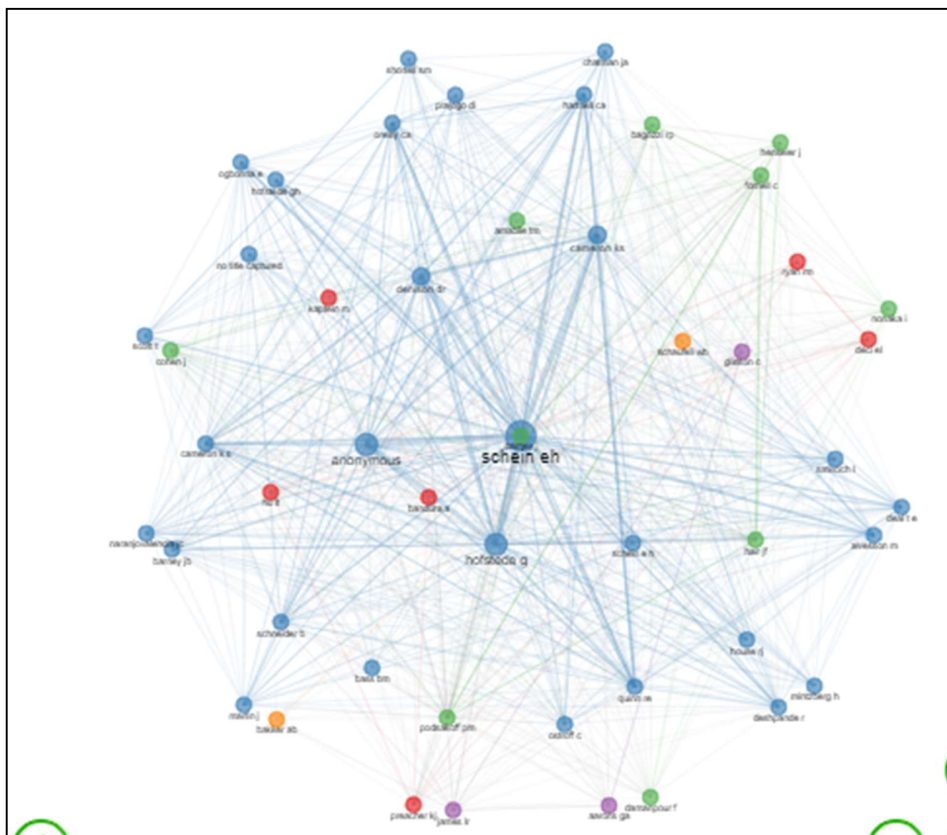


Figure 17: Co-citation network of author for documents

The network visualization of co-citation analysis of journals for journals that produced papers on this field (Fig. 18) reveals the existence of two clusters with the same hue, in which the journals of each group are frequently co-cited. The most influential journals are cited with other publications.

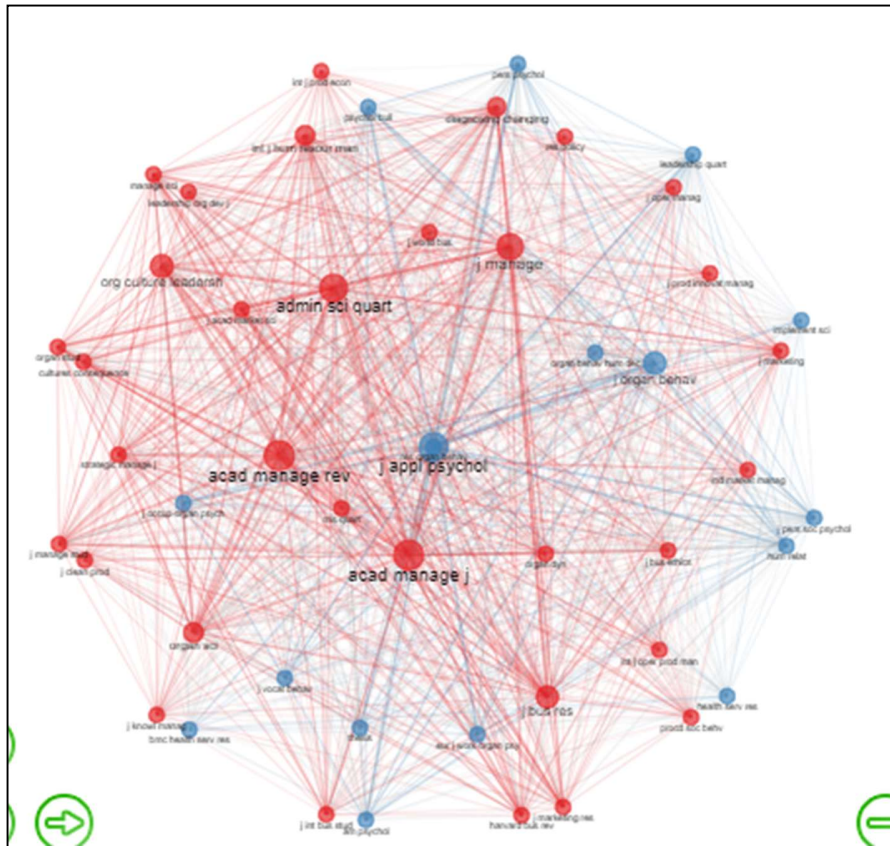


Figure 18: Co-citation analysis of journals for journals.

### The social structure of knowledge

The social structure study, using cooperation networks, demonstrates how authors, institutions, and countries are related to one another and verify the most prominent writers, groups of authors, or significant scientific research institutes. The co-authorship network is the most frequent social structure, with ties between writers primarily founded on joint publications (Baji *et al.*, 2021).

Figure 19 depicts a network of author collaboration. The number of articles under co-authorship determines the list of authors. The map features 35 circles indicating the writers, which are organized into colour-coded groups. The closest rings represent writers that worked closely together on their study. The cooperation index (CI) for papers with several authors remained stable between 2012 and 2022, with an average value of 3.02.

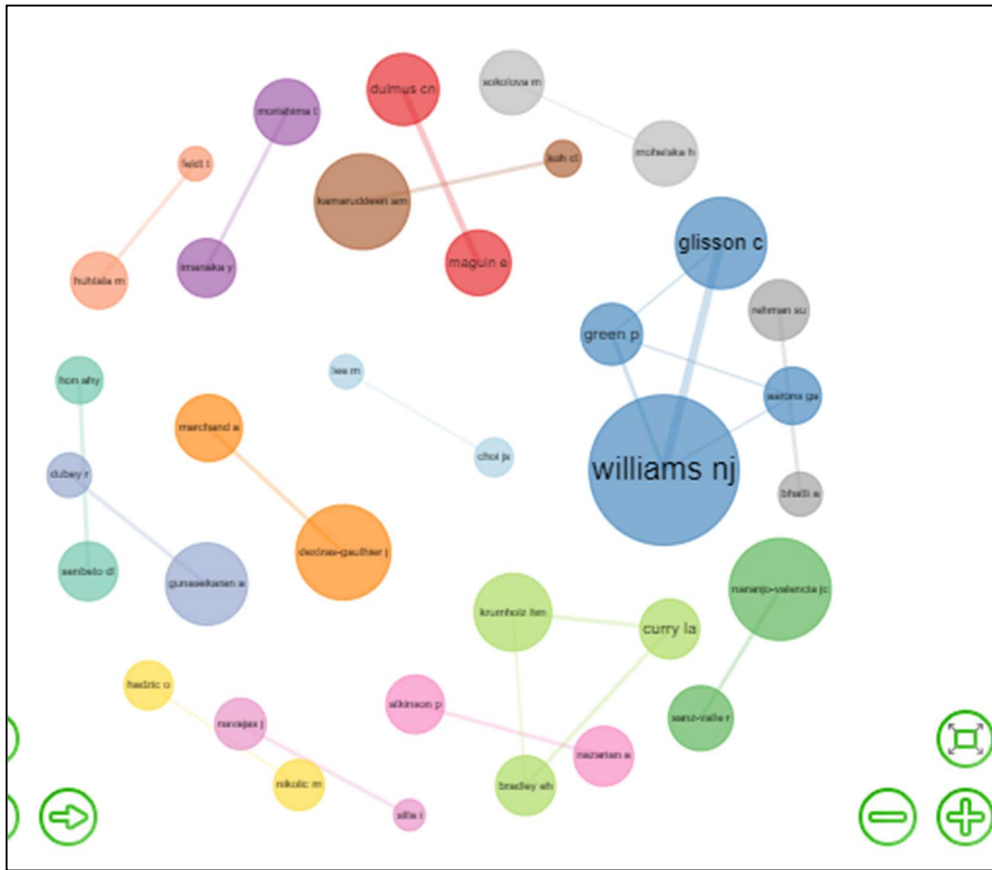


Figure 19: Network visualization of collaboration between authors

The number of articles in co-authorship determines the nations on the list. The United Kingdom plays an important role in the visualization map (Fig. 20), establishing a partnership ring with the United States, Australia, France, and Spain. The most significant collaboration, depicted by thick lines, is between the following countries: the United States and the United Kingdom, the United Kingdom and Spain, the United Kingdom and France, Pakistan and Malaysia, and the United States and the Netherlands.

We found 8 clusters, each with a distinct hue. The United Kingdom is the country that collaborated with most countries. The United States and Australia demonstrate that they are bridges linking the United States to the European continents.



**Table 2.** Summary of research articles that studied the association between organizational culture, workplace motivation and innovative work behaviour

<b>Author (s)</b>	<b>Article Title</b>	<b>Study Design</b>	<b>Sample Size</b>	<b>Analysis</b>
Geanina, (2010)	Relation between Organizational Culture and Work Motivation in a Romanian State University	Cross-Sectional	102 (+)	Descriptive analysis
Joharis, (2016)	The effect of leadership, organizational culture, work motivation and job satisfaction on teacher organizational commitment at senior high school in Medan	Cross-Sectional	123 (+)	Descriptive and inferential statistics
Rianty and Us, (2019)	Job Satisfaction in Organizational Culture, Transformational Leadership and Work Motivation	Cross-Sectional	249 (+)	Multivariate Analysis
Ari <i>et al.</i> , (2018)	The Effect of Leadership Effectiveness, Organizational Culture and Work Motivation Toward Job Satisfaction	Cross-Sectional	123 (+)	Descriptive and inferential statistics
Cucu-Ciuhan and Guită-Alexandru, (2014)	Organizational culture versus work motivation for the academic staff in a public university		(+)	
Al-musadieq <i>et al.</i> , (2018)	The mediating effect of work motivation on the influence of job design and organizational culture against HR performance		(?)	Pearson correlation
Sastra and Muchtar, (2019)	The Effect of Organizational Culture, Human Resources Quality And Work Motivation on Nurse Performance (In M.Djamil Central Hospital)	Cross-Sectional	839 (+)	Structural Equation Modeling (SEM) analysis
Feliks <i>et al.</i> , (2017)	The Effect of Organizational Culture and Work Motivation on Teachers' Performance at Public Senior High School in Tebing Tinggi	Cross-Sectional	297 (+)	Correlation

Table 2. Continue

<b>Author (s)</b>	<b>Article Title</b>	<b>Study Design</b>	<b>Sample Size</b>	<b>Analysis</b>
Aboramadan <i>et al.</i> , (2020)	Organizational culture, innovation and performance: a study from a non-western context	Cross-Sectional	186 (+)	Quantitative analysis
Khan <i>et al.</i> , (2020)	The Interplay of Leadership Styles, Innovative Work Behavior, Organizational Culture, and Organizational Citizenship Behavior	Cross-Sectional	160 (+)	Multivariate Analysis
Faraz <i>et al.</i> , (2019)	The Impact of Transformational Leadership, Organizational Learning and Organizational Culture on Employee Innovative Work Behavior	Conceptual model	(+)	
Jankelová <i>et al.</i> , (2021)	A Diverse Organizational Culture and Its Impact on Innovative Work Behavior of Municipal Employees	Cross-Sectional	227 (+)	Sobel test for the mediation effect
Eskiler, Ekici, Soyer, Sari, <i>et al.</i> , (2016)	The Relationship between Organizational Culture and Innovative Work Behavior for Sports Services in Tourism Enterprises	Cross-Sectional	134 (+)	Correlation analysis
Stoffers, Neessen and van Dorp, (2015)	Organizational culture and innovative work behaviour: A case study of a manufacturer of packaging machines	Cross-Sectional	53 (+)	Quantitative, Correlation analysis

Note: (+) = positive association between variables, (-) = negative association between variables (o) = association not significant (?) inconsistent findings or undetermined results.

**Table 3.** Summary of association between empowering leadership variable and quality of care variables tested in 25 reviewed articles

Variables	Organizational Culture					Workplace Motivation					Innovative Work Behaviour				
	N	+	-	0	Outcome	N	+	-	0	Outcome	N	+	-	0	Outcome
Organizational culture	NA	NA	AN	NA	NA	9 (1919)	8	0	1	++	6 (574)	6	0	0	++
Workplace motivation	8 (1919)	7	0	1	++	NA	NA	AN	NA	NA	?	?	?	?	?
Innovative work behaviour	6 (574)	6	0	0	++	?	?	?	?	?	NA	NA	NA	NA	NA

Note: N= Number of sample articles results in (parenthesis) represents the number of respondents for the studies. Under outcome: Positive (++) or negative (- -) for percentage > or = 75%. (?) Inconsistent findings or identifiable results due to a small number of studies available. NA = Not Applicable

## **Chapter 5. DISCUSSION**

The purpose of this study was to discover the thematic evolution of the scientific literature and, in a second instance, whether the variables (organizational culture, workplace motivation, and innovative work behaviour) are related in order to benefit current investments in healthcare services made in the context of an ongoing crisis and war in Ukraine over the last decade using bibliometric techniques. With our initial search of key phrases encompassing all years accessible in the WoS core collection, we found a total of 5893 papers. Following the application of the qualifying criteria and the removal of duplicates, our analysis chose 426 articles published by 1204 authors with an average of 0.3 articles apiece.

The results show that, out of this, a total of 203 articles from 588 authors published by 156 journals we found to have been produced before the crisis period with increasing annual growth of 30%. While a total of 200 articles from 578 authors were published by 155 journals, we found to have been produced during the crisis period with a decreasing annual growth of -25.55%. This decrease caused by the crisis has been observed and confirmed by other authors. For example, a study by Raynaud et. al., 2021, found a dramatic increase in publications on COVID-19 and a substantial decrease in non-COVID-19 research. The findings also suggest that in the period from 2012 to 2018, the number of articles in the 156 journals saw a gradual evolution. This result is consistent with the annual increase of 3% in publications across all scientific areas (Ware and Mabe, 2015). However, our research reveals an overall yearly growth rate of 30%, which is substantially quicker than other fields. This expansion might be attributed to an increase in the number of researchers and an increase in the number of publications.

When analysing the country collaboration and international distribution of articles, we found that the USA, United Kingdom, and Brazil were the countries with the most significant number of publications and citations of the total of 61 countries pre-pandemic. We also found a strong collaboration between the USA and the United Kingdom as well as Australia and USA. During the pandemic, the USA is the country with the highest number of publications with 71 publications, followed by China, and Turkey with 41 and 40 publications representing. A strong collaboration was found between France and the United Kingdom as well as Pakistan and Malaysia. Although fewer countries were researching in this space before the pandemic, there was a strong collaboration between countries. However, there has been an increase in the number of countries

researching in this space but there are no or limited collaborations between these countries and fewer publications are being produced as a result. These findings support previous research (Zhang *et al.*, 2020) that has shown that research productivity has increased during public health emergencies. Further analyses showed variations by countries and that while a country's prior patterns mattered in collaborating on internationally authored publications, the extent to which the country is affected by pandemics increases the likelihood they would participate in international collaboration.

Our analysis also shows a change in the use of keywords-plus over the years. Themes based on author keywords have evolved throughout time. Thematic evolution of keyword plus shows four primary topics in the period of 2012-2018, which then transitioned to a series of new themes in 2019-2022. In the theme evolution mapping, it was discovered that "organizational culture" remained a transversal issue. It highlights the changes in research themes from 2012 to 2018 and 2019 to 2022 based on research papers. The findings show the rise of new research subsegments in this subject. Before the outbreak of the pandemic and the war between Russia and Ukraine, studies concentrated on characterizing the measurement models of success in healthcare delivery based on organizational culture, whereas studies focused on organizational culture as a measure of innovation. This evolutionary trend is also being observed in various fields of research, as documented by (Moon and Song, 2019).

The study also reveals that, whereas research partnerships between authors and nations were widespread previous to the pandemic, it was discovered that research cooperation among countries was severely limited during the pandemic, with scientific publications on the decline. This suggests a narrow field of focus. This study also identified researchers in a variety of healthcare research contexts, using different research themes, reflecting the sector's growing relevance and growth as an academic subject. This research provides healthcare managers with insights into developing trends and issues in the area, as well as translating theoretical and practical methods into functional models to better service delivery within their organizations.

Out of the 14 articles (Table 2) studied the association between these variables using different types of analysis and sampling research techniques. In all eight studies (Geanina, 2010; Cucu-Ciuhan and Guită-Alexandru, 2014; Joharis, 2016; Ambarita, 2017; Al-musadieq *et al.*, 2018; Ari *et al.*, 2018; Rianty and Us, 2019; Sastra and Muchtar, 2019) that investigated the association

between organizational culture and workplace motivation the general findings suggest that there is a relationship between organizational culture and workplace motivation. However, one of the articles (Santie *et al.*, 2020) could not conclude on the relationship between the two variables but concluded that leadership effectiveness as well as lecturer and employee job satisfaction had a positive effect on organizational culture and work motivation. The general conclusion from all six articles (Stoffers, Neessen and van Dorp, 2015; Eskiler, Ekici, Soyer and Sari, 2016; Faraz *et al.*, 2019; Aboramadan *et al.*, 2020; Khan *et al.*, 2020; Jankelov, Skorkov and Joniakov, 2021) that accessed the associations between organizational culture and innovative work behaviour is that organizational culture has a direct effect on work motivation. This is corroborated by Stoffers, Neessen and van Dorp (2015), who stated that the creativity involved in generating new ideas depends on the management of the organisation and, in particular, on the people who generate the new ideas. The ability to generate innovative solutions depends on people's knowledge and experience in applying this knowledge to solve new problems. This shows that organizational culture has a significant relationship with work motivation and innovative work behaviour, however, it is important for organizations to understand the type of organizational culture that exists within their firm in order to be able to use that as a tool to motivate employees so as to make them innovative at work.

## **Chapter 6. CONCLUSIONS**

The study aimed to discover the thematic evolution of the scientific literature and, in a second instance, whether the variables (organizational culture, workplace motivation, and innovative work behaviour) are related in order to benefit current investments in healthcare services made in the context of an ongoing crisis and war in Ukraine over the last decade using bibliometric techniques. The study searched articles from WoS for literature related to this field and analyse 426 articles published by 1204 authors using bibliometrics.

Our findings show, there has been a decrease in the number of articles produced during the crisis period than there were to the era before the crisis. However, country collaborations have increased. There has been a strong collaboration between the USA and the United Kingdom as well as Australia and USA both during the crises and before the pandemic. However, the collaboration grew stronger with other countries such as China, Turkey, France, Pakistan and Malaysia during the crisis period. The cumulative occurrence of these keywords over the years and the growth in the use of these words have seen a transition. There have been dynamics of the time-dependent occurrences of author keywords on the increased usage. The number of all main-term occurrences per year increased over time, but some grew more dynamically than others. To answer our first research question: was organizational culture, workplace motivation and innovative work behaviour in health service delivery a pivotal topic in the academic literature the post-Covid-19? The answer from the research to this question is no, as there has been a decrease in the number of articles produced during the crisis period than there were to the era before the crisis.

Our findings also suggest that there is a significant positive relationship between organizational culture and workplace motivation as well as organizational culture has a direct effect on work motivation as found in other field studies. This implies that if managers introduce a suitable and effective organizational culture then employees would be motivated at work to innovate. To answers our second research question: Do variables (organizational culture, workplace motivation and innovative work behaviour) correlate? The answer base on the study is yes, our findings show that organizational culture has a significant correlation relationship with work motivation and innovative work behaviour. However, it is important for organizations to understand the type of organizational culture that exists within their firm in order to be able to use that as a tool to motivate employees so as to make them innovative at work. Healthcare managers therefore should

understand that the ability to generate innovative solutions from workers depends on people's knowledge and experience in applying this knowledge to solve new problems and that it is important to develop a strong and favourable organizational culture to be able to get the best out of employees.

The present study has some limitations. This research conducts a systematic review design with a small number of articles (N=14) trying to select the most relevant articles that target this research. However, a small number of articles commonly produces low internal validity. Future research could adopt a large sample size, or otherwise, carry out an experimental research design to re-investigate this. On the other hand, the dataset generated for the study involves only a search on the web of science (WoS). Despite WoS being an established database, this could limit the number of articles that were retrieved for analysis.

We recommend that further research should focus on the type of organizational culture that exists within healthcare organizations and how they motivate employees to be innovative.

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