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ORIGINAL ARTICLE

Availability of medical care and social support from the perspective of women with breast cancer during the COVID-19 pandemic

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Abstract

Aim This article describes the situation of women with breast cancer during the pandemic. The study assessed the accessibility of oncological care, experienced stress, and use of social support.

Subject and methods The study involved 158 women with breast cancer who lived in Poland. Purposive sampling was used. The research method was a diagnostic poll, and the research tool was a survey questionnaire designed by the authors of this study.

Results The results showed that the pandemic was an additional aggravating factor for the participants, was associated with difficulties accessing medical care, and generated anxiety related to potential hospitalization and the resulting limited contact with loved ones. All participants were concerned that they might be unable to continue treatment. Family situation did not affect the level of stress, but was associated with seeking social support. Participants living alone sought support outside their families more often. The use of psychological care differed depending on place of residence: participants living in large cities used it more often than participants living in medium-sized and small cities and villages.

Conclusion Breast cancer is a highly aggravating factor that was further exacerbated during the COVID-19 pandemic.

Keywords Women · Breast cancer · Medical care · COVID-19 · Social support

Introduction

Breast cancer is a neoplasm emerging from the epithelial cells of the ducts (85%) or lobules (15%) in the glandular tissue of the breast. Initially, breast cancer only develops in situ within a duct or a lobule, where it is usually asymptomatic and has minimal metastatic potential (Wałaszczyk and Gabryś 2018). Breast cancer is the second most common neoplasm in the world, after lung cancer. According to the World Health Organization (WHO), there were 2.3 million patients with breast cancer worldwide in 2020, constituting about 12% of total patients with cancer, with mortality amounting to 685,000 (IARC 2020). In the same year, 25,000 patients in Poland were diagnosed with breast cancer (primarily women), with mortality amounting to nearly 9000. This constituted an increase by almost 7000 diagnoses and over 1800 deaths compared to 2019 (IARC 2020; KRN 2018).

The results of breast cancer treatment depend to a significant extent on an early diagnosis, which in turn depends on access to specialized clinics and prophylactic programs and women's awareness about the risks related to cancer. The risk of mortality rises considerably when these factors become limited, as was the case during the COVID-19 pandemic.

The beginning of the pandemic is dated at December 2019, when the first case of pneumonia of unknown etiology was identified in the Chinese city of Wuhan (Li et al. 2020). Subsequently, over 136 million cases were identified from December 2019 to April 2021, with over 2.9 million deaths (WHO 2019). These numbers made the COVID-19 pandemic one of the most extreme crises in terms of public health in recent decades. At the beginning of the pandemic, before the vaccines were developed, protective measures involved standard anti-epidemic initiatives, i.e., travel and gathering restrictions, imposed social distance, isolation, and quarantine. Furthermore, the health care

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sector was reorganized to accommodate an influx of patients with severe cases of COVID-19. This, combined with the patients' fear of visiting hospitals and restricted operation of primary health care services, meant that fewer prophylactic tests were conducted, even though such tests are key to the early identification of a disease. In Poland, a 27% decrease in mammographic screening was observed compared to 2018 (Narodowy Instytut Onkologii 2021).

A cancer diagnosis is both a physically and mentally aggravating factor. Moreover, the pandemic constitutes an environmental factor that exacerbates the stress related to the diagnosis. Consequently, in addition to medical care, patients should be provided with various forms of support. In general, support is defined as help provided to an individual who is in a difficult situation. Support can be provided by professionals, i.e., people working in medical and assistance professions, as well as by family, friends, and nonprofessional groups. Support helps to restore balance in the beneficiaries' lives, while lack thereof may lead to pathological manifestations (Sęk and Cieślak 2023).

Material and methods

Study participants comprised women with breast cancer. The sampling was purposive. Inclusion criteria were female gender, age 18–67 years, consent to participate in the study, and time of diagnosis (no more than a year between the diagnosis and taking the questionnaire). The research method was a diagnostic poll, and the research tool was a survey questionnaire designed by the authors of this study. The study was conducted during the pandemic, at the turn of 2021 and 2022. The questionnaires were distributed both in paper form and online. Paper questionnaires were distributed during support group meetings (the Amazon support groups). Links to online questionnaires were published on message boards for women with breast cancer. A total of 192 questionnaires were collected, some of which were rejected due to missing essential information. The final sample size was 158 complete questionnaires, including 100 completed online and 58 in paper form.

Out of all 158 respondents, 95 had higher education (60.1%) and the remaining 63 had secondary education. The highest share of respondents lived in cities and were in a relationship. Table 1 presents the respondents' basic sociodemographic data.

Information about the stage of cancer was also collected. Pre-invasive breast cancer was diagnosed in 23% of the respondents, early breast cancer (I–II) in 42%, locally advanced breast cancer (III) in 23%, and advanced (metastatic) breast cancer (IV) in 12%.

The aim of the study was to determine the situation of women with breast cancer, in particular, to assess the availability of medical care and psychological support during the pandemic, and to identify potential associations between the respondents' family situation and experienced stress and use of support groups.

Table 1 Sociodemographic data

		N	%
Age	18–37 years	41	25.9
	38–47 years	62	39.2
	48–57 years	45	28.5
	58–67 years	10	6.3
Place of residence	Village	33	20.9
	City < 50,000 population	42	26.6
	City 50,000–100,000 population	10	6.3
	City 100,000–500,000 population	41	25.9
	City > 500,000 population	32	20.3
Family situation	In a relationship	104	65.8
	Living alone	54	34.2
Education	Higher	95	60.1
	Secondary	63	39.9

In order to achieve the aim of the study, statistical analyses were conducted using the IBM SPSS Statistics 24 software package. Kruskal–Wallis nonparametric variance analyses, the Mann–Whitney *U* test, the chi-square test, and other tests were applied. Statistical significance was assumed at $\alpha = 0.05$; however, results within the $.05 < p < .1$ range were interpreted as approaching significance. These specific statistical tests were selected due to their applicability for small sample sizes.

Results

Before the collected quantitative data were analyzed, the authors decided to determine whether the respondents' family situation differentiated the use of support groups.

The chi-square test was used, which proved it to be statistically significant: $\chi^2(1) = 14.60$; $p < .001$. A higher share of respondents who lived alone used support groups than those who were in a relationship. This association was moderately strong, as measured with Cramér's *V*: $V = .30$. The results are shown in Table 2.

The next step of the analysis assessed whether family situation differentiated the declared stress resulting from the disease. The Mann–Whitney *U* test was performed, and was found to be statistically nonsignificant: $U = 2700$; $Z = -0.43$; $p = .670$. The level of stress was similar in both groups.

Next, it was tested whether place of residence differentiated the declared access to oncological consultations during the pandemic. The Kruskal-Wallis test was performed,

Table 2 Family situation and use of support groups

			Family situation	
			In a relationship	Living alone
Were you a member of a support group between June 2020 and December 2020?	Yes	*N*	70	51
		%	67.30%	94.40%
	No	*N*	34	3
		%	32.70%	5.60%

which was found to approach significance: $H(3) = 6.75$; $p = .080$. Whereas this result did not allow for a post hoc analysis, Table 3 shows that referrals to a different medical center occurred most often among respondents who lived in villages, while postponing appointments occurred most often among those who lived in large and medium-sized cities.

Place of residence was also tested for its effect on the respondents' ability to continue treatment during the pandemic. One respondent was excluded from analysis due to extremely few answers being provided (category 4). The Kruskal–Wallis test was performed, which was found to approach significance: $H(2) = 5.00$; $p = .082$. Whereas this result did not allow for a post hoc analysis, Table 4 shows that respondents living in large and medium-sized cities most often experienced fear of restricted contact with loved ones.

Place of residence was also tested for its effect on the use of psychological support by the respondents. The Mann–Whitney *U* test was used, which proved to be statistically significant: $U = 1630$; $Z = -4.65$; $p < .001$; $r = 0.37$. Most of the respondents who used psychological support were residents of large cities. This effect was strong, as measured with *r*. The results are shown in Table 5.

Last, age was analyzed for its effect on the respondents' ability to continue treatment during the pandemic. One respondent was excluded from analysis due to extremely few answers being provided (category 4). The Kruskal–Wallis test was performed and was found to be statistically nonsignificant: $H(2) = 2.89$; $p = .236$. Consequently, the respondents' age was not significantly associated with the declared ability to continue treatment during the pandemic. The pandemic impacted young and old respondents equally: all respondents evaluated their ability to continue treatment as limited.

Discussion

The COVID-19 pandemic put severe strain on medical care systems around the world, which in turn impacted the lives of patients, including oncological patients. A range of restrictions on social contact and travel were introduced in an attempt to minimize the spread of COVID-19. Fear of contracting the virus caused many women to postpone or cancel their medical appointments, even when they showed symptoms of a disease (Figueroa et al. 2021).

COVID-19 had a varying effect on oncological care in Poland, depending on the phase of the pandemic. The most severe changes compared to preceding years concerned the number of first-time contact and hospitalization, screening,

Table 3 Place of residence and declared access to oncological consultations during the pandemic

			How did the pandemic affect your access to oncological consultations?			
			The waiting time was definitely longer	The appointment was postponed	I was referred to a different center	The pandemic did not affect my participation in oncological consultations
Place of residence	Village	*N*	3	3	9	18
		%	23.10%	12.50%	32.10%	19.40%
	City < 50,000 population	*N*	3	3	5	31
		%	23.10%	12.50%	17.90%	33.30%
	City 50,000–100,000 population	*N*	1	1	3	5
		%	7.70%	4.20%	10.70%	5.40%
	City 100,000–500,000 population	*N*	4	8	5	24
		%	30.80%	33.30%	17.90%	25.80%
	City > 500,000 population	*N*	2	9	6	15
		%	15.40%	37.50%	21.40%	16.10%

Table 4 Place of residence and declared ability to continue treatment during the pandemic

			How did the COVID-19 pandemic affect your ability to continue treatment?			
			The pandemic did not affect my participation in oncological consultations	The coronavirus did not affect my ability to continue treatment	I am worried about restricted contact with my loved ones should hospitalization be necessary (limited visits)	I am worried that my support group meetings will be suspended
Place of residence	Village	*N*	18	9	6	0
		%	20.90%	26.50%	16.20%	0.00%
	City < 50,000 population	*N*	24	11	7	0
		%	27.90%	32.40%	18.90%	0.00%
	City 50,000–100,000 population	*N*	7	2	1	0
		%	8.10%	5.90%	2.70%	0.00%
	City 100,000–500,000 population	*N*	20	8	12	1
		%	23.30%	23.50%	32.40%	100.00%
	City > 500,000 population	*N*	17	4	11	0
		%	19.80%	11.80%	29.70%	0.00%

Table 5 Place of residence and declared use of psychological care

			Do you use psychological or psycho-oncological care due to the disease?	
			Yes	No
Place of residence	Village	*N*	4	29
		%	7.00%	28.70%
	City < 50,000 population	*N*	12	30
		%	21.10%	29.70%
	City 50,000–100,000 population	*N*	5	5
		%	8.80%	5.00%
	City 100,000–500,000 population	*N*	13	28
		%	22.80%	27.70%
	City > 500,000 population	*N*	23	9
		%	40.40%	8.90%

and rehabilitation, and took place during the first wave of the pandemic (March–May 2020). Throughout this period, especially during the lockdowns, the decrease in prophylactic tests and diagnostics was particularly severe (Sęk and Cieślak 2023). In the United States, the number of mammography scans performed decreased by 89.2%, and the number of colonoscopies by 84.5% (London et al. 2020). In the UK, the number of all cancer diagnoses decreased by 18%, while the percentage of late-stage diagnoses increased (Purushotham et al. 2021). In Poland, the decrease in screening tests was significantly impacted by a notification from the president of the National Health Fund on March 15, 2020, on limiting screening tests in order to avoid the risk of spreading COVID-19 (NFZ 2020). As a result, screening tests were almost completely discontinued, especially during the first wave of the pandemic (March–May 2020), and were locally limited in the subsequent stages of screening. The decrease in screening tests, fear of infection, and numerous awareness campaigns conducted to reduce interpersonal contact were the likely causes behind the decrease in new cancer diagnoses. For example, a Spanish study found that colon cancer diagnoses decreased by almost half, primarily those performed as part of prophylactic tests (Suárez et al. 2021). Furthermore, many clinics reported a doubling of the waiting time for diagnostic procedures (Bosch et al. 2021). The present study also showed that the participants were referred to other centers or had their appointments postponed.

The authors of this study believe that the true effects of delayed diagnoses will not be understood for some time. However, there are some predictions; for example, the breast

cancer mortality rate in the UK is speculated to increase from 7.9% to 9.6% over the next 5 years (Maringe et al. 2020).

The pandemic had a major impact as an additional aggravating factor on the mental health of women with breast cancer. Research conducted by other authors indicated that female patients were afraid of relapse or failing to completely cure the disease due to delayed access to medical care (Sokas et al. 2021). Other aggravating factors were the logistics of the treatment process and availability of follow-up appointments (Massicotte et al. 2021). The present study demonstrated that participants living in large and medium-sized cities were afraid of limited contact with their loved ones in the case of hospitalization. This fear was related to the restrictions imposed on visits and travel. Consequently, it must be emphasized that COVID-19 constituted an additional stressor for the participants.

It seems that the priority should be to provide oncological patients with not only medical care, but also psychological care. The results of studies conducted in Canada, the UK, and other countries show that postponed surgeries and breaks, delays, and changes in treatment procedures due to an overloaded health care system affected women with breast cancer by increasing their anxiety, depression, insomnia, fear of relapse, emotional stress, and emotional sensitivity related to the pandemic (Choobin et al. 2021; Chapman et al. 2020). Isolation meant that women with breast cancer lost access to many supportive mechanisms, including personal communication and participating in support group meetings. Researchers consider communication as key in overcoming psychological hardships, providing the necessary information, counseling, and support, and creating a safe environment for the patients (Schifferdecker et al. 2021). Professional support offered by psychologists also cannot be underestimated as a space for communication. This study revealed a statistical association between use of psychological support and place of residence. Residents of large cities use such support more often, which may be the result of its greater availability in large cities. However, this association may also result from stereotypes related to the use of psychological care and the social perception of individuals with mental disorders. Poland is one of the few countries in which studies on attitudes toward individuals with mental disorders have been conducted systematically, in several-year intervals, among representative samples of society (Wciórka 2012). Unfortunately, the results indicate that low awareness and fairly rigid stereotypes among society (with only slight differences between ages and genders) significantly affect attitudes toward individuals with mental disorders. Living in a large city makes it easier to remain anonymous, which in turn facilitates the decision to attend psychological consultations. Groups dedicated to women with cancer, including breast cancer, are viewed differently.

The use of support is determined by its availability, which includes both a patient's family and support groups. This study revealed an association between the use of support groups and the participants' family situation. Participants living alone joined support groups considerably more often that those living with their families. It can be assumed that individuals with families receive sufficient support, and consequently do not seek it among organized support groups. Individuals who live alone seek contact that will help them satisfy their needs.

Conclusions

Breast cancer is a highly aggravating factor that was further exacerbated during the COVID-19 pandemic.

The results obtained in this study lead to the following conclusions:

- The participants' family situation differentiated their use of support groups but did not affect the stress experienced due to the disease.
- Place of residence differentiated the responses concerning the participants' access to oncological consultations during the pandemic: referrals to a different center occurred most often among participants living in villages, whereas postponed appointments occurred most often among those living in large and medium-sized cities.
- Psychological care was predominantly used by residents of large cities.
- Participants living in large and medium-sized cities declared fear of limited contact with their loved ones in the case of continued treatment during the pandemic.
- Age did not significantly differentiate the participants' assessment of access to continued treatment during the pandemic.

The authors of this study acknowledge that the sample size was small. This was caused by reduced access to participants under the COVID-19 restrictions. However, the results clearly indicate the difficult situation of women with breast cancer. Supporting these patients is a challenge not only in the age of the pandemic, but every day. Access to medical care, use of psychological care, and support from loved ones, in addition to improving physical health, may improve mental and social health as well.

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Data availability Data available on request from the authors.

Declarations

Disclosure statement The authors report no potential conflicts of interest.

Consent to participate The form contained information about the study for the participants. Submission of a completed form was taken as consent for participation in the study.

Consent for publication Study information stated that the information provided by the participants will be published; however, their identity will not be revealed at any stage.

Ethics This research is noninvasive, and the study was conducted in accordance with the Declaration of Helsinki (1964); the research tool was only a questionnaire.

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