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ORIGINAL ARTICLE

Socio-demographic Antecedents, Intrapersonal factors and Patient Delay among Breast Cancer Cases in Punjab Province

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ABSTRACT

Aim: To find out the relationship between socio-demographic, intrapersonal factors and patient delay among breast cancer cases.
Method: It was a cross-sectional study conducted in three divisions of Punjab province i.e. Lahore, Faisalabad and Multan. A total of 350 breast cancer patients who were under treatment in the public sector hospitals participated in the study. The respondents were selected through multistage sampling technique and responses were taken through the intrapersonal scale of breast cancer patients developed by the researcher.
Results: Under socio-demographic antecedents, income, education, and distance were associated with the patient delay. Poor awareness of the disease was found among respondents, about 40% of the respondents were unaware of its signs and symptoms. A majority of the respondents (45.6%) did not share the basic signs and symptoms of the disease with family members due to shyness. The traditional mode of treatment was preferred by more than 50% of the respondents (SA=29.1%, 22.6 A=). A significant relationship was also found between intrapersonal factors and the patient delay.
Conclusion: The socio-demographic factors were found to be important determinants of the patient delay among breast cancer patients. Intrapersonal factors including less knowledge and awareness, fear of disease, shyness, and belief in spiritual healing and alternative medicine were negatively affecting the timely presentation of patients to the doctors. So, there is a need to launch effective awareness programs based on the socio-demographic characteristics and individual circumstances of the patients.
Keywords: Socio-demographic antecedents, Intrapersonal factors, Breast cancer, Punjab

INTRODUCTION

As per Global Cancer Report in year 2018, 2.08 million breast cancer cases were reported approximately[1]. The two-to-three-month delay in diagnosis of breast cancer cases was complained by more than 25% females that reflects the 15% increase in the death rate of breast cancer patients among all type of cancers in low and middle income countries[2]. In developing country particularly in Asia, breast cancer treatment is becoming a challenge as due to lack of resources these countries are unable to provide proper medical and health care assistance and facilities to the patients[3]. In Asian countries, individual responsiveness to the disease by females is also found to be poor as women are unable to reach health care facilities timely due to social responsibilities imposed by the society[4].

Pakistan as compared to the other countries of the region like India and Iran has 2.5 times higher cases of females with breast cancer. As per the report of Agha Khan University Karachi, cancer is one of those diseases which impose a devastating and larger economic burden on patients[5]. At a particular age, in Pakistan 50.1/100,000 women every year are diagnosed with this disease. Furthermore, statistic indicates that every 9th woman in Pakistan is at risk of developing breast cancer during her life span. In Asian countries, the incidences of this disease are (>5.2 times) and mortality rate (>2.8 times) higher[5,6]. A higher number of deaths are being caused by breast cancer due to the diagnosis of the disease at a very advanced stage[7]. In this regard, Pakistani women do not have proper awareness of the disease, its initial symptoms for timely treatment and especially of breast self-examination.

At Intrapersonal level, lack of education, insufficient economic resource, poor awareness level of the disease and its symptoms are the most significant factors associated with the presentation delay of the patients. The knowledge about symptoms, late diagnosis and treatment of the disease are almost found to be absent among people[8]. Prevailing fear of the disease and its associated risk of death among individuals as well in communities is also an obstacle in the timely treatment of the disease[9,10]. Moreover, poor attitude towards cleanliness and bad hygiene practices are also factors that add a caveat on this situation[11].

According to the report of the World Health Organization, over last few years in Asian countries the incidences of breast cancer disease are on rise dramatically [12]. In Pakistan, the survival rate of the breast cancer patients is very low and an increase in the mortality rate of these patients is also observed. As per one of the researches[13], the delayed presentation of women in Pakistan is an outcome of the poor knowledge of the disease, lack of time due to overburden of the responsibilities on women, lack of exposure and disbelief[14]. Fear, denial of the risk of disease, shyness, poor self-efficacy was among the other individual factors revealed by another research in this context [15]. Another screening barrier identified was fatigue that adversely affect women's' ability to carry out their daily activities[16]. The other daily life family and social stressor faced by women in their everyday life further don't allow them to think that they might be affected with breast cancer disease[17].

So, various socio-demographic and intrapersonal factors affect the patient delay. In this study, "patient delay" is considered in terms of time of presentation delay[18]. And this delay in terms of times is based on ignoring the consultation after symptoms appear and late consultation to the doctor[19].

The literature-based evidence suggests that it is very crucial to explore the socio-demographic and intrapersonal factors that determine the time of patient delay in treatment so that a comprehensive approach may be adopted by public health experts to deal with the delay. Thus, the study focused on the individual factors of the delay which were ignored by previous researches in the local context.

METHODOLOGY

It was a cross-sectional study conducted from March 2021 to August 2021 in three main cities of the Punjab i.e., Lahore, Faisalabad, Multan. The breast cancer patients registered in the five main hospitals of these three cities were the primary respondents of the study. The respondents of the study were selected through a multistage sampling technique. At the first stage, a list of registered breast cancer patients from all the hospitals was taken. Once the list of these patients was taken through simple random sampling 70 respondents from each hospital were selected. A total of 350 respondents were

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approached to gather data. The data was collected through a questionnaire. The socio-demographic part covered age, income, education, distance to a health facility. Intrapersonal factors included awareness, shyness, fear, denial of disease, belief in traditional and alternative medicine, belief in spiritual healing, and affordability issues. The Cronbach alpha of the scale was .925. The patient delay was measured as "not delay" with 1-3 months' time duration consultation to a health care facility or doctor and more than 3 months' time span in consultancy was considered as "delay". The study is the part of researcher's doctoral dissertation and the Advance Study Board, University of the Punjab via letter No. D/8555/Acad approved all the protocols of the study. Moreover, the anonymity and confidentiality of the information were maintained by researchers. The respondents were properly guided about the study and a written informed consent was taken from the respondents. Descriptive statistics, correlational analysis, and binary logistic regression were applied to the data.

RESULTS

Socio-Demographic Characteristics of the Respondents: The mean age of the respondents of the study was (M=43.41, n=350). Average monthly income of the respondents' family was found to be PKR 16270/- Pakistani rupees. The health care facilities to the respondents were reported to be located at the average distance of 109.52 Miles. The educational profile of the respondents shows that about 174(49.7%) of the study participants were illiterate that represents a majority. From grade 1-5 level of education, 24(9.7%) respondents were found whereas 10.6 (n=7) respondents had grade 6-8 level of education. The respondents who had education till 10th grade were 15% whereas 5.1% had intermediate level of education, 5.4% had graduation degree and 5.4% were postgraduates. Married respondents were found to be in majority 279(79.7%), 1% of the respondents were divorced and 10.6% were unmarried.

The urban residents were found to be in majority with a percentage of 53.1% where 46.9% of the respondents were rural dwellers. A majority of the study participants were housewives 280(80%) or unemployed, skill full employment was reported by 8.3% of the respondents whereas 1.7% of the respondents were working as sales person or domestic workers representing unskilled labour. About 9% of the respondents had good positions in banking sector or colleague's and 4% of the respondents were students.

Intrapersonal Factors Associated with Patient Delay of Breast Cancer Cases: The intrapersonal factors of the patient delay are represented in table 01. A majority of the respondents 40% (17.4% and 26%) did not had basic knowledge of the signs and symptoms of the breast cancer disease. Due to shyness, a big majority 18.6% and 26.9% of the study participant did not verbalize the issue to the family members and avoided reporting their health issue whereas 24.3% of the respondents shared the initial signs and symptoms to the family members.

About 15.4% and 24.3% were of the view that breast cancer disease can be treated in the hospitals whereas a majority 40% (18.6% and 26.9%) perceived it a disease that cannot be treated in the hospitals. About 50% of the respondents were not having fear of the treatment of disease whereas 30% respondents (17.7% and 17.4%) were fearful of the cancer treatment. The traditional medicine was a preference in the treatment given by more than 50% of the respondents before consultation to the medical and health care facility (SA=29.1%, 22.6 A=). In context of spiritual healing, 17.1% and 25.7% of the study participants also preferred to consult some spiritual healer for the treatment rather than any doctor. Due to economic burden and unaffordability o the treatment, about 19.6% and 25.4% of the respondents could not start their treatment even in the government hospital.

The significant association was found between the age and patient delay (r=.18, p<.01) through Pearson product-moment correlational analysis. The income was found to be negatively associate with the patient delay (r= -.12, p<.05) representing the fact that low-income group had more patient delay as compared to high income group. A significant negative association was found between education and patient delay (r = -.11, p<.05). The findings explain that illiterate women had more patient delay as compared to the educated women. A significant positive association was also found between the distance and patient delay (r= .64, p<.001). These findings explain that patients having more distance to health care facilities were presented late for the treatment.

In order to test the hypothesis "if there is a relationship between individual/intrapersonal factors and the patient delay" binary logistic regression was applied. The model as Cox & Snell, and Nagelkerke R^2 were .317 and .423 respectively in logistic regression were found to be predictor variable as intrapersonal factors. For the constant B = (-9.76), SE = 1.17, Wald=70.17, p< .001 was unstandardized beta weight. One time increase of the estimated odd ratio increase (nearly 51%) [Exp (B) =1.08, 95 CI (1.01, 1.09)] of every unit increase of intrapersonal factors for the patient delay was found.

Table 1: Frequency and Percentage Distribution of Intrapersonal Factors Associated with Delay in Treatment (N=350)

Items	**SA**	**A**	**N**	**D**	**SD**
	f(%)	**f(%)**	**f(%)**	**f(%)**	**f(%)**
The basic signs and symptoms of breast cancer was not known to me.	61(17.4)	91(26)	59(16.9)	60(17.1)	79(22.6)
Due to shyness, I feel reluctant to discuss with someone about its symptoms in family.	65(18.6)	94(26.9)	52(14.9)	54(15.4)	85(24.3)
I didn't really accept that breast cancer issue could be treated in a hospital.	58(16.6)	69(19.7)	62(17.7)	55(15.7)	106(30.3)
There was a fear of treatment in my mind.	62(17.7)	61(17.4)	45(12.9)	62(17.7)	120(34.3)
Initially I preferred traditional medicine for the treatment.	102(29.1)	79(22.6)	52(14.9)	56(16)	61(17.1)
Initially believing on the effectiveness of spiritual healing, I preferred it for my treatment.	60(17.1)	90(25.7)	71(20.3)	63(18)	66(18.9)
My treatment started late as I did not have money for the treatment of this disease.	65(19.6)	89(25.4)	58(16.6)	71(20.3)	671(9.1)

Note f=number of respondents, %=percentage SA= Strongly Agree, A=Agree, N=Neutral, D=Disagree, SD= Strongly Disagree

Table 2: Correlation Analysis between Socio-demographic factors i.e. Age, Education, Income, Distance, and Patient Delay (N = 350).

Variables	***1***	***2***	***3***	***4***	***5***
Age		.032	-.316***	.128*	.184**
Income			.218***	-.127*	-.122*
Education				-.139**	-.109*
Distance					.643***
Patient Delay					

**p<.05, **p<.01, ***p<.001*

Table 3: Binary Logistic Analysis Predicting Individual/Intrapersonal on Patient Delay (N = 350)

Variables	***B***	***SE***	***Wald***	***OR***	***95% CI [LL,UL]***
Individual/Intrapersonal Factor	0.05**	.018	7.048	1.05	[1.01, 1.09]
Constant	-1.978***	0.315	39.487	.000	

Note. OR = odd ratio, CI = confidence interval, LL = lower limit, UL = upper limit., **p<.05, **p<.01, ***p<.001*

DISCUSSION

The socio-demographic antecedents such as income, age, and education are the main determinants of the patient delay along with other individual factors such as knowledge, awareness, attitude, belief about the disease. The findings of this research inferred low income as a major determinant of the patient delay as due to poverty the patients are unable to approach the medical treatment timely. Few previous studies also reported that increasing death rate among females due to breast cancer is an outcome poverty that leads to late detection and late treatment[20]. Moreover, level of education and awareness were also found to be important determinants in the timely treatment of breast cancer patients. The lack of education of respondents as well as family members, caregivers and the key decision makers of the families also badly affect the awareness level about the disease. Another study found[22] that initial symptoms were not recognized by the patients at early stages as they were not aware of the breast cancer disease. Distance to health care facility was another hindrance associated with the patient delay of the breast cancer patients as the studies conducted by few researchers [21,22] also reported that long-distance, issue of accompanying person and traveling time required to reach health care facility thwarted the regular visit of patients to the hospitals.

Intrapersonal factors such as shyness, belief about the disease, fear of treatment, preference to use alternative medicine, and spiritual healing were found important determinants in the patient delay. As narrated earlier, awareness, low income, and knowledge were poor among respondents about breast cancer. Moreover, due to shyness, they avoided discussing mater even with family members that caused the delay. The same observations were discussed by Gulshan[23]. The study found the main reasons of the delay in the diagnosis and treatment such as shyness, avoidance to get physical examination, lack of information about the disease and keeping the disease secret from the family members. Another factor was the fear of treatment of the disease as it was perceived as a painful and expensive treatment even that does not cure the patient. Women also hide their breast cancer issue as they have a fear of rejection from the husbands and family members particularly from inlaws[24]. Resultantly, most of the patients' first preference was to approach some spiritual healers and to consult alternative medicine for treatment that even worsen the situation of the patient.

CONCLUSION

This study concluded that socio-demographic antecedents were the basic determinant of the patient delay in the treatment of breast cancer. In this regard, poverty, illiteracy, and long-distance to health care facilities were found to be significant factors. Moreover, intrapersonal factors such as awareness, attitude, behaviour, beliefs on alternative medicine, and spiritual healing were significantly associated with the patient delay. On the basis of these results, it is expected that these identified factors will be helpful for public health experts and policymakers in order to design effective breast cancer awareness programs in the country.

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