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Original Article

Clinical reasoning of Brazilian expert occupational therapists: a constructivist grounded theory study[1]

Raciocínio clínico de terapeutas ocupacionais brasileiras experts*: um estudo da teoria fundamentada em dados construtivista*

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Abstract

Introduction: Practice-based models or theories are relevant elements for understanding deliberate thinking processes in individualizing care for a specific client in occupational therapists' practice. The Dynamic Occupational Therapy Method (DOTM) is an ongoing conceptual-methodological framework developed in Brazil since the 1970s. **Objective:** To examine the clinical reasoning processes of expert occupational therapists employing the DOTM. **Method:** A constructivist grounded theory approach guided this study. Data were collected and analyzed simultaneously through Constant Comparative Analysis. Individual and in-group interviews, and a reflective journal, comprised the data collection instruments. Participants were ten expert occupational therapists with: minimum of 10 years of practice experience, minimum of five years since completion of the DOTM clinical training, employing the DOTM as the main framework in practice, and considered by peers as experts. **Results:** Two major categories emerged from data analysis: (1) the DOTM reasoning processes – construction of the situational diagnosis, establishment and management of the triadic relationship, and dialogical assessment of the therapeutic process/associative paths; (2) thinking ethical-aesthetically, associatively, and dynamically. **Conclusion:** This research advances knowledge about the reasoning processes of expert therapists, demonstrating the importance of theoretical and methodological knowledge to inform clinical reasoning. A theory on the clinical reasoning of expert occupational therapists employing the DOTM was developed, detailing how this conceptual-

[1] Data availability: The raw data supporting the results and conclusions of this study remain confidential and will not be shared for ethical reasons. All necessary information supporting the presented results is provided within this manuscript.

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methodological framework underpins reasoning by providing valuable operational concepts to support a dynamic practice centered on the clients' uniqueness and situated context.

Keywords: Clinical Reasoning, Occupational Therapy, Grounded Theory, Thinking, Professional Practice.

Resumo

Introdução: Modelos ou teorias baseadas na prática são elementos relevantes para a compreensão dos processos de pensamento deliberado na individualização do cuidado a um cliente específico na prática do terapeuta ocupacional. O Método de Terapia Ocupacional Dinâmica (MTDO) é um arcabouço conceitual-metodológico em andamento desenvolvido no Brasil desde a década de 1970. **Objetivo:** Examinar os processos de raciocínio clínico de terapeutas ocupacionais *experts* que utilizam o MTDO. **Método:** Uma abordagem construtivista da teoria fundamentada em dados norteou este estudo. Os dados foram coletados e analisados simultaneamente através da Análise Comparativa Constante. Entrevistas individuais e em grupo e um diário reflexivo compuseram os instrumentos de coleta de dados. Os participantes foram 10 terapeutas ocupacionais *experts* com: mínimo de 10 anos de experiência prática, mínimo de cinco anos desde a conclusão do treinamento clínico do MTDO, que empregam o MDTO como estrutura principal em sua prática, e considerados *experts* por seus colegas. **Resultados:** Duas categorias principais emergiram da análise dos dados: (1) processos de raciocínio do MDTO – construção diagnóstica situacional, estabelecimento e gestão de relações triádicas e avaliação dialógica do processo terapêutico/percursos associativos; (2) pensar ético-esteticamente, associativa e dinamicamente. **Conclusão:** Esta pesquisa avança no conhecimento sobre os processos de raciocínio de terapeutas ocupacionais *experts*, demonstrando a importância do conhecimento teórico e metodológico para informar o raciocínio clínico. Foi desenvolvida uma teoria sobre o raciocínio clínico de terapeutas ocupacionais *experts* que empregam o MDTO, detalhando como esse referencial conceitual-metodológico sustenta o raciocínio, fornecendo conceitos operacionais valiosos para apoiar uma prática dinâmica centrada na singularidade dos clientes e no contexto situado.

Palavras-chave: Raciocínio Clínico, Terapia Ocupacional, Teoria Fundamentada em Dados, Pensamento, Prática Profissional.

Introduction

Clinical reasoning is a process entailing cognitive operations (to observe, collect, and analyze information) related to the need of making decisions for action (referred to as decision-making) in a specific clinical situation (ten Cate & Durning, 2018). Occupational therapy is a practical, pragmatic, and hands-on profession, where therapists draw on complex clinical reasoning processes that combine theory, evidence, and contextual details to make decisions in practice in a client-centered, contextual and occupational-based perspective (Taylor, 2012). Clinical reasoning in Occupational Therapy has been studied since the 1980s. The first large scale study identified the

'Three-Track Mind', characterizing the interconnected functioning between procedural (to find the better therapeutic action), interactive (to foster collaborative practice), and conditional (to imagine the person in a broader social life) clinical reasoning (Mattingly & Fleming, 1994).

A recent review identified many studies addressing classic types of clinical reasoning – procedural, conditional, interactive, pragmatic, narrative, ethical, and scientific (Araujo et al., 2022). This review also pointed to emergent perspectives that attend to embodiment, aesthetics, intuition, emotions, and interactions among the therapist, patient, and surroundings (Araujo et al., 2022). These emerging perspectives call for the need to increase the visibility of embodied aspects, both through feeling and acting, as well as through critical perspectives for contextual analysis, such as the conscious thinking about social and political issues involved in professional decisions (Araujo et al., 2022). These issues were present in initial studies on clinical reasoning in occupational therapy (Fleming & Mattingly, 1994) but less explored in subsequent research. Despite efforts to conceptualize different processes related to decision-making in practice more comprehensively (Araujo et al., 2022; Burke et al., 2024; ten Cate & Durning, 2018), the term clinical reasoning is still prominent and has been called to be understood broadly.

Some studies have also discussed the use of practice-based models or theories, and proposed models or frameworks to guide clinical reasoning, drawing on classic practice models or focusing on practice outcomes (Araujo et al., 2022; Boniface & Seymour, 2012). Theories and models inform assumptions about the way the world works and guide how practitioners assess, identify and solve problems (Reagon, 2012). Kramer (2020) points out that when the occupational therapist has theoretical clarity, there is a clear choice about the scope of the problems to address. Occupational therapists, however, may not recognize these influences on their reasoning (Thompson, 2012). In a recent review, Márquez-Alvarez et al. (2019) found that theoretical aspects of clinical reasoning are one of the main lines of study on this theme. Understanding how theoretical-methodological frameworks influence practice actions and clinical reasoning can help practitioners to be more critically competent (Higgs & Trede, 2019).

Given that theories and/or conceptual models are an important component of clinical reasoning, understanding how these aspects underpin occupational therapists' cognitive operations and decision-making is important for deepening comprehension of professional practice. One of the frameworks employed in professional practice by occupational therapists is the Dynamic Occupational Therapy Method (DOTM) – an ongoing conceptual and methodological framework developed in Brazil since the 1970s by the occupational therapist Jo Benetton. Dr. Benetton was not satisfied with the imported and decontextualized approaches to therapy used in Brazil (Mello et al., 2023).

Through the Theory of Technique, a process sustained by a pragmatist epistemology (Dewey, 1991; Marcolino, 2022), Benetton placed "practice" as an object of study. From the observation and analysis of practical phenomena, she started to build generalizations for a conceptual-methodological framework that has proven useful for practice over the years (Marcolino et al., 2020; Mello et al., 2020, 2022). Her main concern was not to build a model of practice that would simplify the phenomena of practice but to build a theoretical and methodological framework for supporting

occupational therapists in thinking and acting within the complexities, singularities, and situated contexts of practice (Marcolino et al., 2020; Mello et al., 2020).

The DOTM was systematized through academic research in Dr. Benetton's master and doctoral studies. After her postdoctoral studies in the History of Health at the *École des Hautes Etudes en Sciences Sociales* in France, she identified similarities between her propositions and those of Eleanor Slagle in the early years of Occupational Therapy in the United States. The main similarity embraces the recognition of ideals and practices to promote health through activities/occupations. In this direction, Benetton situated the DOTM as belonging to the Occupational Therapy Paradigm (Benetton, 2005; Marcolino et al., 2020). The emphasis on the noun "therapy" qualified by occupation, led her to put the practical intervention as the axis of analysis of different paradigms of the profession (Benetton, 2005). She considers three paradigm for occupational therapy practice: the medical paradigm, existing since before the foundation of the profession sustaining symptom-oriented practices; the occupational therapy paradigm, due to the emergence of a way of treating habits (and not diseases or symptoms)—or pursuing health, well-being, and good living—using occupation, similarly to the paradigm of occupation as seen in Kielhofner (2009); the rehabilitation paradigm, under which the profession had spread around the world with practices centered on functional recovery, as a re-habilitation, a "getting back to being" before disability (Benetton, 2005).

The term "occupation" does not belong to the DOTM conceptual framework. This may initially be a challenge for its presentation to the international community, but it is also an opportunity to broaden the situated possibilities for building knowledge in the field away from the productions of the Global North. As will be presented, the DOTM is a theoretical and methodological proposal highly occupation-based and person-centered (Araujo et al., 2022), underpinned by dynamic, relational, situated, and dialogical processes.

The DOTM seeks to understand situationally what limits or hinders the target person from doing what they want or need to do in their life, from a dynamic and ongoing perspective (Marcolino et al., 2020; Mello et al., 2020). Considering "problems in doing activities/occupations" in life in its breadth and complexity, it is not possible to name the focus of the intervention beforehand. Benetton (1994) proposes conducting a situational diagnosis as an ongoing process of identification of needs and desires of the target person through multiple information available (observation of the person doing, the occupational therapist's feelings and other embodied perceptions, the person's beliefs, information from other people and professionals, and even assessments of specific deficits, when necessary). It is a dynamic, descriptive, and analytical map that seeks to situate the person in relation to what may be limiting/hindering their doing in all relevant aspects (Marcolino et al., 2020; Mello et al., 2020).

Intervention, therefore, is also dynamic and centered on a phenomenon that is totally specific to occupational therapy: the triadic relationship, composed of the occupational therapist, target person, and activities. Benetton (1994) identified that by introducing activities into the therapist-person relationship, new relational movements occurred. Establishing the triadic relationship and managing it is what allows the occupational therapist to sustain the possibility of a person to experience. The intervention is not focused on performance but on experience, so that what one needs to learn how to do and what one wishes to do can be integrated into occupational therapy (Marcolino,

2022; Marcolino et al., 2020; Mello et al., 2020). As a pragmatist method, occupational therapy for the DOTM is seen as an *ethical-aesthetic* process always considering the particularities of the situation, its consequences, and what has practical use in people's lives, distancing itself from moral and aesthetic normativity (Marcolino, 2022).

In the process of performing activities within the triadic relationship, the activities that the target person considers bringing well-being are performed more regularly, thereby increasing people's participation in the social milieu (Marcolino et al., 2020). The DOTM calls it as a process to expand health spaces and participation for the target person, fostering social insertion. Conceptually speaking, *health* is defined as a singular and non-normative concept attributed by the person to what brings them well-being and regulates their possibilities of doing (Marcolino et al., 2020; Mello et al., 2020). Expanding doing activities implies expanding the person's participation in the social environment. This participation, however, is not necessarily guaranteed in society by various and complex aspects (Marcolino et al., 2020). The social insertion concept dialogues with Bruno Latour's Sociology of Associations (Marcolino et al., 2020), and can be understood as a continuum process "in the dynamic, fluid, and unstable movement of the social, through active processes of persons' participation in the construction of the collective." (Marcolino et al., 2020, p. 1332). An example of a new collective in construction can be seen when supermarket employees are not expected to communicate through Augmentative and Alternative Communication (AAC) devices. A person who uses AAC and starts shopping in the supermarket "forces" the staff to communicate with them. This transformation does not have stability in the social milieu, but it allows for the construction of a new collective, mobilized by human and non-human actions (the AAC device), which carries the potential for social transformation (Marcolino et al., 2020).

The transformation process demands broadening awareness and constructing new meanings, which is essential for occupational therapy practices (Mello et al., 2021). In the DOTM, activities are analyzed constantly and collaboratively, centered on a dialogical process of meaning-making that allows reflection on the lived experience so that the person can recognize skills, capabilities, and limits. This process is centered on the associations triggered by the activities undertaken. Although the meaning-making process can occur from continuous and routine analysis, there is one specific technique for meaning-making in the DOTM called Associative Paths. This technique involves grouping activities based on the meanings attributed to them by the target person and talking about them, allowing for new groupings of meanings in a dialogical process. The Associative Path opens up a space for historicity and for the construction of a narrative about what was experienced (Mello et al., 2020).

In the 1980's, Benetton, in partnership with Sonia Ferrari, started to offer postgraduate specialty training in the DOTM. It is now a two-year educational program that therapists can complete following a bachelor's degree in Occupational Therapy.

Objective

This study aimed to examine the clinical reasoning processes of expert occupational therapists who use the DOTM. The research question was: What are the processes of

clinical reasoning used by expert occupational therapists who employ the DOTM as their main conceptual-methodological framework in professional practice?

Methods

Ethics

Ethics approval (number 3.382.934) was obtained from the Research Ethics Committee of the Federal University of Sao Carlos. The participants signed an Informed Consent Form and, to ensure anonymity, were identified by pseudonyms.

Study design

We used a constructivist Grounded Theory approach to guide this study (Charmaz, 2014). Grounded theory is a systematic method of conducting qualitative research that provides explicit strategies for collecting and analyzing data; the aim is to inductively build theoretical propositions that offer an abstract understanding of the studied topic (Charmaz & Thornberg, 2021). The constructivist approach emphasizes interpretation and prioritizes conceptual understanding more than explanation. It seeks to understand actions, meanings, and how people construct them. Moreover, it recognizes the interpretations of both participants and researchers, situating the research in historically, socially, interactionally, and situated contexts (Charmaz, 2014). It fosters the construction and development of new insights, delving deeper into the studied phenomenon and moving away from existing theories (Charmaz, 2014).

We chose Grounded Theory because it is a research methodology often used to study clinical reasoning (Araujo et al., 2022; Márquez-Alvarez et al., 2019) and because the clinical reasoning of practitioners employing the DOTM had not been previously investigated.

Participants and recruitment

To gain a greater understanding of the clinical reasoning of occupational therapists who orient their practice using the DOTM, we choose to work with expert occupational therapists. Experts are considered to be those professionals, usually recognized as experts by their peers, who are capable of solving new problems or addressing issues in innovative ways to meet the complex needs of clients in unpredictable or uncertain situations. To this end, they use a set of knowledge, personal characteristics, competencies, and skills (King et al., 2008). The advantage of conducting research with professional experts enables the assessment of more robust and grounded practical knowledge, as well as the use of theory in practice (King et al., 2008).

The participants were 10 expert occupational therapists who employed the DOTM as the main conceptual-methodological framework in practice. The following inclusion criteria were used for recruitment: 1. Minimum of 10 years of occupational therapy practice experience; 2. Minimum of five years since completion of DOTM clinical

training; 3. Employing the DOTM as the main conceptual-methodological framework in practice; 4. Be recognized by peers as an expert.

Following Grounded Theory guidelines (Morse, 2007), we used three types of sampling:

Convenience sampling: At the beginning of the research, we recruited occupational therapists who met the inclusion criteria and were instructors in the DOTM education program.

Purposeful sampling: We asked the first participants to indicate other occupational therapists who met the inclusion criteria were considered "experts" as per the definition found in King et al. (2008).

Theoretical sampling: In line with theoretical sampling, which seeks to engage specific participants who may delve deeper into the interpretations, we conducted a group interview with the four DOTM education program instructors - the same composing the convenience sampling. These experts were recalled for this step because of their expertise in teaching the DOTM and their in-depth knowledge of this method.

Data collection procedures

Following Grounded Theory guidelines (Charmaz, 2014), data were collected and analyzed simultaneously by the first author (ASA), who was an occupational therapist with seven years of experience, trained in the DOTM education program, and a doctoral student. The other authors, members of the research team (EAK, ACCM, and TQM), contributed to the data analysis and emerging interpretations.

Data collection began with completion of a participant demographic form. Data collection tools included: 1. Ten individual semi-structured interviews, completed in Portuguese, in which participants were asked to describe their clinical reasoning processes and give examples from their professional practice, illuminating particularities of applying the DOTM. The interview scripts were modified as the concepts emerged, and other experts participated to make the emerging Grounded Theory more robust. Table 1 brings examples of questions participants from the three samples were asked; 2. A group interview, also completed in Portuguese, was conducted with four DOTM education program instructors, in which the preliminary results were introduced, and the participants asked to discuss and provide further reflections about them. Their insights were used to clarify and delver deeper into the emerging theory; 3. A reflective journal to record insights, reflections, and emerging interpretations throughout the research process. Memo notes were recorded to foster reflections regarding methodological choices, emerging codes, and conceptual categories (Charmaz, 2014).

The interviews lasted from 60 to 120 minutes and were audiotaped and transcribed. The first four individual interviews were face-to-face at the participants' workplace. The other six individual interviews and one group interview were completed through video conference because of the geographic distance and the COVID-19 pandemic.

Table 1. Examples of the questions asked in the interviews.

Sampling	Questions
Convenience	1. What does clinical reasoning mean to you? 2. Could you tell us about a clinical case you are following that exemplifies your clinical reasoning? 3. Do your bodily perceptions/sensations influence your clinical reasoning? How does that work? 4. Do you think the DOTM underpins your clinical reasoning? How?
Purposeful	1. How do you organize your professional practice? What theoretical concepts do you use? Could you give me a practical example? 2. How do you decide what actions to take? 3. What practical processes do you structure your clinical reasoning around? 4. How does the DOTM help you decide what is right or best to do in a specific situation? 5. Do you think your clinical reasoning is dynamic? How does that work?
Theoretical	1. Do you think your clinical reasoning goes beyond cognition? How? 2. Do you think your actions are all supported by the construction of the situational diagnosis and the establishment and management of the triadic relationship? 3. Is your clinical reasoning always associative?

Data analysis

Constant Comparative Analysis (Charmaz, 2014) was used for data analysis, managed with NVivo® (version 12.7.0) software, and involved initial, focused, and theoretical coding (Charmaz, 2014; Thornberg & Charmaz, 2014). Throughout this process, the field journal and the memos were used to support the emergent analysis.

First, we repeatedly listened to the interviews' audio recordings and read the transcripts seeking an in-depth immersion in the data. Keeping the research question at the forefront, we engaged in initial coding through a paragraph-by-paragraph analysis, generating provisional codes. Next, we conducted the focused coding, selecting the most significant/frequent initial codes and generating categories and subcategories. Finally, we conducted theoretical coding after the group interview with the theoretical sampling. This process involved reanalyzing all the data to confirm the generated categories and subcategories and to modify and deepen them.

The analysis process was conducted inductively, as Grounded Theory proposes (Charmaz & Thornberg, 2021). Throughout the analysis, especially between the stages of focused coding and theoretical coding, the theoretical-methodological framework of the DOTM naturally emerged. Thus, it was possible to identify that the subject under investigation (clinical reasoning) reflected the structure of the DOTM – a theoretical-methodological framework that was also constructed inductively from the analysis of the phenomena of practice. As discussed further below, we consider this to be one of the findings of this research.

Table 2 illustrates the data analysis process.

Table 2. Example of the data analysis process.

Excerpt from a participant's interview	Interviewer: Could you tell us about a clinical case you are following that exemplifies your clinical reasoning? Sophia: I have been caring for a year of a girl who is now 17 years old, and in our first meeting, she came with her mother. And, a situational diagnosis is that this first contact tells me a lot about how I am going to construct this reasoning because it is the first photograph that I see of this person. Then, this girl came to my office with her mother, a very shy girl, with long hair, she sat very next to her mother, she spoke softly, shyly. And her mother, a beautiful, young woman, was telling me the story and was saying "Right, daughter?". Then, the alarm clock on the mother's cell phone rang and she said, "It's time to take your medicine, right daughter?". And her mother told me that she had changed her school, and after that, she got very anxious, very… and started with symptoms of cleaning mania, didn't want to go to school, and had difficulty socializing with her peers. The girl got depressed. After this first meeting, I had a second one alone with her, without her mother. And I tried to understand how she organized herself with her studies, to understand how things worked for her, and then I realized that she was a girl who put a lot of pressure on herself, very rigid... Then my clinical reasoning revolved around this, "I need to take care of what is really important to her, the studies and the school, but I also need to teach this girl that there are other things in life".
Provisional codes	- first meeting - situational diagnosis: how I am going to construct this reasoning - she spoke softly, shyly - her mother telling me the story - my understanding: changes in life - a girl who put a lot of pressure on herself, very rigid - clinical reasoning - understanding - I need to take care of what is really important to her
Focused coding: most significant/frequent initial codes	- situational diagnosis - understanding of what is really important to the person
Theoretical coding	Category: The DOTM reasoning processes
	Subcategory: construction of the situational diagnosis

Trustworthiness

Trustworthiness was addressed through application of the constructivist Grounded Theory guidelines, conducting multiple interviews, and double-checks by the researchers of the interview prompts transcripts, and generated codes, categories, and subcategories. The researchers also held multiple meetings to discuss the analysis until a consensus was reached. The participants recruited for theoretical sampling/group interview also provided member checking. They reviewed the provisional results over two weeks and expressed their insights regarding the content, definitions, and accuracy of the categories and subcategories during the group interview. This process added trustworthiness to the analysis, as participants suggested changes that allowed for deepening the emergent theory.

Conflict of interest

The participants and almost all authors have training in the DOTM. This fact needs to be made explicit, as it is in the interest of all those involved that the DOTM gains more visibility and scientific evidence of the effects of its use in occupational therapy practice.

Possible bias

To avoid possible bias, the research team tried to stick to the guidelines of Grounded Theory, as well as maintaining a stance of encouraging reflexivity, as an ongoing process of examining our prior knowledge and experiences (Stanley & Nayar, 2023). Reflexivity opportunities occurred regularly through the reflective journal and research team meetings. In addition, one of the authors does not have DOTM training and is not Brazilian. Her questioning of our findings expanded opportunities for reflection to broaden discussions about bias.

Results

Ten female occupational therapists employing the DOTM as the main conceptual-methodological framework in professional practice participated in this study. Their length of practice experience ranged from 13 to 50 years (mean: 27.5; standard deviation: 12). They had DOTM training from 6 to 39 years (average of 21.0). All of them were practicing in private clinics, in variable practice areas (mental health, physical rehabilitation, and home care), with children, adults, adolescents, and older people. They also had considerable previous experience in public services. Four participants were also teachers in the DOTM educational program.

Two major categories emerged from the data analysis: (1) The DOTM reasoning processes and (2) Employing ethical-aesthetic, associative, and dynamic thinking (Figure 1). Quotes from the interview transcripts were used to illustrate the results.

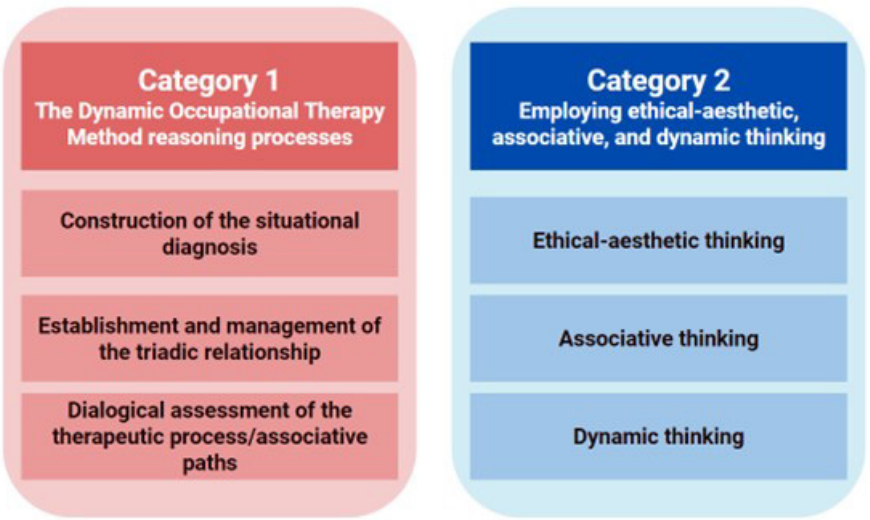

Figure 1. Categories and subcategories.

Category 1: The DOTM reasoning processes

The participants' clinical reasoning was structured around three processes proposed in the DOTM: (1) construction of the situational diagnosis, (2) establishment and management of the triadic relationship, and (3) dialogical assessment of the therapeutic process/associative paths. The participants indicated that despite several theoretical knowledge bases informing their clinical reasoning, the DOTM stood out as the main conceptual-methodological framework underpinning it.

> *From the moment I completed my training in the DOTM, the concepts and structure of the DOTM are what I use all the time. Sometimes I use some sensory stimulation resources to, for example, improve a child's diet, or alternative communication resources to establish communication with the child and so that he or she can also establish it with other people. But I use these theories with some patients when I think they need it. These are not theories that are there all the time* (Flora).

Construction of the situational diagnosis

The participants highlighted the construction of the situational diagnosis as the main DOTM process underpinning their clinical reasoning: "*The ground of all my reasoning is the situational diagnosis*." (Lilian).

Participants described how they employ investigative thinking to construct the situational diagnosis. Two processes stood out: information gathering (from various sources) and observations made throughout the therapeutic process. The construction of the situational diagnosis helped the participants understand the person's situation as a whole, situating the repercussions of the problem in their everyday activities and interpersonal relationships: "*I start from the observation to identify how this child is doing things, how he reacts, and if he/she reacts. This will start to bring me information*." (Flora); "*The situational diagnosis I do is soaked in information that covers a huge spectrum of fields, from the child's foot extension up to the child at the school, the whole child's everyday life*." (Olivia); "*It's about understanding, comprehending the situation. To build a good situational diagnosis of that moment*." (Violeta)

Information composing the situational diagnosis were not just rational or cognitive but also embodied, drawing on feelings, affect, and intuition.

> *It is hard to put in words. Yesterday, I conducted an online session with a five-year-old child with Down's syndrome. The mother always stays with him because he needs help. Yesterday, because of house repairs, everything was out of place. Then, in the middle of our session, he changed his clothes. He got some clothes from his closet, took off his clothes, and threw them on the floor. And his mother did not say anything. When the session was over, I said, "OMG!". It was giving me anguish! How I was affected by that situation! When I bring this into the field of my ideas, I am already cognitively understanding the process. It goes to the situational diagnosis: 'There is a dynamic in this family, which does not set limits, that everything can be done!' From what I felt, I try to build meaning* (Lilian).

Participants shared how the situational diagnosis was not fixed or definitive but iteratively reformulated throughout the sessions as new information emerged: "*First, I sketch a rough draft of what I think and move into the next sessions with that reasoning. New information will come to compose my diagnosis. All the time, this diagnosis is being reformulated*" (Iris).

Establishment and management of the triadic relationship

Many participants described how they thought about the dynamic movements of the triadic relationship (target person, occupational therapist, and activities) as the core of the therapeutic process. They described constant decision-making regarding the establishment and management of this relationship to facilitate the conduct of activities: "*I focus on the triadic relationship and the reasoning involved. In the beginning, I am more concerned with establishing this* [relationship]*, attentive to movements happening, what is changing as I conduct an activity with the person*." (Carina); "*I clearly see the triadic relationship established. There is always a lot of movement that flows all the time*." (Sol).

Many participants described how decisions to manage the triadic relationship were based on the situational diagnosis and the uniqueness of the relationship. Their actions, such as indicating and teaching activities were discussed as supporting the person, for instance, to learn skills, discover new desires, explore ways of doing and relating, be more active or visible in their social life/world: "*When I suggest activities, do some intervention, say* 'go this way not that way'*, all of this is supported by the triadic relationship, in the process and the history I have with the person*." (Violeta).

> *A child with a clinical diagnosis of autism. But his situational diagnosis, beyond his autistic symptoms, he had other needs. I offered some painting materials, and he did not know how to paint. First, he looked at the pencil and just made a line exploring the object. We started with just one color, experimenting. After some sessions, I mixed the pencils' colors, and he liked it. For me, these teaching actions, these expansions, are very important. [...] He gradually discovered he liked to paint detailed drawings. At home, his parents were expanding what we were doing in the sessions. Today, when there are exhibitions at school, his drawings are always in the spotlight. He has become someone recognized for an activity he does well* (Flora).

Participants highlighted how what is embodied, felt, and intuited by them overlaps with what is rationalized or purely cognitive, and informs their reasoning in the sessions. These aspects were discussed as linked to the particularities of the triadic relationship. For instance, it was described as a relational engagement, an affective investment, believing in the improvement of the other: "*It has to do with my desire for the person's improvement. You manage this affection, this proximity to the other*." (Iris).

> *I understand that all this has to do with the relationship, a feeling, an attitude that cannot be transferred to other places or to other relationships. It is very specific and relates with how we are affected by what the person brings to us. This has nothing to do with cognition. We filter something to be able to respond or act*

> *therapeutically. It is not just us. It belongs to that particular triadic relationship* (Violeta).

Dialogical assessment of the therapeutic process/associative paths

The participants talked about dialogical assessment as a moment when they, in partnership with the target person (and sometimes the family), construct meanings about the therapeutic process.

> *At least once a semester, I have a session to talk about what we have worked on during the therapeutic process. It is a way for the subjects (and sometimes we invite their families) to take ownership of the process. It is a moment of reflection and conversation to identify the path we are building. What have we advanced or not*? (Olivia).

In this dialogical assessment, the experts discussed building associative thinking (paths). They described integrating what was experienced/done/felt during the therapeutic process with the person's broader life.

> *The associative path is a way of building narrative. When you propose, 'Look, here, from these activities that we did, let's try to group them together? Let's think about what we were living here?'. And it is a narrative construction that never brings only the elements of the triadic relationship. It always brings elements of the person's life and history* (Maia).

Category 2: Employing ethical-aesthetic, associative, and dynamic thinking

Throughout the therapeutic process, the experts also described employing three types of thinking supported by the DOTM framework: ethical-aesthetic, associative, and dynamic.

Ethical-aesthetic thinking

Participants spoke about how attention to the ethical-aesthetic dimensions has always been present in their clinical reasoning, describing it as: "*always present* [...], *it's part of the DOTM*." (Olivia); "*present all the time*." (Flora).

Ethical-aesthetic thinking was variously described as: constructed with each person, based on the situation they are experiencing, focusing on the person's uniqueness, and encompassing their desires and needs: "*The ethical-aesthetical aspect of the therapeutic relationship is something that is not transferred from one person to another. That is why it detaches from the moral question. What is ethical aesthetic is defined in the uniqueness of each relationship*." (Olivia); "*My clinical reasoning was always to build what was important to them. The ethical-aesthetic dimension is in this triadic relationship*." (Sofia).

> *For each person, it is individual. It is impossible to have a recipe like 'I will do this because they are this age and have this clinical diagnosis'. It is constructed depending on the situation that each client is experiencing* (Flora).

Therapists' ethical-aesthetic thinking moved away from ready-made ideas, prejudgments, and prejudice, and from what is exclusively theoretical: "*What is procedural, moral, or pre-established in a relationship, in science, in knowledge, in life, that is not part of my thinking*." (Rosa); "*What has to be left out is the normative, moral valuation of what the person is experiencing*." (Violeta).

Associative thinking

The experts described the ways they made associations related to: (1) observations about the target people's particularities (i.e., how they behave, what makes up their everyday lives, how they relate to objects and people), (2) collected information (i.e., what the subjects say about themselves, what other relevant people say about them), (3) events throughout the therapeutic process, and (4) embodied feelings they experienced during the sessions: "*We associate what we have seen with what we have heard, with what we have already experienced with the person. My clinical reasoning also has this associative characteristic*." (Lilian).

> *Always associating a word with an action, an activity with a way of doing, with the target person's participation. This never stops. It does not give place only to the word, or only to the action, or only to the activity, or only to the subject, or only to me. But it always considers all of these together* (Rosa).

Associations were constructed not only from rational and cognitive information but also from feeling, affection, and intuition, which emerge as the relationship is unfolding: "*The association is freer. Perhaps more emotional, intuitive, without this previous cognition* [...] *more linked to sensations, to feelings, than to rationality*." (Iris)

> '*Why is it that when she repeats, repeats, it gives me a feeling of irritability?' I think this information is very important* [...] *the more things we live, the more associations expand, the greater chance of having one thing to do with the other. The more we live, the more we experience, the more I make associations* (Iris).

Participants highlighted the importance of memory in making associations. They described remembering observations, information, experiences, and embodied information, and using this to make associations about what is similar or different as a basis for action: "*This information that sticks together, that is associated, it helps me because I associated before, I added before, I saw what is similar and what is different, and then it also helped me to take action*." (Iris); "*We construct the situational diagnosis, and it is kept somewhere* [...] *I use these records whenever necessary*." (Lilian).

Dynamic thinking

At the same time that the participants employed ethical-aesthetic and associative thinking, they also described using dynamic thinking. They discussed how the three link, in a complex way throughout the entire practice. They pointed out that the processes and concepts of the DOTM are dynamic and fluid, rather than linear and static: "*Absolutely dynamic. There is not a fixed moment where one process starts and the*

other ends." (Rosa); "*The construction of the situational diagnosis, identifying the client's needs, managing the dynamics of the triadic relationship, and reaching the associative paths. You cannot separate these processes*." (Flora).

> *The triadic relationship is not linear. The triadic relationship can start already during the construction of the situational diagnosis. I also think that the situational diagnosis is an initial photograph, it is our initial assessment, but we do it throughout all the therapeutic process* (Olivia).

Figure 2 illustrates a representation of the clinical reasoning of expert occupational therapists employing the DOTM, showing how the three DOTM processes are dynamically present, grounded in ethical-aesthetic, associative, and dynamic thinking, seeking to expand health spaces in everyday life, aiming to favor social insertion.

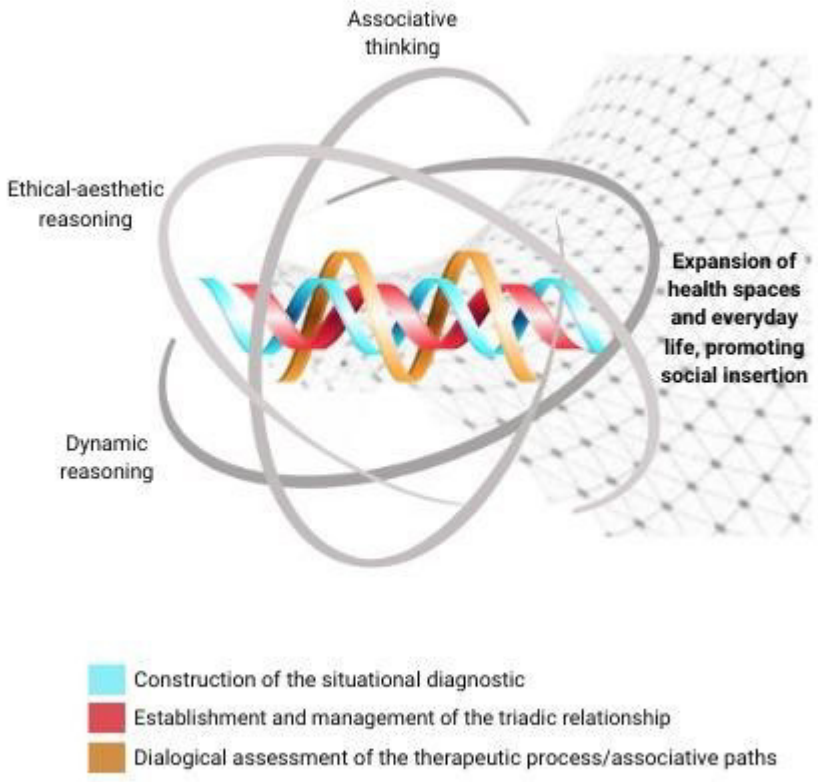

Figure 2. Representation of the clinical reasoning processes of expert occupational therapists employing the Dynamic Occupational Therapy Method.

Discussion

Our research generates evidence about how the DOTM informs clinical reasoning by showing how expert therapists describe their reasoning using a language largely grounded in the conceptual and methodological structure of the DOTM. These results can be understood insofar as the very development of the DOTM occurred from conceptualizing the phenomena of practice (Marcolino et al., 2020). Thus, our data can be considered robust regarding the feasibility of this language to describe and organize the participants' clinical reasoning – the DOTM was built precisely for this. Considering that theories and practice models remain implicit in the processes of clinical reasoning (Reagon, 2012; Thompson, 2012), the DOTM helps professionals to make the theory more explicit, because the DOTM concepts are operational, they were built to support thinking and acting (Marcolino et al., 2021). Our results also indicate that using the DOTM enables the inclusion of various elements necessary for intervention, favoring an approach centered on the person's uniqueness and situated context, which moves away from the risk of reducing the complexities of practice (Fish & Boniface, 2012).

The literature addresses the central role of the people assisted by occupational therapists, highlighting the importance of respecting their values, perspectives, abilities, and experiences (Mattingly & Fleming, 1994; Araujo et al., 2022; Restall & Egan, 2021; Unsworth, 2004). Our results demonstrate that, in the experts' reasoning, the target person remains at the center when they describe the ethical-aesthetic thinking detached from the moral valuation of a person's experience. For Benetton (1994), given the complexity of the practice, it is often difficult to objectively identify in advance what could harm the target person. She proposes that ethical decisions be made singularly and in partnership with the target person. It is the target person's needs and desires that need to count, because decisions need to have a purpose that is also aesthetic. Considering Wittgeinstein's propositions (Benetton, 1994), this is an aesthetic aspect that allows beauty to be identified by what works in life, thus distancing it from a normative aesthetic standard. The ethical-aesthetic thinking seems to relate more to what Rogers (1983, p. 602) points out; that occupational therapy "[...] must be as congruent as possible with the patient's concept of the 'good life'.", as a practical ethics because of its focus on individualization (Mattingly & Fleming, 1994).

Person-centered occupational therapy is not just about uniqueness. Indeed, occupational therapy can be characterized as a problem-solving practice, aware that practical and valuable solutions will be more easily found if there is a shared decision-making process (Mattingly & Fleming, 1994). According to Thomas et al. (2020), shared decision-making recognizes the central place of the patient in the decision-making process, giving explicit attention to the role that patients have and are expected to play in a dialogical process of co-construction of meaning. In our results, therapists' commitments to the person's explicit participation can be seen in the sharing decisions that lie in the engagement in the triadic relationship and in the meaning-making process. The participants highlighted how engaging in dialogue through activities allows the target person to gain ownership of the process, recognize abilities and limits to become someone to be self-recognized, and decide future actions. Kinsella (2012) calls this reflexivity; moments for socially negotiating meaning, questioning, connecting with

others through dialogue, seeking to build new knowledge, and deconstructing various perspectives.

For a dialogical process, the participants explained that their clinical reasoning lies in associative thinking. They also explained associative thinking as a highly embodied and centered-in-doing process. All the sensory and emotional inputs are activated – they associate what they have seen, heard, and felt, characterizing it as a more emotional and intuitive process rather than purely cognitive; although it involves making these phenomena explicit to critically analyze them. It is possible to relate these results to dual-system theories, which describe two different systems humans use when reasoning and making decisions (Frankish, 2010). System 1 is evolutionarily older, non-conscious, fast, intuitive, associative, and contextualized, whereas System 2 is evolutionarily more recent, conscious, slow, analytical, reflective, abstract, and decontextualized (Frankish, 2010).

Associative thinking (System 1) is essential for art and creation, encouraging the generation of new ideas (Sowden et al., 2015). Our participants use associative thinking to find connections as a process open to the new, linking to ideas, images, situations, and unusual elements. The associations seem to be sustained by the associative memory to retain information of each singular case obtained through perception and other sources and leave them free to be associated with new events, supporting dialogical meaning-making.

Studies have also highlighted that the creation of new ideas for decision-making and reasoning requires System 1 and the dynamic refinement, evaluation, and selection of ideas by System 2. They also discuss the difficulty of understanding this dynamic process (Frankish, 2010; Sowden et al., 2015). Our results characterize dynamic thinking, particularly when experts present reasoning in action as fluid, constant, and not separated across the three DOTM processes, supporting evidence of the dynamics of clinical reasoning already reported in several studies (Carrier et al., 2012; Maruyama et al., 2021; Unsworth, 2005).

This characteristic of not having a fixed moment "where one process starts, and the other ends" is one of the most difficult to grasp in the reasoning enterprise. Kinsella (2012) can help us think about some of our results when highlighting reflection as a *continuum*: receptive, intentional, embodied reflection, and reflexivity. We have discussed the presence of reflexivity in shared problem-solving and the dialogical meaning-making process. Intentional, cognitive, and structured reflection can be seen when the participants talk about the situational diagnosis as a moment to "stop to think" about all the information available—from perceptions, emotions, and other relevant people—to understand the situation the person is experiencing within a contextual whole.

The establishment and management of the dynamics of the triadic relationship involve receptive and embodied reflection (Kinsella, 2012). Receptive reflection involves intuition, insight, emotion, and the possibility of surprise, requiring the presence of the occupational therapist ready to act in search of a connection with the other. On the other hand, embodied reflection is revealed in action, in the practitioner's bodily comportment and corporeality in conversation with the situation (Kinsella, 2012). It involves cognitive-embodied aspects, as experts said when handling the action and reaction movements of the terms of the triadic relationship, as a flow. The

interconnection between embodied perceptions, emotions, and the unfolding of actions in the triadic relationship offers evidence of how the concept of embodiment, an emergent perspective in literature (Araujo et al., 2022; Unsworth & Baker, 2016), can inform clinical reasoning (Arntzen, 2018; Kinsella, 2018).

Considering the interconnected and dynamic processes of the DOTM, we venture to associate them with Mattingly & Fleming's (1994) Three-Track Mind theory, a well-accepted theory in the field that describes procedural, interactive, and conditional reasoning as general types of reasoning employed by occupational therapists. We can discuss our results by identifying three other "paths" that structure clinical reasoning informed by the DOTM: a) construction of the situational diagnosis, b) establishment and management of the triadic relationship, and c) dialogical assessment of the therapeutic process/associative paths. Another possibility is to consider them as a new way to operationalize Mattingly & Fleming's (1994) Three-Track Mind theory. In any case, they are practical processes that the experts used to structure their perceptions, actions, and thoughts throughout the therapeutic process.

Based on our results in discussion with the literature, we aim to broaden the discussions on clinical reasoning in the field. We propose that occupational therapy clinical reasoning can be informed and shaped by different models and conceptual-methodological frameworks, and that a fruitful conceptual-methodological framework for consideration in the Brazilian context and potentially beyond is the DOTM. We propose that occupational therapy clinical reasoning be viewed as a dynamic and situated process of perceiving-acting-thinking composed of different types of reflection and centered on shared decision-making.

Limitations and Future Research

Given that the participants were experts employing the DOTM as the main conceptual-methodological framework in their professional practice, the results highlight reasoning processes of occupational therapists who use this particular style. The results have the potential to be practically transferable to other groups who use the DOTM and may offer new ways of thinking to those who use other types of clinical reasoning. We recommended additional studies regarding how other theories, frameworks, or practice models underpin occupational therapists' clinical reasoning. Studies on this topic with practitioners in other stages of professional development are recommended.

Conclusion

This research demonstrates how occupational therapists' clinical reasoning is highly shaped by the conceptual-methodological framework employed in professional practice. We present a Grounded Theory on clinical reasoning of expert occupational therapists employing the DOTM framework, showing how their reasoning is dynamically structured around three conceptual and methodological processes and how three specific types of thinking are employed. The participants were able to explicitly state how the DOTM framework provides conceptual and methodological tools capable of providing a dynamic path to structure their thinking and their practice; grounding the

employment, throughout the therapeutic process, of three types of thinking; favoring a practice centered on the persons' uniqueness and situated context, respecting their values, perspectives, knowledge, abilities, and experiences.

The DOTM was used to support creative and innovative practice, centered on the needs of the target person in their lived world, seeking interventions at the "sweet spot", meeting the needs of all stakeholders. The occupational therapists reflect on their experience through critical analysis of knowledge and embodiment. Their clinical reasoning highlights an appropriate way of applying the "art" of occupational therapy, based on locally generated evidence, seeking to increase attunement and confidence in the individualization of the occupational-therapeutic process. Based on these results, it is possible to comprehend occupational therapists' clinical reasoning as a dynamic and situated process of perceiving-acting-thinking composed of different types of reflection and centered on shared decision-making.

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