

RESEARCH ARTICLE

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Community and Policy Factors Influencing the Decision to Undergo Screening Mammography amongst Indian Women in the United Arab Emirates

Leena R David¹, Fred Murphy², Shaista Salman Guraya³, Mohamed M Abuzaid^{1*}

Abstract

Objective: This study explored the expectations, requirements, and recommendations and identifies the socio-ecological determinants for the informed uptake of screening mammography amongst expatriate women residing in the UAE. **Methodology:** A qualitative research approach was adopted using five focus group discussions. The study comprised two populations- those who had undergone screening mammography and those who had not. Thematic analysis- the six-phase model was adopted and modified for data analysis. **Results:** The factors that influence the rate of uptake of screening mammography by the participants were multifactorial and reciprocal. The community determinants identified are cultural beliefs, medical professionals, breast cancer survivors, community organizations, and media. The health policies in an expatriate's home country and adopted country were found to have a considerable influence on the health behaviors of the participants. A comprehensive approach to change in health behavior is required to increase the informed uptake of screening mammography by expatriate women residing in the UAE. **Conclusion:** The study identified the need of developing migrant health units with community navigators, international health collaboration, migrant health directory, risk assessment team, automatic invitation system for screening, referral system, migrant cancer registry, and psychological support team in UAE. However, further studies are expected to give a wider perspective.

Keywords: Breast cancer- screening mammography- socio-ecological model- United Arab Emirates

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Introduction

One of the most reliable methods for the early detection of breast cancer is screening mammography (American Cancer Society, 2022). The cancer cases diagnosed in the first stages are easier to treat and have better chances of survival (WHO, 2017). Breast cancer screening among the population in different countries was introduced by late 1980s when the randomized controlled trials showed that there was a reduction in the mortality due to breast cancer (Lauby-Secretan et al., 2015; Johns, 2017).

The incidence rate of breast cancer in India found to be 30.5, 25.8 per 10,000 females respectively in urban and rural areas (Stanford et al., 1995). There is a large migrant Indian population in the United Arab Emirates (UAE) estimated at 2.24 million (Badam, 2021). Some studies reported that breast cancer incidence among migrant populations differs from those recorded in their home and host countries (Purkayastha, 2017). In both UAE and India, although the annual screening mammography is recommended for women forty years of age and older (Breast Cancer India, 2022), many women ignore this.

Therefore, it is crucial to identify the factors that affect the rate of informed uptake of this procedure and devise strategies to improve the uptake.

In UAE, for both locals and resident expatriates; free, discounted, and self-pay screening mammography options are offered by both government and private hospitals. Breast cancer initiative, the Pink Caravan through local and national campaigns multiple times a year provides free screening mammography at various locations of the UAE.

Different socio-ecological factors, highlighted in the socio-ecological model (McLeroy et al., 1988), such as individual, interpersonal, community, organizational, and policy-related factors, have a pivotal role in influencing women's breast cancer screening behavior. This study aimed to identify the socio-ecological determinants focusing on community and policy level and strategies that may influence the uptake of screening mammogram among Indian women residing in the UAE. We focused on community and policy level as this is a novel study that analysed these factors in the context of expatriate in UAE.

¹Department of Medical Diagnostic Imaging, College of Health Sciences, University of Sharjah, United Arab Emirates. ²Diagnostic Radiography, School of Health and Society, University of Salford, United Kingdom. ³Royal College of Surgeons Ireland & Medical University of Bahrain, Bahrain. *For Correspondence: mabdelfatah@sharjah.ac.ae

Materials and Methods

This qualitative research explored the socio-ecological factors that influence the uptake of free screening mammogram by Indian women residing in the UAE from an emic perspective in connection to the location they inhabit. Critical ethnography approach was used as it allows exploration with an interpretative lens to identify the internal and external relationships that influence how a particular group behaves as well as it provides the opportunity to change behaviours (Taylor et al., 2013; Palmer et al., 2017).

In qualitative research there is disagreement on the sample size (Saunders et al., 2018), however, according to Guest et al., (2017) focus group should consist of typically six to ten participants, although it may just have two or three depending on the goal of the study. Furthermore, there is debate on the number of focus groups necessary to adequately to address a research objective. However, it is frequently stated that a research study needs at least two or three to uncover the most prevalent themes (Guest et al., 2017).

Data Collection

Focus group discussions (FGD) were conducted to explore the collective experiences and views of the participants regarding breast cancer screening. Before actual FGDs, FGD guides (Appendix A) were developed to provide contextual landmarks for gathering the data and to ensure that all the intended interview topics were covered. The FGD guides were used in the Malayalam language (language used in India) to be understandable to all participants (Côté-Arsenault et al., 2005). All FGDs were conducted by the principle investigator of the research, who is a native speaker of Malayalam. No personal information gathered before or during data collection. The participants' demographic data were collected personally at the end of the FGD.

A minimum of three participants was assigned to each FGD, and five FGDs were conducted. The target focus groups were population 1- consisting of women who had undergone screening mammogram in UAE or India, and population 2- consisting of women who had not undergone screening mammography. Both purposive and snowball sampling techniques were adopted in participant recruitment.

Participant Characteristics

Population: 1 (Indian women who underwent screening mammogram): the participants were; 40 years or above, natives of India, reside in UAE for minimum two years and not resided in any other country, undergone screening mammogram in the UAE or India. The participants should not be breast cancer survivors or had diagnostic mammogram.

Population: 2 (Indian women who have not undergone screening mammogram): in population 2 only women who had never undergone screening mammogram were included.

Analysis of the findings

The thematic analysis was approached keeping the theoretical constructs of socioecological model theory which led to a deductive but at the same time an inductive lens was applied while looking at the data. We followed the Braun and Clarke (2006) a six-phase process to capture unique findings from the transcripts. Data trustworthiness (Guba, 1981) was achieved through obtaining credibility, confirmability, dependability by investigator triangulation, member check, researcher reflexivity and prolonged engagement.

Results

The results consider the community and policy factors for the informed uptake of screening mammography amongst Indian women in the UAE. The FGDs were conducted among 25 participants. Table 1 shows the participants demographic characteristic.

Community factors

The study showed that community had a greater influence on the uptake of screening mammography. Community determinants found are cultural beliefs, medical professionals, breast cancer survivors, community organizations, and media.

Cultural beliefs

Cultural beliefs influence cognitive processes and practices, and they were found to influence participants' attitudes regarding mammography screening. The participants conveyed that in Indian culture, women may not be willing to expose their breasts even for a medical examination; therefore, was considered a shameful act. Participants believed that undergoing screening mammography would give a false impression to others in the community that they suffer from breast cancer. Some participants expressed their concern about different types of attitudes from the community if they get diagnosed with breast cancer. So, they do not prefer to experience such a situation and cited as a reason for avoiding screening mammography.

'Breast examination; a shameful procedure! Women should have an open mind to undergo mammography' -FGD 2: (Population 1)

'If someone hears that I have undergone this test, they think that I have cancer; otherwise have to prove to them' -FGD 3: (Population 2)

'Women diagnosed with breast cancer will be watched through a different eye and with sympathy' -FGD 5: (Population 2)

Medical Professionals

Participants relied on messages shared by medical professionals rather than those posted or shared by non-medical individuals. They believed that medical professionals had better knowledge about breast cancer. This highlighted the role of medical professionals in raising the public's awareness of the importance of screening mammography.

'One of my friends shared an interview video with a

Table 1. Demographic Characteristics of the Research Participants

Variables		Population 1			Population 2	
		FGD 1 (n=5)	FGD 2 (n=3)	FGD 3 (n=7)	FGD 4 (n=6)	FGD 5 (n=4)
Age (Range)		46-58	49-54	47-54	49-58	46-53
Location		Sharjah	Ajman	Sharjah	Sharjah	Ajman
Educational	Pre-Degree	1	0	1	0	0
Status	Bachelors	2	1	4	3	1
	Masters	2	2	2	3	3
Residential duration		9-32	7-25	5-25	4-20	10-18
Employment status	Yes	4	3	6	3	4
	No	1	0	1	3	0
Marital status		Married	Married	Married	Married	Married

doctor about breast cancer on Facebook. That doctor conveyed how to do self-breast examination and portrayed that if it is diagnosed in early stage, no one should worry about the disease. Because of that reason I did screening mammography' -FGD 2: (Population 1)

Breast Cancer Survivors

A breast cancer survivor could positively affirm the importance of early detection of breast cancer. Their living experience could make other women understand the meaning and benefits of early detection, motivating them to undergo screening mammography. The participants stated that they would trust messages conveyed by breast cancer.

'One of my relative diagnosed by breast cancer early and survived. Currently she is married and gave birth. So, I thought to do screening mammography' -FGD 1: (Population 1)

'Breast cancer survivors are living testimony, influencer and motivator to others to undergo mammography -FGD 2: (Population 1)

Some participants also admitted that survivor experiences may be painful and stressful to the audience and herself.

'We feel sad about survivors, and it is difficult to face others -FGD 2: (Population 1)

Community Organizations

The participants' views call attention to their community organizations like churches, Indian community centers. Participants believe that their community organizations could positively impact women and their health behavior.

'In UAE, we depend on our communities more than our relatives' - FGD 1: (Population 1)

Participants prefer direct contact from screening mammography centers or community centers, which should gather and spread this information among. Some participants indicated their faith in community leaders, particularly females, while others did not believe gender was a significant factor.

'I think the pastor aunty, community leader has a major role. Their words will consider as believable by the members in the community' - FGD 2: (Population 1)

'If the leader is male, maybe, they may not share with the women' -FGD 3: (Population 2)

'I do not think that the pastor of a church has a limitation to give information. Our pastor is an open-minded man; he wants to see us healthy. He always recommends good things' -FGD 2: (Population 1)

Media

Participants stated that social media had an impact on their awareness of breast cancer screening and early detection. Some participants, on the other hand, noted that media may lack specific information and similar messages, and so lose its relevance and utility.

'I went to do it as I watched a video in social media that showed cancer that is diagnosed earlier are easy to treat. -FGD 2: (Population 1)

'Advertisements will be seen, but do not know whom and how to approach' - FGD 3: (Population 2)

'I usually ignore WhatsApp forwarded messages as I don't know whether it is fake or not' -FGD 1: (Population 1)

'In some way running a hospital is a business, we think they are sending a message for their business only' -FGD 4: (Population 2)

'If the government give advertisement, that will be trustworthy and reach to them' -FGD 1: (Population 1)

Academic Institutions

The participants believed that academic institutions have an important role in raising awareness of breast cancer early detection to current and future generations.

'Students can understand, share information, raise awareness about self-detection and other tests' -FGD 2: (Population 1)

'Awareness in academic institutes can help students to practice and convey trusted messages to their parents.' -FGD 3: (Population 2)

Policy factors

Health policies in an expatriate's home country and adopted country were found to have a substantial impact on the health behaviors of the participants. Participants emphasized the importance of public awareness and collaboration between India and the UAE.

Governments

Participants acknowledged the breast cancer screening

initiatives by the UAE government.

'They (UAE government) are doing many activities for breast cancer screening. I think it is not reaching to everyone.' - FGD 2: (Population 1)

'Many lifestyle diseases can be diagnosed early, not only breast cancer... If the India government arranges tests free of cost that will be helpful. We are the major source of India's income. They (India government) can consider our wellbeing' -FGD 2: (Population 1)

Automatic Invitation system

The participants suggested developing automatic invitation system by government to overcome the impact of the various influencers present at the socio-ecological level.

'Automatic invitation will help us to overcome the fear. Then women will start to think that we must do it' -FGD 4: (Population 2)

Psychological support

According to participants, a psychological support team is required to educate women and their families to undergo screening mammography and manage their stress if diagnosed with breast cancer.

'Better to wait until there is symptoms. If diagnosed mental problems will arise and find difficult to face the results too' -FGD 4: (Population 2)

International health collaboration

The participants suggested that the India community associations in the UAE could work towards addressing their members' health concerns.

'There are many mediators between UAE migrants and the Government of India which are able to convey the population needs. If the government opens a facility for women to do mammography and other tests that will be very helpful for everyone' – FGD 1: (Population 1)

Discussion

This study highlights the interlinked and significant impact of socio-ecological determinants on the early detection of breast cancer using screening mammography among the Indian community in the UAE. Indian women in the UAE have close links with other community members through various formal venues. This form of close social ties inspires trust in community leaders and their organizations. This may be because the members share the same cultural values and traditions and can share culturally sensitive information in a foreign land, while their relations with individuals at their home decline (the distance decay effect) (Matous et al., 2013).

A study conducted in India supported the idea that community participation involving volunteers collaborating with the healthcare system and local government could increase breast cancer detection (Parambil, 2019). Further our study found that academic institutions play a significant role in spreading awareness of the importance of screening mammography. However, studies showed that awareness of breast cancer, the risk

factors, and screening methods among teachers and students was too inadequate to understand the importance of early detection and practicing screening mammography (AlBlooshi, 2017). Meanwhile students in health care shows satisfactory level of knowledge and skills regarding screening and early diagnosis of breast cancer (Zongo, 2017). Therefore, it is essential to implement educational programs to increase the knowledge, attitude and to convey the required changes in lifestyle and nutritional patterns related to breast cancer (Asadi, 2018).

Our study also found out that it requires serious efforts to change the external factors beyond the control of the individual or community. For improved outcomes, context-specific considerations, as well as interprofessional collaboration are essential (Wu et al., 2020). Moreover, the first-degree relatives of breast cancer patients, the high-risk individuals should receive comprehensive support and interventions for early detection of breast cancer (Mulmi et al., 2021). Many participants had highlighted that both the UAE and the India governments could significantly influence the uptake rate of screening mammography in expatriates. The appeal to governmental intervention may be explained by the fact that migrant workers significantly contribute to the India economy yet no consideration on their health (Hameed, 2013). It has been claimed that 'no state in India is as historically integrated and embedded with the world system economically and culturally as the state of India. Roughly 18 percent of households in India have at least one member working overseas (Jones, 2015).

Studies that assessed healthcare services accessible to refugees and migrants in European countries under migratory pressure concluded that expatriate communities usually face many challenges in accessing healthcare services due to the high cost of the health services, lack of reliable information, and cultural differences (Chiarenza, 2019; Gostin, 2019). A study conducted among British-Pakistani women highlighted the importance of conducting regular events in faith community centres and schools as well as in creating screening information leaflets for the migrant population. A study conducted among the immigrant minority women in Canada also confirmed that barriers to breast cancer screening continue to exist and emphasized that barriers need to be recognized and interventional measures should be developed to cross it (Schoueri-Mychasiw, 2013). A study on the low uptake of breast screening services were studied among Black African Women in UK, showed the necessity for improving the knowledge, screening, and treatment for breast cancer. The study added that the interventions should be given to the group through community social networks, media, and devotional settings like worship centres (Bamidele, 2017).

UK has NHS Breast Screening Program that invites the women between the age 50-70 years for screening mammogram every three years. After 70 years, women can self-refer every three years, for the screening program (Johns et al., 2017; Godley et al., 2017). Although free screening services are available for women in UAE, relevant information does not always reach the

community.

Limitation

This study gains a chance of transferability in similar single cultured settings for informed utilisation of screening mammography among expatriates, however, in qualitative research it cannot be claimed as changes encounter depending on the time, location, and attitudes of participants under study. Thus, in this study also there are limitations usually attributed to qualitative research such as the sample size, imbalance in the sample size of both populations. Further this research has not attempted to use linguistic features to analyse and clarify the data or used content analysis to highlight the most common view or statement expressed by the participants.

In conclusion, the study established that community and policy factors in the socio-ecological model of health were interrelated for the informed uptake of screening mammography by a sample of migrant women in the UAE through focus group discussion. The study recommends establishing international health collaboration, migrants' health unit, migrant health directory, risk assessment team, automatic invitation system, referral system, migrant cancer registry, and psychological support team, and the appointment of community navigators to improve the uptake of screening mammography in the target population.

Author Contribution Statement

Leena R David developed and designed the study, prepared research instruments, connected and conducted focus group discussions the focus group discussion venues, participant recruitment, data collection, analysis and final write up of the article. Frederick Murphy contributed to designing, data analysis, investigator triangulation and mentoring throughout the study, and contributed to final write up. Shaista Salman Guraya and Mohamed Mahmoud Abuzaid contributed to the study design, reviewed research instrument, data analysis, and in the write up and review of the manuscript.

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Ethical Declaration

The research was approved by Institutional Review Board of University of Sharjah (REC-17-09-18-01-S), United Arab Emirates and the University of Salford, United Kingdom (HSR1617-88). Both universities approval was obtained as this is a part of thesis of Leena R David.

Availability of data

Transcripts available with the Principle Investigator Leena R David.

Conflict of Interest

There is no conflict of interest.

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