SYSTEMATIC REVIEW

Occupational therapy productions in times of pandemic: a systematic review of occupational therapeutic actions against the new coronavirus (COVID-19) epidemic [version 1; peer review: 1 approved with reservations]

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**Abstract**

**Background:** In March 2020, the World Health Organization classified infection and contagion of coronavirus disease 2019 (COVID-19) as a worldwide pandemic. Since then, health professionals have been tirelessly researching the symptoms and consequences of this disease in people's daily lives. Occupational therapists have also been mobilized to implement effective actions in order to guarantee the functionality and quality of life of individuals and groups. The aim of this article was to investigate what available resources there are regarding occupational therapy during the pandemic, and thus support and enrich professional practice during this time.

**Methods:** A search for was carried out for materials such as technical notes, guidelines for working with COVID-19 patients, clinical trials, and reflections and debates on occupational therapeutic practice during the COVID-19 pandemic. Articles in English, Portuguese and Spanish were included. The search was carried out in the Virtual Health Library (VHL), Google Scholar, Latin American & Caribbean Health Sciences Literature (LILACS), Scientific Electronic Library Online (SCIELO) databases, Medical Literature Analysis and Retrieval System Online (MEDLINE), Pubmed, and the websites of occupational therapy entities and organizations.

**Results:** A total of 44 materials were found and categorised into performance guides, technical notes and scientific articles. The materials dealt with different themes, with a predominance of guidelines for hospital practices. However, there was also a significant
amount of notes on the positioning of representative bodies in the preparation of intervention guides in wards, intensive care units, and outpatient and patient homes to support these professionals.

**Conclusions:** The results demonstrate the quick response of authors in the field of occupational therapy, to combat the challenges and barriers of the COVID-19 pandemic. The texts promote scientifically-based strategies to provide the best assistance to patients during the pandemic period.

**Keywords**
Occupational Therapy, Coronavirus Infections, Coronavirus, Pandemics

This article is included in the [Coronavirus](https://www.f1000research.com/collections/coronavirus) collection.

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Introduction
The coronavirus disease 2019 (COVID-19) pandemic, caused by the SARS-CoV-2 virus, impacts the daily lives of people, families and communities, as well as having an emergency impact on public health worldwide. In view of this, challenges arise for the multidisciplinary teams working on the front line to fight the virus, to adopt patient-centered approaches and care during the acute phase of the disease and aftercare.

COVID-19 spreads through contact with droplets on contaminated surfaces followed by direct contact with eyes, nose or mouth. The main symptoms of the disease are high temperature, continuous cough, and loss or change to sense of smell or taste. Emergency measures have been adopted to slow down the contagion curve and prevent health systems from being overloaded. Social distancing has been the main measure used to reduce the spread of the virus; however, social distance and isolation has had a negative impact on people’s daily lives.

According to the World Federation of Occupational Therapists, there are several changes to and consequences of the way people perform their occupations in times of isolation, including access to resources in terms of activities of daily living (ADLs), mobility, communication, social interaction and wellbeing. The COVID-19 pandemic has had a devastating impact on the occupations of millions of people around the world. In this sense, occupational therapy, as part of the multidisciplinary team on the front line to face the crisis, presents itself as a fundamental specialty in reducing the repercussions of symptoms, hospitalization and social isolation.

Throughout history, occupational therapy has been important when dealing with social emergency scenarios, starting after the first world war, when thousands of people had physical and / or mental disabilities. In the current situation, all knowledge accumulated over the years must be accessed, mainly because in the beginning of the pandemic, health professionals did not know which strategies would be better for treating the symptoms and consequences of COVID-19. It is worth noting that occupational therapists use evidence-based practices to ensure effective treatment and improve the quality of life of their patients.

Following this, the aim of this article was to perform a systematic review of scientific publications that make reference to occupational therapy during the COVID-19 pandemic. This was in order to provide guidance for the clinical practice of occupational therapy professionals and students.

Methods

Search strategy
This systematic review was carried out according to the PRISMA recommendations using the following electronic databases: Virtual Health Library (VHL), Google Scholar, Latin American & Caribbean Health Sciences Literature (LILACS), Scientific Electronic Library Online (SCIELO) databases, Medical Literature Analysis and Retrieval System Online (MEDLINE), Pubmed, and the websites of occupational therapy entities and organizations.

The databases were searched between May and September 2020. The terms and combinations used for the search were derived from the Health Sciences / DeCS Descriptors, which were: Occupational Therapy, Coronavirus, Pandemic and COVID-19, and their equivalents in Spanish and Portuguese. The complete strategy consisted of searching the entry terms in the MeSH, referring to the research question based on PICO (population, intervention, comparison and outcomes): what are the actions taken by occupational therapists during the pandemic period caused by the new coronavirus? The terms were searched using the Boolean operators AND and OR.


No filters were used (neither time nor language) so that the results were as comprehensive as possible.

Inclusion and exclusion criteria
Articles were included if they were written in English, Spanish and Portuguese, written by occupational therapists and / or representative entities, and published in late 2019 until September 2020, consistent with the first documentation of the virus in December 2019. For this review, randomized clinical trials, reflective articles, performance guides and normative articles from professional associations were included. Experimental studies in animals, systematic reviews and letters to the editor were excluded.

Data collection and analysis
The data collection was carried out by two independent researchers. The articles from the search were first judged on:
the title of the study, the type of study, and the summary. Articles that did not meet the eligibility criteria were excluded. After the first filter, a complete reading of the studies was performed to judge and list the information relevant to the research.

For the analysis, a synthesis matrix was prepared for the presentation and qualitative organization of information. For each identified category, the matrix contained the title, authors, study objective, results and the type of study. We simplified the main guidelines and results of the studies in order to provide a quick overview of the included articles.

Results and discussion

Of an initial 733 articles found, 44 were included in the analysis (Figure 1), of which 21 were in Portuguese, 19 in English and two in Spanish. These were categorized into three categories, being scientific articles in journals (19), performance guides (18) and technical notes published by entities representing occupational therapy (7) (Figure 1). The 19 scientific articles were divided into experience reports and original articles.

The 18 performance guides found were produced by associations and official entities of occupational therapy around the world. They address guidelines for the performance and operation of occupational therapy services during the pandemic. The main texts found were from the American Occupational Therapy Association (AOTA).

The technical notes found are responsible for clarifying doubts of occupational therapists in matters regarding COVID-19. They aim at being a quick communication channel between representative entities and professionals, in addition to demonstrating their position on governmental decisions.

The articles were separated into five thematic axes, namely: guidelines for occupational therapy services; quality of life during isolation; telehealth; social context; and possibilities of occupational therapy.

The publications of the guidelines for occupational therapy services (Table 1) have an important documentary role in assisting therapists in understanding measures to deal with the pandemic, addressing the main strategies implemented to treat the symptoms and consequences of COVID-19. The publications on occupational therapy are also important to stimulate reflections and decision making of professionals about the consequences of COVID-19 and social isolation in carrying out daily activities. From this theoretical framework, the concern of the representative entities is to provide information to offer several possibilities of how professionals should perform hospital, outpatient and home care for the treatment of the physical and psychological health of people with COVID-19.

Occupational therapy aims to weave support networks in the fight against COVID-19 that go beyond the hospital context in order to achieve balance and occupational justice in a harmonious way that promotes social and family satisfaction, and reduces stressful environments that provide panic, anxiety, and other distressing emotions. The current scenario offers occupational therapists the opportunity to contribute their knowledge through governmental and non-governmental programs that aim to mitigate the side effects of social isolation that directly affect people’s occupational performance.

Regarding quality of life (Table 2), the studies found show the negative effects of the routine change in the subjects’ lives, mainly due to the abrupt break and modification in their daily routine. This shows the need for reflection on and adaptation of habits to prevent social isolation. The English-language texts address aspects such as low quality of life due to decreased income, lack of sleep and unstructured routine. The authors allow us to observe financial losses, which part of the population are facing, as well as repercussions on mental health, work activities and physical health. Guidelines and reflections about a quality routine are the main points addressed which may help populations that are experiencing occupational disorders. The main suggestions for enhancing quality of life focus on structuring a good routine, including personal care, home care, work (in person or online), leisure activities, exercise, developing new hobbies, and receiving psychological support with professionals online. There is an emphasis on structuring a routine with schedules, pleasurable activities, exercise and home maintenance, for physical, mental and emotional health.

The articles in Portuguese deal with the issue of quality of life and isolation, emphasizing issues such as the professional identity of occupational therapists regarding their role in the pandemic, and discuss different isolation processes that may vary according to socioeconomic class and other contextual factors. They also point out the challenges of the academic community in developing strategies to continue undergraduate teaching of occupational therapy, in addition to providing psychosocial support to students.

The construction of the thematic axis of quality of life during isolation, made it possible to reaffirm the competence of the occupational therapist in identifying impairments in patient independence, setting treatment goals, increasing autonomy and performance capacities in the activities of daily life.

Finally, the articles compile actions taken by occupational therapists in order to promote a better quality of life during social isolation, such as reorganizing daily routine, promoting self-care, and providing support networks to help maintain mental and physical health.

Given the high degree of infection by COVID-19, telehealth, which is shown in Table 3, was one of the main strategies adopted to continue remote treatments to guarantee the safety of professionals and patients. The Canadian Association Of Occupational Therapy defines telehealth as the provision of health services through telecommunications, which may vary according to the user’s skills.
The articles addressing this theme involved occupational therapists’ reflections on the introduction of telehealth in their practice. When using remote means of communication, therapists need to improve their skills in order to identify patient needs in distant care. This might be achieved by the therapist paying greater attention to the tone of the patient’s voice and their way of communicating for example. The use of telehealth in occupational therapy impacts the way therapists interact with their patients for appointments regarding a range of issues including mental health, hand and upper limb therapy, group therapy, the use of sensory diet as a form of intervention, and assessing elderly people with cancer.

The advantages of telehealth have the potential to optimize the time and costs of services, the possibility of expanding the reach of the health team in remote areas and the increased potential for rehabilitation. In addition to being more practical for the patient, call centers enables the care and monitoring of a greater number of patients. Telehealth could also be used in an educational program through daily dialogues that expand
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<tr>
<td>Agudelo et al.</td>
<td>Reflections from the Latin American Confederation of Occupational Therapists - clato, en tiempos de covid19</td>
<td>Promote a reflection to occupational therapists, regarding their performance during the pandemic: how interventions should occur, how representative bodies can contribute to the training of students and can contribute to this process.</td>
<td>It reports the importance of the representative entities of occupational therapy in Latin America, and their support with professional practice such as the call center during the pandemic, raising some reflections on how to continue the process of monitoring and assisting the subjects in this process of social isolation.</td>
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<td>Muños</td>
<td>Encourage a reflection on the assistance level of OT during emergency periods, taking into account the different contexts in which the subjects are inserted.</td>
<td>Reflects on the role of occupational therapy in health emergencies, highlighting its importance in the process of confinement, as the social help network has been fragmented due to the limits of social isolation and assistance to those who are in situations of social fragility.</td>
<td>It reports the importance of the representative entities of occupational therapy in Latin America, and their support with professional practice such as the call center during the pandemic, raising some reflections on how to continue the process of monitoring and assisting the subjects in this process of social isolation.</td>
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<td>Bregalda et al.</td>
<td>Actions of Occupational Therapy against the coronavirus: Reflections on what Occupational Therapy should not do in times of pandemic</td>
<td>Present a position on the current context of the pandemic and present the supplement that the Brazilian Interinstitutional Journal of Occupational Therapy developed as a technical-scientific contribution to the demands and crises arising from the coronaviruses.</td>
<td>Briefly describes a position on the current context, bringing reflections on the different social contexts and their respective impacts during the pandemic, in addition to fostering a discussion on the role of occupational therapy in the pandemic.</td>
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<td>World Federation of Occupational Therapists (WFOT)</td>
<td>Present in a translated way the Portuguese positioning WFOT.</td>
<td>It is a translation of the world federation of occupational therapy (WFOT) that reports on the importance of the profession in this new context and ways of contributing today, namely, telemonitoring, environmental adaptation and mental health monitoring of individuals in isolation.</td>
<td>Present three positioning notes released by ABMAT.</td>
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<td>Brazilian Association of Occupational Therapy (ABMAT)</td>
<td>Present three positioning notes released by ABMAT.</td>
<td>It brings possible behaviors to be adopted by occupational therapists, some of them, the stimulation of the creation of support networks, acting on the propagation of information of the real situation, as well as guiding and stimulating games and games for families who are in isolation with children.</td>
<td>It presents the technical-political-scientific positioning of the Brazilian Association of Occupational Therapy on COVID-19.</td>
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<td>RENETO</td>
<td>Present RENETO’s positioning in the face of the impacts of the COVID-19 pandemic on teaching and research in occupational therapy.</td>
<td>It is a position that describes the opposite of the substitution of practical disciplines, for remote ones, taking into account some factors such as access to technologies and quality internet, which is unequal among students, disruption of family life that was established during isolation, and among other issues that make remote education unviable, and highlight support for policies that support teaching and research in public universities.</td>
<td>Present RENETO’s positioning in the face of the impacts of the COVID-19 pandemic on teaching and research in occupational therapy.</td>
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<td>National Occupational Therapy Teaching and Research (RENETO)</td>
<td>Present RENETO’s positioning in the face of the impacts of the COVID-19 pandemic on teaching and research in occupational therapy.</td>
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<td>Telehealth position statement</td>
<td>WFOT[21]</td>
<td>Present the translated position of the World Federation of Occupational Therapists on telehealth care.</td>
<td>It brings the speech of the World Federation of occupational therapy, reports on the use of telehealth, its importance in providing assistance to users, describes strategies to be used with this tool for its best effectiveness, such as the selection of clients to be assisted, taking into account its uniqueness, collaboration with local professionals, and affirms the effectiveness of using this method for the provision of services in occupational therapy during the pandemic.</td>
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<td>Communication by occupational therapists during the Covid-19 Academy</td>
<td>Cordeiro[22]</td>
<td>List the pandemic’s reflexes on occupational therapy in Brazil and considerations for effective and dignified communication of the principles that govern professional practice during the pandemic and for the post-pandemic period.</td>
<td>It instigates a reflection on occupational therapists, regarding communication before society through social media, as well as encouraging a consensus among professionals in the area on concepts, guidelines and the future of the profession, after the pandemic.</td>
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<td>Learning to deal with routine changes due to Covid-19: Practical Guidelines for Healthy Routines</td>
<td>da Silva et al.[23]</td>
<td>Translation and dissemination of information material with guidance and contributions from occupational therapy on essential care for the development of healthy routines.</td>
<td>It brings together guidelines on how to behave in the face of social isolation, in different contexts, and reinvent itself to continue the occupations that make up the subjects’ routine, resulting in self-control, maintenance of mental health and other innumerable benefits than a healthy routine can provide.</td>
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<td>Occupational Therapy in palliative care at covid-19</td>
<td>National Academy of Palliative Care[24]</td>
<td>Present possibilities of intervention in different dimensions of assistance in which the occupational therapist is inserted, such as the palliative approach and person-centered care.</td>
<td>It is a systematization of assistance that can be provided by the occupational therapist in different contexts in palliative care, whether in the infirmary or in the residence. Having as main actions, help in choosing the isolation environment, making environmental adaptations to control fatigue and better carrying out occupations, adjusting the routine, as well as family support and guidance to facilitate the isolation process.</td>
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<td>Hitav et al.</td>
<td>Understand the effect of lockdown during the coronavirus outbreak on the quality of life of individuals in Mumbai, India.</td>
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<td>In the study, the WHOQOL scale was applied, referring to quality of life. The applied scale was analyzed in the 832 research participants. It was observed that the main complaints regarding changes in the participants’ quality of life were related to physical and psychological aspects, without observing significant differences between genders. It was concluded that the social isolation caused by COVID-19, directly affects the quality of life of the subjects.</td>
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<td>Hammell</td>
<td>Describes different environments and scenarios for affecting occupations during the period of social isolation, as well as the need for occupational therapy based on occupation science.</td>
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<td>The article is based on the validation of occupational therapy as a necessary professional for the treatment of patients directly and indirectly affected by COVID-19, whether in physical, co-conscious or social aspects. In addition, it describes the ability of occupational therapy to act with 'uncertainty' during the normal activities of the profession, being a valid skill in times of uncertainty such as the pandemic.</td>
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<td>Mynard</td>
<td>Production that proposes strategies for occupational therapy professionals and students to deal with people affected by social isolation.</td>
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<td>Lorca Mynard’s extensive production on occupational therapy favours a reflective discussion of the effects of quarantines and social isolation on productivity, self-care, leisure, individual time, routines and roles. In addition, it offers professionals ways to guide and intervene in the needs of patients with routine regulation caused by the pandemic.</td>
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<td>da Silva</td>
<td>To problematize issues involving the occupational therapist’s professional practice in daily life – in the face of the COVID-19 pandemic.</td>
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<td>It questions the professional practice of occupational therapists in the face of the pandemic, relating terminologies of our professional practice to everyday life, with the moment of social isolation we are facing. In this process of occupational resignification during isolation and in the evaluation of the same pre, during and post pandemic, occupational therapy is being used as a necessary professional for the treatment of patients directly and indirectly affected by COVID-19.</td>
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<td>Correa et al.</td>
<td>Open reflection on social isolation, the circumstances that touch each one, the impact caused by COVID-19 on daily life and the concerns about occupying time-space.</td>
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<td>Reports strategies adopted by students and professors at a university during the period of social isolation, with the main objective of providing a psychosocial support network. Some strategies adopted were the reorganization of the routine, mapping the situation of students, self-care actions, support and monitoring of students in distress during isolation.</td>
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<td>Performance Guide: Occupational Therapy Telehealth decision guide</td>
<td>AOTA</td>
<td>Offer a flowchart of decisions about the occupational therapeutic approach on call centers</td>
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<td>Performance Guide: Occupational Therapy Performance Guide</td>
<td>CAOT</td>
<td>Create reflection points for occupational therapists in their practice environments</td>
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<td>Performance Guide: Occupational Therapy Performance Guide</td>
<td>Buckinghamshire Healthcare</td>
<td>Compile information in order to support the occupational therapists who are considering telehealth, with occupational therapeutic bases, the occupational therapist's action plan, and the child's/clinic's profile.</td>
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<tr>
<td>Performance Guide: Occupational Therapy Performance Guide</td>
<td>Macêdo et al.</td>
<td>Present strategies developed by occupational therapists in different contexts, such as mental health, doctor's offices and rehabilitation centers.</td>
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<tr>
<td>Scientific Article: Development of a telehealth geriatric assessment model in response to the COVID-19 pandemic</td>
<td>DiGiovanni et al.</td>
<td>Describe the adaptation and delivery of a geriatric oncology assessment in telehealth in order to support the occupational therapist's position regarding the recommendations and obligations that occupational therapists must adopt to start and continue the call center service. The flowchart demands a series of requirements for the use of telehealth, as well as the familiarity of patients and therapists with the tools to be used.</td>
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<tr>
<td>Scientific Article: The role of the occupational therapist based on the Theory of Sensory Integration in the care of children with Autism Spectrum Disorder</td>
<td>Vanessa Rafaelle, Brasile de Souza</td>
<td>Describe the role of the occupational therapist in occupational therapy, sensory integration, and the use of the sensory diet.</td>
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AOTA: American Occupational Therapy Association; CAOT: Canadian Association of Occupational Therapy; ASD: Autistic Spectrum Disorder.
the understanding of patient’s health conditions and encourage them to make changes in their lives to make them healthier and more independent. The articles in Table 4 show occupational therapy actions in the social context, pointing out the inequalities observed in vulnerable populations in coping with COVID-19 due to the pre-existence of disadvantages in social and economic factors.

One of the groups cited is the LGBTQIA+ community. This community has faced daily situations of stigma, prejudice, social isolation, and increased mental health problems, due to the interruption of support groups and therapy aimed at mental health during the COVID-19 pandemic. People living in the suburbs and with low incomes are also more affected, due to the lack of resources to obtain individual protective items and hand and object hygiene. Many people have lost their jobs during the pandemic, which has compromised the basic livelihood of many families. Also highlighted are the elderly, who are at risk of having severe symptoms and requiring hospitalisation. Although they are in this high risk group, many elderly people in Brazil have not obeyed the isolation guidelines and have continued to frequent places with crowds of people during the pandemic, such as markets and shopping centers.

The study by Pereira et al. describes a strategy created by students and professionals in occupational therapy during the pandemic, which aimed to provide social support for these groups, not only in this moment of social isolation, but also for after the pandemic. This involved socio-educational support for children and youth in communities via distance learning, promoting the strengthening of socio-community ties and assisting the organization of collecting and donating basic supplies to poor communities in various regions of Brazil.

For possibilities of occupational therapy during the pandemic (Table 5), 12 papers were found divided into scientific articles, performance guides and technical notes that discuss mental health, assistive technology, hospital care, primary health care, worker health, and rehabilitation, written in all three languages.

Primarily, articles that dealt with hospital care included strategies that are being applied in the institutions, including training for the correct use of personal protective equipment (PPE), remote work strategies, reorganization of the units, individualized care, interventions with the patient’s family, priority screening and construction of informative booklets on the disease and protective measures for non-contamination. Some papers provided resources more directed to care in bed, such as postural information, how to communicate during therapy, and attention to clinical conditions, especially the respiratory system.

With regard to mental health, contents were found that dealt with the impact of the pandemic and social isolation in particular. Some articles commented on changes in the mental health of professionals who are on the front lines. These studies pointed out ways to support health professionals since many of them have had to leave their homes and isolate themselves to avoid contaminating their families. In addition there has been an intensification in working hours due to the very high demand for health services worldwide for a small number of professionals on the front line. These variables were observed as potentially stressful factors for professionals.

The assistive technology addressed in the publications refers to adaptations in the masks and respirators used to prevent the spread of COVID-19, focusing on the low cost and availability of equipment, guaranteeing the population’s access to these tools. As far as rehabilitation is concerned, the action guide found seeks to guide occupational therapy for patients discharged from the ICU after infection, prioritizing sequelae in the respiratory and musculoskeletal system that can affect occupational performance. The guide was based on the Person-Environment-Occupation (PEO) model to promote better patient follow-up and rehabilitation.

As for the performance of professionals in primary health care, the study by Falcão, et al. carried out remote work at a family health unit (USF) and at a family health support center (NASF) with the objective of continuing the monitoring of mildly symptomatic patients. Health education groups, assessment and guidance in carrying out ADLs, and monitoring of mental health were created. In remote service, through the internet, they carried out environmental organization, listening and solving problems that patients reported, assistance in triage, urgency classification and order of care, including emergencies due to mental illness.

The article by Barroso et al. discusses the teaching of occupational therapy students and reflects on the safety and health of workers during the pandemic period, addressing issues regarding legislation and worker rights. Work is considered a potential source of spreading the virus due to workplaces often not providing self-protection resources, such as protective masks, gloves and alcohol gel. There are also often shifts with large numbers of workers and inadequate distance between staff. In addition, many workers use public transport to get to work, and this is also a potential source of contagion. Therefore, for workers to guarantee their rights in having protection against catching COVID-19 at work, it is necessary to discuss the regulations and organizational measures of each active job, according to its level of exposure, thus guaranteeing the safety of workers.

Since this review searched for papers in three languages, the number of papers found was small compared to the initial expectation of the study. This can be considered a negative and aggravating point for the recognition of the profession, since occupational therapists are part of the essential team on the front line of the COVID-19 pandemic. Studies about the work and contributions of occupational therapy for the affected public are of great use to support discussions, and enable students and professionals to access information about what actions can be taken by therapists, as well as drawing attention to the profession, which as shown in this review, is important in the face of health emergencies.
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<tr>
<td>Occupational therapy in times of pandemic: Social security and guarantees of a possible daily life for all</td>
<td>Malfitano et al.</td>
<td>Point out the main contributions in the scope of health and social security to the confrontation of COVID-19.</td>
<td>It describes the importance of the occupational therapist on the front line of COVID-19, as well as portraying some strategies to be adopted by them, as organization guides for routine and leisure, which contribute to the maintenance of physical and mental health in times of isolation.</td>
<td>Scientific Article</td>
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<td>Gender and sexuality dissident old ages: collective occupations in the face of the Covid-19 pandemic</td>
<td>Correia et al.</td>
<td>Addresses and discusses old dissenting gender and sexuality in addressing the issues posed by the current pandemic moment of COVID-19.</td>
<td>She reports on the reality of the LGBTQIA+ elderly population, describes changes made by the “café com memórias” group that met in person to exchange knowledge, and, because of the pandemic, started to use social networks, such as whatsapp to maintain social relationships with others in the group, as well as as a way of spreading information and supporting those who are suffering.</td>
<td>Technical Note</td>
</tr>
<tr>
<td>Pandemic, social and necropolitical inequality in Brazil: reflections from the Social Occupational Therapy</td>
<td>Bardi et al.</td>
<td>Reflect from the perspective of social occupational therapy on the pandemic with a focus on socioeconomic and political issues.</td>
<td>It brings reflections about the social inequality that was intensified in the pandemic process, together with these reflections reinforce the need for the occupational therapists to act in the construction of multi and intersectoral actions, which can reach and meet the demand of the entire population that suffers from the impacts of social inequality.</td>
<td>Technical Note</td>
</tr>
<tr>
<td>Social Occupational Therapy: reflections and possibilities of action during the Covid-19 pandemic</td>
<td>Pereira et al.</td>
<td>Reflect on the possibilities of occupational therapy acting during the COVID-19 pandemic.</td>
<td>It reflects on the importance of social actions in marginalized populations during the pandemic, and reports some actions developed, such as the “corona map in the peripheries” that is organized for the propagation of information, as well as the distribution of personal protective equipment, and the action “network &quot;that aims to maintain and stimulate the critical reading of young people, who are away from school, due to isolation.</td>
<td>Scientific Article</td>
</tr>
</tbody>
</table>

LGBTQIA+: Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual/Aromantic/Agender
<table>
<thead>
<tr>
<th>Title</th>
<th>Authors</th>
<th>Objective</th>
<th>Results</th>
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<tr>
<td>Adapting reusable elastomeric respirators to utilise anaesthesia circuit filters using a 3D-printed adaptor; a potential alternative to address N95 shortages during the COVID-19 pandemic.</td>
<td>Liu et al.⁸⁶.</td>
<td>The objective of the study is to offer a strategy to prolong the life of the masks with respirators, making modifications to the elastomers, applying rapid prototyping technology.</td>
<td>This study demonstrated that the interface of an anesthesia circuit filter with reusable elastomeric respirators made in 3D printing can be a viable alternative to disposable N95 respirators for healthcare professionals who perform aerosol generation procedures in patients with COVID-19.</td>
<td>Scientific Article</td>
</tr>
<tr>
<td>Exploring the impact of the COVID-19 pandemic on the mental health of rehabilitation therapists</td>
<td>Ayahito &amp; Toshiyuki¹¹⁴.</td>
<td>Point out the benefits, impacts, limitations, barriers and current needs, as well as future recommendations for the adoption of an evidence-based practice of telehealth services in Occupational Therapy.</td>
<td>Although there is little evidence about the impact of COVID-19 on work, life and mental health for rehabilitation therapists to date. It is possible to note that the pandemic changed the community and society. There is no possibility to live as before, being necessary protection of the therapist, his family and patients amid such drastic changes.</td>
<td>Technical Note</td>
</tr>
<tr>
<td>A quick guide for occupational therapists: Rehabilitation for people recovering from COVID-19</td>
<td>Royal College of Occupational Therapists⁴².</td>
<td>Provide a practical guide for the performance of occupational therapists and health managers, with points to consider in relation to the potential for rehabilitation of people affected by COVID-19.</td>
<td>Provides a broad overview of the interventions that occupational therapists should consider at each stage of treatment and a person’s recovery journey, in addition to offering a personalized service approach focused on occupation, supporting the recovery of people facing functional challenges resulting from the virus and its treatment.</td>
<td>Performance Guide</td>
</tr>
<tr>
<td>Inpatient Occupational Therapy—Decision Guide for COVID-19</td>
<td>AOTA⁴³.</td>
<td>Provide a practical guide to assist decision-making for the occupational therapist in the hospital context during the COVID-19 pandemic.</td>
<td>They provided a rapid change in the ability to assess, plan and adapt their care through a checklist for developing the work plan during the COVID-19 Pandemic and in clinical decision-making, in addition to offering ways of managing facilities and the infection control department to develop a plan and maintain continuous monitoring to address emerging factors and guidelines.</td>
<td>Performance Guide</td>
</tr>
<tr>
<td>Metacognivite: 7 Steps For Thinking About The Coronavirus Pandemic</td>
<td>Brettenny⁴⁷.</td>
<td>Stimulate metacognitive awareness and to provide seven metacognitive steps to think of any challenging situation, such as the coronavirus or any daily task, difficult concepts or essential life skills.</td>
<td>The ebook explored possibilities for stimulating metacognitive steps, which can be used to better perform activities of daily living and occupations. The steps described are based on the principle of self-knowledge of the routine, capacity limitations, setting goals and objectives, as well as monitoring achievements and assessing one’s own performance.</td>
<td>Performance Guide</td>
</tr>
<tr>
<td>Institutional action plan for therapists at a teaching hospital in Pernambuco in the face of the COVID-19 pandemic</td>
<td>Santos et al.⁸⁷.</td>
<td>Describe action plans and protocols developed by occupational therapists at a university hospital in Pernambuco.</td>
<td>Describes actions taken by occupational therapy students at a teaching hospital, such as relocating professionals, making assistive technologies to promote full recovery of inpatients, positioning equipment, matriculation of frontline professionals, and humanization actions in the environment hospital.</td>
<td>Scientific Article</td>
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<tr>
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<td>Therapeutic-occupational interventions for patients with COVID-19 in the ICU</td>
<td>Do Carmo et al.</td>
<td>Discuss possibilities of occupational therapist intervention with the patient diagnosed with COVID-19 in the ICU.</td>
<td>She reports on some possibilities for occupational therapists to intervene in ICUs during the COVID-19 pandemic, such as the organization of the intervention in order to avoid unnecessary leaving the bed, the use of disposable materials in therapy, the use of alternative communication and attention to the clinical condition of the patient, especially the respiratory system so that there is no complication in the therapy session.</td>
<td>Scientific Article</td>
</tr>
<tr>
<td>Brazilian pediatric occupational therapy in the face of the COVID-19 pandemic reformulating professional practice</td>
<td>da Silva et al.</td>
<td>To report the experience of occupational therapy professionals before the national scenario of COVID-19 and their interventions with children in three different contexts.</td>
<td>It describes actions taken by professionals during the pandemic, such as training, publication of technical notes, call center, adaptations of governmental health unit in Brazil and reorganization of the flow of users, to continue the assistance, and highlights the need to decentralize total attention to COVID-19, and assisting people with other health needs who are currently neglected.</td>
<td>Scientific Article</td>
</tr>
<tr>
<td>Everyday life against the coronavirus in a health resiliency: possibilities built with occupational therapists</td>
<td>Miranda et al.</td>
<td>To report the experience of occupational therapy Residents in the context of the coronavirus pandemic.</td>
<td>It describes the inequality in the pandemic, emphasizes the importance of the occupational therapist to this public that is on the margin of isolation, and as a support strategy, a booklet was built with a structured routine for the whole family that is in isolation, in a broad way to supplying the demand of the various subjects, taking into account their uniqueness, the primer with the routine was designed to warn about the positive and negative points of disorderly productivity and occupational balance.</td>
<td>Scientific Article</td>
</tr>
<tr>
<td>The dizzying access in the acquisition of facial masks and their repercussions on public health and vulnerable populations</td>
<td>Da Conceição et al.</td>
<td>Describe the development of a low-cost resource for socially vulnerable groups in the ABC Paulista region of Greater São Paulo, Brazil.</td>
<td>It describes the process of creating the low-cost face mask, the most widely used individual protection equipment in the pandemic, for distribution to vulnerable groups, in order to reduce the spread of the virus and protect this population.</td>
<td>Scientific Article</td>
</tr>
<tr>
<td>Occupational health in times of covid-19: reflections on health, safety and Occupational Therapy</td>
<td>Barroso et al.</td>
<td>Discuss and reflect on worker health in times of COVID-19.</td>
<td>It brings several reflections on the current situation of workers, whether they are informal or not and describes some measures adopted by the government to minimize the impact of the pandemic on this population, such as emergency aid, however it brings a criticism regarding the need for effective humanization policies, and assistance to the working class.</td>
<td>Technical Note</td>
</tr>
<tr>
<td>Occupational Therapy in Primary Health Care (PHC) reinventing daily actions in view of the changes caused by COVID-19</td>
<td>Falcão et al.</td>
<td>Present to the experiences of Occupational Therapy in the context of PHC in the epidemic by COVID-19.</td>
<td>It describes actions taken by professionals during the pandemic, such as training, publication of technical notes, call center, adaptations of PHC and reorganization of the flow of users, to continue the assistance, and Highlights the need to decentralize total attention to COVID-19, and assisting people with other health needs who are currently neglected.</td>
<td>Scientific Article</td>
</tr>
</tbody>
</table>

AOTA: American Occupational Therapy Association; ICU: Intensive care unit; PHC: Therapy in Primary Health Care.
Conclusion

This review found that both professionals and professional associations showed the concern to report and scientifically disseminate the experiences and guidelines of occupational therapists during the COVID-19 pandemic. The resulting 44 papers demonstrate the quick response of the profession to the challenges and barriers that have been imposed during this time, promoting scientifically based strategies to provide the best assistance to patients within the pandemic. The contributions addressed include positioning in bed, the humanization of care, and the restructuring of a daily routine after recovery of the infected person or just for those who are at home due to social distancing measures.

There were some limitations of the review such as the low number of papers found, the high concentration of papers from magazines and specific organizations, as well as the lack of preparation and visibility of the profession in public health emergency contexts. Further, this review had structural limitations due to the lack of qualitative and quantitative analysis. These analyses were not done due to the types of study included (technical notes, performance guides and reflection articles) which do not work for meta-analysis or qualitative evaluation. Another limitation is that we did not see any risk of bias, due to the lack of qualitative and quantitative analyses. Finally, the search time was short; we are aware that there was an accelerated production of new articles published after the end of the survey carried out by the authors.

We believe that this review serves as a basis for further research in this area, instigating students, researchers, professionals and other agents of occupational therapy to produce and discuss the profession’s practices in public health emergencies with a focus on infectious agents like COVID-19.

Data availability

All data underlying the results are available as part of the article and no additional source data are required.

Reporting guidelines


Data are available under the terms of the Creative Commons Attribution 4.0 International license (CC-BY 4.0).

References


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27. Mynard L: Normal life has been disrupted: managing the disruption caused by COVID-19. OTAUS. [acesso em 22 mai 2020].

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Camila Caminha Caro
Universidade Federal de São Carlos – UFSCar, São Carlos, Brazil

I am very happy with the opportunity to review this article. The topic is very important for the occupational therapy, especially in this time of pandemic.

The article shows important information, but needs a better presentation of the results and discussion. I have some suggestions that are indicated below:

Title
  o The title is clear and good. I suggest deleting the word epidemic.

Abstract
  o The abstract is clear, but I felt the necessity to describe the time considered for the search in the databases. I suggest you to include this information.
  o In the results I feel the necessity to inform the classifications of the articles (guidelines for occupational therapy services, quality of life, telehealth, social actions, and possibilities of occupational therapy during the pandemic).

Introduction
  o The introduction is clear and demonstrated the importance of the study. I suggest you write more about the different consequences of COVID-19 in the health, for example, in the memory, lost muscle strength, fatigue and tiredness, in moderate and severe cases, and the impact of this in the activities of daily living during and after hospitalization.

Methods
  o I suggest that you include a topic with criteria of exclusion that were showed in the Figure 1.

Search strategy section
  o First paragraph - What are the websites of occupational therapy entities and organizations? It is necessary to describe where they are found.
  o In the second paragraph, I suggest you cite the reference of use PICO strategy.
In the last paragraph, I suggest you inform that neither time nor language was used in the FIRST TIME.

Data collection and analysis section
- What type of analysis is used? Simple? Descriptive?

Results and discussion
- You have a lot of results. I suggest that you create topics for presentation and discussion of the results.

- All legends of the tables and figures need to indicate the number of articles.

- In the second paragraph, it is necessary to indicate the number of studies of American Occupational Therapy Association (AOTA). It is important to present the references of the articles in the text. It is too important that you describe these performance guides.

- In the third paragraph, it is necessary to present the number of studies. It is interesting that you describe some results of the technical notes here.

- In the fourth paragraph, it is necessary to present the number of each type of study founded.

- In the fifth paragraph it is necessary to present the number of publications about guidelines for occupational therapy services. Is too important to presents the main information of these articles and after discusses them. Where are from these articles? There are differences between the places?

- In the seventh paragraph it is necessary to present the number of publications about quality of life during isolation. How many articles were writing in English? Where are from these articles? There are differences between the places? It is important to present the references of the articles in the text.

- Eight paragraph - How many articles were written in Portuguese? Where are from these articles? There are differences between the places? It is important to present the references of the articles in the text.

- The tenth paragraph has similar information of the eighth. It is possible put this information together.

- In the eleven paragraph, it is necessary to present the number of publications about telehealth. Where are from these articles? There are differences between the places? It is important to present the references of the articles in the text.

- Twelfth paragraph - Where are from these articles? There are differences between the places? It is important to present the references of the articles in the text.

- In the thirteenth paragraph, it is important to discuss the possible negative impacts of telehealth.

- In the fourteenth paragraph, it is necessary to present the number of publications about
occupational therapy actions in the social context. Where are from these articles? There are differences between the places? It is important to present the references of the articles in the text.

○ Fifteenth paragraph: Where are the articles about LGBTQIA+ community from? It is import to discuss the articles in terms of differences between countries.

○ In the sixteenth paragraph it is necessary to indicate the origin of the article.

○ In the seventeenth paragraph, it is necessary to present the number of articles in each classification. Is it a new classification? This classification is different of the presented in the first paragraph of Results and Discussion Section?

○ Eighteenth to Twenty-second paragraph - Where are these articles from? There are differences between the places? It is important to present the references of the articles in the text.

○ Twenty-third paragraph: This paragraph must be in the Conclusion section.

○ There are differences between the countries in the tackling the pandemic? These differences have possible relations with the scientific publications of this review? These discussions can help in the understanding the occupational therapy knowledge developed in different places.

Are the rationale for, and objectives of, the Systematic Review clearly stated?
Yes

Are sufficient details of the methods and analysis provided to allow replication by others?
Partly

Is the statistical analysis and its interpretation appropriate?
Not applicable

Are the conclusions drawn adequately supported by the results presented in the review?
Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Occupational therapist graduated from UFSCarMaster and PhD in Occupational Therapy from PPGTO-UFSCarSpecialist in Neuroscience and Rehabilitation by FAMERP

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.
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