

Organizational Perception and Information Management at the National Information Center of Medical Sciences in Cuba

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ABSTRACT

The objective of this article was to identify the elements of information management that contribute to generating capabilities for adequate organizational perception. For this purpose, the research was contextualized to the National Information Center for Medical Sciences (Infomed) due to its development and main results in the health sector from the field of Information Sciences. Among the methods and techniques, documentary and content analysis was used to characterize the institution, and a survey of managers and strategic level specialists. Among the main results of the study were the informational nature of organizational perception and its specific processes. The informational elements of information management that influenced the development of perceptive capabilities were identified, focused mainly on the analysis and use of strategic information, its monitoring and systematic surveillance, the scenarios for the construction of shared meanings, the processes informational and managerial aspects that were developed in the process, and the informational culture. The study concluded that information management directly affects organizational

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perception, and presents informational elements that—strategically articulated can favor the perception capabilities of an organization.

Keywords: Information

management; organizational

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INTRODUCTION

Perception has been examined by various researchers and fields of knowledge since the 1960s. In the literature on the subject, two fundamental approaches related to this concept are evident: the cognitive and the organizational. The first of these has been under the gaze of the social sciences, especially Psychology and Sociology, and its main objective was focused on understanding how people perceived, interpreted and represented a certain phenomenon of reality. In 1967, *Garfinkel* used the term in his orientation to "sense-making," ¹ as a way of studying the everyday practices of actors as they interact, interpret, and explain their experience of reality. The second approach, coined as organizational perception, derives from the development of the area of management, and focuses on how organizations can perceive the situations and events that take place in their external and internal environment, a key aspect for strategic action.

In the field of management and organizational development, the term was used more frequently, also from the late 1960s onwards. The first mention of perception in the organizational context is found in the book "The social psychology of organizing", ² by *Weick*, in 1969, which maintained that the ecological changes that took place in the organizational environment created discontinuities or variations that attracted the attention of organizational actors. From this date, researchers such



as *Gioia* (1993), ³*Melgarejo* (1994), ⁴*Choo* (1999), ⁵*Dervin* (2003), ⁶*Liu* and *Mait lis* (2014), ⁷*Carnevali* (2015), ⁸ among other authors, They begin to delve deeper into the components and particularities of this process. As a result of these investigations, two visions or perspectives are offered from the organizational environment: the psychological and the contextual. The first is oriented to the individual, his mental model and his behavior based on organizational situations or events. The second focuses on the organizational dynamics through which individuals, in their social media, represent, interpret and respond to certain situations as a result of a collective learning process.

In this way, it can be argued that the study of organizational perception emerges from the need to study the behavior of people in their professional activities within an organization. This interest is seen in much of the research on the subject. Authors such as *Gioia* and *Chittipeddi* (1991)⁹ highlight the importance and incidence of organizational perception processes in the strategic changes that organizations develop. *Maitlis* (2005), ¹⁰ for his part, focused on social processes as a key element of perception theory, with emphasis on leadership and work groups.

Among the main contributions of organizational perception studies, the identification of critical factors stands out, such as the importance of the external and internal organizational environment for the strategic performance of organizations, the effect of organizational uncertainty, the search and analysis of information such as strategic processes, the mental models of individuals, the incidence of knowledge and interpretation schemes, to adequately perceive



changes in the environment, the importance of social interaction, teamwork dynamics, as well as emotional factors in the organizational perception.

Due to its importance in the organization-external context relationship, organizational perception became an essential part of communication processes in the organizational field. As a result, according to *Dervin* (2003), "this notion of organizational perception has been used in several disciplinary fields such as: journalism, media studies, cultural studies, critical theory, education and pedagogy, communication campaigns, health communication, citizen communication - government, patient-doctor communication, telecommunications policies, library science, and information science. ⁶ Some consider it as a primarily cognitive process that takes place in the minds of individuals; but it is generally considered a process of social construction because individuals who construct meaning for themselves are immersed in a socio-material context where their thoughts, feelings and behaviors are influenced by the real, imagined or implicit presence of others.

Organizational perception processes imply three important points about the search for meaning in organizational life. First, perception occurs when a stream of organizational circumstances is converted into salient words and categories. Secondly, the organization is materialized in written and spoken texts. Third, reading, writing, speaking, and editing are crucial actions that serve as a means through which the invisible hand of institutions shapes behavior. In what is called an ongoing, instrumental, subtle, rapid and social process (Gioia, Thomas, Clark and Chittipeddi, 1994). ^{eleven}



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From the analysis of studies carried out by authors such as *Weick* (1995), ¹² *Choo* (1999), ⁵ *Maitlis* (2005), ¹⁰ *Dervin* (2008), ¹³ and *Cornelis* sen (2012) ¹⁴, organizational perception is understood as a process that:

- Is active, social and dynamic, in compliance with the functions and organizational strategy.

- It constitutes a cognitive, subjective and intersubjective phenomenon, from which meanings are constructed through the analysis of information.

- It depends on the changing circumstances of the environment and the experiences and mental models of individuals.

- It occurs in the middle of an intense emotional experience. It is a process that never stops, it is constantly changing so it is called a cyclical process, with added value.

- It leads to obtaining actionable knowledge and organizational learning with a prospective nature, seeking visibility and prediction of its future environment.

- Try to understand and represent situations of change, ambiguity and/or uncertainty.

- It allows us to build representations of reality in order to act collectively.

- Provides a represented environment, the result of new interpretations of organizational reality.

- Information, knowledge and communication constitute the key to analysis, interpretation, representation and decision-making itself.

This process is part of organizational learning and constitutes a social, dynamic and active process of creating shared meanings in organizations. It allows us to understand and strategically represent the main changes, transformations and



particularities that take place in the internal and external organizational environment. This representation of the organizational scenario/context contributes to strategic decision making and organizational intelligence.

Based on the theoretical elements that characterize organizational perception and information management, as well as the identification of the National Information Center for Medical Sciences (CNICM/INFOMED) as a research context, the objective of this study is presented: to identify the elements of information management that contribute to generating capabilities for adequate organizational perception

ORGANIZATIONAL PERCEPTION AND THE MAIN CHARACTERISTICS, THE DISTINCTIVE PROCESSES AND THE INFORMATIONAL CHARACTER

Among the fundamental processes of organizational perception are the proposals of some of the most representative authors on the subject: "scanning, interpretation, action and performance" (*Liu* and *Maitlis*, 2014); ⁷ "ecological change, representation, selection, retention" (*Weick*, 1995); ¹² "enactment" (*Weick*, 2005); ¹⁵ processes instigated by opinions: "argue and wait" and processes instigated by actions: "compromise and manipulate" (*Choo*, 1995); ⁵ processes in a "guided, fragmented, restricted and minimal" way (*Maitlis*, 2005). ¹⁰ From the analysis of these proposals, the processes of ecological scanning/variation, representation, selection and interpretation, action, performance, retention and enactment are essential.

Scanning, ecological change and representation focus on monitoring capabilities that allow observing and identifying the main particularities that occur in the



external and internal organizational environment. The selection and interpretation are oriented to the dynamics and routines that allow the representation of these scenarios. For their part, action, performance, retention and enactment are oriented towards the strategic result of perception for decision-making, and the incorporation of the process into organizational memory due to the impacts and benefits generated.

In this sense, it is valid to highlight that the processes presented by *Choo* (1999)⁵ and *Maitlis* (2005)¹⁰ refer to the dynamics for the development of organizational perception processes. The proposal of these authors, which focuses on the name "instigated processes," ⁵ emphasizes the forms and mechanisms for the construction of collective meaning. They emphasize the use of opinion leaders, dialogue and/or manipulation strategies, prioritized interests and ways to create consensus. This is why the proposal of these authors is viewed as complementary processes focused on the forms or dynamics of development of the intrinsic processes of organizational perception.

THE INFORMATIONAL CHARACTER OF ORGANIZATIONAL PERCEPTION

The development of organizational perception processes is conditioned by the characteristics of the organizations in their environments or contexts of action. Organizations seek to position themselves and grow in increasingly dynamic environments, with changing markets, the result of socioeconomic and political changes. Given this panorama, its survival depends on the ability to search, process, analyze and interpret external and internal information, as a basis of knowledge for action.



"Organizational perception produces implications in its perceivers; it reconceptualizes people as information designers who struggle to make sense of an incomplete reality and not as information seekers who attempt to gather information that describes an objective 'reality'. These people use the systems designs to help others create and undo their own perception Provides information systems designers with ways to understand and begin to bridge the gaps between chaos and order, encouraging systems focused on the processes people use to fill organizational gaps.¹⁶

When organizations carry out information management based on organizational perceptions, it happens that:

- They form business environments through collective behavioral structures that interact with other companies or industrial associations.

- Uses organizational mechanisms that preserve knowledge through retention.

- Decision makers use selected information from the environment to maintain or change organizational structures or processes.

- Information processing helps understand and predict future perceptions.

- Actors enact or create the environment to which the organization must adapt.

- Learning occurs when new action is taken based on interpretations.

Choo (2002) states that: "changes, events and trends in the environment continually create signals and messages. Organizations detect or receive these signals and use the information to adapt to new conditions. These signals modify perceptions of the state of the world. When decisions are based on these messages, more information is generated and transmitted, which in turn leads to new signals and decisions. An essential part of a senior manager's job is to correctly interpret



the external uncertainties facing the company, and thus deciding on the appropriate management structure. ¹⁷ Therefore, organizations are called interpretation systems. The ability to perceive with the well-managed information base within the organization allows us to indicate that it is a perceptive entity capable of facing any event or situation that may arise in the future. Organizational perception is one of the primary elements that entities must possess to be called intelligent organizations.

This informational nature of organizational perception requires the creation of an infrastructure (strategies, resources, processes, systems and informational products) to guarantee good use of the information that is needed, identified, acquired, analyzed and shared. That is why information management constitutes a fundamental strategic process that contributes to the development of perceptive capabilities in organizations.

INFORMATION MANAGEMENT AND ORGANIZATIONAL PERCEPTION

Organizational perception requires adequate use of information at different decision levels; It conditions all the strategic and operational actions of the organization, as well as the way in which its members share and socialize visions, meanings and interpretations that they make of the external and internal environment. Given this scenario, it is essential to plan, organize, direct and control resources, processes and information systems, to obtain quality information in each process of organizational perception.

Information management, according to *Best* (2010), is "the economic, efficient and effective coordination of the production, control, storage, retrieval and dissemination of information from external and internal sources to improve



organizational performance." ¹⁸ It is a strategic process that manages and supervises all information resources to optimize the life cycle of organizational information.

Information management is of great importance in organizational contexts because: - It affects the organizational strategy, and its objectives and goals in the short, medium and long term.

- Ensures a systemic and comprehensive approach in all the organization's information activity.

- Contributes to high levels of efficiency and effectiveness through the use of information.

- Promotes organizational learning from its link with document management, knowledge and intelligence.

- It constitutes a management process that affects the generation of informational competencies and informational culture.

Correspondingly, information constitutes a key resource in organizational management; hence its scope, according to *Ponjuán* (2008), is aimed at:

- The quality of the information, the information subsystems associated with all the organization's processes.

- The life cycle of information and available information resources.

- Correspondence with the needs, priorities and objectives of informational strategies.

- The rational and efficient use of information resources, including people, the quality of information processes and services.

- Information flows in the organization.



- The role of each person in relation to the use, treatment and management of information resources.

- Information audits.

- The skills of people to use information and the skills of those who work in the different phases of the supply chain.

- Productivity, costs and value of information.

- Management indicators (applied to informational work): cost, benefit, impact, effectiveness, efficiency. Monitoring environmental information, surveillance and organizational intelligence.

- The information necessary for the redesign of processes and services.

- The redesign of information systems, benchmarking, reengineering of these processes.

- The allocation of resources for informational work, including technological means.

- The information necessary for computer security.

- Planning of all informational activities. The design of the system for the improvement of information activity.

- The relationship with document management and knowledge management projects.

- The appropriate use of meta-information by the organization's information systems.

- The measurement and control of the efficiency, and the impact of informational work, as well as the permanent evaluation of its behavior. The appropriate use of information for decision making.¹⁹



The interrelation of each of these components, and their actions, allows effective information management in organizations by developing institutional advantages and strengths from the use and management of information.

The relationship between information management and organizational perception is supported on a theoretical level, by the informational nature of organizational perception given the influence of information on the construction of shared meanings. However, it is necessary - for a better understanding of this phenomenon - to understand what informational elements favor the development of perceptive capabilities in an organization, so that improvement actions can be focused on for adequate strategic performance.

For this purpose, the CNICM/INFOMED has been selected as the research context because it is a leading institution in the field of Information Sciences in Cuba, and in the information activity of the Cuban health sector. This Center's mission, as established in its Organization Manual (2017), "is to be the reference unit for scientific-technical information, teaching and research in information and communications technologies, telematic services and support." technology of the National Health System (SNS), and constitutes an integrated network in the publication editing. and dissemination of scientific production, health information.²⁰ This means that the center is in charge of national management functions for scientific-information activity in the health sector, and its services and network are oriented towards satisfying the needs and expectations of the Cuban Health System and its Ministry. of Public Health. The National Medical Library and the Medical Sciences Publishing House are subordinated to the Center's structure.



The technological and informational development of the CNICM/INFOMED has led to its management model serving as a reference for the rest of the national library network system and its Virtual Health Library constitutes a reference within the Information Sciences sector in Cuba and in the region. The prestige and leadership of this center has been recognized nationally and internationally, and its strategic actions take into account various development scenarios, critical success factors, among other aspects resulting from its strategic planning.

METHODS

The descriptive research used content analysis as the main research method. Once the main characteristics of the CNICM/INFOMED were examined, a questionnaire was designed to collect information, which was applied to an intentional sample of 10 managers and 26 specialists from the Center linked to information activity and strategic areas within the institution.

The instrument designed (questionnaire) for the collection of information took into account the elements presented by *Ponjuán* (2008) and those aspects of information management that would allow analyzing its conception within the Center. The design of the questionnaire respected two related dimensions: organizational perception and information management, and in each of them specific variables and elements of each process and their own relationship were established. The dimensions and their articulation with the elements specified in the theoretical references are presented below:

- Dimension 1. Information management



Information that intervenes in organizational perception, information quality criteria, intelligence processes and systems, informational processes, informational products and services, informational practices associated with organizational perception, emotional states, information techniques and tools, informational systems and platforms , information flows (formal or informal), document management.

- Dimension 2. Organizational perception.

Perceptual capabilities of the organization, organizational perception conception, procedure and functional dynamics, specific processes, routines and preferences in the spaces of organizational perception, environments that are perceived, scenarios and spaces of organizational perception, institutional systems involved, involvement of the members of the organization organization, motivations and preferences to develop the process.

The instrument allowed us to delve deeper into the informational elements of information management present in the CNICM/INFOMED, while establishing the relationship and level of incidence of these in the specific processes of organizational perception.

ANALYSIS OF THE RESULTS

IMPACT OF INFORMATION MANAGEMENT ON THE ORGANIZATIONAL PERCEPTION OF THE NATIONAL CENTER FOR MEDICAL SCIENCES INFORMATION/INFOMED

The CNICM/INFOMED is a strategic entity for the National Health System. It has a high technological development and its workers are characterized by a high



professional level. It is an organization that provides access to information and knowledge, and allows the exchange of information between professionals, academics, researchers, students and managers of the Cuban National Health System. Their perceptive abilities are conditioned by the functions they perform for the medical sector in the country, their advisory and research services, the fact that they constitute the main governing center for all medical information, the support they offer in solving problems and risks of the sector, the studies of information needs that it carries out, as well as the training of info-technological skills of the National Health System.

The CNICM/INFOMED is seen as an entity positioned in the medical sciences sector, a leader, focused on learning and continuous improvement, and with defined goals. This fundamentally responds to the leadership capacity that the organization possesses as it is a reference center for the entire SNS. On the other hand, the organization is oriented towards problem solving; It constitutes an institution open to change and requires information for its strategic performance.

According to 76% of respondents, Managers and group leaders are recognized as the main actors responsible for perceiving situations of change, threats and opportunities in their environments. These are responsible for contributing to decision-making and ensuring that the rest of the members of the organization are in an environment of certainty and reliability. 92% consider that they feel involved in the organizational perception processes, mainly based on the skills they possess, the time they have worked in the institution, their years of experience and the performance they have had in strategic exercises and processes. 100% emphasize that the organizational perception processes take into account the organizational



memory, the current situation and the future projections of the Center. That is why past experiences serve as a reference in 80% for the analysis of situations or events that can be identified in the organization; but the analysis of organizational strategy has a fundamental role in organizational perception.

In the organizational perception processes, the leadership, experiences and criteria of the workers are taken into account. Most perception processes are coordinated by institutional managers who constitute opinion leaders. According to the results of the questionnaire, the decision-making process is carried out through guided instigated processes, since in the organization these leaders direct and generate new decision alternatives in the work groups. In these processes, various criteria come together from the members of the organization, which are taken into account and respected due to the importance given to the points of view and commitment of the workers. However, it is recognized that reaching consensus takes time and effort due to the diversity of criteria and points of view of the members of the organization.

Likewise, the respondents identified the need to strengthen skills related to the analysis of information from the external environment, its representation and the generation of new interpretations of important situations that occur in their environment. This would allow us to acquire and strengthen capacities to be more proactive in institutional actions.

Among the elements of information management that affect organizational perception, the existence of a favorable informational scenario/environment for the use and management of information in strategic decision making is evident. Among the results obtained, it is evident that information flows



throughout the organization and at all its decision levels. More than half of those surveyed consider that the entity carries out strategic exercises that support the decision-making process. In the development of these, a great exchange of knowledge and experience is experienced with the aim of collective action towards solutions. The skills of the workers allow them to express their criteria and opinions in strategic spaces and exercises. Organizational memory and references to past events constitute a great strength in organizational perception processes, as they serve as support to identify good practices and understand institutional practices and dynamics.

Based on the analysis of the examined categories, the informational elements of information management that affect the organizational perception of the CNICM/INFOMED were identified. The <u>table</u> presents those elements that influence and play a fundamental role in the development of the organizational perception of the Center. Although there are other components and elements of information management, those shown constitute those that impact the particular processes of organizational perception.

The informational elements of information management identified affect the perceptive capabilities of the Center. These are favored by continuous and intensive use and monitoring of strategic and specialized information in the health sector in Cuba, as well as the existence of fundamental information processes: search and acquisition of information, analysis and interpretation, and dissemination or dissemination. of information. The first makes it possible to identify information signals through constant monitoring, and determines the information that is relevant to the organization. This monitoring is focused on the



institution in both the external and internal organizational environment, and recognizes the relevance of technological surveillance systems and organizational intelligence for a better search and obtaining of information, prior identification and validation of official and public information sources in correspondence with the context of the Cuban National Health System.

This search process allows for the adequate development of analysis and interpretation, and the socialization and dissemination of information, through the existence of formal information flows in the center that guarantee that the information involved in the organizational perception process reaches all levels of decision and spaces/scenarios for collective construction of meanings, and exchange and creation of knowledge. In this process, techniques and tools that favor the exchange and strategic analysis of information are key. The shared visions that are generated from this process, as well as the information involved, are supported by the use of information platforms and systems such as the web portal, the intranet, the Virtual Health Library (VHL) and the institutional repository for socialization and the creation of organizational memory, while recognizing the determining role that document management plays in this purpose.

The information services of the Center and the information products they generate—all focused on the novelty of the health sector, in other words its main advances, events and contributions or contributions—determine, in turn, the perception established by the members of the organization. All these elements are articulated from the informational culture itself in the center, with emphasis on leadership, competencies and informational roles that are assumed and made explicit in the perception processes.



FINAL CONSIDERATIONS

Organizational perception constitutes an essential process for organizational management and strategic action. It has an informational character given the marked dependence of its specific processes—ecological scanning/variation, representation, selection and interpretation, action, performance, retention and enactment—on the use of information. This means that it constitutes an emerging topic within Information Science due to its impact on decision making, knowledge management and organizational learning.

Information management constitutes a strategic process that contributes to the adequate development of organizational perception, since among its informational elements are resources, processes, systems, products and services that contribute to the construction of meanings and shared visions by the organization. as a result of organizational learning itself and its specific components.

At the CNICM/INFOMED, information management constitutes a fundamental process for the creation of perceptive capabilities. This organization, characterized by being flexible, adaptive, open to change and committed to the development of the health sector in Cuba, reflects a marked interest in generating adaptive conditions in the face of an increasingly dynamic and complex info-technological scenario. The greatest incidence of GI in organizational perception is conditioned by the use of information that is required for each perception process, including the dynamics and spaces of interpretation and representation of reality.

Among the elements of the GI that affect the organizational perception of the CNICM/INFOMED are: the processes of search and acquisition of information,



analysis and interpretation, and dissemination or dissemination of information; the strategic information coming from the two organizational information environments - internal and external -; surveillance and organizational intelligence systems; the identification and validation of information sources; information flows at decision-making levels; qualitative information analysis techniques and tools; the use of web platforms and institutional repositories; the document management system, information products and services, as well as competencies, roles and information culture. These informational elements contribute to identifying those aspects that should enhance information strategies for an adequate development of organizational perception processes. Among these aspects are:

- Systematic monitoring of the internal and external organizational environment.

- Design and implementation of technological surveillance systems, competitive intelligence or organizational intelligence.

- Design of organizational information systems, among which the document management system must be conceived and implemented.

- Identification of the information that is involved in the strategic actions of the organization, as well as the public sources of information that are most frequently used.

- Design of formal flows that allow information to circulate and be used at each decision level.

- Management of information processes—search and acquisition of information, analysis and interpretation, and dissemination or dissemination of information.



- Design and use of web systems and platforms (intranet, websites, virtual repositories) for an effective search, storage, dissemination and socialization of strategic public information.

- Design of products and services with strategic value for decision making.

- Information literacy programs (ALFIN) for the design of informational competencies of leaders and members of the organization.

- Incentive for informational roles and responsibilities that allow assertive communication practices.

- Establishment of criteria or indicators that allow assessing the development of the organization's perceptive capabilities.

These aspects, developed in an articulated manner, could favorably affect organizational perception, and would serve as support to adapt appropriately and accurately to increasingly complex organizational and business environments.

Conflict of interests

The autors declare that does not exist an interest conflict.

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