

**Review Article** 

# Body experimentations in the formative processes of occupational therapy undergraduate course: a review in brazilian literature

As experimentações corporais nos processos formativos da graduação em terapia ocupacional: uma revisão na literatura brasileira

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#### **Abstract**

**Introduction:** The notion of body was socially constituted throughout history, deeply altering the relationship of individuals with their own body. By focusing on body conceptions beyond the biological body, the use of body experimentation during occupational therapy degree course has been a relevant resource in the development of personal skills for professional practice. Objective The aim of this study was to identify and synthesize the available information about the relation between the use of body experimentations and occupational therapist degree course. Method: The methodology used was the literature integrative review. A sensitivity test was performed to define keywords and data sources. The researches were made in national Occupational Therapy journals and in SciELO and LILACS databases. For the sample selection, three steps were performed. Inclusion/exclusion criteria were applied, resulting in the final sample of eight articles. Results: The results of this study show efforts of changing Occupational Therapy professionals training, aiming to break with traditional teaching models by considering body experimentation as a resource that allows to share experiences. Conclusion: The authors defend a training course that invests in new learning scenarios, seeking to train professionals who are more attentive and open to the needs of the other. However, studies are still needed to identify how practitioners who have experienced body experimentation during their formation lead their practice and their relationship with the client.

Keywords: Occupational Therapy, Human Body, Professional Training.

#### Resumo

Introdução: A noção de corpo se constituiu socialmente, ao longo da história, alterando profundamente a relação dos indivíduos com o seu próprio corpo. Ao pautar-se em concepções de corpo para além do corpo biológico, o uso de experimentações corporais durante a formação graduada de terapia ocupacional tem sido um recurso relevante no desenvolvimento de habilidades pessoais para a prática profissional. Objetivo: Identificar e sintetizar o conhecimento disponível sobre a relação entre o uso de experimentações corporais e a formação graduada de terapeutas ocupacionais. Método: A metodologia utilizada foi a revisão integrativa da literatura. Foi realizado um teste de sensibilidade para definição das palavras-chave e das fontes de dados. As buscas foram realizadas nos periódicos nacionais de terapia ocupacional, na SciELO e na base de dado LILACS. Para seleção da amostra foram realizadas três etapas. Foram aplicados critérios de inclusão/exclusão, resultando na amostra final de oito artigos. Resultados: Os resultados deste estudo mostram esforços de mudanças na formação de profissionais da terapia ocupacional, visando a romper com os modelos tradicionais de ensino ao considerar as experimentações corporais como recursos que permitem o compartilhamento de experiências. Conclusão: Os autores defendem uma formação que invista em novos cenários de aprendizagem, buscando formar profissionais mais atentos e abertos às necessidades do outro. Entretanto, ainda são necessários estudos que identifiquem de que forma os profissionais que vivenciaram as experimentações corporais na formação conduzem sua prática e sua relação com o cliente.

Palavras-chave: Terapia Ocupacional, Corpo Humano, Formação Profissional.

## 1 Introduction

The notion of body has been socially constituted throughout history, profoundly altering the relationship of individuals with their own body (Florentino & Florentino, 2007). In the case of health, the concept of body that underlies training of professions in this field is still hegemonically referenced to medical rationality, which in turn is anchored in the knowledge of biomedicine, which can be understood as:

Biomedicine is linked to a 'scientific imaginary' corresponding to the rationality of classical mechanics, moving towards isolating discrete components, reintegrated a posteriori into their original 'mechanisms'. The whole of these mechanisms is necessarily given by the sum of the parts - any inconsistencies must be debited in the absence of one or more 'pieces' (Camargo Junior, 2005, p. 178).

While, on the one hand, biomedical knowledge has been instrumental in anchoring intervention techniques on the biological body, on the other, it has not been sufficient to support the construction of other skills necessary for the care process. Empathy and communication skills with others are not always developed throughout the training process. Thus, the approach of the body as a machine has

been severely criticized for its insufficiency in the process of integral formation of future professionals (Camargo Junior, 2005).

In occupational therapy, there have been training and practice of interventions based on body conceptions beyond the biological body. In these perspectives, the notions of body adopted are based on knowledge of transdisciplinary fields, such as Philosophy, Psychology, Communication, Education, Anthropology, among others (Castro, 2000; Liberman et al., 2011). Following are some of the perspectives adopted by occupational therapists regarding the notion of body, intervention proposals, research and/or training of occupational therapists.

For Castro (2000), the body is constituted as a fundamental indicator for knowing the subject's history, their feelings, and their daily life. Often, what is inexplicable through verbal language, the body demonstrates with gestures of approach, withdrawal, inhibition or acceptance. Liberman (2010) states that the construction of a body and its functioning depends on several factors, including culture, genetics and heredity, the experiences of the individual, the bonds acquired throughout life and the subjectivity that shapes body functioning in time and space.

The study by Silva & Gregorutti (2014), discuss the teaching-learning process of body approaches in the field of occupational therapy. They observed the importance of providing students with the possibility of discovering, within themselves, through their own bodily expression, awareness of sensation and immersion in a process of self-knowledge, providing support to take better care of themselves and others. The authors also point out that the experimentation of body practices provides knowledge that complements theoretical teaching, in order to train reflective professionals and critics about the client's real needs, becoming a transforming resource of training.

Silva et al. (2014) also proposed to discuss the theme, reporting the importance of music and body workshops in the training process of health professionals. The workshops reported in the study, titled "Clinic in the Heart of Music: Do you listen what you hear?" And "The body and clinic in the heart of music" were intended for students in Physical Education, Physiotherapy, Nutrition, Psychology, Social Work and Occupational Therapy at the *Universidade Federal de São Paulo*. The authors point out that

By facilitating the student's contact with their own body, their sensations and, through observation, touch and speech, with the other's body, the workshops highlight the issue of the living and powerful body. In them, a sensitivity that is listening is exercised, little developed in the training of health professionals, understood here not as restricted to the sense organs, but as a possibility for the body to affect and be affected by events (Silva et al., 2014, p. 192).

The authors show the relevance of the spaces of experimentation and senses that emerge from the creation of body movements, in which the participants are affected by the experience, and based on it, they create reflections about their own body, ways of relating to the world, the potential of listening and the permanent exercise of sensitivity, something little exercised in university daily life (Silva et al., 2014).

Thus, it is possible that the use of body experimentation during training is a relevant resource for occupational therapists, enabling the development of personal skills for professional practice. Gibertoni (1991 apud Piergrossi & Gibertoni, 1997) points out that the occupational therapist is much more than a promoter of activities, and that the experience lived by the therapist and the patient will assume meaning only if the therapist is able to connect to the patient using their own transformative functions.

In this perspective,

If the therapist's own transforming function does not exist, the experience with activities will be superficial, isolated from internal emotions, and unable to be transformed into thoughts that can be used (Piergrossi & Gibertoni, 1997, p. 39).

Therefore, the awareness of occupational therapists during training through body experimentation can be a tool for future professionals to see beyond what is common, opening to the bond and the experience with the patient (Lima, 2004), stimulating body, clinic and subjectivity articulation (Liberman et al., 2011).

The relationship with the body can be one of the means to allow learning about the other, their experiences, their fears and anxieties. In this sense, expressive and artistic activities (such as dance, theater and other bodily practices) enable the subjectivation of the subjects, in which the body and the arts enhance the "[...] transformation experience: of materials, of nature, of themselves, of daily life and of interpersonal relationships" (Castro et al., 2001, p. 52), collaborating to understand the subject based on a perspective that includes the body and its potentialities (Liberman, 2002).

Body experimentations are often used as a resource in occupational therapist interventions, and are reported as a transformative instrument of the daily life of the population served, as they allow self-appropriation and become the subject's own experience (Castro, 1992; Saito & Castro, 2011). These experiences are configured, in the subject's life, as experiences that establish connections between the moments of each one's life and their interaction with the world, enabling fluency between the internal and external world, and building the possibility of knowledge for the subject (Castro, 2000).

However, the occupational therapist needs to be aware of their own creative process, and their own bodily processes, in order to be able to keep up with the complexity of the cases treated. It is also up to professionals to launch into the experiences of body activities, since this will support their action as a therapist (Castro, 2000). Lima (2004) states that it is the occupational therapist's role to present a different look at everyday situations. If the therapist is not able to take advantage of this look in the relationship with the client, they will not be able to enter a space of exchange with the user. Thus, it is necessary to seek a perception that is always linked to the movement and sensations that inhabit our body (Lima, 2004).

The author points out that:

In this sense, as well as the artist, occupational therapists also needs to "occupy" themselves with perception and search in the most common and everyday images what is unusual, new, different, interesting, singular. For this, it may be necessary to think, act and look in daily life as a foreigner would: strangeness and delight with each new revelation (Lima, 2004, p 46).

However, it is necessary to activate in the occupational therapist the possibility of being aware of what is subtler, open to the experience of a look that meets another look, allowing to be affected by it and connecting (Lima, 2004). In this sense, the experience of artistic and bodily experiences during training can contribute to open the therapeutic gaze and bond formation, which is related to the individual's connective capacity, "[...] capacity that extends in various directions, paths and modes, producing bodies that are living expressions of a continuum of these processes" (Liberman, 2010, p. 451).

According to Castro (2000), body approaches are activities that can promote strategies for care, being an opportunity to raise awareness of the importance of touch and learning a relationship of care with their own body, seeking meanings and new possibilities. When lived and experienced by undergraduate students, body experimentations can become resources for the elaboration of feelings, and "[...] assist in training and improvement for clinical care" (Silva & Gregorutti, 2014, p. 136). In addition, based on the experiential subjects, the occupational therapy student will be able to rescue their history and reflect on their meanings (Liberman, 2002).

In occupational therapy training processes, students study subjects focusing on body manipulation techniques, such as kinesiology and kinesiotherapy, among others. However, the purpose of this study was to address the practices through which the intention to develop body awareness through experimentation during the graduation in occupational therapy. This study will include the practices of body experimentation that are described as a means to trigger students' perception of themselves and the others' needs, such as dance, theater, expressive activities, music and play. Thus, the aim of this study was to identify and synthesize the available knowledge about the relationship between the uses of body experimentation in the graduation process of occupational therapists.

## 2 Method

This study is an integrative literature review, a research method that aims to perform an analysis of the knowledge available in published research on a given theme, allowing the development of new knowledge (Botelho et al., 2011). This review methodology allows the integration of studies that adopt several methodologies - experimental and non-experimental (Mendes et al., 2008) - being suitable for the literature review on the theme of this monograph, since in the bibliographic survey there was no homogeneity of the methodologies of the studies initially found.

For the accomplishment of this study, we followed the integrative review stages as established by Botelho et al. (2011): identification of the theme and selection of the research question, establishment of inclusion and exclusion criteria,

identification of the pre-selected and selected studies, categorization of selected studies, analysis and interpretation of results and presentation of review/synthesis of knowledge.

In the process of delimitating the theme and building the research question, we identified the challenge of adopting a definition of "body approach" that could contemplate the diversity of perspectives initially found, which eventually reflected in the difficulty in choosing the descriptors or keywords of this review.

Thus, in principle, to define the descriptors or keywords, we performed a sensitivity test in the national occupational therapy journals - Revista de Terapia Ocupacional of Universidade de São Paulo - USP, Cadernos de Terapia Ocupacional of Universidade Federal de São Carlos - UFSCar, Revista Interinstitucional Brasileira de Terapia Ocupacional - REVISBRATO and Revista Baiana de Terapia Ocupacional. In this test we used the descriptors "Occupational Therapy", "art", "dance" and "music", present in the virtual dictionary of Health Sciences Descriptors (DeCS), and the free terms (not found in DeCs, but relevant for research) "body", "bodily", "body approaches", "body approaches", "body "undergraduate", "training", "body expression", experimentation". The descriptors and keywords were combined using the Boolean operator "and", and each term was used without quotes and with quotes (to retrieve the exact term1). The accented words and written with "ç" were used to search also without accent, and using letter "c", because writing could influence the articles recovery. These terms were chosen because they were in accordance with the proposed theme, and also because they were located in the bibliographic references used to delimit this research theme. At first, we did not delimited period/year of publication.

The sensitivity test in the databases returned 1142 results recorded in an Excel® table. This initial result was analyzed by reading the titles, and it was found that the combinations "Occupational Therapy AND body"; "Occupational Therapy AND training", "Occupational Therapy AND Art" and "Occupational Therapy AND undergraduate" returned most of the studies that could compose the sample of this work. Even so, it was decided to keep the descriptors and free terms used in the sensitivity test to find the largest possible number of publications related to the subject of this research.

Thus, to search the studies that would compose the sample, the following combinations were performed: "Occupational Therapy AND body"; "Occupational Therapy AND training"; "Occupational Therapy AND art"; "Occupational Therapy AND dance"; "Occupational Therapy AND music"; "Occupational Therapy AND body expression"; "Occupational Therapy AND experimentation"; "body experimentation AND training"; "Occupational Therapy AND undergraduate"; "Occupational Therapy AND body approach";

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<sup>&</sup>lt;sup>1</sup>During the database sensitivity test, there were some inconsistencies found in the search results, which can probably be attributed to the resource potential of the databases. Several graphical possibilities and boolean search capabilities were tested to ensure greater reliability in the results.

"Occupational Therapy AND body approaches"; "Occupational Therapy AND body awareness".

Regarding the databases, another strategy was necessary: after identifying publications on the theme of this research in non-specific occupational therapy journals, the search was expanded to *Literatura Latino-Americana e do Caribe em Ciências da Saúde (LILACS)* and Scientific Electronic Library Online (SciELO) databases, maintaining specific occupational therapy journals.

The search returned 1741 results, of which 107 were SciELO studies, 224 studies from the *Cadernos de Terapia Ocupacional* of UFSCar, 880 studies from the Revista de Terapia Ocupacional of USP, 492 studies from LILACS<sup>2</sup>, 32 studies from the *Revista Interinstitucional Brasileira de Terapia Ocupacional* and 6 studies from *Revista Baiana de Terapia Ocupacional*.

Based on this total of records, the following steps were performed:

Ist stage: By reading the title directly from the results obtained in the databases, we selected publications that referred to the use of body experimentation in occupational therapists degree training course, either through the report of body activities, such as dance, music, artistic or other expressions, or describing the existence of courses or laboratories on body expression in undergraduate courses. At this same stage, and by the same process of reading the title directly in the databases, we excluded studies that dealt with body approaches in occupational therapist interventions (without mentioning the experience during training). In this step, we also excluded the repeated records. At the end of this stage, 37 publications remained.

**2nd stage:** By reading the title and the abstracts, the publications that addressed the theme of this research were selected. At this stage, publications other than articles were excluded, such as book chapters, theses and congress proceedings. This process resulted in 24 publications.

3rd stage: The 24 pre-selected articles were organized in a table, using the Excel® program, built to list the studies that would be read in full. After full reading of the publications, it was still necessary to apply the following exclusion criteria: 1 - studies that focused on body experimentation as a clinical intervention were excluded; 2 - studies that discussed the use of other resources in training - such as painting activities, for example - that did not involve body practices were excluded; 3 - studies that reported body experiments in training spaces other than graduation were excluded. At the end, 8 studies were selected (Table 1).

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<sup>&</sup>lt;sup>2</sup>The journals Rev. Ter. Ocup. USP and Cad.Bras.Ter.Ocup. are indexed in the LILACS database, and the search result in this database should be at least the sum of the results from the USP and Cadernos journals – that is 1104. However, the number of 492 records found in LILACS was smaller. Thus, once again the inclusion of the search in the LILACS database was justified to find publications that were not only from occupational therapy journals.

Table 1. Prisma Model (Moher et al., 2009).

Sensitivity test

Searches by *descriptors* "Occupational Therapy", "art", "dance" and "music"; and by the *keywords:* "body", "body", "body approach", "body approaches", "body awareness", "undergraduate", "training", "body expression.", "body experimentation" in websites of the journals *Rev. Baiana de Ter.Ocup.*, *REVISBRATO, Cad. Bras. de Ter.Ocup. and Rev. de Ter.Ocup.* of *USP* 

## N= 1142 (records)

entified

Screening

Search by the combination of descriptors / keywords: "Occupational Therapy AND body/training/art/dance/music/body expression/experimentation/undergraduate; body approach(es)/body awareness"; "body experimentation AND training"; in the journals Rev. Baiana de Ter.Ocup., REVISBRATO, Cad. Bras. de Ter.Ocup. and Rev. de Ter.Ocup. of USP, and in Scielo and Lilacs databases

## N= 1741 (records)

# 1st stage

By reading the title, the following were excluded: 1—studies that did not mention in the title "body/body experimentation, artistic practices or training"; 2 - studies that were repeated during the search.

# Remained N= 37 (publications)

#### 2<sup>nd</sup> stage

By reading the title and the abstracts, the following were excluded: 1 - studies that did not explain in the abstract the theme "body/body experimentation, artistic practices or training"; 2 - studies other than articles.

## Remained N= 24 (publications)

## 3rd stage

Through full reading and systematization in Excel Spreadsheet, the following were excluded:

ligible

1 - Studies that focused on body experimentation as a clinical intervention; 2 - Studies that discussed the use of other resources in training, which did not involve body practices, 3 - Studies that reported body experiments in other spaces (outside the undergraduate).

## Remained N= 8 (articles)

ncluded

# Final sample N= 8 (srticles)

To treat the data, it was necessary to use an instrument capable of ensuring the organization of the relevant data of the selected articles, serving as a record. For this study, the treatment of data was done through the composition of the analysis matrix, organized in Excel® spreadsheet, which recorded all the data of the selected articles considered relevant to meet the objective of the review. The analysis matrix consists of a tool that organizes data extracted from articles. The matrix must contain information that allows an overview of the data (Botelho et al., 2011).

The synthesis matrix aims to protect the researcher from errors during the analysis. It is an initial milestone to assist investigators in focusing their

research. The matrix can contain verbal information, connotations, text summaries, note extracts, memos, standardized answers, and generally have integrated data around a point or research topics. In short, the matrix should contain information about aspects of the investigation and allow the researcher to have an overview of data related to performance of certain points (Klopper et al., 2007 apud Botelho et al., 2011, p. 131).

The matrix contributes to the interpretation and essay construction of the integrative review. For this, it is necessary to create analytical categories that facilitate the organization of each study that can be descriptive, in which the most relevant data are indicated (Botelho et al., 2011). Another objective of the matrix is to facilitate the analysis of these data, providing elements for discussion and pointing out possible gaps in relation to the theme and guiding question (Botelho et al., 2011).

For the current study, the categories used in the analysis matrix for data extraction are the following: author(s); title; name of scientific journal or magazine; year of publication; authors; institutional affiliation at the time of the publication; objective of the study expressed in the article; methodology/methodological procedures; and modalities of body experimentation in training.

## 3 Results

# 3.1 Sample profile

Of the 8 articles selected, 4 were published in *Revista de Terapia Ocupacional* of USP (Castro, 2000; Castro et al., 2009; Silva & Gregorutti, 2014; Silva & Von Poellnitz, 2015); 2 are from the *Cadernos de Terapia Ocupacional* of UFSCar (Liberman et al., 2011; Borba et al., 2018), and 2 were published in the journal *Fractal: Revista de Psicologia* (Inforsato et al., 2017; Liberman et al., 2017). Institutions located in southeastern Brazil publish all three journals.

The articles were published between 2000 and 2018, written by 21 authors. Two of these authors published three articles each (Lima and Castro), two other authors published two articles (Inforsato and Liberman); and the other authors published one article each (Table 2).

Considering the institutional affiliation of the authors at the time of publication, eight were from the *Universidade de São Paulo* – USP; six from *Universidade Federal de São Paulo* – UNIFESP; two from *Universidade Estadual Paulista* – UNESP; two from Universidade Federal de São Carlos – UFSCar; one from *Universidade de Sorocaba* – UNISO; another from *Centro Universitário São Camilo*; and another to the *Instituto* "A casa". USP, UNIFESP, UNESP and UFSCar are public higher education institutions; UNISO and São Camilo University Center are private higher education institutions; and the last institution is a private mental health care service, which also conducts research and professional training. All of these institutions are located in the southeastern region.

Table 2. Sample profile.

AUTHOR (S)	Institutional affiliation	TITLE	JOURNAL
Castro (2000)	USP	Art, Body and Occupational Therapy: approaches, intersections and results	Rev. Ter. Ocup. USP
Castro et al. (2009)	USP	Occupational Therapy Training at the Interface of Arts and Health: PACTO experience	Rev. Ter. Ocup. USP
Liberman et al. (2011)	UNIFESP; Centro Universitário São Camilo; UNISO	Laboratory of expressive activities in occupational therapist training	Cad. Bras. Terapia Ocupacional (UFSCar)
Silva & Gregorutti (2014)	UNESP	Body Approaches: Transforming Resource in Occupational Therapist Training	Rev. Ter. Ocup. USP
Silva & Von Poellnitz (2015)	UFSCAR	Occupational Therapist Training Activities	Rev. Ter. Ocup. USP
Inforsato et al. (2017)	USP	Art, body, health and culture in a territory of doing together	Fractal: Revista de Psicologia
Liberman et al. (2017)	UNIFESP; USP	Body and artistic practices, inventive learning and self-care	Fractal: Revista de Psicologia
Borba et al. (2018)	UNIFESP; Instituto "A casa"	Experimentation spaces: power of meeting, doing and broadening the repertoire of activities	Cad. Bras. Terapia Ocupacional (UFSCar)

The objectives of each publication were analyzed according to the objective of the study expressed by the authors of the articles. Only one of them declared as main objective the reflection on the process of teaching and learning of corporal approaches by the students of occupational therapy. In other publications, the objectives of the studies involved this discussion, but not always as a central theme. As an example, in the article by Inforsato et al. (2017), the objective of the study was to present the reflections on the formation of occupational therapy students through the development of activities involving the body and art. Castro et al. (2009), find similar reflection in the article, which addresses the same project. In the study by Silva & Von Poellnitz (2015), the objective was to map the activities and resources used in occupational therapy courses in the state of São Paulo, which eventually included body approaches. Thus, in these and the other articles included in the sample, body approaches appeared in the discussion context of the use of expressive and/or artistic activities during the training process.

Regarding the methodology or methodological procedures, two of the articles included in the sample resulted from research involving people as research subjects, and were submitted to an ethics committee; and five others are experience reports.

Of the articles resulting from research, in one of them the research subjects were the students (Silva & Gregorutti, 2014), and in the other, the research was conducted with the coordinators and teachers of undergraduate occupational therapy courses (Silva & Von Poellnitz, 2015). Table 3 shows the methodological procedures used in both surveys.

Among the six articles that present experience reports, Castro (2000) brings an article resulting from work presented at a congress; Castro et al. (2009) guided the experience report on the project work methodology described in the article; Liberman et al. (2011) presented the experience report without describing a specific methodology; Inforsato et al. (2017) used an "ethical-aesthetic-political" perspective to present the students' education project; Liberman et al. (2017) carried out the experience report through the cartography method; Borba et al. (2018) mentioned the procedures that were conducted together with the monitors, which were workshop and supervisions reports.

Regarding the modalities of body experimentation present in the articles, the following were mentioned/reported: body approaches (4 articles); body arts (1 article); body practices (2 articles); body techniques (1 article); body expression activities (4 articles); expressive activities (2 articles); theater (3 articles); dance (6 articles); experiences with music (3 articles); children's games and play (1 article); cooperative games (1 article); massage (1 article) and artistic activities (2 articles) (Table 3).

About the target audience of body experimentations in the articles: 4 articles report body experimentations aimed at students of occupational therapy in undergraduate; 1 reports on the use of experimentations for both students and occupational therapy professionals; 2 report body experimentations aimed at students and the population served in projects that present body activities as a method of intervention and 1 article reports body experimentations aimed at students from various health courses, including occupational therapy.

Regarding the offer of body experimentation on degree courses: 4 articles mention courses that have experimentation as a methodological resource (Occupational Therapy and Body Practices I, II and III; Therapeutic Resources and Body Approaches in Occupational Therapy; Expressive Activities and Therapeutic Resources (AERT)); Body expression course; Health and body; Therapeutic activities and resources: creative processes; 3 mention projects in laboratories (Body Expression Laboratory; Body Approach Laboratory; Body Expression Activities Laboratory; Studies and Research Art, Body and occupational therapy) and 1 mentions a monitoring program aimed at courses that discuss the use of therapeutic resources (Activity in Focus Monitoring Project).

**Table 3.** Objectives, methodology and modalities of body experimentations.

AUTHOR(S)	OBJECTIVE	METHODOLOGY/ METHODOLOGICAL PROCEDURE	MODALITIES OF BODY EXPERIMENTATION
Castro (2000)	Discuss the importance of new practices involving body and art and occupational therapist preparation	Article presented at Brazilian Congress of Occupational Therapy. It does not describe the methodology.	Art, body and occupational therapy laboratory, where body approaches, practice of artistic activities, dance, acting (theater) are experienced.
Castro et al. (2009)	Report a training project for occupational therapy undergraduates	The project work methodology was described: supervised practices of occupational therapy students; team meetings; study groups; field diaries and thematic seminars.	Dance, theater workshops
Silva & Gregorutti (2014)	Discuss the teaching- learning process of body approaches in Occupational Therapy undergraduate	Methodological procedures: filming the classes; focus group. Thematic Category Content Analysis (Bardin)	Course of body expression, in which body approaches are experienced (expressive activities, body techniques, music, dance).
Liberman et al. (2011)	Report the practice of teachers of the course Expressive Activities and Therapeutic Resources - AERT - taught in undergraduate occupational therapy	Experience report. It does not describe the methodology.	Experiences with music, dance, theater, body approaches, children's games and play and cooperative games
Silva & Von Poellnitz (2015)	Map and analyze teaching activities and resources proposals in occupational therapy courses	Methodological procedures: survey and analysis of pedagogical political projects and specific courses for teaching activities and resources; interviews with course coordinators; questionnaire to teachers	Courses: Therapeutic Activities and Resources and Creative Processes; Occupational therapy and body practices; Therapeutic activities and resources of communication and expression; Therapeutic resources and body approaches in OT; Body expression laboratory; Laboratory of body approaches.
Inforsato et al. (2017)	Present projects that make up the scenarios of practical training of occupational therapy students	Experience report presented from an ethical-aesthetic-political perspective	Experimentations on body and artistic practices, workshops with artistic languages and body arts
Liberman et al. (2017)	Present body and aesthetic experimentations in contexts of artistic formation and production	Report of experience marked out by the cartography method	Courses: Health and Body and Therapeutic Activities and Resources: Creative Processes. In the courses, body experimentations are performed (dance, music)
Borba et al. (2018)	Report the process of the monitoring project of occupational therapy course in activities and resources courses	Experience report based on workshop and supervisory reports with fellows.	Massage, dance, body expression

To complement the exposure of the results, we show a brief summary of each article that makes up the sample of this study.

Castro (2000), in the article "Art, body and occupational therapy: approximation, intersections and developments", argues about the importance of art and body for the creation of new care practices in the context of antipsychiatry, psychiatric deinstitutionalization and fight for the rights of disabled people. It points to the importance of the body perception in detecting the real needs of the subjects, considering the psychophysical unity of the individual, and breaking with the conception in which rational discourse would be preponderant. The discussion about body fits into the context of the discussion of art, and both would be considered confluent languages, which could provide connections between the individuals and their everyday concrete needs. The theoretical framework presented in the article relates mainly to the field of art and creativity, such as Carl Jung and Nise da Silveira. The author reports the experiences of the Art, Body and Occupational Therapy laboratory, in which she proposes to work, through teaching, research and extension, making use of body and artistic activities, providing training pathways for occupational therapists, including undergraduates. According to the author, the therapist must be aware of their body processes and experience the activities in order to signify their professional action, since these elements are essential to the professional's training.

Castro et al. (2009) reported the experience of the Laboratory of studies and research Art, Body and Occupational Therapy through the actions of the Permanent Program Artistic Compositions and Occupational Therapy (PACTO). The program aims to enable the student to contact various artistic languages, their insertion in the cultural territory and health services, aiming to understand the demands of the population served. According to the authors, the laboratory offers body-based approaches such as dance and theater, and students who experience these practices are empowered to understand occupational therapy approaches in health and culture settings. The body was referred to in the context of arts, or specifically as "body arts". In addition to the experimentations lived by the students, the training process included activities of a study group, through which the theoretical framework to support the care practices developed in the project was presented. This theoretical reference was mainly related to the historical-conceptual contextualization of the use of artistic activities in the health field, placing the discussion about body in the context of art and health as a clinical-artistic-cultural device. Dance, choir and theater, for example, are pointed out as artistic languages and as possible ways of expression with the populations served in the project.

Inforsato et al. (2017) reports experimentations on body and artistic practices in the Art, Body and Occupational Therapy Studies and Research laboratory. The project has the "[...] proposal of training artists and occupational therapists in a territory of interface between arts, body, health and culture" (Inforsato et al., 2017, p. 110). In the daily life of this experience, they offer artistic activities and body experimentations with interdisciplinary actions articulated to the territory. The authors point out that this type of training prepares occupational therapists to act in an interdisciplinary manner, by investing in cross-training content. In this publication, as well as in the study by Castro et al. (2009), body, corporeality and

body arts are related to arts, artistic expressions as an aesthetic-clinical experimentation based on relationships with philosophy, psychology and sociology.

Liberman et al. (2011) report the experience of the course Expressive Activities and Therapeutic Resources (AERT), which aims to create a field of experimentation and reflection, and articulate the student's experience in the laboratory with occupational therapy. The course focuses on experiences with music, dance, theater, body approaches, children's games and playing and cooperative games. The article discusses that learning to observe and deal with the others and being able to understand the effects that emerge from each contact are requirements to become a therapist. The theme body during training favors the construction of knowledge, since the body is an indicator of the other's needs (Liberman et al., 2011). Body approaches are presented as referenced in conceptual fields "[...] of the body, arts, psychology, philosophy and also the knowledge and practice of some body approach techniques, group dynamics [...]" (Liberman et al., 2011, p. 90), without necessarily presenting the reference authors.

The study by Liberman et al. (2017) discusses the offer of the course Health and Body, which aims to propose that students live different experimentations with body and aesthetic practices, and the course Activities and Therapeutic Resources: Creative Processes, which aims to create a field of experimentation aimed at production of knowledge and space for meetings and exchanges. The authors state that immersion in creative processes encourages students to reflect on themselves and their work, with the aim of inserting in training the exercise of preparation for understanding and caring for others. In the process of training, it relates to acting in communities, health services and spaces of artistic production, and involve dance, music, arts and writing, and the intervention processes are based on the cartographic method.

The study by Borba et al. (2018) presents the monitoring project in the courses Daily Life Activities: everyday life; Expressive and non-expressive activities; Playing and leisure activities; Assistive Technology and Group Approach, with the objective of broadening the student's contact with practical experimentation of techniques and resources (such as massage, dance and body expression), as well as facilitating the integration of content available to the student during their training. The article points out that during the monitoring program, student monitors coordinated workshops with a view to sharing their specific knowledge in certain resources and/or techniques. This provided an interesting exchange between students, monitors, workshops and teachers. The authors point out that the possibility of coordinating workshops is very pertinent to training, since occupational therapists often occupy the role of group coordinators in their practice.

The course of Body Expression, described by Silva & Gregorutti (2014, p. 137), aimed to

[...] promote the apprehension of fundamentals about corporeality, experimentation of body awareness, the expression, elaboration and understanding of internal contents and the reflection about oneself and the body of the other.

The authors understand that it is relevant that the students connects with themselves and reflect on the other, who is the subject of care, through techniques and body experiences (expressive activities, body techniques, music, dance). The article emphasizes that the teaching-learning process of body approaches during occupational therapist training has the objective of training committed professionals, able to identify the client's real demands.

Silva & Von Poellnitz (2015), when analyzing the proposals for teaching activities and resources in occupational therapy courses of public higher education institutions of the State of São Paulo, identified in the curriculum the following courses: Therapeutic Activities and Resources: creative processes; Occupational therapy and body practices I, II and III; Therapeutic Activities and Resources of communication and expression; Therapeutic resources and body approaches in occupational therapy; Body expression laboratory; Laboratory of body approaches; Laboratory of Body Expression Activities. In this study, it was possible to identify differences in the curricula offered, but there is a consensus among the interviewed coordinators about the importance of experiencing this kind of activities during training.

#### 4 Discussion

The National Curriculum Guidelines (DCNs) of undergraduate occupational therapy courses were published in 2002 by the *Conselho Nacional de Educação* (CNE), becoming the guiding element of vocational training in Brazil (Drummond & Magalhães, 2001). Article 5 of the guidelines provides that occupational therapists training objective is to provide the professional with the necessary knowledge to exercise some specific skills and abilities, including

XXIV - awareness of their own potentials and limitations, adaptability and flexibility, emotional balance, empathy, criticality, intellectual autonomy and the exercise of verbal and nonverbal communication:

XXVI - know, experiment, analyze, use and evaluate the structure and dynamics of activities and human work, such as: craft, artistic, body, playful, leisure, daily, social and cultural activities (Brasil, 2002).

Also in the DCNs document, there is a mention of playing, artistic and body activities, which should be considered, in training, as a resource to develop skills and abilities in the professional future, which is in line with the discussions in the studies found in this review. In the periods before and after the DCNs, the efforts of occupational therapy to deepen and direct the debate about professional training and performance focusing on activities, occupations and daily life are evident, trying to stop having the biomedical model as central in graduate education and for interventions (Cardinalli & Silva, 2018). In this sense, it is noteworthy that the publications included in this study date from the 2000s to nowadays, the time of DCNs publication, and show the multiple paths that were built in relation to the use of body approaches, both artistic and those promoting body and subjective awareness.

In the studies included in this research, we highlight the diversity of modalities of body approaches, as well as theoretical perspectives.

On the one hand, we can hypothesize that occupational therapy was influenced by the entry of body therapies in Brazil. Russo (1994, 2002), when analyzing the diffusion of body therapies in Brazil, points to the 1980s as the period of intense diffusion of these approaches. The study points out that this movement was in opposition to psychoanalysis, trying to overcome the split between mind and body. The approaches proposed by Wilhelm Reich, Alexandre Lowen's bioenergetics, Gerda Boyesen's biodynamics, or David Boadella's biosynthesis were widely disseminated through courses, seminars and workshops, which also resulted in the creation of specific study groups and institutes for training in body therapies. In these perspectives of individuals and body approach, the objective was to integrate the knowledge of the psi field with the knowledge of the biological and/or biomedical sciences. Mainly in Liberman's work, in the article "The body as a pulse", the author refers to Keleman (1992 apud Liberman, 2010) who proposed an approach to the body based on emotional anatomy.

On the other hand, in the Brazilian psychiatric reform movement there was an intense movement of creation and promotion of approaches that were not exclusively biomedical, allowing the experimentation of artistic resources and body expression as a means of therapeutic intervention, promotion of social insertion and citizenship building (Pitta, 1996). Castro et al. (2009), in one of the articles selected in this research, addressed the need to expand intervention strategies in the face of the psychiatric reform movement. This dialogue between the body arts and occupational therapy is shown among some of the studies included in this research.

Even so, we agree with Bianchi & Malfitano (2018) who point out that training in occupational therapy has a strong influence on the biological and health field, denoting gaps in the social and human area. In this perspective, Liberman (1997) discusses that the way the body is viewed and experienced limits it to some actions, not prioritizing creativity and inventive possibilities. By incorporating body experimentation into training - such as music, theater and dance in occupational therapy - teachers show the students a possibility to change their perception of the body (Liberman, 2002).

Most of the studies (n=6) were published in the main national occupational therapy journals, while two of the articles were published in journals from another area of knowledge. Folha et al. (2017) point out that postgraduate training of occupational therapists in Brazil came in close proximity to other areas, such as psychology, education and sociology, which is evident in the authors of the studies training. In addition, articles that were not published in occupational therapy journals feature two co-authors who are not occupational therapists, due to the interdisciplinary nature of the project described in the studies, which may have influenced the choice of the journal for publication.

It is important to highlight that the studies were mostly carried out by occupational therapists doctors affiliated to universities in the state of São Paulo (mainly USP and UNIFESP). This result is congruent with the study by Vasconcelos et al. (2014), who points out that 81.4% of doctor occupational therapists are distributed in the Southeast region of Brazil. Similarly, Lopes et al.

(2010) show that there is a significant concentration of occupational therapy research groups in this region, where the undergraduate, masters and doctorate courses in all areas of knowledge in the country are concentrated (Vasconcelos et al., 2014). These data show "[...] the need to expand the number of researchers in other regions to glimpse the scientific growth of occupational therapy throughout the country" (Lopes et al., 2010, p. 211).

However, even identifying that most authors are allocated in Universities, the articles included in this study are mostly reports of experience. In addition, the context in which body experimentation is inserted - that is, undergraduate - is concentrated mainly in optional courses, laboratories and programs aimed at the population served. This demonstrates that the involvement in the course depends on the academic background and interest of the student, as well as on the teacher's path, considering body experimentation as a resource that should be incorporated into training.

Cyrino & Toralles-Pereira (2004) point out that changes in the education of health professionals are necessary, aiming to break with the traditional teaching models. In this sense, training in occupational therapy has been directed to a reflexive process, in which the student questions their practice and builds their own knowledge (Barba et al., 2012). The results of this study show the attempt of changes in this perspective, considering body experimentations as resources that allow sharing experiences. The courses, projects or laboratories that provide opportunities for body experiences during training are important to enable professional construction, considering that each student brings with them a unique content that will directly influence their training and the therapist they will become.

Thus, Cruz & Campos (2004) sought to analyze and report the conceptions of a group of students in occupational therapy about the training process. Practical experiences and opportunities for reflection on becoming an occupational therapist are reported in the study as fundamental for students, who experience conflicts and yearnings in undergraduate studies, both in relation to the academic background and the challenges imposed when dealing with the anxieties of others. Therefore, it is possible to analyze that the studies present a way of looking at training from a new perspective, in which the student experiences ways of learning that give them tools to think in clinical practice and direct their professional construction.

Regarding the modalities of body experimentation present in the sample studies, dance was mentioned in most articles (n=7). For Castro (1992), dance is an art that contemplates gesture, creativity, expression and movement, providing self-knowledge through the body, which justifies its mention when it comes to activities that awaken body awareness. In addition, body experimentations appeared in the literature expressed by various terms, which demonstrates that there is no single term that defines these techniques.

However, it was possible to analyze in the studies the various modalities of experimentation and formats with which learning has been built in this perspective. The use of body experimentations is presented in studies with similar proposals, but the way in which occupational therapy courses have incorporated this practice in undergraduate studies is related to the teachers' evaluation regarding the need to reformulate the learning process.

## 5 Final Considerations

Body approaches, dances and arts are important tools in the professional practice of occupational therapists in different contexts (Liberman et al., 2018). Likewise, body experimentations in undergraduate education seem to contribute significantly to the understanding of the profession and the body as an indicator of the subject's history, producing discussions about different teaching-learning methodologies that benefit both students and the public served in occupational therapy.

Through this study, it was possible to identify a movement of incorporation of body experimentation practices in occupational therapy undergraduate courses in recent years, since the theme of the body as an element of expression has been contemplated in training. The experience of activities that stimulate body awareness and expression during training is reported as a resource for awakening students' ways to connect with each other, while providing the knowledge of their own limits.

The authors of the aforementioned studies, faced with the need for changes in the format in which learning has been built, propose body experimentations as a resource to train professionals who are more attentive and open to the needs of others. However, studies still need to identify how professionals who have practiced body experimentation in training conduct their practice and their relationship with the client.

However, it is necessary to highlight the limitations of this study, in order to boost future work on this theme. The use of articles that present information only from the national scenario and the diversity of terms and concepts used to define body experimentations were limiting factors. Another limitation refers to the reduced sample size, which shows some restrictions on the exploration and analysis of the subject, as well as the non-inclusion of other types of documents, such as dissertations, congress proceedings and books.

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#### **Author's Contributions**

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