INTERDISCIPLINARITY IN HEALTH: THE MEDICAL HUMANITIES

INTERDISCIPLINARIDADE EM SAÚDE: AS HUMANIDADES MÉDICAS

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ABSTRACT

Studies in the philosophy of science indicate that the major innovations of recent decades are due to interdisciplinarity. This article addresses the growing relevance of interdisciplinarity in the health field and how it represents a significant change in relation to the traditional paradigm of disciplines. This highlights the need to overcome excessive specialization, which has fragmented knowledge across various disciplines and hindered an in-depth understanding of current challenges. This text exemplifies new areas of investigation that arise from the connection with human sciences and applied social sciences, which can be framed in the new field of the medical humanities.

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RESUMO

O artigo aborda a crescente relevância da interdisciplinaridade no campo da saúde e como isso representa uma mudança significativa em relação ao tradicional paradigma da disciplinaridade. Ressalta a necessidade de superar a especialização excessiva que tem fragmentado o conhecimento em várias disciplinas, prejudicando a compreensão aprofundada dos desafios da atualidade. Destaca a importância da interdisciplinaridade para pensar a saúde, exemplificando novas áreas de investigação que brotam da conexão com as ciências humanas e ciências sociais aplicadas, as quais podem ser enquadradas no novo campo das humanidades médicas.

Palavras-chave: *Humanidades. Médicas. Saúde. Interdisciplinaridade. Ciência*.

1 INTRODUCTION

In the field of philosophy of science, one of the big questions of recent decades seems to be: what are the problems of disciplinarity? In the most diverse areas of knowledge, we see an innovative flow in the way science is done, producing new discoveries and creating new solutions, which can be translated as a kind of interdisciplinary discovery. In a way, it is a paradigm shift resulting from the consideration of the problems of the process of specialization of knowledge, a representative mantra of the essence of modern science. In human and natural sciences, there is a growing perception that the divorce between areas of knowledge has harmed the in-depth understanding of certain phenomena, leading us to a certain epistemological blindness.

It is interesting to analyze the criticism of disciplinarity and the rise of interdisciplinarity that sets the tone for contemporary discussions. Next, we will demonstrate how this impacts the health sciences, specifically giving rise to what can be called Medical Humanities.

It became imperative to demonstrate how the introduction of interdisciplinarity in the health field does not merely constitute a sterile desire. Therefore, it is necessary to show how these new forms of knowledge production arise from a vehement need of our times, already producing relevant effects on the ways academia understands reality and addresses more effective responses.

In this chapter, we illustrate how interdisciplinarity has impacted knowledge about human health, mentioning emerging themes and concepts from recent decades that demonstrate undeniable advances (Japiassu, 1976).

Therefore, it was important to bring to the analysis not only a more epistemological approach but also to invoke very evident analyses that prove that the rise of Medical Humanities is an ongoing reality, being fundamental to deal with current challenges (Rios, 2016).

In summary, this article addresses the problem of modern disciplinarity in the face of contemporary complexity, invokes as a hypothesis the essential adherence to interdisciplinarity, and finally, demonstrates how the encounter between health sciences and humanities (human sciences and applied social sciences) has produced fundamental investigations for today's world.

2 DISCIPLINARITY AND INTERDISCIPLINARITY

Analyzing studies on the history of science, the idea of separating common sense beliefs (doxa) and true knowledge can already be found in Antiquity, with the Greeks certainly taking special prominence, recognized as authors of the first written records in this regard. This would be the origin of the idea of philosophy in Western tradition (Reale, 1990).

Philosophical-scientific language is established in the European tradition in an attempt to understand how to identify the characteristics of truth and the paths to it. The great pursuit of science enthusiasts stems from the challenge of using human rationality to find knowledge that goes beyond mere opinions and myths. Secure knowledge.

As is well known, the history of science is not linear or progressive. In this journey, it is possible to record some fundamental flows and events to understand the circumstances in which we find ourselves at the present moment, allowing us to calculate routes and set new goals in a process of criticism and construction.

One of these traits that mark the genealogical studies of science deals precisely with comings and goings around the claim of the unity of knowledge. No one questions that the first records of the Greeks dealt with a cosmological perspective study, where it was assumed that truths were connected in a whole of regularities. Not by chance,

education was conceived in the model of “enkyklios paideia,” aiming at an integrality between the constitutive themes of the intellectual order (Rech, 2020).

This logic of knowledge would remain for a long period, also spanning the Middle Ages, although in this phase, the cosmos was sustained around the idea of a Creator God. In its own way, the cosmos of religious character preserves the unity of knowledge and guarantees the integrity of the epistemological horizon (Japiassu, 1976).

In other words, cosmological thinking maintained the idea that the truths of the universe were all connected, so that science had to bring with it an interconnected knowledge. In this context, it is common to see the same philosophical work transitioning between diverse themes, such as politics, love, ethics, and method.

Such a configuration would begin to change with what came to be called the Scientific Revolution, which occurred in the 16th and 17th centuries. With Galileo Galilei, Isaac Newton, and René Descartes as its greatest exponents, this movement triggered a new logic of scientific operation, raising the banner of the specialization of knowledge (Rosa, 2012).

These authors launched the idea of finding truth through method, stipulating that we can unravel objects by dividing the whole into smaller parts. That is, the more the truth is “quartered,” the clearer it will appear to the investigator. This is the basis of modern analytics (Pombo, 2005).

As Morin states, the scientific revolution is established from the idea of the "simplification" of reality, turning the chaos of nature into rational and organized explanations according to universal laws. The pillars of this functioning are order, disjunction, reduction, and logic. Following this line, dividing and specializing knowledge is the preeminent way to get closer to the truth (Morin, 2005).

Deeply anchored in the exact sciences, modernity gives rise to physics as the first independent science, inaugurating a rupture in the pretension of the synthesis of knowledge. The new paradigm established defends the existence of various relations in world events, each with a nature, forcing a process of division of knowledge into disciplines, and demanding independent objects and methods (Queiroz, 2016).

There were still attempts to resist this break in the unitary perspective. Academies and societies of scholars were created in the 17th century, as well as the encyclopedist movement of the 18th century, with the aim of bringing together the first

dispersed branches of knowledge. However, the march of modernity would be strong in the direction of segregation, in the pursuit of purity of knowledge fields (Japiassu, 1976).

It is in the 19th century that the paradigm of specialization was definitively established. In it, there is an explosion of independent sciences (such as biology, psychology, geology, geography, economics, history, and sociology), within the new belief that advancing knowledge demands the progressive isolation of content. The link between knowledge increasingly falls into disuse, promoting solitude between fields of knowledge, which is accentuated by new educational systems and social practices (Vilela, 2003, p. 526).

Hyperspecialization dictates the tone of modernity and brings with it the figure of the scientist as a profound connoisseur of a monopolized theme, possessing a profession inasmuch as he masters a field of knowledge. With this, he becomes the bearer of a specific language, largely inaccessible to outsiders, because the objective is to advance by promoting dialogue practically restricted to his peers within the field of knowledge (Lima, 2022).

This is how "scientific communities" are built, composed of practitioners of the same discipline. The established paradigm presupposes similar professional initiation and teaching through the same technical literature, puncturing the limits of the object and method of study that set the tone for receptivity in the group. Scientific performance demands group acceptance, requiring the use of typical signs in the area (Kuhn, 2013). Everything moves in a process that deepens the isolation between knowledge.

In this step of disciplinary independence, many have diagnosed that the installation of the model based on natural sciences promoted a cut from philosophy. Scientific positivism is marked by this “aversion to philosophical reflection,” aiming at an independent practice through rigor, which demands the policing of boundaries and more defined methods (Santos, 2008).

However, the 20th century brought a problematization of this modern mechanism. Questioning the boundaries between sciences reignites the methodological debate, bringing epistemology to the center of the scientific scene. Curiously, it would be from physics itself that this potent debate would begin when the discoveries of Einstein and quantum physics questioned the dominant model (Santos, 2008).

Here, the critique of positivism strengthens a re-discussion about disciplinarity in science, provoked by an attempt to re-approximate the studies of nature and man. According to some, the 20th century inaugurated a “new renaissance,” criticizing compartmentalization and valuing a process of reconnecting knowledge. This is an interdisciplinary movement (Aleksandrowicz, 2002).

The interdisciplinary premise stems from this realization of the damage caused by the division of areas of knowledge, especially the inability to provide adequate solutions to the increasingly complex problems of the contemporary world. The creation of exchanges and cooperation between knowledge areas has emerged as a necessity owing to the hybrid nature of humanity's challenges (Rech, Rezer, 2020).

In other words, due to a combination of factors ranging from globalization to digital technologies, the 20th century imposed ultra-complex problems on humanity, problems whose multiple variables are no longer solvable using disciplinary methods alone.

Research began to see the need to build bridges, confronting the supposed autonomy in the way of researching and teaching. It became clear that a distant dialogue between the various sciences, a mere respectful encounter, would not be enough; rather, a new form of communication was needed that would open up spaces and rethink the way science is done.

Interdisciplinarity promotes new syntheses between the objects and methods of science. It perceives that mere complementarity of knowledge is not enough; it truly requires a fusion in the pursuit of common objectives. Laws and propositions need to be reallocated, and novelty must come from exchange (Japiassu, 1976).

In this encounter of disciplines, the objective is for them to emerge modified, creating a mutual reference for future research. It is a joint enrichment generated by the transformation of their ways of approaching the object and weaving concepts. It is a model conducive to innovation, as it introduces other ways of looking at problems and their responses (Vilela, 2003).

Such reciprocal transfer of methods can occur at the level of application, epistemological degree, and in the formation of new disciplines. For example, this occurs when nuclear physics methods are transferred to medicine to create cancer treatments. That is, objects are displaced from their original fields and come to compose a new function (Iribarry, 2003).

In this process, its novelty lies precisely in articulation, so that the areas can collectively broaden the analysis of the object of study. The goal is to build connections between specialties and promote their integration and convergence (Japiassu, 1976). Therefore, it is imperative to build bridges. This type of work encourages connections between people and theories; the understanding of the object can be done in its multiple dimensions, considering instruments, data, and qualitative formulations. Triangulation of perspectives and methods occurs, which cannot happen in the disciplinary system (Minayo, 2010).

The interdisciplinary challenge is to investigate new solutions based on the increasing complexity of the current era. Therefore, science itself must become more complex, moving out of the multiple compartments in which it was found. Interdisciplinarity is like a new movement in search of connection, not intending to extinguish disciplines but simply establishing a new flow in which science can benefit from both specialization and unity.

The search for a “paradigm of complexity” does not mean a movement to discredit disciplinary knowledge but rather to strain it. It is necessary to recognize all the advances achieved with the disciplinary model, but also to perceive that new knowledge can be achieved through reciprocal involvement, inserting a flexible logic (Tauchen, Fávero, Alvarenga, 2017).

Finally, after almost five centuries in which the scientific vector functioned in the sense of knowledge dispersion, science today appeals for a return to interconnectivity. It is time to promote reciprocal fertilization of knowledge, believing in the richness that comes from the transfer of concepts, problems, and methods.

3 INTERDISCIPLINARITY IN HEALTH

Among the various fields impacted by interdisciplinarity, the focus here is on health-related research. As already explained, the disciplinary format imposed a division between areas of knowledge, and it was no different in the investigation into the functioning of the human body. Therefore, it is necessary to understand the established paradigms.

The first major aspect to be verified is the segregation established between the natural sciences and the humanities. This typically positivist premise is neither instinctive nor natural; it makes sense within the nineteenth-century disciplinary model,

which understood the advancement of medicine through theoretical isolation from the humanities. According to historical records, German science was the first to stand out in this process (Cole, Carlin, Carson, 2015).

It is a consensus that this model reflects a fixation on the biological character of the body in medicine. Everything else is segregated outside this field of knowledge and is not of interest to researchers. Advances in microbiology and biochemistry would be clear, operating many scientific conquests but raising certain walls in research on human health (Puustinen, Leiman, Viljanen, 2003).

In turn, there was a rise in epistemological debates about medicine in the second half of the 20th century, driven by the diagnosis that the exclusive focus on the biological perspective limited the complex analysis of the health-disease process. The type of modern training began to be questioned, laying the groundwork for border reopening.

The focus on biology brought a leap in knowledge and legitimacy to medical knowledge, as scientific knowledge began to operate according to the logic of fragmentation typical of modernity. However, distancing from the humanities exacts a price, which has become the target of more vehement criticism in recent decades.

It is from there that the idea of “Medical Humanities” emerged, a term that began to gain popularity, especially in English-speaking countries, from the 1980s onwards. Pioneers such as Pellegrino began to focus on how to connect the studies of the human body with the humanities, especially provoked by ethical questions in clinical decisions, processes of self-questioning of medical habits, and the reconstruction of teaching (Cole, Carlin, Carson, 2015).

This debate fuels two striking types of concern: one about the need to “humanize” the health professional with knowledge aimed at better patient care and the other about the actual construction of new technical medical knowledge from a critical perspective. There is an “affective” and a “cognitive” emphasis (McManus, 1995).

The demand for knowledge in the so-called human sciences and applied social sciences has become evident. This search for interaction invokes an innovative vision of medicine (Rios, 2016).

Therefore, structuring an interdisciplinary agenda in health is capable of multiplying lines of investigation on various scales. It embraces new languages and knowledge, precisely fulfilling the perspective of reconnecting knowledge in search of innovation.

This openness seems to demand cooperation between researchers from distinct areas, from the conception of the research, the construction of complex thought that connects the whole and the parts, collective work with a plurality of theories and experiences, and an articulation of knowledge with practice to meet the real needs of the population.

In Brazil, this debate seems to have first emerged through the title “collective health” in the 1970s, seeking mediation between biomedical knowledge and the population's perception of public health guidelines, mainly incorporating the research of social scientists (Lima, 2022).

It is worth noting that the process of interdisciplinarity in health has been operating internationally under various nomenclatures, such as "collective health," "bioethics," "human and social sciences in health," and "Medical Humanities."
Interdisciplinarity is driven by this terminology with a strong focus on epidemiology, public policies for assisting individuals and groups, as well as a problematization of “modes of behavior, social representations, and subjectivities of patients” (Luz, 2011). Since then, the ambition to tackle human diseases and promote public health can no longer disregard the confluence of biological and social dimensions. Therefore, politics, economy, and culture are all these items become mandatory in the idea of constructing complex medical knowledge today.

The new task seems to be to confront the breadth of methodological and conceptual contours between these diverse fields to better guide the possible products of medical interdisciplinarity. From a critical perspective, it should enable new ways of understanding disease, suffering, intervention, and cure, all while respecting the social context that impacts them and by which they are impacted (Fitzgerald, 2016).

According to these arguments, medical humanities open doors to warn against the cultivation of insensitivity, highlighting the political dimension of medicine and promoting public involvement in reflecting on ways to access human health (Bleakley, 2020).

In a sense, embracing the interdisciplinary challenge in health should impact the most diverse aspects that configure the human experience in its demand for a healthy and functional body, already considering that such a claim is always historically situated.

To better clarify the proposal of a new interdisciplinary understanding of human health, it is useful to describe the most relevant topics that have been highlighted in this encounter of disciplines. Beyond a conceptual presentation of the interdisciplinary intent in health, we outline a synthesis of some of the most celebrated and promising fields of approximation between health sciences and humanities, all corresponding to objects of study that can only be developed in this connection between knowledge.

Research on the doctor-patient relationship deserves attention, as there is a predominant understanding of the need for a humanization process in medicine and the development of greater sensitivity to suffering due to illness.

In this sense, for better care, it is fundamental that the health professional understands that the patient's illness experience is influenced by various factors, including cultural, family, and emotional aspects, which are less explored by doctors compared to issues related to symptoms and signs of disease (Caprara, Rodrigues, 2003).

There are also interesting researches directed at the study of health communication. As an example of a research object, one can cite the communication strategies adopted by the SUS (Brazil's public health system) during the pandemic, which were fundamental for coping with the public health crisis, as their scope was population engagement and, consequently, damage mitigation (Vilas Boas, Daltro, Garcia, Menezes, 2017).

Furthermore, the field of bioethics is important in research. The great evolution for The regulatory framework for research ethics in Brazil evolved significantly with the creation of the current CEP/Conep system in 1996, based on the international principles of autonomy, beneficence, non-maleficence, justice, and equity. With the issuance of other norms, Brazil became a vanguard in the protection of research volunteers, calling upon a series of researchers to reflect on the theme (Salgueiro, Freitas, 2022).

Another axis discussed in the medical humanities concerns research on the individualization of health, usually referred to as Person-Centered Medicine (PCM), or Person-Centered Clinical Method (PCCM). PCM and PCCM have been studied as a way to individualize care to meet needs, concerns, and experiences related to health

and disease, escaping a massification process that has set the tone in health services in general. This method seeks to guide professionals through a set of proposed actions to centralize the understanding of the patient (Fuzikawa, 2013).

Another interesting field of analysis is psychosomatic manifestations. Pain is common to all humans and goes beyond purely biological explanations, as taught by the Brazilian Society for the Study of Pain (Satsangi, Brugnoli, 2017).

Pain can be both physical and psychological in nature. Many studies have explored how difficulty tolerating pain and the inability to process conflicts can lead to the development of psychosomatic disorders in individuals. The relationship between mental well-being and body health is increasingly being explored, promising new discoveries regarding the extent to which the mind interferes with the functioning of the organism.

Other interdisciplinary works delve into the debate on the influence of social contexts on health treatments. Some studies emphasize the importance of social bonds for achieving human health, considering that "social cohesion has a direct influence on the formation of solidarity networks and constitutes a protective factor in lifestyle and quality of life" (Souza, Pio, Oliveira, 2021, p. 6).

Biodiversity is also presents itself as an important area of study. Its action is constantly being demanded by scientific progress in an attempt to balance scientific advancements with the need to protect the psychophysical integrity of citizens (Santos, Milhomem, 2022).

Another field of study is biotechnology, also called "biotechnology," which encompasses the relationship between science, technique, and life. This area of study aims to create and produce goods and services, with the scope of providing greater general well-being for the population (Schramm, 2019).

It can no longer be ignored how much the medicalization of life advances into themes that go beyond healing, increasingly delving into aesthetic and performative aspects of life. Beauty standards are created and modified over time, forming new "ideologies of body worship" and directly impacting human relationships (Anjos, Ferreira, 2021).

Relevant discussions also emerge concerning the "mercantilization of health", which connects contemporary economic and health systems. Specifically, mercantilization is the process of transforming human health into a commodity, aiming for profit through commercialization (Marques, 2016).

The pharmaceutical capital, Big Pharma, has been described as a gigantic international market monopolized by a few companies. Much has been discussed about how this sector has gained the power to modulate the definition of certain diseases to suggest treatments with highly profitable products, as well as its power to dictate more or less accessible values to the population (Marques, 2016).

The rhetoric used to justify health intervention in a school environment to diagnose children would be that early treatment would enable the reversal of mental disorder conditions in adulthood. On the other hand, some authors criticize this approach, arguing that school failure cannot be reduced to a biological analysis, which hides social, cultural, and political factors, as well as didactic models (Brzozowski, 2020).

4 CONCLUSION

Finally, we believe that we have covered important debates to frame the discussion on interdisciplinarity in health. Medical humanities seem to have arrived definitively, given the growing awareness of the need to develop deeper studies on human health in the field.

We began by indicating the historical shift resulting from the paradigmatic leap from disciplinary to interdisciplinary sciences. The increase in the complexity of societies over the last two centuries has invoked demands previously unsolvable by rigid ways of conceiving knowledge, so that science is challenged in its capacity for innovation.

The connection between disciplines is urgent to promote the exchange of knowledge, methods, concepts, and objects. The same is true for health sciences, as a biopsychosocial model for understanding human health demands new ways of seeing our problems and our solutions.

As we have indicated, medical humanities act precisely at the interdisciplinary intersection of health and human/applied social sciences and can no longer be neglected by any scholar who wants to think about medicine geared towards the 21st century. The disciplinary model presents insurmountable challenges.

Finally, we exemplified some of the most interesting study focuses in this line, highlighting the advances achieved. We conducted research on the doctor-patient relationship, health communication, bioethics, biolaw, humanization of medicine,

individualization of health, correlation between social factors and disease, medicalization of life, and commodification of health.

Therefore, this article provides a solid foundation for how interdisciplinarity in health is a reality and increasingly needs attention. We hope that the map traced here can foster new fields of investigation and problematize aspects that are still hidden in the narrative of human health production.

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