

Impacts of COVID-19 on physiotherapy care for women with breast cancer

Impactos da COVID-19 nos atendimentos fisioterapêuticos a mulheres com câncer de mama

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Abstract

Introduction: COVID-19 has been declared a public health emergency of international concern by the World Health Organization, with a diverse clinical spectrum. Given the coronavirus prevention measures and recommendations from health authorities, there is a concern about how physiotherapy care is provided to women with breast cancer. The discontinuity of care may favor the emergence of complications, and compromise functionality, quality of care and the provision of complementary treatments. **Objective:** To assess the impacts of the COVID-19 pandemic on the continuity of physiotherapy care for women with breast cancer. **Methods:** This is a cross-sectional study. Data were collected through an online questionnaire and the population was composed of physiotherapists, of both sexes, who work in Brazil. **Results:** Twenty percent of the 40 participants reported no change in their work routine, 48% had their workload reduced, 12% had an increased workload, 25% were relocated to provide assistance to patients affected by COVID-19, and 20% of consultations were suspended. The greatest continuity of care was seen in hospital admissions (40%) and outpatient clinics (42%). The number of women cared for before the pandemic compared to during the restriction period declined by 72%. **Conclusion:** Most consultations were suspended; however, in most cases, continuity of care was guaranteed through telerehabilitation. Nevertheless, the interviewees reported clinical worsening in women after treatment was interrupted.

Keywords: Breast neoplasms. COVID-19. Pandemic. Physical therapy. Rehabilitation.

Resumo

Introdução: A COVID-19 trata-se de uma situação de emergência de saúde pública de importância internacional, cujo espectro clínico é diverso. Levando em consideração as medidas de prevenção ao coronavírus e as recomendações das autoridades de saúde, surge a preocupação de como estão os atendimentos fisioterapêuticos a mulheres com câncer de mama, já que sua descontinuidade pode favorecer o aparecimento de complicações, prejuízos na funcionalidade, na qualidade de vida e na realização de tratamentos complementares.

Objetivo: Avaliar os impactos da pandemia de COVID-19 na continuidade dos atendimentos fisioterapêuticos a mulheres com câncer de mama. **Métodos:** Trata-se de uma pesquisa transversal. Os dados foram coletados por meio de questionário on-line e a população foi composta por fisioterapeutas que atuam em território brasileiro. **Resultados:** De um total de 40 participantes, 20% relataram não ter sofrido alteração na rotina de trabalho, 48% tiveram a carga horária reduzida, 12% sofreram aumento de carga horária, enquanto 25% foram realocadas de setor para prestar assistência aos acometidos pela COVID-19. Vinte por cento dos atendimentos foram suspensos, sendo os locais com maior continuidade na assistência os de internação hospitalar (40%) e ambulatoriais (42%). Quanto ao número de mulheres atendidas antes da pandemia em comparação ao número durante o período de restrição, houve uma queda de 72%. **Conclusão:** Verificou-se suspensão da maior parte dos atendimentos, no entanto, em sua maioria, a continuidade da assistência foi garantida através de teleatendimento. Não obstante, os entrevistados relataram piora clínica no quadro das mulheres após o período de suspensão do tratamento.

Palavras-chave: Neoplasias de mama. COVID-19. Pandemia. Fisioterapia. Reabilitação.

Introduction

COVID-19, caused by the new coronavirus (SARS-CoV-2), was declared a public health emergency of international concern. It exhibits a diverse clinical spectrum, ranging from mild (fever, fatigue and nonproductive cough), to moderate (dyspnea) or severe symptoms, when the patient develops severe acute respiratory syndrome.¹ The preventive measures adopted in Brazil followed World Health Organization (WHO) recommendations, which include frequent hand

washing, mask wearing, avoiding touching the eyes, nose and mouth, respiratory hygiene practices, and social distancing.²

With the advance of the pandemic in the country, there was a need to expand the healthcare infrastructure for people who progressed to the most serious form of the disease. Faced with this emergency health situation, a significant number of people affected by other health conditions continued to need treatment.³ The Brazilian Society of Surgical Oncology estimates that, in a three-month period of the pandemic, 171,000 were not diagnosed with cancer and previously diagnosed cases had their treatment delayed, possibly leading to longer and/or aggressive treatments, with higher morbidity, mortality and cost.³

Patients who had already started treatment are more likely to exhibit physical and functional complications if early physical therapy is not performed. Rehabilitation becomes paramount, since it displays a number of therapeutic possibilities that may be used in all stages of cancer treatment (diagnosis, chemotherapy, radiotherapy, hormone therapy, post-surgery, disease recurrence and palliative care), contributing to reducing of cancer-related fatigue, improving general conditions, and lowering the risk of surgical complications and injuries.⁴⁻⁶

Among women, breast cancer is the mostly commonly diagnosed cancer worldwide, except in Eastern Africa and Australia/New Zealand. In 2020, the International Agency for Research on Cancer estimated 2,261,400 new cases of breast cancer.⁷ In Brazil, according to the National Cancer Institute, 66,280 new cases are estimated annually for 2020-2022.⁸ This type of carcinoma has a good prognosis when detected and treated early.⁹

Although breast cancer treatment has made considerable progress, leading to a significant reduction in mortality rates, 90% of patients are affected by sequelae.¹⁰ Complications vary widely in severity and may lead to short- and long-term functional impairments, including lymphedema, pain, functional changes and axillary web syndrome.^{4,5,10,11} In addition, the abovementioned complications may compromise the activities of daily living, quality of life and complementary treatments, such as radiotherapy, typically performed after breast-conserving surgery.^{12,13}

As a way of contributing to preventive measures against COVID-19, physiotherapist associations recom-

mended partial or total suspension of in/person care. This measure resulted in therapy postponement or discontinuation of those already underway.⁶ Thus, there is a concern about physical therapy monitoring in breast cancer patients. Given the above, the present study aimed to assess the impacts of the COVID-19 pandemic on physical therapy care for women with breast cancer.

Methods

This is a cross-sectional study. Physical therapists of both sexes who worked in Brazil and treated women with breast cancer were included, while incompletely filled-in questionnaires were excluded. Data were collected in October and November 2020, through an online questionnaire (Figures 1 and 2), disseminated through telephone contacts via a messaging application (WhatsApp), emails and social networks (Instagram). The e-mail addresses of the participants were collected from the website of the Brazilian Association of Oncologic Physical Therapy (ABFO).

The questionnaire contained information on sex, age, length of experience in caring for patients with breast cancer, region of the country, workplace and sector where the respondent works, changes in routine as a result of the pandemic, continuity of in-person care, number of patients monitored before the pandemic and those whose care was interrupted, remote follow-up and how patient contact was conducted at a distance. In addition, questions were asked about resuming treatment, changes observed in patients and clinical status of newly admitted patients.

The present study was approved by the Research Ethics Committee (REC) of the Hospital das Clínicas of the Federal University of Pernambuco, under protocol number 4,313,820.

Results

Six of the 46 completed questionnaires were excluded, one due to incorrect completion and five for duplicity. The sample was composed of 40 physical therapists, one (2.5%) male and 39 (97.5%) female, aged between 21 and 54 years, with mean and standard deviation of 37.4 ± 7.9 years. Most physiotherapists (50%) worked in the Northeast of the country, followed

by the Southeast (32.5%), South (12.5%), Midwest (2.5%) and North (2.5 %). Data on length of experience caring for patients with breast cancer, workplace and sector are described in Table 1.

EFFECT OF THE PANDEMIC ON THE PHYSIOTHERAPY TREATMENT OF PATIENTS WITH BREAST CANCER

Physiotherapists who treat patients with breast cancer, you are invited to participate in the research project entitled "Effect of the COVID19 pandemic on the physiotherapy treatment of patients with breast cancer".

This study is justified due to the importance of identifying the effect of the pandemic on the physiotherapy treatment of patients with breast cancer, in order to minimize it. The main object is to assess the impact of the COVID19 pandemic on the physiotherapy treatment of patients with breast cancer.

The data will be collected via an online questionnaire, which you will complete digitally.

The study poses a little risk, since it involves an online questionnaire, with the possibility of embarrassment or a feeling of invasion of privacy when answering the questions. However, these situations will be minimized because you will complete the instrument anonymously.

By participating in this study you will contribute to our understanding of the effects the pandemic could have on the treatment of patients with breast cancer, helping us to devise strategies to mitigate the effects identified.

You are free to participate or not. It is your right to refuse, and you can withdraw consent at any phase of the research, with no repercussions. All the information from this study will be confidential and disseminated only at scientific events or in scientific journals. You will incur no costs during this research.

If you have any questions or wish to receive more information on the study, contact us at: brenda4@hotmail.com

Click on "Next" below to confirm you have read the informed consent form and have decided to voluntarily participate in this study.

Figure 1 - First page of the online form containing informed consent.

EFFECT OF THE PANDEMIC ON PHYSIOTHERAPY TREATMENT OF PATIENTS WITH BREAST CANCER

Full name:*
Your answer _____

Sex:*

Female

Male

Age (only numbers):*
Your answer _____

How many years have you been treating patients with breast cancer?*

Less than 1 year

1 - 3 years

3 - 5 years

More than 5 years

In which region of Brazil do you work?*

North

Northeast

Midwest

Southeast

South

Where do you work?*

Outpatient/Public clinic

Outpatient/Private clinic

Public hospital

Private hospital

Home care

What sector do you work in?*

Intensive care unit

Hospital ward

Private office/Outpatient clinic

Home care

Your work routine:*

My routine has not changed because of the pandemic

My workload decreased because of fewer patients during the pandemic

My workload increased during the pandemic

My workplace treats patients with COVID and I was transferred to that unit

During the pandemic, in-person treatments for patients with breast cancer continued in the following sectors:*

Outpatient

Hospital admissions

Home care

None, all were cancelled

How many patients with breast cancer, on average, were you treating before the pandemic?*
Your answer _____

How many of your patients had to interrupt their treatment due to the pandemic?*
Your answer _____

Does your workplace provide any remote treatment for patients who are not going for outpatient treatment?*

Yes, the service provides remote treatment

Yes, I was advised to treat remotely, but was not provided with any resource to do so

My boss did not advise me to treat remotely

Not applicable

In relation to patients who were no longer receiving in-person physiotherapy treatment:*

An instruction booklet was sent by email or app and patients were subsequently called to provide further explanations

Patients only received a telephone call/contact with instructions

Treatment was continued through digital appointments

No contact was made or instruction booklet created

Have treatment for patients with breast cancer that were suspended because of the pandemic resumed?*

Yes

No

In the cases where treatment was suspended, but patients have resumed in/person treatment, was any change in their clinical condition observed?*

Yes, most patients exhibited a worsened clinical picture

No, the clinical picture of most patients remained unchanged

Yes, most patients showed an improvement in their clinical picture

Not applicable

In relation to new patients (whom you did not treat before the pandemic), do you consider that they are presenting with any difference when compared to patients in an habitual context?*

Yes, new patients are presenting with more complications and complaints than usual

No, the complications and complaints observed have been the same as those exhibited by patients at other times

I have not treated any new patient thus far

Figure 2 -Questionnaire to assess the impacts of COVID-19 on physical therapy care for women with breast cancer.

Table 1 - Data on physical therapist care

Professional experience	n (%)
Less than 1 year	4 (10)
Between 1 and 3 years	4 (10)
Between 3 and 5 years	7 (18)
More than 5 years	25 (62)
Workplace*	
Outpatient Clinic/Public clinic	9 (22)
Outpatient Clinic/Private clinic	19 (48)
Public hospital	15 (38)
Private hospital	3 (8)
Home care	9 (22)
Work sector **	
Intensive care unit	2 (5)
Hospital ward	11 (28)
Office/Outpatient	34 (85)
Home care	13 (32)

Note: *Some physiotherapists worked in more than one location.
 ** Some physiotherapists worked in more than one sector within their workplace or in one sector plus home care.

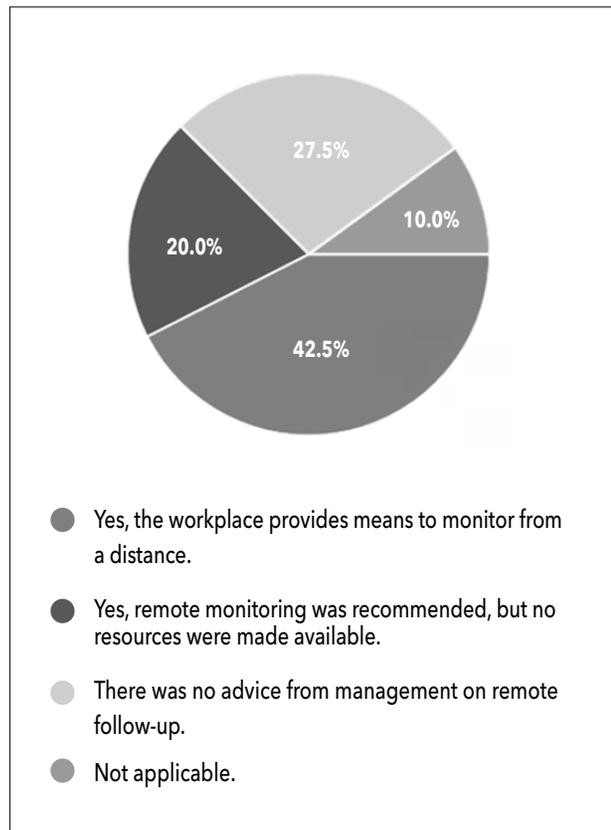
Data on workplace and sector revealed that 35% of physiotherapists worked in at least two different areas within the same institution or in different sectors, such as a hospital ward and outpatient clinic, or in more than one location. Most of the professionals (77.7%) involved in home care (22.5%) worked double shifts, providing services in hospitals and/or clinics, both public and private. A curious fact was that 85.7% of the physiotherapists who worked in at least two different locations had more years of experience, with at least three years in cancer physiotherapy.

Many workload changes occurred due to the need to adapt to COVID-19: nineteen (48%) had their workload reduced by the interruption of care due to preventive measures, five (12%) had an increased workload, ten (25%) were relocated from their sector to provide direct care to COVID-19 patients, and eight (20%) reported no change in their workload.

During the pandemic, it was found that 20% of appointments for breast cancer patients were cancelled. At the facilities that continued providing care, hospitalizations and outpatient clinic appointments were 40 and 42% of normal levels, respectively. Only 22% of home care appointments were continued.

There was a 72% drop in the number of appointments during the period of greatest restrictions when compared to before the pandemic (207 and 749, respectively). In regard to management counseling and remote monitoring strategies for patients who were not receiving in-person care, 27.5% of professionals did not receive any advice on remote monitoring and no guidelines were established for this purpose, as shown in Figures 3 and 4.

According to the interviewees, 82% of suspended treatments have resumed, 40% of professionals observed a worsening in the women's clinical condition, 30% considered the conditions similar and the other 30% answered "not applicable". In regard to admitted patients, 40% considered that complications and complaints were the same as those of women who sought care before the pandemic, 32.5% reported that new patients were presenting with more complications and complaints than usual and 27.5% have not treated any new patients to date.

**Figure 3** - Data on remote follow-up of suspended appointments due to the COVID-19 pandemic.

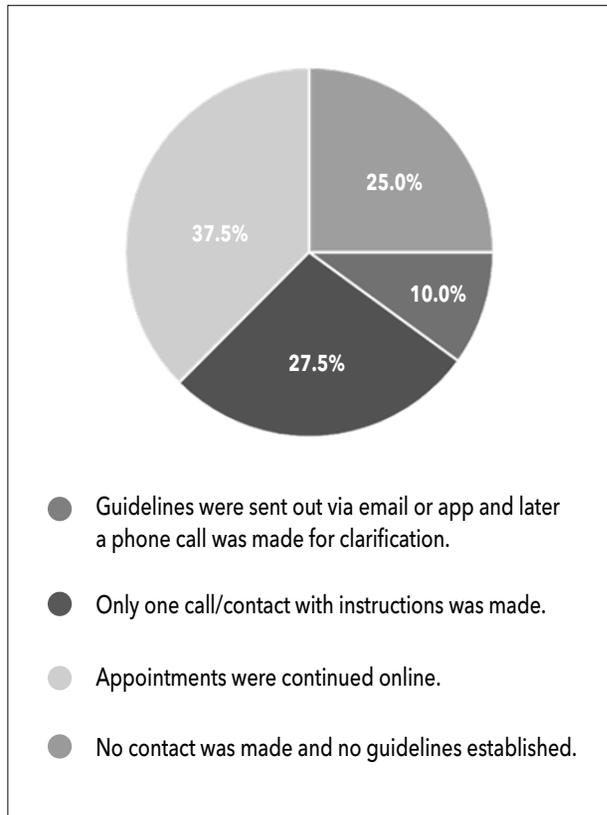


Figure 4 - Measures taken by physiotherapists during the COVID-19 pandemic.

Discussion

The data from the present study revealed that 72% of in-person appointments were discontinued, with the greatest impact on homecare. This result showed that the population strongly followed the WHO recommendations regarding social isolation, even if this implied a worsening in their patients' health condition. With respect to the suspension of in-person care, a similar result was found by Minghelli et al.,¹⁴ who evaluated 619 generalist physical therapists in Portugal, 453 of whom (73.2%) interrupted their in-person activities, but used digital tools to monitor patients.

According to the ABFO website, most physical therapists specialized in oncology are from the southeast of the country. Nevertheless, this study included several professionals working in the northeast region. All the specialists were contacted via email; however, only a small number completed the questionnaire. Positive feedback was given primarily by physiotherapists from

the northeast. Non-specialist professionals who treat breast cancer patients were also invited through social networks. It is important to point out that the authors are from the northeast, and have greater knowledge about the people from that region, which may also explain these results. With a view to improving patients' clinical conditions as well as minimizing the exposure of professionals, patients and those involved in the care process, the ABFO and the Brazilian Association of Physiotherapy in Women's Health (ABRAFISM) recommended the suspension of in-person care for stable patients (provided it did not compromise functionality) and remote support measures through teleservice or home exercise prescription.^{15,16} These measures were also adopted by other international organizations, such as the World Confederation for Physical Therapy, and the Federal Council of Physiotherapy and Occupational Therapy (COFFITO), through Resolution No. 516 from March 20, 2020, which allowed off-site care in teleconsultation, teleconsulting and telemonitoring.¹⁷

Telerehabilitation has been shown to be a promising model, providing several benefits.^{18,19} Most professionals (90%) in the present study adhered to some form of digital monitoring, from teleconsultation, with live assistance and video calls (37.5%), to follow-up calls by telemonitoring after instructions were sent by e-mail (10%), or only with routine calls for guidance (25%).

Areas where telerehabilitation programs were implemented as a strategy during the pandemic have shown a high level of acceptance and satisfaction by patients and physiotherapists, and have obtained satisfactory results in reducing postoperative breast complications, proving to be an effective tool in lessening the damage caused by the interruption of physical therapy.²⁰

Despite the good results reported in literature, in this study, 60% of patients whose in-person care was replaced by telerehabilitation reported a worsening of their clinical condition. This can be explained by the advanced stage at which the Brazilian population is diagnosed in relation to populations in developed countries, requiring aggressive cancer treatments and culminating in complications that are more difficult to treat, thereby increasing the need for in-person follow-up.²¹

Advanced disease staging may also explain the fact that 55.2% of physiotherapists who resumed treating women with breast cancer observed the

same complications and complaints when compared to patients treated at other times.

In Brazil, it was recommended that the pandemic should not affect or postpone cancer screening and treatment. However, there was a decline of up to 60 and 56% in diagnoses and surgical treatment, respectively, caused mainly by the patients' fear of exposure to the virus during medical visits and the reduced response capacity of health services in public hospitals, due to the priority given to COVID-19 patients.^{8,22} The results of the present study corroborate these data, since 25% of professionals in the sample were relocated from their sector to the front lines of COVID-19 care, thereby contributing to the interrupted care of women with breast cancer.

In the United Kingdom and several other countries, cancer screening was also suspended due to the drastic drop in referrals caused by the priority treatment for COVID-19 patients, reduced medical visits, postponed imaging examinations to monitor tumor growth, in addition to decreasing elective surgeries. This severely affected cancer diagnosis, active treatments and routine follow-ups, possibly leading to worsened health conditions, advanced stages of cancer and higher treatment costs.²³ In Turkey, on the other hand, studies show no delay in 98% of treatments or consultations in progress, probably due to the implementation of care strategies through online platforms and the priority to maintain on-going treatments, despite users' reporting changes in their daily routine.²¹

In spite of the limitations surrounding online care, this type of service has proven to be a beneficial option for providing long-term physical therapy, since patients can be observed in their home environment and their ability to modify and execute self-management strategies assessed. Moreover, the patients' functional mobility can be monitored using their own means and equipment, providing them with continuous feedback and supervision.²⁴ Given the results of this research, the limitations involving this modality of care may be related to the lack of counseling and training provided by managers to professionals, since only 20% provided advice on distance monitoring, but with no support, and 27.5% abstained from any counseling.

According to the findings and complications created by the suspension of care for breast cancer patients during the pandemic, there is currently a need to emphasize an interdisciplinary approach to breast

cancer care. Rehabilitation is essential because it plays an important role from the preoperative to postoperative phase, from the monitoring or functional recovery of the upper limbs and shoulder girdle to the prophylaxis and treatment of complications such as adhesions and lymphedemas and, consequently, in the reintegration of women into their daily activities.^{5,24}

Telerehabilitation may be an excellent tool, but there is a lack of training and encouragement from management for its satisfactory use, as seen in the present study, where almost 1/3 of professionals did not receive any advice or instructions on remote care or developing guidelines that could help in women's rehabilitation.

Conclusion

Due to the social isolation recommended by the WHO as a measure to control the pandemic, as well as the relocation of professionals to the front lines of COVID-19, most physical therapists discontinued their care of breast cancer patients. The suspension of in-person treatment, non-adherence to the telerehabilitation system, lack of management support, and the advanced stage when breast cancer is diagnosed are all factors that may influence the worsening of patients' clinical condition. However, since this is an unprecedented study in Brazil, at the time of this research there was no comparative data for the variables analyzed, which we consider a limitation. It is suggested that further studies be carried out to analyze the effects of suspending health services, as well as the impact of telerehabilitation on the clinical condition of Brazilian women with breast cancer.

Authors' contribution

BAAP, CKDD and CWSF were equally responsible for the conception, design, analysis and interpretation of data. BAAP wrote the manuscript and CKDD and CWSF revised and approved the final version.

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