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Humanization and Perception of Effectiveness of Brazilian Healthcare System

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Artigos

Humanization and Perception of Effectiveness of Brazilian Healthcare System

Humanização e Percepção da Efetividade do Sistema de Saúde Brasileiro Humanización y Percepción de la Eficacia del Sistema de Salud Brasileño

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ABSTRACT:

Research objective: Identify the factors of humanization that influence the perception of the effectiveness of healthcare services in Brazil by users (patients, companions, and family members) and professionals (doctors, assistants, and any others, directly or indirectly, linked with the provision of services) in the area.

Theoretical framework: Six guidelines of the National Humanization Policy (NHP) gave potential rise to constructs that are analyzed under the theoretical lens of the Autopoiesis Theory.

Methodology: Data is treated quantitatively from a survey of perceptions with a non-probabilistic sample. Exploratory factor analysis determined eight factors of humanization.

Results: The evidence indicated that the factors Professional Attention, Relational Attention, Expanded Clinic, and Valuing Workers' Technical Skills are positively related to the effectiveness of Brazilian healthcare services. Besides, there are differences in the perceptions of users and professionals concerning the effectiveness of humanization in healthcare services.

Originality: Based on public policy guidelines, through unprecedented quantitative research, the factors that form the construct of humanization in health services are highlighted.

Theoretical and practical contributions: The results contribute to humanization in healthcare services, especially in scenarios of the stress of the health system, which claims for substantive actions in the healthcare services social, technical, and political dimensions.

KEYWORDS: Healthcare services, National Humanization Policy, Determining factors of humanization, Autopoiesis Theory, Brazilian healthcare system.

RESUMO:

Objetivo da pesquisa: Identificar os fatores de humanização que influenciam a percepção da efetividade dos serviços de saúde no Brasil por usuários (pacientes, acompanhantes e membros da família) e profissionais de saúde (médicos, assistentes e quaisquer outros profissionais direta ou indiretamente ligados à realização dos serviços) da área.

Enquadramento teórico: Seis diretrizes da Política Nacional de Humanização (PNH) deram origem a possíveis construções, que são analisadas sob a lente teórica da Teoria da Autopoiese. **Metodologia:** Os dados são tratados quantitativamente a partir de um levantamento de percepções tipo *survey* com uma amostra não probabilística. A análise fatorial exploratória determinou oito fatores de humanização.

Resultados: As evidências indicaram que os fatores Atenção Profissional, Atenção Relacional, Clínica Expandida e Valorização das Habilidades Técnicas dos Trabalhadores, estão positivamente relacionados à efetividade dos serviços de saúde brasileiros. Além disso, existem diferenças nas percepções dos usuários e profissionais de saúde sobre a efetividade da humanização nos serviços de saúde.

Originalidade: A partir de diretrizes de uma política pública, por meio de pesquisa quantitativa inédita, são evidenciados os fatores que formam o construto da humanização nos serviços de saúde.

Contribuições teóricas e práticas: Os resultados contribuem para a questão da humanização nos serviços de saúde, principalmente, em cenários de estresse do sistema de saúde, como uma epidemia ou pandemia, o que exige ações substantivas nas dimensões social, técnica e política dos serviços de saúde.



PALAVRAS-CHAVE: Serviços de saúde, Política Nacional de Humanização, Fatores determinantes da humanização, Teoria da Autopoiese, Sistema de saúde brasileiro.

RESUMEN:

Objectivo de la investigación: Identificar los factores de humanización que influyen en la percepción de la efectividad de los servicios de salud en Brasil por parte de los usuarios (pacientes, cuidadores y familiares) y profesionales de la salud (médicos, asistentes y cualquier otro profesional conectado directa o indirectamente) de los servicios.) en el área.

Marco teórico: Seis lineamientos de la Política Nacional de Humanización (PNH) dieron lugar a posibles construcciones, que se analizan bajo la lente teórica de la Teoría de la Autopoiesis. Metodología: Los datos se tratan cuantitativamente a partir de una encuesta tipo encuesta con una muestra no probabilística. El análisis factorial exploratorio determinó ocho factores de humanización.

Resultados: La evidencia indicó que los factores Atención Profesional, Atención Relacional, Clínica Ampliada y Valorización de las Habilidades Técnicas de los Trabajadores se relacionan positivamente con la efectividad de los servicios de salud brasileños. Además, existen diferencias en las percepciones de usuarios y profesionales de la salud sobre la efectividad de la humanización en los servicios de salud.

Originalidad: A partir de lineamientos de política pública, a través de una investigación cuantitativa sin precedentes, se destacan los factores que conforman el constructo de humanización en los servicios de salud.

Contribuiciones teóricas y prácticas: Los resultados contribuyen al tema de la humanización en los servicios de salud, especialmente en escenarios de estrés en el sistema de salud, como una epidemia o una pandemia, que requiere acciones sustantivas en las dimensiones social, técnica y política de los servicios de salud.

PALABRAS CLAVE: Servicios de salud, Política Nacional de Humanización, Factores determinantes de la humanización, Teoría de la autopoiesis, Sistema de salud brasileño.

1 Introduction

The best way to deal with an individual's suffering is through responsible compassion, which emanates from emotion, according to the Theory of Autopoiesis (Maturana, 2002). That is characteristic phenomenon of the animal kingdom, which drives human action, and is daily intertwined with reason and constitutes human living (Maturana, 2002). Love is the basis of social relationships, and it is what provides the legitimate acceptance of the other as a subject in coexistence, although for these relations to occur, legal systems that establish rules and limits are necessary (Maturana, 2002).

The relationships established in healthcare services have undergone several transformations that became even more substantial as the new coronavirus pandemicspreads (McKinsey, 2020). Continuous scientific and technological awareness and advances, in the center or ideological disputes during the pandemic, are consistent with the precepts of autopoiesis, as Maturana (2002) already highlighted. Humanization actions are a form of its manifestations. This component of healthcare services in Brazil is relevant, and principles that value the rights, needs, and dignity of workers and users have been the subject of several recent movements, aiming to achieve more efficient and effective results (Benevides & Passos, 2005; Casate & Corrêa, 2005; Soares & Polejack, 2016).

In 2003, the Brazilian Government lauched the National Humanization Policy (NHP) in the context of its National Health System (NHS). It consists of principles and guidelines proposing changes in the *status quo* of public healthcare management models. NHP urges to regulate relations among the various actors involved in healthcare services - users, workers, and managers – aiming new paths to the overloaded sector continually in crisis (Benevides & Passos, 2005; Calegari, Massarollo, & Santos, 2015; Santos, 2010). The guidelines proposed by the NHP - in clinical, ethical, and political spheres - direct the performance in the area. Although mainly oriented for the public healthcare sector, its principles are universal. Therefore, in this study, the NHP guidelines will be considered for both the public and private healthcare sectors. In this way, for guiding effect, they are the basis for building the model of this research, namely: attention/



care; expanded clinic; ambiance; participatory management and co-management; rights of users; and valuing workers (Santos, 2007; Santos, Barros, & Gomes, 2009).

Some researches investigated, exclusively, the users' perception of humanization (Soares & Polejack, 2016; Brito & Carvalho, 2010; Moglia, Motta, & Lopes, 2015), while others analyzed only the perception of professionals and managers of healthcare on the topic (Calegari *et al.*, 2015; Bomfin, Trivellato, & Hastenreiter, 2013; Tavares *et al.*, 2014). Still, studies have investigated the perception of both groups of actors (Buffoli *et al.*, 2014; Falk, Falk, Oliveira, & Motta, 2010).

We highlight the qualitative emphasis in those studies' scope dealing with public and private services, and analyzing various subjects' satisfaction. However, the humanization literature approaches neither quantitatively nor capturing both users (patients, companions, and family members) and professionals (doctors, assistants, and any others, directly or indirectly, linked with the provision of services) perceptions of effectiveness.

The interest of such an approach for healthcare services administration occurs to the extent that greater efficiency in healthcare services may imply cost reduction, and increased availability of resources (human, beds, medicines), in addition to physical and emotional comfort to all actors involved (Pascuci, Meyer, Nogueira, & Forte, 2017). That becomes even more relevant in a context of epidemic or pandemic, like the disease caused by the worldwide spread of SARS-CoV-2 virus (COVID-19), and after the crisis period, resulting in a series of discontinuous changes that can reshape the entire group of healthcare services, both public or private, in a 'new normal' after 'wartime' (Moglia *et al.*, 2015).

So, the objectives of this study are to identify: 1) the factors that makeup humanization and its influence on the effectiveness of healthcare services in Brazil, and 2) variations in perceptions among professionals and users. Initially, it started from the 6 (six) dimensions proposed by the NHP (Brazil, 2012).

Theoretically, this work intends to expand the knowledge about humanization in the provision of healthcare services using the Autopoiesis Theory as a theoretical lens. Practically, it can contribute to healthcare organizations' management actions towards humanization practices that could potentially affect their services' effectiveness.

2 Theoretical Framework

The changes occurring in the healthcare services relationships have been the subject of several movements in recent decades. The rights, needs, and dignity of users and workers in Brazil have been a relevant theme, seeking to establish more humanized relationships between the various actors in the sector and, at the same time, obtain more effective results in terms of management (Benevides & Passos, 2005; Casate & Corrêa, 2005; Tavares *et al.*, 2014). In healthcare services, the effectiveness estimations come from the interventions carried out in the beneficiaries of them, whether users or service providers (Contandriopoulos, Champagne, Denis, & Pineautl, 2000).

The provision of services in healthcare requires its professionals to establish direct contact with people, patients, and family members, on many occasions, in the most challenging moment of their lives, where health, illness, conflicts, and frustrations position the individual as the center of attention and care (Mota, Martins, & Véras, 2006). This scenario reflects the intrinsic specificity of the healthcare segment, which makes it unique due to this focus on the human being, who with his characteristics and values that guide the act and express himself, positions himself with his individuality in the context of a group, thus legitimizing the characteristics that make it human (Bomfim *et al.*, 2013).

We aim to understand the effect of humanization actions on healthcare grounded on three theoretical axes. Firstly, the Theory of Autopoiesis (Maturana, 2002) human beings' reflections as emotional and rational; moved by love, not only reason. In the sequence, there is a bibliographic review about humanization in healthcare and the NHP, which might also fit the private sector.



2.1 Theory of Autopoiesis

Overcoming the basic premise of Western thought, the Chilean biologist and neurophysiologist Humberto Maturana came to propose, in the early 1990s, a fresh look at the human being, looking beyond the physical and rational aspects. He does not deny the rational approach but awakens to the understanding that the human emotional system overcomes such an approach: that we act through emotion. Moreover, those emotions are the basis of relationships and attitudes (Maturana, 2002).

The biology of knowing, explains what it is to live, based on the phenomenology that involves the aspects of human "becoming" (Maturana, 2002). "Hominization," the constitution of the human, began with language developed by biped primates (Maturana, 2002). That transformed them into *homo sapiens*, which is the process of creating and constructing opportunities for the existence of a dignified life (Pessini & Bertachini, 2004).

Still, from historical records, ever since language became part of human life, love was already present as a central emotion in social relationships, where life habits have been the basis for physical, emotional, social, and spiritual development and reinforce the importance of accepting the other as another legitimate being in the relationship, both concerning adults and children. The human being is a being that depends on love to develop and survive. Thus, lack of love or denial can be considered the primary cause of health problems and illnesses (Maturana, 2002).

Regardless of religious questions, biologically speaking, it is love that builds social relationships rooted in a language based on consensual interactions of conduct. Human beings transform themselves to better coexist with each other and with the environment (Maturana, 2001, 2002). So, as he argues that love affects social relationships, some scholars and professionals have directed their research to identify new ways of acting and relating to the various subjects involved in healthcare processes.

2.2 Humanization in Healthcare

Humanization has various meanings, sometimes divergents, and such controversy still persit since the birth of the NHP, regarding the relevance of using the term for name a public policy. That said, in the healthcare sector it is used mostly as a means to improve se sense of quality of services both from customers and professionals (Souza & Mendes, 2009). NPH aims to provide quality and dignity to healthcare services (Pasche, Passos, & Hennington, 2011), whitout aiming to achieve more efficient and effective results (Benevides & Passos, 2005; Casate & Corrêa, 2005; Soares & Polejack, 2016).

Therefore, healthcare organizations must be continually seeking to improve their processes to ensure financial sustainability and permanence in the market, combined with effectiveness in care results. The specificity peculiar to the healthcare segment acquires special status due to the issue that involves the individual as the center of attention through the provision of quality care and administrative services (Bomfim *et al.*, 2013).

Customer-oriented behaviors consist of the workers' desire to help customers assess their needs and offer them services that will satisfy them; and accurately describe and perform services, among others (Leite & Strong, 2006). The role of professionals working in management is fundamental to encourage workers' inclusion and propose the reinvention of work processes by forming active agents of change in the healthcare services (Brazil, 2012). Above all, they feel valued as a person, satisfied as professionals, well informed, and attuned to the organization's purpose (Leite & Strong, 2006).

Humanization as a part of management tool values the quality of care, preserves the biological, psychological and social dimensions of users and emphasizes communication and the integration of professionals (Rios, 2009; Pasche, Passos, & Hennington, 2011). Therefore, the organization's employees



must realize the relevance of humanized hospital care, which provides well-being to the patient and family (Trevisan *et al.*, 2013).

To produce health through a humanized public healthcare service, the National Humanization Policy of Attention and Management (NHP) of the National Health System (NHS), launched in 2003, presents changes in the care model. It reflects proposals for adjustments in the healthcare management model, highlighting the importance of managers' engagement to improve the services. The NHP implementation should expand access to public healthcare services, reducing waiting lines, and improving services. Besides, the implementation of risk criteria should guarantee the users' rights and value workers throughout the healthcare services (Brazil, 2016).

NHP present some guidelines covering attention/care, expanded clinic, ambiance, participatory management and co-management, rights of users, valuing of work and workers, fostering groupings, collectives and networks, and building the NHS memory that works (Brazil, 2016). In the present research, the last two guidelines presented are not considered, as they refer to specific aspects of the National Health System, which is not a particular focus of the present study.

Attention/care, in the healthcare area, is an ethical posture; it is not space or place. It is a way of developing work processes with a receptive posture, listening, and conducting the demands and needs of users properly (Brazil, 2012). The culture of humanization brought to light the thought that the quality of care accompanied by responsible interest is a necessary aspect of healthcare relationships from the first contact (Rios, 2009). Accepting, receiving, listening, wrapping, attending, in short, several attitudes characterize attention/care. It is about getting closer, being close to someone, or something, including (Brazil, 2016).

Participative management means the inclusion of new subjects in analyzing results and decision-making to minimize differences and expand the dialogue. It is a search for shared knowledge, despite taking into account the differences between those involved (Brazil, 2004).

Co-management accounts for creating mechanisms for horizontalizing the relationships between the subjects involved in the process. Co-management is a process of including the actors to seek more appropriate, assertive solutions, aiming to balance the needs and demands of anyone involved, that is, users, managers, and workers. Besides, ensuring that users and family members participate in the day-to-day activities of the healthcare units, giving their opinion, and collaborating to improve the results (Brazil, 2012).

From the combination of the words environment and experience the ambiance is one of the guidelines of the NHP (Brazil, 2018). It is the "spatial guideline" that proposes the adequacy of physical spaces, here considered as social, professional, and interpersonal relationships spaces to make coexistence more pleasant and meet the needs of the different subjects who use it. In line with the triple inclusion method (users, professionals, and managers), spaces should be healthy, welcoming, comfortable, and respect the privacy of those who need them. In other words, they contribute to providing a more welcoming, resolutive, and humane attention (Nicholl & Bueri, 2001; Brazil, 2004).

As a tool that seeks to articulate and include different areas and approaches, the Explanded Clinic expands and shares the healthcare processes relating services to the community in a common, negotiated, and participatory way (Brazil, 2012, 2016). The Expanded Clinic guidelines proposes to care for the subject beyond the disease, recognizing that there are limitations of knowledge in the face of the complexity of the human being; that healthcare is co-produced by the matters involved, whether they are workers or users of the services (Brazil, 2016, Oliveira, 2018).

The user benefits from the services, having a broader scope than the terms client and patient, since the client is the person who buys the product or service, including healthcare, using their power of choice and affected by contractual and rights aspects. In contrast, the patient is simply the one who passively receives the necessary treatment without question. In this way, the term "user" designates everyone who uses the services. In the case of healthcare, it encompasses both the client who uses it, the family member or companion, and the one who works or manages the institution (Brazil, 2016).



Acting in conjunction with the Management and Co-management guidelines, the Valuing Work aims to promote the health of professionals through actions. The is supposed to encourage their integration into the organization's environmental health, expanding communication and opening space for collective debates where subjects can take a position on their feelings and needs within the context of their professional performance, seeking to promote health and prevent suffering and illness (Brazil, 2012).

Management's role lead to the construction and deconstruction of concepts and values, ways of acting and thinking, assessing where healthcare wherever it is so that it is possible to carry out the necessary interventions. The worker can "appropriate" himself his responsibilities within the work assigned to it and participate in the collective management spaces, collaborating in decision making through the exercise of analysis, definition, and qualification of processes (Brazil, 2012).

In summary, the search for greater effectiveness in healthcare services is constantly improving, which include 'social mobilization, support to management systems, services and health teams and the development of training processes for institutional stakeholders' (Pasche, Passos, & Hennington, p.4541). Effectiveness is the ability and art to improve health and well-being, targeting the best possible performance in the most favorable conditions according to the patient's condition and in unchanged circumstances (Donabedian, 2001).

Thus, healthcare effectiveness is directly associated with the achievement of the individual's well-being, considering that the best possible effort aims to achieve the result, which is improving an individual's health (Donabedian, 2001). Besides, one of the purposes of the NHP is to produce competent healthcare services, that is, aiming at obtaining the desired results and established as goals, valuing their execution and use with quality and productivity (Brazil, 2004). We present the proposed model in Figure 1.

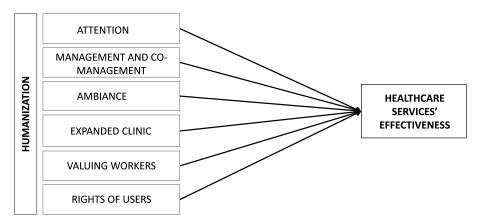


Figure 1: Research model - Effect of humanization on the effectiveness of healthcare services

Thus, the first hypothesis of the research is:

H.: Humanization positively affects the effectiveness of healthcare services in Brazil.

2.3 Perception of Users and Professionals about Humanization in Healthcare Services in Brazil

There are several studies that seek to understand how humanization actions are perceived by the actors involved, indicating different points of view (Falk *et al.*, 2010; Buffoli *et al.*, 2014; Pascuci *et al.*, 2017; Hermida *et al.*, 2018). Users' perception is different from that of healthcare workers regarding the issue of embracement (Falk *et al.*, 2010). Patients and companions evaluate, measuring the degree of importance, attention, agility, and resolvability as the most relevant aspects of welcoming (67% of all). In a very different way, healthcare professionals point out that the most critical aspects in welcoming are, in order of relevance,



referrals to other professionals and individuality and listening (54%), attention and pre-assessment (36%), and resolvability (10%) (Falk *et al.*, 2010).

Despite identifying that humanization in many Brazilian hospitals is still restricted to a mere speech or only seats provided for companions waiting in lines, Pascuci *et al.* (2017) followed the implementation of the humanization program in a children's hospital in Brazil, and observed that the process of change took place in three dimensions: individual, organizational and social. Pascuci *et al.* (2017) argue that despite the conflicting internal interests and different perceptions about humanization, emanating from the proposed change, the process took place through intense negotiations and conversations, aiming to integrate, involve and convince those involved so that humanization could become a reality in the hospital.

Buffoli *et al.* (2014) developed a tool called LpCp (Linstening to people to Cure people) that observes different perceptions within the same physical environment. They identified problems related to the humanization of the facilities and the deficiency in the communication of services offered to users, concluding that, sometimes, small and less costly actions can generate positive affects on the experiences of different users in hospitals (and this includes all users, doctors, professionals from all areas, patients and caregivers), perceptions that differ from each other.

Thus, the second hypothesis of this research is:

H.: Users and health service workers in Brazil perceive healthcare services' effectiveness differently.

3 Methodology

To achieve the objectives of the research, we opted for a survey, based on a structured questionnaire. The study was cross-sectional and exploratory, using a quantitative method to analyze the collected primary data (Fontelles, Simões, Farias, & Fontelles, 2009).

Data was collected *online*, employing a questionnaire developed at Google.docs, and a link sent by e-mail and WhatsApp to people of different profiles, starting with the researcher's network. From then on, through the snowball technique, the respondents expanded. The sample was, therefore, non-probabilistic and due to accessibility. The questionnaire had three sessions. The first two identify the user's profile, and the third brings 31 questions related to the investigated constructs and one question regarding the dependent variable.

Due to the absence of a specific instrument that met the objective of this study, the developed questionnaire covered the six guidelines of the NHP - attention, participatory management and comanagement, ambiance, expanded clinic, rights of users, and valuing workers (Brazil, 2012). The dependent variable was the effectiveness of healthcare services. That was autodeclared perception of effectiveness of the healthcare services captured by 5-point Likert scale (from 1 – 'Strongly disagree' to 5 – 'Strongly agree'). The questionnaire was pre-tested with 16 different profiles of respondents. Some semantic adjustments were necessary, and the questionnaire was approved.

As a newly developed set of constructs in the questionnaire, an exploratory factor analysis identified which dimensions were significant according to the set of variables, making adjustments to the previously established constructs (Damásio, 2012). A 5-point Likert scale captured the respondent's perceptions (from 1 – 'Strongly disagree' to 5 – 'Strongly agree'). From a total of 481 questionnaires answered, 457 were valid.

Two groups account for this research population: the users and the professionals/workerss. Users are any person residing in Brazil who use any healthcare services, be they public or private. Professionals/workers perform any professional activity in healthcare services, interacting with users, including technical activities (doctors, nurses) and support, administrative, and management areas, through a public or private entity anywhere in Brazil. Of the valid sample, 171 were professionals/workers, and 286 were users of healthcare services. Considering a questionnaire with 32 questions regarding the constructs, the minimum requirement of 160 respondents was achieved (Hair *et al.*, 2009).



The demographic and socioeconomic data collected met the typical subject of this sample, both for professionals and users of healthcare services, a female, aged 40 something, with an income between 10 and 20 minimum wage, high schooling, and experience with private healthcare services and healthcare plans. Data were using in Stata 17.

Thus, the originally model was built as presented in equation (1).

HCSE. = β o + β 1*ATT. + β 2*MCM. + β 3*EXC. + β 4*AMB. + β 5*ROU. + β 6*VW. + β 7*VW. + #. (1)

Where: HCSE = Healthcare Services Effectiveness; ATT = Attention; MCM = Management and Comanagement; EXC = Expanded Clinic; AMB = Ambience; ROU = Rights of Users; VW = Valuing Workers; # = Error.

4 Results

The exploratory factor analysis identified the significant dimensions in the set of variables (Damásio, 2012), with low correlatins. The KMO test (Kaiser-Meyer-Olkin) obtained a result of 0.841 (greater than 0.8), which indicates an excellent degree of correlation between the variables. Bartlett's test of sphericity, with a result of 0.000 (less than 0.05), suggested the adequacy of data, enabling the execution of the exploratory analysis. Data obtained after using the factorial rotation process (orthogonal Varimax) provided a better interpretation solution, eliminated some variables, and identified eight factors from a statistical correlation pattern (Damásio, 2012; Hair *et al.*, 2009). The "common variance" of the factors presented in Table 1 shows the portion of variance that the variables share among themselves in their results (Damásio, 2012).

TABLE 1 Factor analysis – variance of principal factors

FACTOR	VARIANCE	DIFFERENCE	PROPORTION	ACCUMULATED
Factor 1	3.85797	0.76346	0.1206	0.1206
Factor 2	3.09451	0.27615	0.0967	0.2173
Factor 3	2.81837	0.18795	0.0881	0.3053
Factor 4	2.63041	1.02403	0.0822	0.3875
Factor 5	1.60638	0.28076	0.0502	0.4377
Factor 6	1.32562	0.00159	0.0414	0.4792
Factor 7	1.32404	0.12088	0.0414	0.5205
Factor 8	1.20315		0.0376	0.5581

Notes:

× Methods: Principal Component Factor / Bartlett Test / Kaiser-Meyer-Olkin (KMO) Test / Orthogonal Varimax Rotation; × Number of observations: 457; × Identified factors: 8.

Although there is no consensual criterion to define how many factors should be extracted, the literature points out some methods that can help the researcher when making this decision. We opted for the eigenvalue (eigenvalue) rule which suggests that only factors with an eigenvalue above one should be extracted. A low eigenvalue case would contribute little to explain the variance in the original variables. We support our decision in Tabachinick, Fidell and Ullman (2007). The six guidelines of the NHP presented previously were based on Atention, Management and Co-management, Ambience, Expanded Clinic, Rights of Users, and Valuing Workers. The exploratory factor analysis identified eight factors, four of which are coherent with the NHP and another four as improvements of the other two factors of the NHP. Thus, the Attention construct was subdivided into Professional Attention (PRA) and Relational Attention (RRA), while the Valuing Workers construct split into Technical Worker Valorization (VWT) and Worker Insertion Valorization (VWI). Table 2 shows the load factores and the uniqueness of each



variable (communalities = 1 – uniqueness). The latter ideally should be less than 0.5 and the load factors greater than 0.4 (Damásio, 2012, Hair *et al.*, 2009). In the process the variables V2, V7, V13, V17, V24, and V32 were excluded using a greater cut of 0.5 for the load factor and accepeting communalities bellow 0.5. Researchers may consider eliminating such variables in other research contexts, however for the purpose of this study, a variable with a significant charge can still be accepted in the factor solution (Hair *et al.*, 2009). So, jointly, those criteria revealed the variables in each of the eight factors.

TABLE 2
Exploratory factor analysis – principal component factor

VARIABLE	F1 = ROU	F2= PR	A F3=1	MCM F4	= EXC	F5= AMB	F6 = RR.	A F7= VWT	F8= V1	VI UNIQUE-NESS
V1							0.5768			0.4785
V3							0.6503			0.4189
V5				0.6953	2					0.4075
V6									0.6856	0.4194
V8							().5395		0.5027
V9			0.7205							0.3955
V10			0.7762							0.3569
V11				0.842	2					0.2377
V12				0.8393	7					0.2489
V14		0.6711								0.4616
V15		0.6733								0.4425
V16	0.5574									0.4793
V18		0.6472								0.5093
V19		0.6554								0.4902
V20		0.6822								0.4896
V21	0.5381									0.5218
V22	0.5464									0.5270
V23	0.6717									0.4735
V25	0.8324									0.2842
V26	0.8349									0.2655
V27							().7067		0.4658
V28					0.7	7765				0.3383
V29			0.5122							0.4388
V30					0.6	3989				0.3977
V31			0.6033							0.4608

Notes:

× Factors: ROU – Rights of Users; PRA - Professional Attention; MCM - Management and Co-management; EXC - Expanded Clinic; AMB - Ambience; RRA - Relational Attention; VWT – Valuing Works' Technical Skills; and VWI – Valuing Workers' Insertion; × Dependent variable: HCSE (Healthcare Services effectiveness).

In short, after the exploratory factor analysis, the model goes from six to eight renamed factors:

- Rights of Users (ROU) users are protected by law and by ethical standards;
- Professional Attention (PRA) understood here as the technical performance of professionals about welcoming and establish a relationship with people in healthcare practices;
- Relational Attention (RRA) the result of the relationship between professionals and users derived from healthcare practices with welcoming;
- Management and Co-Management (GCG) performance of services administration covering management and co-management;
- Expanded Clinic (EXC) effect on services beyond the disease; in terms of queues and waiting times;
- Ambiance (AMB) the effect of issues related to the environment and experience and the integration of teams in services;
- Valuing Workers' Technical Skills (VWT) valuing the technical performance of healthcare professionals; and



• Valuing Workers' Insertion (VWI) - insertion of professionals (or not) in the management processes.

From the factor analysis, the original model (Equation 1) evolved to equation (2):

HCSE. = β o + β 1*PRA. + β 2*RRA. + β 3*MCM. + β 4*EXC. + β 5*AMB. + β 6*ROU. + β 7*VWT. + β 8*VWI. + #. (2)

Where: HCSE = Healthcare Services Effectiveness; PRA = Professional Attention; RRA = Relational Atention; MCM = Management and Co-management; EXC = Expanded Clinic; AMB = Ambience; ROU = Rights of Users; VWT = Valuing Workers' Technical Skills; VWI = Valuing Workers' Insertion; # = Error.

The proposed model seeks to analyze the effect of the dimensions of humanization (established by the NHP) on the effectiveness of healthcare services in the perception of users and professionals in this sector. Before performing the multiple linear regression, some tests identified the significant variables of the model.

Table 3 shows that there is evidence that the sum of squares in all constructs of the model is lower among groups of users and professionals than within groups, which suggests a wide variation in responses, especially within the VWI, ROU, GCG, and AMB constructs, which affects the F statistic. These results reinforce the conclusions on the differences in perception between users and professionals about aspects related to humanization in healthcare (Falk *et al.*, 2010).

TABLE 3
Variance of constructs

Variable	SS (sum so	quares)	Df (degre	es of fre	edom) MS (mean squares)		F	Prob. F	Chi2	Prob. Chi2
	Between	In groups	Between	In	Between groups	In groups				
	groups		groups	groups						
PRA	0.38	68.53	1	455	0.38	0.15	2.51	0.1139	1.2369	0.266
RRA	0.00	17.03	1	455	0.00	0.04	0.01	0.9434	5.1032	0.024**
CAM	0.12	171.93	1	455	0.12	0.38	0.31	0.5750	0.6629	0.416
VWT	0.04	285.34	1	455	0.04	0.63	0.06	0.8020	0.5289	0.467
AMB	5.10	173.67	1	455	5.10	0.38	13.36	0.0003	42.6187	0.000***
ROU	7.00	406.93	1	455	7.00	0.89	7.82	0.0054	2.6319	0.105
VWI	11.44	733.28	1	455	11.44	1.61	7.10	0.0080	3.4887	0.062
MCM	8.00	379.68	1	455	8.00	0.83	9.60	0.0021	1.6729	0.196
HCSE	0.03	93.25	1	455	0.03	0.20	0.15	0.6997	4.6368	0.031**

Notes:

 \times Bartlett test – equal variances – results in Chi2 and Prob>Chi2;

 \times Estimation method: stepwise;

× Dependent variable: HCSE (Healthcare Services Effectiveness);

 \times Independent variables: PRA (Professional Attention), RRA (Relational Attention), EXC (Expanded Clinic), VWT (Valuing Workers' Technical Skills), AMB (Ambiance), ROU (Rights of Users), VWI (Valuing Workers' Insertion), and MCM (Management and Co-management).

Thus, the results show that there are differences in the perception of users and healthcare professionals in the constructs AMB - Ambiance, MCM - Management and Co-management, ROU – Rights of Users, and VWI - Valuing Workers' Insertion. The other constructs did not show significant differences between groups, as also identified in the average tests performed. At this point, it is relevant to highlight that the results might be consequence of the sample's sociodemografic composition, i.e., the geographic location of the respondent. The estimation method was stepwise, which adds or removes variables to select the most appropriate subset for the analysis. The test was run with all variables and excluded GCG, ROU, VWI, and AMB. Thus, only the explanatory variables with a significance level of 1% and 5% remained in the model: Professional Attention (PRA), Relational Attention (RRA), Expanded Clinic (EXC), and Technical



Enhancement of the Worker (VWT). All are positively related to healthcare services' effectiveness, with Relational Attention (PRA) having a more significant effect on humanization (46%), as shown in Table 4.

TABLE 4 Multiple linear regression

Variables	Non st			P> t Sig.	95,0% Conf. Interval to B		Colinearity	
	В	Standard error	·		Inf. limit	Sup. limit	Toler.	VIF
PRA	0.13	0.05	2.41	0.017	0.023	0.232	0.83	1.21
RRA	0.46	0.10	4.59	0.000	0.265	0.664	0.92	1.09
EXC	0.19	0.03	5.68	0.000	0.125	0.258	0.82	1.21
VWT	0.07	0.02	2.74	0.006	0.020	0.120	0.87	1.15
(Const.)	0.77	0.50	1.54	0.124	-0.210	1.743	-	-

Obs.:

× Estimation method: Stepwise;

× Dependent variable: HCSE (Healthcare Services Effectiveness);

× Independent variables: PRA (Professional Attention). RRA (Relational Attention), EXC (Expanded Clinic), VWT (Valuing Workers' Technical Skills).

The multiple linear regression indicates that the model is adjusted, given that the result found in the F distribution test is 31.61, as presented in Table 5. Tests of normality of the residuals and homocedasticity (Breush-Pagan and White) confirmed the adjustment of the model. So, we reject the hypothesis that all coefficients are statistically equal to zero at 1% significance; that is, at least one of them is different from zero. R2 adjusted shows that the model's variables can explain 21 % of the Healthcare Services Effectiveness. Some other issues could define the rest of the effectiveness variable (Donabedian, 2005).

TABLE 5 Multiple linear regression model

Model	_2	R ² adjusted	Std. error	Statistics			
	R*		stu. error	F	df1	df2	Sig. F
4	0.22	0.21	0.20	31.61	4	452	0.000

Notes:

× Predictors: PRA (Professional Attention); RRA (Relational Attention); EXC (Expanded Clinic); VWT (Valuing Workers' Technical Skills);

Thus, this study confirms the hypothesis that Humanization positively affects healthcare services' effectiveness (H1). And also, that there are differences in some aspects in the perceptions of users and healthcare professionals about the effect of humanization on the effectiveness of services, which also allows confirming H2, as supported by other studies (Buffoli *et al.*, 2014; Falk *et al.*, 2010; Pascuci, 2017).

5 Discussion

The current changes in relationships established in healthcare services are due to scientific and technological advances associated with behaviors affected by the on-going COVID-19 pandemic, which is consistent with the Autopoiesis Theory precepts. The process of creating and building relationships bases the interactions consensual conduct, with love as the dominant emotion, expanding and stabilizing human coexistence



[×] Dependent variable: HCSE (Healthcare Services Effectiveness);

 $[\]times$ Stepwise estimation method and ANOVA validation method.

through the recognition and acceptance of each one (Maturana, 2002). These concepts are in line with the understanding that social subjects can modify themselves and transform collective realities when engaged in good practices (Benevides & Passos, 2005). They also align with humanity's adequacy to a pandemic scenario, which affects how people and organizations behave for the sake of the common good and towards a more humanistic view (Moglia *et al.*, 2015).

Considering the specificity of the healthcare services segment, which makes it unique due to the focus on the human being (Bonfim *et al.*, 2013), studies in the area of humanization developed in Brazil in recent years led to the creation of the National Health System (NHS). That body acts in the public healthcare policies and management and is aligned with the National Humanization Policy (NHP) to produce health through a humanized NHS. The initial constructs used came from the NHP, which added an autopoietic look and supported humanization to affect the effectiveness of healthcare services for both users and professionals in the area.

Evidence of perceptions of the effect of humanization on the Healthcare Services Effectiveness (HCSE) validates the perspective that healthcare effectiveness is directly associated with achieving the individual's well-being (Donabedian, 2001). The survey's respondents tend to agree that humanization is one factor that contributes to the improvement of the effectiveness of healthcare outcomes, with the low variance between groups, where both have equal means.

Consequently, there is also agreement that the lack of love, or its denial, can come from health problems and diseases (Maturana, 2002). That can change healthcare environments, affected by, for instance, the ongoing COVID-19 pandemic, and might demand, from leaders and managers, decisions driven by not only facts but also in the humanitarian perspective of the communities they serve, to establish sustainable growth (McKinsey, 2020). In terms of the NHP (Brazil, 2016), in an environement where everyone is involved, people fell responsible for the overall result. Each one must perform their work in the best possible way and recognize that their performance affects are individual. And collective in the results. The results obtained in the construct Expanded Clinic (EXC) confirms that. There is evidence that the attitudes of professionals can positively affect the results of treatments.

The results obtained reinforce the differences in perception between users and professionals when analyzing aspects related to humanization in healthcare (Falk *et al.*, 2010). The most significant differences were grounded in factors associated with the management of healthcare organizations and the performance of professionals/workers, that is, in the Ambience, Management and Co-management, Rights of Users, and Valuing Workers' Insertion.

The positive effect of Relational Attention on Healthcare Services Effectiveness reinforces the idea about the importance of professionals developing a relationship of "responsible compassion" with users (Arantes, 2016). It aligns with the concept of autopoiesis that, in relationships, subjects transform themselves, and structures are modified to better suit themselves and the environment through "consensual conduct interactions" (Maturana, 2002).

The results can contribute to business administration and, more specifically, healthcare facilities administration. It occurs to the extent that greater efficiency in healthcare services may imply cost reduction, increased availability of resources (human, beds, medicines), in addition to providing more physical and emotional comfort to patients (Pascuci *et al.*, 2017).

6 Conclusion

Humanization is a factor that affects healthcare services' effectiveness and has been gaining relevance both in service management and in scientific research. Humanization is a practice that interferes with the results of healthcare services in its multiple aspects and considers, as a central point, social subjects and their ability to individually or collectively promote changes in themselves and their environments. When interacting,



human beings change their structures to suit the ground. In the process of autopoiesis, they reconstruct and modify themselves to better coexist through consensual interactions of conduct and acceptance and legitimation of the other in relationships. Humanization under the theoretical lens of Autopoiesis Theory should be the essence of healthcare services.

Despite the essentially personal profile and the qualitative emphasis of previous studies on the theme, the results showed the effect of humanization on the effectiveness of healthcare services in Brazil and the variations in the perception of users and professionals of services through quantitative healthcare methods research.

The evidence indicated that Professional Attention, Relational Attention, Expanded Clinic, and Valuing Workers' Technical Skills are positively related to Brazilian healthcare services effectiveness. Besides, there are differences in users and healthcare professionals concerning the point of humanization in healthcare services. The results contribute to humanization in healthcare services, especially in a scenario of stress like an epidemic or pandemic, which claims substantive actions in the healthcare services social, technical, and political dimensions. The results indicate that professionals' attitudes based on humanization could positively affect the results of treatments, which validates the autopoietic thinking about the negative effect that the absence of love or the denial of it can provoke in hospital environments. Humanization has a vital role in the relationships among professionals and users, which should be taken into account by healthcare organizations' management.

Despite being based on an state policies, data was predominantly private, from both professionals and users of the services. Another aspect to highlight is a possible bias in the sample concerning education level (more than 75% with higher education or more), age (more than 78% over 35 years, almost 50% over 45 years), and income (45% with earnings above ten minimum wages). This spectrum does not represent the Brazilian population, so the results cannot be generalized. This sample tends to mean a slice of the population that uses or works in private health with health plans (more than 56% of respondents). As data collection was online, it reached audiences in several regions of Brazil. However, the questionnaire did not capture the respondent's geographic location, thus making it impossible to analyze different regional characteristics.

This work objective is pivotal in scenarios, like the on-going COVID-19 pandemic, when humanization becomes so disrupted. Besides, providing a different look when using a quantitative approach. Using the NHP guidelines, this study also provides a theoretical contribution to humanization management in healthcare and involves issues that encompass both public and private healthcare services. The proposed constructs and the data collection instrument are contributions to future research in the field of humanization benefits, mainly healthcare services.

A higher level of awareness and demand by all actors involved with healthcare services in the post-COVID-19 pandemic period is expected. Humanization should be central in talks and researches in healthcare services. So, practically, the study contributes to healthcare management organizations' actions, both public and private, and humanization practices to affect their services' effectiveness. It also collaborates with the management of organizations by providing information on users and professionals' perceptions about the effect of humanization on the effectiveness of healthcare services, identifying the aspects that are considered most relevant for each of the audiences analyzed.

Future research may carry out new applications of the questionnaire seeking to validate the constructs proposed in differente environments. It can apply to users and professionals of essential public services. It is also possible to use this research to a specific audience, consisting of customers and employees of the same organization, a particular branch of healthcare, or a specific territorial region. Such niches can bring different insights that can be very useful both for public policies and for positioning private organizations.

Finally, despite the evidence of humanization contributions to healthcare, there is a long improving agenda to formulators of public health policies, to managers of organizations focused on healthcare services, public and private, professionals in the field, and even users. Evolving discourse and techniques need to be



transformed into practices to contribute to organizations' effectiveness and the well-being of human beings in their most fragile condition when dealing with health problems, often on the threshold between life and death. In this sense, all the precepts of the Autopoiesis Theory support this point of view.

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