CC BY

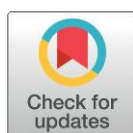## RDBCI |
Revista Digital de Biblioteconomia e Ciência da Informação
Digital Journal of Library and Information Science

Check for updates

Information anxiety and organizational performance: Challenges and Solutions in the Digital Age

Nelson Mitsuo Shimabukuro [1] ID   Francisco Carlos Paletta [2] ID

ABSTRACT

Introduction: Increasing digitalization and the exponential increase in data volume have profoundly impacted the organizational environment, resulting in challenges related to information anxiety. This phenomenon, coined by Wurman in 1989, describes the gap between what we know and what we believe we should know, generating discomfort, frustration, and cognitive overload. Objective: To investigate the relationship between information anxiety and organizational performance, analyzing the main mediating factors, such as digital literacy, organizational leadership, and strategic people management. Methodology: This is a qualitative, exploratory study based on content analysis and case studies available in scientific databases such as BRAPCI, JSTOR, Web of Science, and Google Scholar. Articles focusing on organizational settings were selected, while academic research unrelated to the topic and those concerning COVID-19 pandemic were excluded. Results: A total of 130 articles were analyzed, of which only five directly addressed information anxiety and organizational performance, highlighting a gap in both the quantity and depth of studies in the subject. Most studies take a more general approach to anxiety focusing on psychological aspects. Conclusion: The results demonstrate that information anxiety negatively affects productivity, innovation, and operational efficiency indicators, in addition to impacting employees' emotional well-being. Factors such as digital literacy, effective organizational leadership, and strategic people management emerge as essential mediators in mitigating the adverse effects of information anxiety.

KEYWORDS

Information anxiety. Organizational performance. Digital literacy. People management. Leadership.

Correspondence from authors

[1] ROR University of São Paulo
São Paulo, SP - Brazil
nelson.mitsuo@usp.br

[2] ROR   University of São Paulo
São Paulo, SP - Brazil
fcpaletta@usp.br

Ansiedade informacional e desempenho organizacional: desafios e soluções na era digital

RESUMO

Introdução: A crescente digitalização e o aumento exponencial no volume de dados têm gerado impactos profundos no ambiente organizacional, resultando em desafios relacionados à ansiedade informacional. Esse fenômeno, cunhado por Wurman (1989), descreve a diferença entre o que sabemos e o que acreditamos que deveríamos saber, gerando desconforto, frustração e sobrecarga cognitiva. Objetivo: Investigar a relação entre ansiedade informacional e performance organizacional, analisando os principais fatores mediadores, como literacia digital, liderança organizacional e gestão

| 1

estratégica de pessoas. Metodologia: Trata-se de um estudo qualitativo e exploratório, baseado em análise de conteúdo e estudo de casos disponíveis em bases de dados científicas, como BRAPCI, JSTOR, Web of Science e Google Acadêmico. Foram selecionados artigos com foco em ambientes organizacionais, excluindo pesquisas acadêmicas e aquelas relacionadas à pandemia de COVID-19. Resultados: No total foram analisados 130 artigos, sendo que apenas 5 artigos se relacionavam a ansiedade informacional e desempenho organizacional diretamente demonstrando que há carência de estudos tanto na quantidade quanto na profundidade. A maioria dos estudos são mais genéricos abordando a ansiedade de uma forma mais genérica e abordando mais aspectos relacionados com a psicologia. Conclusão: Os resultados demonstram que a ansiedade informacional afeta negativamente indicadores de produtividade, inovação e eficiência operacional, além de gerar impactos no bem-estar emocional dos colaboradores. Fatores como literacia digital, liderança organizacional eficiente e gestão estratégica de pessoas surgem como mediadores essenciais na mitigação dos efeitos adversos da ansiedade informacional.

PALAVRAS-CHAVE
Ansiedade informacional. Performance organizacional. Literacia digital. Gestão de pessoas. Liderança.

Credit

1 INTRODUCTION

The accelerated growth in the volume of data and information, driven by the integration of digital technologies into the everyday life is evident in contemporary society.

The digital age and the data explosion discussed by Gleike (2011) confirms the impact of digitalization on society, including information overload, information anxiety and the transition of the economy and knowledge to a fully informational basis.

From the moment we wake up, we engage with various digital information systems, including instant messaging platforms, social media, the Internet of Things, enterprise information systems, geolocation technologies, e-commerce, artificial intelligence, business intelligence technologies, and numerous other tools that continuously download data and information at an increasingly intense pace and volume.

The 2019 Digital Economy Compass report highlighted the exponential growth in data creation, with an increase from 33 zettabytes in 2018 to a projected volume of over 2,100 zettabytes by 2035, corroborating the general perception of the increasing availability of information to which we are continuously being subjected to.

At first glance, we might think this is positive, as having more information would mean better conditions for making decisions, producing systems and thus optimizing the lives of people, companies and society in general.

However, overabundance of information cannot always be regarded as a positive condition. Information anxiety may emerge, as proposed by Wurman (1998), who defines it as the gap between what we know and what we think we should know. This concept conveys feelings of discomfort, restlessness, cognitive overload, and frustration that arises when individuals are faced with the challenge of analyzing and processing large volumes of data rapidly and efficiently.

In the context of this article, which addresses information anxiety and organizational performance, the interdisciplinary nature of Information Science which connects areas such as Library Science, Computer Science, Cognitive Science (including artificial intelligence) and Communication, as emphasized by Saracevic (1995), provides the analysis of the interrelations among the different areas of knowledge, addressing the complex problems of information organization, retrieval and use.

Thus, this study aims to analyze the relationship between information anxiety and organizational performance, and the challenges that arise in contemporary digital environments, which are expanding in data and information volume at near-instantaneous speeds, alongside organizational environments that are increasingly demanding in terms of performance.

2 LITERATURE REVIEW

Information anxiety, term coined by Richard Saul Wurman (1989), describes the difficulties and challenges human beings experience when dealing with large volumes of data, which are not always structured and easy to analyze.

Wurman (1989) conceptualizes information anxiety as "the black hole between data and knowledge", highlighting five main subcomponents: lack of understanding, information overload, lack of knowledge about the existence of information, difficulty in locating information, and access barriers.

Research conducted by Girard and Allison (2008) shows that information anxiety and information overload are distinct phenomena, as the former is related to qualitative challenges rather than to the amount of data.

However, even before Wurman coined the term, studies related to information anxiety had been conducted by other researchers and scholars. Shannon and Weaver (1949) introduced the concept of information noise in their mathematical study on communication theory, which, although not directly related to information anxiety, raises several associated elements which contribute to the understanding of what compromises information processing.

In turn, Toffler (1970), in his book Future Shock, anticipated the psychological and cognitive impacts of rapid changes and the increasing amount of information resulting from economic, social, and technological evolution. He also stated that society was not prepared for the Information Revolution and would need more time to cope with and adapt to this new context.

Another important study was conducted by Simon (1971), who broadens the understanding of the effects of the information society by introducing another relevant aspect, "attention as a scarce resource", where human attention is diluted in the face of so many sources of stimuli and information, creating a gap between the amount of data available and the capacity to process it.

Along the same lines, Bell (1973), in his book The Coming of Post-Industrial Society: A Venture in Social Forecasting, emphasizes the shift from the industrial society to the information society, where the excess information load could create challenges for effective filtering and analysis. At the time, he also suggested the emergence of a new social class composed of highly qualified professionals, including engineers, economists, scientists, and analysts, whose primary role would be to use information and knowledge as a central and strategic element.

Watzlawick (1976) emphasized another important factor in information dynamics: the different interactions and situations that occur between sender and receiver. The difficulty in tracking, analyzing, and filtering these interactions in detail could also lead to problems of information confusion and anxiety.

Another topic related to information anxiety, which is the abundance of information that consequently generates informational overload, was addressed by Klapp (1986), pointing out that this situation could lead to decision-making paralysis, behavioral apathy and psychological stress.

In more recent studies, the concept of informational normosis has emerged, as described by Weil, Leloup, and Crema (1996). It refers to a social pathology in which the compulsive consumption of information is normalized by society. Although this behavior may appear functional, it leads to cognitive overload, anxiety, and significant impairments in both decision-making and mental health.

Addressing the concept of informational normosis in the contemporary, it translates into behaviors such as the demand to be up-to-date and consume information all the time, as society demands individuals to be up-to-date and connected. Other behaviors include, for example, the so-called FOMO (Fear of Missing Out), that is, the fear of missing out on relevant information and missing out on some unique opportunity, the compulsion to always check social media or messages, very frequent searches for news and even superficial consumption of information.

Thus, information anxiety is a multifaceted topic which has been studied and debated for decades, expanding and finally having several ramifications in social, academic and corporate contexts.

Information anxiety is described by Girard and Allison (2008) as an "organizational malady", negatively impacting organizational memory, decision efficiency and productivity.

Tabosa and Freire (2015) argue that Information Science has a strong interdisciplinary epistemological foundation, fostering dialogue with fields such as Library Science, Computer Science, Sociology, and Philosophy. This interaction favors a more complete understanding of information processes and contributes to the development of innovative approaches in the field.

In the context of this article, information anxiety manifests itself as a subject of study with two basic strands: anxiety related to Cognitive Psychology and information related to

| 4

Information Science. Depending on the approach, its scope can be broadened and connected to Applied Social Sciences, Computer Science, and other fields.

Another area of study to be explored and discussed in this article is organizational performance, that is, how information anxiety affects organizational performance. As many aspects should be considered regarding performance, items related to financial and innovation performance were selected. This article will add another area of study, Business Organizations, in addition to these two areas.

Organizational performance is a widely studied and debated topic in the area of management and business, as it involves the application of strategies and best practices aimed at achieving competitive advantage over competitors.

According to Neely, Gregory and Platts (2005), organizational performance refers to a company's ability to achieve its strategic objectives by adapting to market changes and dynamics. Conceptually speaking, according to Kaplan and Norton (1996), organizational performance can be understood as an organization's ability to achieve its objectives effectively and efficiently. "Effective" refers to perfectly performing a given activity, task, or function, and "efficient" refers to performing it with quality and excellence while using the minimum resources possible.

According to Kaplan and Norton (1996), evaluating organizational performance is not limited to financial indicators alone, it must provide a broader and more holistic view including operational and strategic factors, customer satisfaction, innovation, quality and sustainability.

The main financial indicators include:

- ROI (Return On Investment), which measures the return obtained based on the investment made in a company, marketing action or investment.
- EBITDA (Earnings Before Income Tax Depreciation and Amortization), which measures the company's ability to generate revenue excluding fees and accounting issues
- Profitability, which measures the relationship between a company's net profit and total revenue
- Current Liquidity, which measures the company's ability to honor its financial commitments

| 5

For Richard et al. (2009), financial indicators must be complemented by other non-financial indexes in order to provide a more comprehensive view of organizational performance. Customer satisfaction indicators have been highlighted lately, as loyal customers can be considered a kind of company asset. Zeithaml, Bitner, and Gremler (2014) emphasize that customer satisfaction indicators are essential for monitoring and improving customer relationships. These metrics provide detailed information about the customer experience, allowing companies to identify critical points, adjust their strategies, and strengthen loyalty.

For Slack, Chambers, and Johnston (2007), key operational indicators include Lead Time, Productivity Rate, Rework Rate, and Waste Rate, which are essential for evaluating the performance of internal production processes. These indicators evidence production and process efficiency and enable evaluating a company's efficiency in delivering products and services. They are primarily used to evaluate industrial companies where manufacturing and delivery systems are highly stressed and vital to the business's survival.

According to Tidd and Bessant (2018), the main indicators of innovation are: New Product Launch Rate, Research and Development Investment, New Product Development Time, and Technology Adoption Rate. These indicators are essential for evaluating a company's ability to expand its product and service portfolio and indicate its creative and adaptive capabilities.

For Garvin (1987), quality indicators such as Defect Rate, Product Satisfaction Index, ISO Standards Compliance, and Mean Problem Resolution Time play a key role in monitoring and

improving organizational processes. These indicators provide companies with means to evaluate their ability to meet customer expectations, reduce failures, and ensure compliance with standards of excellence.

According to Carroll (1999), sustainability indicators, such as carbon emissions, renewable energy consumption, social impact, and compliance with environmental standards allow organizations to monitor and evaluate their environmental, social responsibility, and corporate governance practices. These indicators are essential for promoting transparency and demonstrating a commitment to more ethical and sustainable practices.

3 METHODOLOGY

Gil (2008) emphasizes the importance of scientific research both for advancing academic knowledge and for solving practical and relevant problems faced by society as a whole. It is a systematic process that enables more robust responses, thus contributing to innovation and continuous improvement.

This study has an exploratory and qualitative focus, based on theoretical frameworks and case studies. It aims to explore the relationship between information anxiety and organizational performance.

According to Lakatos and Marconi (2003), exploratory methodology aims to provide greater familiarity with the research problem, enabling the formulation of more precise hypotheses. The qualitative approach, in turn, focuses on a deep understanding of the observed phenomena through direct interaction between the researcher and the object of study, facilitating a more detailed and interpretative analysis of the context.

Within the exploratory methodology, the case study will be used, which, according to Yin (2015), can be used in exploratory research because it enables a detailed analysis of complex phenomena within their real-world context. This approach is especially effective when deep exploration of specific issues is necessary, and when the boundaries between the object of study and its context are not clearly defined.

| 6

Content analysis will also be used, which for Bardin (2011), is a systematic and objective method to explore, understand and analyze textual data as it favors inferences about the context of production and reception of these messages.

Searches were carried out using the terms "anxiety", "information" and "performance" in the BRAPCI database and the terms "information" AND "anxiety" AND "performance" in the Scopus, JSTOR and Web of Science databases.

4 RESULTS

Searches focused on the terms " ansiedade informacional" or "information anxiety", and case studies analyzing the impact of information anxiety on the performance of organizations and corporations were selected. Studies and analyses conducted with students or in academic settings were excluded. Studies related to the COVID-19 pandemic, which has generated a spike in information anxiety across society, were also excluded.

Searches were conducted using the terms "ansiedade", "informação" and "performance" in the BRAPCI, JSTOR, Web of Science and Google Scholar databases.

In the BRAPCI database, the terms "ansiedade informacional" retrieved twenty results, three studies in the academic environment and two studies in the corporate segment.

Accessing the JSTOR database, the terms "information anxiety" in the title retrieved only two papers, neither of which were case studies in the corporate segment.

A search on the Web of Science using the terms "information anxiety" in the title retrieved 16 papers, however, no case studies in the corporate segment.

A search on Google Scholar for the exact term "information anxiety" retrieved 92 papers, three were related to the corporate segment.

In total, five studies on information anxiety in the corporate segment were found, which are summarized below.

The article "*How can leaders alleviate employees' workplace anxiety caused by information overload on enterprise social media? Evidence from Chinese employees*," explores the relationship between information overload on enterprise social media (ESM) and workplace anxiety among Chinese employees. Although ESM platforms, such as *WeChat* and *DingTalk*, facilitate communication and collaboration, they also generate cognitive overload due to information overload. The research seeks to understand how supervisor-subordinate ties, both instrumental (task-focused) and expressive (personal-focused), can moderate this relationship and, consequently, reduce or exacerbate workplace anxiety.

Based on Cognitive Load Theory and Conservation of Resources Theory, the study argues that information overload depletes limited cognitive resources, leading to anxiety. Instrumental ties may help mitigate this anxiety by providing clarity and direction, whereas expressive ties can exacerbate it by introducing additional social demands. These ties play distinct roles in moderating the negative effects of information overload.

A total of 219 valid questionnaires were collected from Chinese employees who use ESM to communicate with their supervisors. Using PLS-SEM (Partial Least Squares Structural Equation Modeling), the researchers analyzed the relationships between information overload, instrumental and expressive ties with supervisors, and workplace anxiety. Factors such as age, gender, educational level, and job autonomy were controlled to minimize bias.

The results indicated that information overload is positively associated with workplace anxiety. Instrumental supervisor-subordinate ties partially mitigate this relationship by providing additional cognitive resources and practical guidance. However, expressive ties, surprisingly, intensified the relationship between information overload and anxiety, possibly due to the additional emotional demands they impose on employees.

Companies should implement information filtering tools to reduce overload and offer training to improve employees' information processing capabilities. Supervisors should balance the use of instrumental and expressive ties, avoiding excessive or misdirected communication. Future research should explore the underlying cognitive mechanisms and apply longitudinal studies to validate these findings in different cultural contexts.

The study "*Influence of information anxiety on core competency of registered nurses mediating effect of digital health literacy*" investigates the relationship between information anxiety, a core competency of registered nurses, and the mediating role of digital health literacy.

The rapid digitalization of healthcare systems has brought significant benefits, but it has also led to information overload that can impair clinical decision-making and the emotional well-being of nursing professionals. This research sought to understand how Digital Health Literacy (DHL) can mitigate the negative impacts of information anxiety on nurses' professional performance.

The research is based on the Transactional Model of Digital Health Literacy, which emphasizes healthcare professionals' ability to process, interpret, and utilize digital information effectively. Information anxiety arises when nurses face an excessive volume of data, ambiguous, or conflicting information, affecting their ability to make informed decisions. Digital health literacy, on the other hand, serves as an essential tool for filtering relevant information and mitigating the effects of cognitive overload.

The study was conducted in three tertiary hospitals in Fujian Province, China, with a sample of 608 nurses. Standardized questionnaires, including the Information Anxiety Scale, the Registered Nurse Competency Inventory, and the Digital Health Literacy Instrument were used. Analysis was performed using Pearson's correlation and structural equation modeling in the Mplus software.

| 7

The findings indicated that information anxiety negatively affects nurses' core competency. Digital health literacy, on the other hand, showed a positive correlation with professional competency. Furthermore, digital health literacy served as a partial mediator between information anxiety and the Core Competency of Registered Nurses, explaining 43.54% of the total relationship. In other words, nurses with greater digital literacy were better able to cope with information overload, resulting in better professional performance.

The study highlights the need for training programs focused on digital health literacy for nurses to reduce information anxiety and improve their professional competence. Hospital managers should prioritize ongoing digital skills training and develop institutional policies to mitigate the adverse effects of information overload. Digital Health Literacy emerges as an essential resource for strengthening nurses' professional resilience in an increasingly digitalized healthcare environment.

In the article "*Information as a cause of anxiety in organizations: a preliminary analysis of people management process guidelines as support for workers' information anxiety*", Ribeiro (2019) explores information as a potential source of anxiety in organizations, directly affecting workers' mental health and performance. The digital age has brought unprecedent access to information, but also an overwhelming excess that is increasingly difficult to manage. This phenomenon, known as information anxiety, arises when individuals struggle to filter, interpret, and use relevant information in the workplace. The study highlights the need for organizational strategies to effectively address this challenge.

Information anxiety is characterized by frustration, overwhelming feelings, and insecurity regarding the quality and quantity of available information. This state of anxiety can lead to mental exhaustion, reduced productivity, and impaired decision-making. The impact is particularly pronounced in corporate environments with high demands for rapid information processing, creating a cycle of stress and diminished performance.

The study proposes people management as a strategic approach to mitigate the negative effects of information anxiety. Structured people management processes, including planning, development, occupational health, and emotional support, can help employees better cope with information overload. Furthermore, clearer and more objective communication between managers and employees is essential to reduce ambiguity and anxiety associated with information.

The research was developed through bibliographical and theoretical analyses, using academic and scientific materials that address the topics of information anxiety, people management, and occupational health. The main triggers of information anxiety as well as the mechanisms by which it affects workers' health were discussed. The analysis also emphasized how strategic management policies can mitigate these impacts.

The article highlights that information anxiety is a growing challenge for modern organizations, requiring systemic and strategic solutions. People management must be integrated into decision-making and organizational development processes, with a focus on training, clear communication, and psychological support. The study also recommended that specific practices be implemented to filter and organize information flow, ensuring that employees can use it efficiently without negatively impacting their mental health.

The study "*Information Anxiety in the Workplace: Scale Development and Validation*" aims to develop and validate an Information Anxiety Scale to measure to what extent anxiety caused by information overload affects workers. Information anxiety is defined as a state of emotional and cognitive discomfort caused by difficulty in dealing with excessive or inadequate information. The research highlights that information anxiety can impair productivity, decision-making, and emotional well-being in the workplace.

The scale was developed in two main phases. In the first phase, an extensive literature review on information anxiety and focus group interviews were conducted to generate preliminary items for the scale. Experts then validated these items for content and appearance.

| 8

The initial scale consisted of 56 items distributed across six dimensions: Task Anxiety, Need Recognition Anxiety, Finding Anxiety, Evaluation Anxiety, Access Anxiety, and Usage Anxiety.

Data were collected from 640 professionals from different sectors, including hospitals, universities, banks, and corporations. Statistical analysis was conducted using Exploratory Factor Analysis (EFA) and reliability tests (Cronbach's alpha and test-retest). The results indicated that the final scale contained 33 valid items distributed across the six dimensions mentioned, explaining 51.97% of the total variance. The measures demonstrated high levels of reliability, with alpha coefficients ranging from 0.749 to 0.901.

The results confirmed that information anxiety is a multidimensional phenomenon that can be categorized into different factors, such as anxiety related to task definition, need recognition, and appropriate use of available information. The scale proved to be a robust instrument for evaluating information anxiety, offering valuable insights into identifying critical points that affect employee performance.

The study highlights the need for organizational interventions to reduce information anxiety, including training programs on digital literacy and information management. Furthermore, organizational policies should focus on appropriate information filtering and psychological support for employees. The developed scale can be used in future studies to analyze the relationship between information anxiety and factors such as workplace performance, emotional well-being, and organizational effectiveness.

In the article "*Information Anxiety in Innovation Startups*", Cavallari (2020) focuses on the behavior of knowledge workers. Due to their dynamic and highly information-dependent nature, startups face significant challenges related to data overload. Information anxiety arises as a result of employees' difficulty filtering, managing, and applying relevant information, affecting their productivity, mental health, and innovative capacity.

The research used a case study method with triangulation of data collection techniques, including closed-ended Likert-scale questionnaires, semi-structured interviews with managers, and direct observation. Participants included 18 employees from four information technology startups. Issues related to employee behavior toward startups, access to online information, and the impacts of informational stress and anxiety were analyzed.

The findings revealed that information anxiety is significantly present in startups, manifesting through frustration with the quality of available information, feelings of guilt for not being sufficiently informed, and constant pressure to stay up-to-date. Information overload has impacted both the physical and emotional well-being of workers, leading to symptoms such as insomnia, headaches, and, in extreme cases, the use of sedatives.

The study suggests that people management plays a crucial role in diminishing information anxiety. Strategies such as planning and evaluating information use, developing data management skills, creating clear policies for information access and use, and actions focused on mental health were highlighted as essential for mitigating the negative impacts of information overload.

The research concludes that information anxiety is a structural challenge in startups, requiring systemic actions from managers. Implementing policies aimed at balanced information use and developing an organizational culture that values mental health and well-being are essential. The study also recommended that startups invest in ongoing training programs to increase their employees' information literacy.

5 DISCUSSION

Search results from BRAPCI, JSTOR, Web of Science, and Google Scholar databases revealed a significant shortage of studies specifically focused on the impact of information

anxiety in the corporate sector. Out of the 130 obtained results, only five met the criteria established for this study. This scarcity suggests that, despite the growing relevance of the topic in the organizational context, the gap in the academic literature that deserves further exploration is significant.

The studies highlighted that information anxiety in the corporate environment is intrinsically associated with information overload, a lack of adequate filtering, and cognitive demands that exceed individuals' ability to process and utilize data effectively. Gerry McCambridge's study on enterprise social media (ESM) reveals that the relationship between supervisors and subordinates, whether instrumental or expressive, plays a crucial role in mitigating or intensifying information anxiety. Supervisors who provide clarity and instrumental guidance significantly reduce the negative effects, while expressive relationships, paradoxically, can exacerbate the problem due to the additional emotional demands.

The research on nurses highlighted digital health literacy as an important mediating factor in reducing information anxiety. Professionals with greater digital competence are better able to filter and interpret information, reducing its emotional impact and improving their performance. The findings reinforce the importance of ongoing digital training programs, not only in the healthcare sector but also in other corporate segments.

Another relevant point was identified in the study on people management as a tool for dealing with information anxiety. Clear strategies, emotional support, and effective institutional policies can directly contribute to reducing the adverse effects of information overload. Strategic people management, therefore, appears to be a central axis in mitigating this problem.

The validated information anxiety scale proposed in one of the studies also represents a valuable contribution, offering a robust instrument for measuring and categorizing information anxiety in different corporate contexts. The creation of reliable metrics is a significant step forward, enabling organizations to develop specific policies based on concrete evidence.

The relationship between information anxiety and organizational performance is multifaceted and requires an integrated approach to be fully understood. Information anxiety directly affects employees' ability to make effective decisions, process critical information, and perform their tasks accurately. Furthermore, information overload can lead to mental exhaustion, reduced creativity, and increased organizational turnover. These factors, combined, negatively impact organizational performance as a whole.

| **10**

Companies that rely heavily on data analytics, information management, and highly digitized environments face even greater challenges. Employee productivity can be compromised when information anxiety reaches critical levels, resulting in communication breakdowns, operational errors, and missed strategic opportunities. This suggests that effectively managing information anxiety is not only a matter of individual well-being, but a strategic imperative for organizational competitiveness and sustainability.

Given this scenario, organizations should adopt proactive policies that involve technical training, ongoing psychological support, clear internal communications, adequate information filtering, as well as the adoption of technologies that automate and simplify information management. Furthermore, organizational leaders must be trained to identify signs of information anxiety in their teams and intervene assertively.

Finally, the study focused on startups revealed that highly dynamic, information-dependent environments are particularly susceptible to information anxiety. The constant pressure to stay up-to-date and the difficulty in filtering relevant information directly impact employees' physical and emotional well-being, in addition to affecting their innovative capacity.

Given these findings, clearly, information anxiety is not an isolated phenomenon, but rather a systemic issue that directly affects organizational performance. Effective solutions depend on integrated approaches that involve technological tools, digital skills development, clear institutional policies, and adequate emotional support. Further studies should expand the

longitudinal analysis of these factors and explore diverse cultural contexts to validate the findings presented in this study.

A recurring theme in studies of information anxiety in the corporate environment is the issue of literacy in digital environments, in line with Botelho's (2017) perspective. The study addressed the concept of emerging literacies in digital contexts, discussing how the appropriation of cyberspace requires specific skills to navigate, interpret, and use information critically and effectively. Emphasizing the impact of Information and Communication Technologies (ICT) on knowledge construction, digital inclusion, and the development of new reading and writing practices, the author highlights the importance of understanding literacies as a plural and dynamic phenomenon, capable of adapting to technological and social changes.

6 CONCLUSION

The increasing volume of data and information is a perceptible trend that is generating significant implications for companies, especially from a organizational performance perspective.

However, associating information anxiety to organizational performance through the analysis of cases collected in the searched databases was not conclusive, as, in addition to collecting few cases, none of them analyzed the points related to business performance, that is, they did not bring considerations on financial, innovation, operational or customer loyalty issues.

Anxiety, in general, is increasing; and information anxiety specifically is revealing its consequences through changes in personal and corporate habits in accessing data and information, not always in a positive manner. Few detailed and in-depth studies on corporations and companies, therefore without detailed or sectorized impact evaluations.

Interdisciplinary as an Analysis Tool, considering that Information Science, Psychology, Management and Technology offer complementary perspectives to understand and mitigate the impacts of information anxiety.

| 11

An important aspect to consider is the ability to filter, interpret, and utilize digital information, which is a key factor in reducing the effects of information anxiety. Improving existing capabilities and developing new approaches may be paths for further exploration, considering that the vast majority of current strategies, apparently developed for other contexts, may be reaching their limits.

Strategic people management as a mitigator of information anxiety is a relevant instrument to improve communication structure. Emotional support and clear policies are essential to reduce the adverse effects of information overload.

Start-up, technology-based, and highly information-dependent companies are more susceptible to the adverse effects of information anxiety, requiring specific approaches depending on the sector in which they operate. They also require in-depth information and knowledge management strategies, otherwise they risk wasting energy without the expected return.

The development of a scale to measure information anxiety represents a significant advance towards accurate diagnoses and evidence-based policies.

Conducting longitudinal studies and comparative approaches in different cultural contexts can improve and detail the understanding of the relationships between information anxiety and organizational performance.

Social networks are part of the corporate work routine, with both positive and negative implications, contributing to the increase in information anxiety within companies.

The importance of information and digital literacy, in a corporate world, increasingly based on and oriented towards complex and structured decisions, proves to be a significant path to improving the relationship between human beings and information.

Finally, we consider that the transition to the digital world and the expansion of studies on information anxiety, information overload and digital humanities is a process that must be deepened and further studied, as more drastic changes in the volume and complexity of information occurred more significantly from the nineties onwards, that is, less than four decades. This is a short time if we consider that the modern human brain, as we know it today, reached its current structure about 300 thousand years ago, with the emergence of Homo sapiens, according to Herculano-Houzel (2016), marked by a significant increase in the number of neurons in the cerebral cortex, allowing complex cognitive capabilities, such as language, abstract reasoning and long-term planning.

REFERENCES

BARDIN, L. **Análise de conteúdo**. Lisboa: Edições 70, 2011.

BELL, D. **The coming of post-industrial society**: a venture in social forecasting. New York: Basic Books, 1973.

BOTELHO-FRANCISCO, R. E. Literacias emergentes em contextos digitais. **Revista Brasileira de Biblioteconomia e Documentação**, São Paulo, v. 13, n. esp, 2017.

CARROLL, A. B. Corporate Social Responsibility: Evolution of a Definitional Construct. **Business & Society**, Thousand Oaks, v. 38, n. 3, p. 268-295, 1999.

CAVALLARI FILHO, R. et al. O impacto da ansiedade em informação nas startups de inovação. **Revista Cubana de Información en Ciencias de la Salud**, Havana, v. n 31, n. 2, 2020.

GARVIN, D. Competing on the Eight Dimensions of Quality. **Harvard Business Review**, Boston, v. 65, n. 6, p. 101-109, 1987.

GIL, A. C. **Métodos e técnicas de pesquisa social**. 6. ed. São Paulo: Atlas, 2008.

GIRARD, J. P.; ALLISON, M. Information Anxiety: Fact, Fable or Fallacy. **Electronic Journal of Knowledge Management**, Reading, v. 6, n. 2, p. 111-124, 2008. Available at: https://www.ejkm.com. Access on: 16 dez. 2024.

GLEICK, J. **The information**: a history, a theory, a flood. Nova York: Pantheon Books, 2011. Available at: https://www.around.com.   Access on: 29 nov. 2024.

HERCULANO-HOUZEL, S. **The human advantage**: a new understanding of how our brain became remarkable. Cambridge: The MIT Press, 2016.

KAPLAN, R.; NORTON, D. **The balanced scorecard**: translating strategy into action. Boston: Harvard Business School Press, 1996.

KLAPP, O. E. **Overload and boredom**: essays on the quality of life in the information society. New York: Greenwood Press, 1986.

| 12

LAKATOS, E. M.; MARCONI, M. de A. **Fundamentos de metodologia científica**. 5. ed. São Paulo: Atlas, 2003.

NEELY, A.; GREGORY, M.; PLATTS, K. Performance measurement system design: a literature review and research agenda. **International Journal of Operations & Production Management**, Bradford, v. 25, n. 12, p. 1228-1263, 2005.

RIBEIRO, K. C. R. et al. A informação como causa de ansiedade nas organizações: uma análise preliminar de diretrizes do processo de gestão de pessoas como suporte na ansiedade informacional dos trabalhadores. **Revista Cubana de Información en Ciencias de la Salud**, Havana, v. n 30, n. 4, 2019.

RICHARD, O. C. et al. Measuring organizational performance: Towards methodological best practice. **Journal of Management,** Thousand Oaks, v. 35, n. 3, p. 718-804, 2009.

SARACEVIC, Tefko. The interdisciplinary nature of information science. **Ciência da Informação**, Brasília, v. 24, n. 1, 1995.

SHANNON, C. E.; WEAVER, W. **The mathematical theory of communication**. Urbana: University of Illinois Press, 1949.

SIMON, H. A. Designing organizations for an information-rich world. In: GREENBERGER, M. (ed.). **Computers, communications, and the public interest**. Baltimore: Johns Hopkins Press, 1971. p. 37-72.

SLACK, N.; CHAMBERS, S.; JOHNSTON, R. **Administração da Produção**. 5. ed. São Paulo: Atlas, 2007.

TABOSA, H. R.; FREIRE, G. H. A. Contribuições de Wilson e Wersig para a intelecção metodológica na ciência da informação. **DataGramaZero**, Rio de Janeiro, v. 14, n. 5, 2013.

TIDD, J.; BESSANT, J. **Gestão da inovação**: integração de mudanças tecnológicas, de mercado e organizacionais. 5. ed. Porto Alegre: Bookman, 2018.

TOFFLER, A. **Future shock**. New York: Random House, 1970.

YIN, R. K. **Case study research**: design and methods. 5th ed. Thousand Oaks: Sage Publications, 2015.

WATZLAWICK, Paul. **How real is real?** confusion, disinformation, communication. New York: Random House, 1976.

WEIL, P.; LELOUP, J.-Y.; CREMA, R. **Normose**: a patologia da normalidade. Rio de Janeiro: Vozes, 1996.

WURMAN, R. S. **Information anxiety**. New York: Doubleday, 1998.

ZEITHAML, V. A.; BITNER, M. J.; GREMLER, D. D. **Marketing de serviços**: a empresa com foco no cliente. 6. ed. Porto Alegre: Bookman, 2014.

| 13