ARTICLES

Breast Cancer Knowledge and Awareness among Kuwaiti Women

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Abstract:

The major aim of this study is to examine breast cancer knowledge and awareness among Kuwaiti women from an anthropological perspective. The study concentrates on examining the impact of sociocultural factors (age, level of education, sector, ethnic roots, material status, family history with cancer, and family history with breast cancer) on participants knowledge and beliefs concerning the risk factors and warning signs of breast cancer. A convenient sample of 353 Kuwaitis women were selected, ages range between 15 and 62 years. The instrument used for date collection was a structured questionnaire that consisted of four sections, with a total of 34 items. Scales of Knowledge of risk factors for breast cancer, breast cancer symptoms, and cultural knowledge of breast risk factors were used for this study. The findings revealed that most of the participants believed that exposure to high-dose radiation in the chest is the cause of breast cancer. And about half of the participants considered smoking, pollution, alcohol consumption, personal history of breast cancer, and heredity and family history of breast cancer as breast cancer risk factors. Others believed that wearing a tight bra and being hit on the breast may cause breast cancer. The most recoginizable breast cancer symptoms were alteration in size of women's breasts, swelling of the breasts, and feeling pain in the breasts. A significant relationship between participants' level of education, marital statuse, and family history of breast cancer and their knowledge of breast cancer risk factor and warning symptoms. Moreover, the date showed that women with a family history of breast cancer are more knowledgeable about brast cancer risk factors than women with no family hsitory of breast cancer. Data also reveal that women's ethnic roots is significantly associated with their knowledge of breast cancer risk factors, and women's age is significantly associated with their awareness about breast cancer warning signs.

Introduction

Breast cancer is one of the most frequently seen malignancies among women in both developed and developing countries. It is an alarming public health issue around the world because of its high prevalence among young women who were diagnosed at an advanced stage (Parkin et al., 2005). Cross-sectional studies examine comprehensive factors that cause breast cancer from biocultural, medical, and socioeconomic perspectives. This includes women's life styles (dietary habit, physical activity, alcohol consumption, smoking, consumption of animal fats versus fibers, fruits, and vegetables), reproductive behaviors (age at first live birth, breast feeding or not, having had children or not, age at menarche, menopause at late age, oral contraceptive pills, hormonal replacement therapy, menstrual history). Sociodemographic factors include (age, obesity, early vs. late age of marriage, pollution and exposure to pesticides), and genetic factors (family history, inherited genetic mutations) (American Cancer Society, 2005; Dundar et al., 2006; Lee et al., 2004; 2008; Madanat & Merrill, 2002; Thomsen et al., 2008; Veronesi et al., 2005; Vogel, 2000).

According to the World Health Organization (WHO, 2007), one million women are diagnosed annually with breast cancer in the world. The International Agency for Research on Cancer has reported that in most of the cancer incidence, morbidity, and mortality will occur in the developing world due to insufficient prevention and screening programs. The IARC report also illustrates that, of the 11 million new cases of cancer reported in 2002 around the world, more than 6 million deaths were from breast cancer. The rate of new cases is estimated to increase to more than 15 million by 2020, and death from breast cancer is to increase to 12 million.

In Arab countries, breast cancer has the prevalence of being the most frequent cancer among women; it comprises between 14 to 42% of all cancers among women (Al-Dubai et al., 2011). In Gulf Cooperation Council (GCC) countries, during 1998-2003 a total of 32,291 cases of cancer was diagnosed (16,342 males and 15,949

females). Males were reported to have a higher mean age at diagnosis than females; cancer of the lung and prostate were the most common among males, and cancer of the breast and thyroid were most frequently reported among females. Out of 15,949 female patients diagnosed with cancer, 4,480 women were diagnosed with breast cancer. Incidence rate per 100,000 women with breast cancer was highest in Bahrain (46.4), followed by Kuwait (44.3) and Qatar (35.5); lower rates were reported in United Arab Emirates (19.2), Oman (14.4), and Saudi Arabia (12.9) (Al-Hamdan et al., 2009). Breast cancer among Arab women presents almost 10 years younger than in the USA and Europe. Arab women's median age at diagnosis is between ages 48 and 52 years old, and half of them are below the age of 50, whereas only 25% of patients with breast cancer in industrialized nations is below the age of 50 years old (Ravichandran & Al-Zahrani, 2009).

Cross-cultural research illustrates that the age of being diagnosed with breast cancer is decreasing, and more young women than ever are affected by it (Parkin et al., 2005; Ravichandran & Al-Zahrani, 2009). This number led to the urgent call to encourage young women to be more aware about their health status and to educate them about the importance of breast self-examination, which may lead to earlier diagnosis of breast cancer. Studies show that there are many socioeconomic, cultural, and religious factors that are attributed to late stage detection of the disease which leads to a higher rate of mortality among young breast cancer patients than older breast cancer patients (Lannin et al., 2002; Mona, 1997; Russell et al., 2006; Somdatta & Baridalyne, 2008; Wong-Kim et al., 2010). Shortage of medical facilities, poor breast cancer screening programs, lack of breast cancer risk factors awareness, geographical isolation, and poverty are considered as main causes of late detection of the disease (Hisham & Yip, 2003). In addition, cultural beliefs, perceptions, values, such as considering breast cancer as a taboo topic, also influence women's attitudes toward mammography use.

For some examples, Sambanje and Mafuvadze (2012) conducted research in Sub-Saharan Africa emphasizing the importance of improving public health knowledge and awareness of breast cancer

screening programs. The study revealed that high mortality rate among breast cancer patients is directly related to late diagnosis of the disease due to insufficient public awareness, unorganized screening programs, difficulty to access to medical services, and lack of effective treatment options (Wadler et al., 2011). As a consequence of late detection, most patients are diagnosed with breast cancer at an advanced stage when the disease has spread to other body organs (Elgaili et al., 2010). Previous research revealed that 70-90% of African women were diagnosed with stage III or IV breast cancer because of absence of available mammographic screening programs (Ukwenya et al., 2008; Wabinga et al., 2011). To decrease the high incidence of breast cancer cases, breast self-examination is considered to be an essential alternative method for African women to detect any of the breast cancer warning signs (Anderson et al., 2003; Panieri, 2012).

The American Cancer Society (ACS) strongly encourages women above 40 years old to perform breast self-examination (BSE) and to increase their awareness about breast cancer risk factors and warning signs. Lately, the rate of breast cancer cases has increased especially among younger women, and their survival rate declined as a result of the advanced stage of disease when the patient was diagnosed (Gurdal et al., 2012). Therefore, ACS and the European Commission recommend annual mammograms and clinical breast examinations for healthy women around their 40s, and encourage all women over 20 years of age to practice BSE once a month (Perry et al., 2008; Smith et al., 2010). Karayurt et al. (2008) presented that early detection of the disease can lower the mortality rate among breast cancer patients. Young Turkish breast cancer patients displayed a lower rate of survival than older breast cancer patients because the younger women were diagnosed at advanced stages. Older patients practiced more BSE and were more aware about the screening program than younger women, which in turn may lead to an earlier diagnosis of breast cancer (Karayurt et al., 2008).

Lack of knowledge and insufficient awareness about the risk factors of breast cancer among women was reported by several cross-cultural researchers. The following studies showed that a majority of

the respondents did not recognize breast feeding, age at menopause, and age at menarche as risk factors of breast cancer (Ahmed et al., 2006; Alam, 2006; Al-Dubai et al., 2011; Amin et al., 2009; Parsa et al., 2008; Seif &Aziz, 2000; Somdatta & Baridalyne, 2008). Oluwatosin and Oladepo (2006) showed that 52% of Nigerian women believed that the reason for getting breast cancer is mysterious. And a majority (90.7%) of the participants claimed that they did not know anything about medical procedures of healing from breast cancer; only 4.8% acknowledged use of drugs (hormone replacement/chemotherapy) and 0.5% identified surgery as a breast cancer treatment. Regarding early treatment of breast cancer, 55.2% agreed that early medical therapy might prevent death and 41% said they did not know. Somdatta and Baridalyne's (2008) illustrated that only 35% of Indian women have an awareness of breast cancer risk factors. One fourth (24%) of the respondents believed that breast feeding can prevent having breast cancer; 8% of the participants believed that taking an oral contraceptive can cause breast cancer, irrelevant of the duration of intake; and 4.9% believed that older women are more prone to having breast cancer, while 6.5% believed that younger women are more at risk of having breast cancer. Karayurt et al.'s (2008) study among Turkish women revealed that 68.7% of the participants believed that personal history of breast cancer is a breast cancer risk factor; and 67.0% believed that a family history of breast cancer is considered a breast cancer risk factor. On the other hand, none of the participants recognized late menopause and recent oral contraceptive use as a risk factor for breast cancer.

Yan (2009) illustrated that 77% of the Chinese participants believed that previous history of experiencing breast problems is a breast cancer risk factor, while 70% of the study participants mentioned family history as a risk factor. HRT and breastfeeding were respectively acknowledged by 50% and 11.3% of women participants as a risk factor. Half of the participants were uncertain about late age at menopause, early age at menarche, sterility, and oral contraceptive intake as breast cancer risk factors.

Ghanem et al. (2011) stated that only 16% of the Moroccan

respondents had outstanding information regarding breast cancer risk factors, compared to 38% who had inadequate knowledge of risk factors. Mor than three-fourths (78%) of the participants believed that recent intake of oral contraceptive pills is a risk factor, while 76% recognized previous history of developing a breast lump to be a risk factor, and 35% thought first childbirth at an advanced age as a breast cancer risk factor. Ravichandran et al. (2011) revealed that more than two-thirds of Saudi Arabian participants said that they were not aware of any breast cancer risk factors, and about two-thirds (65.2%) mentioned that unhealthy diet (19%), family history (9.7%), and pollution (9.5%) are breast cancer risk factors. Others attributed the incidence of having breast cancer to God's will or fate.Al-Dubai et al.'s (2011) study about knowledge and awareness among Malaysian women revealed that 88% of the respondents reported heredity and family history as breast cancer risk factors, 67.2% reported exposure to radiation, 65.2% reported smoking, 56.8% reported alcohol consumption, and 34.3% linked breast cancer to wearing of underwire bra. According to Malaysian participants, number of pregnancies (92%), menarche before age 11 (84.8%), menopause after age 50 (80%), not having children (76.4%), delivery after age 30 (76%), aging (64.4%), taking contraceptive pills (66%), obesity (60%), and HRT (54.4%) are not considered to be breast cancer risk factors. In addition, the majority of Malaysian participants were not aware of breast cancer symptoms such as discoloration and itchiness of the nipples, uneven breast shape, discoloration of the breast, or nipple retraction.

Sambanje and Mafuvadze (2012) showed that among Angolan women, family history of breast cancer was the well known risk factor of breast cancer recognized by 55% of the respondents. Consumption of food high in fat and low in fiber (39%), wearing tight bras (28%), and having a breast implant (26%) were reported as risk factors of breast cancer. On the other hand, early childbirth (58%), obesity (35%), extended duration of use of oral contraceptives (25%), hormone replacement therapy(11%), and breast feeding (8%) were not recognized as breast cancer risk factors by Angolan non-medical university students. Opoku et al. (2012) stated that 20% of Ghanaian

women believed that placing coins in the bra can increase a woman's risk of being diagnosed with breast cancer and only 8.2% of the participants believed that age is considered a breast cancer risk factor. Few women mentioned that smoking (6.3%), family history (5%), experience of breast disease (4.2%), early menarche (1.7%), menarche at a late age (1.5%), and obesity (1%) are breast cancer risk factors.

Besides women having insufficient information and knowledge about breast cancer risk factors as demonstrated in the research above, the following cross-sectional research also shows women's deficiency in recognizing breast cancer symptoms and signs. The studies present that age, socioeconomic status, education levels, cultural beliefs, and occupational status have a significant association with women's information and consciousness about breast cancer symptoms. Sim et al.'s (2009) study in Singapore illustrated that most frequent symptoms identified by participants were nipple discharge and a solid breast lump. Oluwatosin and Oladepo (2006) revealed that about three-fourths (73.7%) of the Nigerian respondents reported that they were not aware of any noticeable signs of breast cancer; and only 1.9% recognized that a painless lump might be a warning indication of breast cancer. Moreover, 6.4% acknowledged swelling, 0.2% identified breast skin changes and nipple discharge as symptoms of breast cancer. Montazeri et al.'s (2008) study in Iran showed that only 5% of participants reported nipple retraction as a breast cancer symptom and 6% believed that bloody discharge is a sign of breast cancer. Opoku et al. (2012) revealed that 46.6% of Ghanaian women identified breast lump change as a warning sign of breast cancer; 15.6% acknowledged change in breast size, 13.1% reported nipple discharge, and 5.5% believed nipple retraction were symptoms of breast cancer.

The following research shows adequate consciousness and recognition regarding breast cancer warning signs. For example, Somdatta and Baridalyne (2008) found that more than half (56%) of Indian women in Delhi who participated in their study were knowledgeable about breast cancer; 42% mentioned that a lump is a sign of breast cancer, and 41% reported painful breasts as a sign. Nipple discharge (7%), skin alteration (1.6%), existence of a breast ulcer,

itching, fever, weight loss, and breast swelling were also reported as breast cancer symptoms. Al- Dubai et al. (2011) illustrated that among Malaysian women, the most telling signs of breast cancer are a breast lump (90.8%), swollen lymph nodes (75.2%), bloody nipple discharge (71.2%), breast skin retraction and breast discoloration (46.8%). In addition, the participants reported the following warning signs: asymmetrical breasts (44.8%) and itchiness and discoloration of the nipples (41.6%). Nafissi's (2012) study illustrated that the most important symptoms of breast cancer among Iranian respondents are a painless mass (60.8%) and bloody discharge (44.9%).

Women's awareness of breast cancer risk factors, warning signs, and screening programs will lower the stage of the disease at diagnosis and improve the patient's quality of life and chance of survival, which relate directly to the stage of the disease (Mona, 1997; Somdatta & Baridalyne, 2008).The purpose of this study is to examine breast cancer knowledge and awareness among Kuwaiti women from an anthropological perspective. The study concentrates on a different sociocultural perspective, as it examines knowledge and awareness about one of the most prevalent diseases among women in Kuwait, breast cancer. It tries to answer the following research questions: What is the sociocultural perspective of breast cancer (BC) among Kuwaiti women? What are their knowledge and beliefs concerning the risk factors of BC? What is their cultural knowledge of the risk factors of BC? Are there significant differences between knowledge of the causes of BC and warning signs and sociocultural factors (age, level of education, sector, ethnic roots, material status, family history with cancer, and family history with BC)? What is the most predictive knowledge of the causes and symptoms of BC? Anthropological research on the relationship between sociocultural characteristics and health status is rare in Kuwait. To the best of the authors' knowledge, no research has been conducted in Kuwait to examine cultural knowledge connected with health status from an anthropological perspective.

Methodology:

Study Sample:

This cross-sectional study was conducted among 353 Kuwaiti women. The sample was convenient; participants came from the six governorates in Kuwait (AlAsimah,ALAhmadi,ALFarwayniyah,AL-Jahra,Hawalli,and Mubarak Al-kabeer). The instrument used for data collection was a structured questionnaire that consisted of four sections, with a total of 34 items. Table 1 illustrates the sample characteristics. The ages range between 15 and 62 years, as it is followed in many studies (i.g. Karayurt et al., 2008; Gwarzo et al., 2009; Somdatta and Baridalyne, 2008; Ravichandran et al.,2011; and Monteiro et al., 2012). According to the participants' report regarding their ethnic roots, 50.7% were Bedouin and 41.1% were urban. Out of 353 women, 48.7% were married and 51.3% were not married. More than half of the participants (56.7%) said that they do not have a history of cancer in their families, compared to 42.2% who said they have incidences of cancer in their families. Regarding the occurrence of breast cancer in their families, more than three-fourths of the participants (77.9%) mentioned that none of their family members was diagnosed with breast cancer and only 21% reported that they have breast cancer patients in their families. The majority of the participants (73.1%) acknowledged that the most common type of cancer women have is breast cancer, while 23.2% said they do not know if breast cancer is the most common cancer among women. Regarding participants' knowledge of the chances of recovery from breast cancer if it is detected at an early stage, the majority (81.0%) said they do not believe that there is a chance of recovery from breast cancer if it is detected early, while 18.1% said they believe that recovery from breast cancer is weak, even if it is detected early.

Table 1: Characteristics of the sample (353)

Characteristics	N(%)
Age	
< 21	139 (39.4)
> 22	214 (60.6)
School grade	
< High School	161 (45.6)
> Graduate Level	191 (54.1)
Missing	1 (0.3)
Marital status	
Married	172 (48.7)
Not married	181 (51.3)
Sect	
Sunni	308 (87.3)
Shia	35 (9.9)
Missing	10 (2.8)
Roots	
Bedouin	179 (50.7)
Urban	145 (41.1)
Missing	29 (8.2)
Kuwait governorates	
AlAsimah	68 (19.3)
ALAhmadi	79 (22.4)
ALFarwayniyah	71 (20.1)
ALJahra	39 (11.0)
Hawalli	41 (11.6)
Mubarak Al-kabeer	54 (15.3)
Missing	1 (0.3)
Family history of cancer	
Yes	149 (42.2)
No	200 (56.7)
Missing	4 (1.1)
Family history of breast cancer	
Yes	73 (20.7)
No	275 (77.9)
Missing	5

Table 1: Characteristics of the sample (353)

Characteristics	N(%)
Breast cancer is most common in women	
Yes	258 (73.1)
No	13 (3.7)
I don't know	82 (23.2)
Recovery from breast cancer is weak even with early detection	
Yes	64 (18.1)
No	286 (81.0)

*Some data is missing

Variables:

Questions on demography, participant's family history of breast cancer (family members was diagnosed with breast cancer), knowledge about breast cancer risk factors and warning symptoms were obtained for the purpose of the current study. Demographic characteristics - age, education level (high school, college, and graduate school), and marital status (married and not married) were recorded. Sociocultural information was also obtained from the participants, such as religious sect (Sunni and Shia) and ethnic roots (Bedouin and urban) questionnaires included three scales: Risk factors for breast cancer scale, knowledge of breast cancer signs and symptoms scale, and cultural knowledge of breast cancer risk factors scale, which are described below.

- Knowledge of risk factors for breast cancer scale. The scale developed by the American Cancer Society (2007) was used for this study. It consists of 16 items. The participants were asked to respond to each question with True (= 1), False (= 0), and Don't Know (= 0). The guideline of participants' knowledge of breast cancer risk factors is based on 16 items: obesity, family history of breast cancer, high fat diet, early menarche (< 12 years), late menopause (> 55 years), tobacco smoke, aging, environment pollution, alcohol,

personal history of breast cancer, late age at first full-term pregnancy (> 30 years), never breastfed a child, recent and long-term use of hormone replacement therapy, high-dose radiation to chest, and deficiency of physical activity.

- Knowledge of breast cancer symptoms scale. The scale was obtained from Al-Dubai et al.'s (2011) study in Malaysia. It consists of 10 items. The participants were asked to respond to each question with True (= 1), False (= 0), and Don't Know (= 0). The guideline of participants' knowledge of breast cancer symptoms is based on 10 items: painless when press on the lump, pain in the nipple, asymmetry of the breast, nipple discharge, breast cancer is about a hard mass like stone or wood, change in the size and shape of the breast, pain in the breast, lump in the armpit, swelling of breast, irritation and redness in the breast.
- Cultural knowledge of breast cancer risk factors scale. The scale was obtained from Nafissi et al.'s (2012) study in Malaysia. It consists of 8 items. The participants were asked to respond to each question with True (= 1), False (= 0), and Don't Know (= 0). The questions were related to cultural beliefs regarding factors that cause breast cancer such as touching a breast cancer patient, disregarding breast hygiene, wearing a tight or dirty bra, having large breasts, getting hit on the breast, higher number of pregnancies, infertility, and poverty.

Validity and reliability were examined. All of these scales were reviewed by six sociocultural faculty members at Kuwait University. They were asked to review, edit and be sure that the items were adapted to Kuwaiti culture. These scales also showed high internal consistency (Cronbach's alpha were 0.85, 0.90, and 0.89, respectively).

Statistical Analysis:

SPSS was used for analysis (Version 19). A number of statistical techniques were used. A T-test was used to examine differences between sociocultural factors (age group, religion sector, and family history of cancer) and participant's awareness regarding breast cancer

risk factors. Multivariate regression was run to predict the effect that family history of breast cancer, economic status, and number of children would have on women's knowledge of breast cancer risk factors and symptoms. The accepted level of significance was set below 0.05 ($P < 0.05$).

Results:

Table 2 below illustrates the sample response regarding participants' knowledge of the risk factors of BC.

Table 2: knowledge of breast cancer risk factors

Risk factors for breast cancer	True		False		Don't know	
	N	%	N	%	N	%
Obesity	84	23.8	101	28.6	168	47.6
Family history of breast cancer	174	49.3	137	38.8	40	11.3
High fat diet	154	43.6	53	15.0	142	40.2
Early menarche (< 12 years)	63	17.8	119	33.7	169	47.9
Late menopause (> 55 years)	86	24.4	74	21.0	190	53.8
Tobacco smoke	209	59.2	47	13.3	95	26.9
Aging	122	34.6	101	28.6	127	36.0
Environment pollution	202	57.2	56	15.9	93	26.3
Alcohol	198	56.1	40	11.3	113	32.0
Personal history of breast cancer	191	54.1	82	23.2	78	22.1
Late age at first full-term pregnancy (> 30 years)	48	13.6	120	34.0	183	51.8
Never breastfed a child	166	47.0	61	17.3	124	35.1
Recent oral contraceptive use	109	30.9	71	20.1	171	48.4
Recent and long term use of hormone replacement therapy	94	26.6	38	10.8	218	61.8
High-dose radiation to chest	216	61.2	25	7.1	110	31.2
Deficiency of physical activity	133	37.7	85	24.1	134	38.0

The findings reveal that most of the participants (61.2%) believed that exposure to high-dose radiation in the chest is the cause of breast cancer, whereas first childbirth at an advanced age - i.e., after 30 years old (13.6%) - and early menarche - i.e., before age 12 (17.8%) - were the lowest risk factors that were identified by the participants. About one-third of the participants reported that taking an oral contraceptive (30.9%), aging (34.6%), and low physical activity (37.7%) are related to incidence of breast cancer. And about one-fourth of the participants reported they believe the following may be breast cancer risk factors: obesity (23.8%), late menopause (24.4%), and hormone replacement therapy (26.6%). About half of the participants considered heredity and family history of breast cancer (49.3), consumption of high fat foods (43.6%), pollution (57.2%), alcohol consumption (56.1%), personal history of breast cancer (54.1%), smoking (59.2%), and never having breastfed a child (47.0%) as breast cancer risk factors.

The participants also mentioned other cultural factors as causing breast cancer. More than half of the participants (57.8%) believed that wearing a tight bra may cause breast cancer; others believed that breast hygiene, i.e., cleaning the breasts regularly, may reduce the incidence of breast cancer (47.6%), followed by 43.1% of participants who believed that being hit on the breast may cause a lump or a tumor in the breast. About one-fourth of the participants believed that poverty (25.8%) and having large breasts (24.4%) are risk factors of developing breast cancer tumors. Few believed infertility (11.3%) and a high number of pregnancies (9.9%) are related to the incidence of breast cancer. Table 3 illustrates the sample response regarding Kuwaiti women's knowledge of breast cancer signs and symptoms.

Table 3: knowledge of breast cancer signs and symptoms

Sign and symptom	True		False		Don't know	
	N	%	N	%	N	%
Painless when press on the lump	116	32.9	94	26.6	140	39.7
Pain in the nipple	157	44.5	50	14.2	142	40.2
Asymmetry of the breast	194	55.0	50	14.2	107	30.3
Nipple discharge	160	45.3	46	13.0	141	39.9
Breast cancer is about a hard mass like stone or wood	207	58.6	21	5.9	121	34.3
Change in the size and shape of the breast	235	66.6	35	9.9	80	22.7
Pain in the breast	214	60.6	53	15.0	82	23.2
Lump in the armpit	182	51.6	46	13.0	121	34.3
Swelling of breast	231	65.4	32	9.1	87	24.6
Irritation and redness in the breast	146	41.4	51	14.4	153	43.3

Table 3 illustrates that the most recognizable breast cancer symptoms in the current study were alteration in size and shape of women's breasts (66.6%), swelling of the breasts (65.4%), and feeling pain in the breasts (60.6%). And more than half of the participants acknowledged that feeling a hard mass like a stone or wood in the breast (58.6%), uneven shape of the breast (55.0%), and finding a lump under the armpit (51.6%) may be signs of breast cancer. In addition, the participants mentioned the following as breast cancer warning signs: nipple discharge (45.3%), pain in the nipple (44.5%), and breast's skin irritation and redness (41.4%). Only one-third (32.9%) of the participants reported that a painless lump is considered to be a breast cancer warning sign.

For cultural knowledge of BC risk factors, Table 4 illustrates the samples response.

Table 4: cultural knowledge of breast cancer risk factors

cultural knowledge of breast cancer risk factors	True		False		Don't know	
	N	%	N	%	N	%
Touching the breast cancer patient	19	5.4	284	80.5	50	14.2
Disregarding breast hygiene	168	47.6	106	30.0	79	22.4
Wearing tight or dirty bra	204	57.8	49	13.9	100	28.3
Large breast	86	24.4	141	39.9	126	35.7
Being hit on the breast	152	43.1	68	19.3	132	37.4
Higher number of pregnancy	35	9.9	151	42.8	167	47.3
Infertility	40	11.3	125	35.4	187	53.0
Poverty	91	25.8	97	27.5	165	46.7

Table 3 shows that the majority of the participants recognized changes in breast size and shape (66.6%), breast swelling (65.4%), and pain in the breasts as the main warning signs of breast cancer. Moreover, participants identified a mass lump (58.6%), asymmetry of the breasts (55.0%), a lump under the armpit (51.6%), nipple discharge (45.3%), pain in the nipple (44.5%), and skin alteration such as irritation and redness in the breast (41.1%) as breast cancer signs. To determine whether there is significant relationship between knowledge of the causes of BC and symptoms with age, level of education, sect, ethnic roots, marital status, family history with cancer, and family history with BC, Table 5 illustrates their difference by using mean, SD, and the t-test. And to examine if there is significant relationship between knowledge of the BC causes and symptoms with age, level of education, sect, roots, marital status, family history with cancer, and family history with BC, Table (5) illustrate their difference by using mean, SD, and t-test.

Table (5) Knowledge of Breast Cancer Reasons and Symptoms by sociocultural characteristics (n = 352)

	Breast Cancer Reasons			Breast Cancer Symptoms		
Variables	**M**	**SD**	**t value**	**M**	**SD**	**t value**
Age < 21	6.31	2.90		5.39	2.39	
> 22	6.82	3.29	-1.49	5.94	2.34	-2.07*
Level of Education						
< High school	6.29	3.02		5.26	2.41	
> Graduate	6.88	3.13	-1.78*	6.13	2.27	-3.36**
Sect						
Sunni	6.61	3.17		5.69	2.36	
Shiite	6.52	2.31	.171	6.09	2058	-.915
Roots						
Urban	6.20	2.72		5.51	2.52	
Bedouin	6.87	3.34	-1.93*	5.76	2.28	-.911
Marital Status						
Married	6.79	3.23		5.99	2.29	
Non-Married	6.42	2.96	1.90*	5.52	2.42	1.78*
Family His w Cancer						
Yes	6.53	2.81		5.50	2.29	
No	6.67	3.30	-.415	5.88	2.43	-1.42
Family His w BC						
Yes	7.51	2.35		6.16	1.90	
No	6.37	3.22	2.80**	5.59	2.50	1.80*

* P < 0.05

** P < 0.01

As shown in Table 5, no significant relationship was found

between sociocultural factors (age group, religion sector, family history of cancer) and participants' awareness regarding breast cancer risk factors. However, a significant relationship was found between participants' level of education($P < 0.05$), ethnic roots($P < 0.05$), marital status($P < 0.05$), and family history of breast cancer ($P < 0.01$)and their knowledge of breast cancer risk factors. The data showed that women with higher education (graduate and above) are more knowledgeable than women with lower education (high school and below grades) about breast cancer awareness ($m = 6.88$, $SD = 3.13$). The data also showed that women with Bedouin roots are more aware of breast cancer risk factors than women with urban roots ($m = 6.87$, $SD = 3.34$). Also, the data showed that married women are more aware than non-married women about the causes of breast cancer ($m = 6.79$, $SD = 3.23$). Moreover, the data showed that women with a family history of breast cancer are more knowledgeable about breast cancer risk factors than women with no family history of breast cancer ($m = 7.51$, $SD = 2.35$).

Also the findings in Table 5 reveal that there is no significant association between participants' awareness regarding breast cancer symptoms and the following sociocultural factors: religion sector, ethnic roots, and family history of cancer. However, there is a significant association between participants' sociocultural characteristics such as age ($P < 0.05$), level of education($P < 0.01$), marital status($P < 0.05$), and family history with breast cancer($P < 0.05$) with their knowledge and awareness about breast cancer warning signs. The data showed that Kuwaiti women above 21 years old ($m = 5.94$, $SD = 2.34$) who have a higher educational level ($m = 6.13$, $SD = 2.27$), are married ($m = 5.99$, $SD = 2.29$), and who have a family history of BC ($m = 6.16$, $SD = 1.90$) are more significantly aware of BC risk factors than younger women with lower educational levels, and women who are non-married and without a family history of breast cancer. Table 6 below illustrates the most important variables related to knowledge of the causes and symptoms of BC.

To predictor the most important variables that related to

knowledge of BC reasons and symptoms, Table (6) illustrate the predictor variables.

Table (6) Predictor of Knowledge of Breast Cancer Reasons and Symptoms by Multiple regression

Variables	B	Beta	t value
Knowledge BC Reasons(dept)			
Family History of BC	.559	.403	4.30**
Knowledge BC Symptoms (dept)			
Economic Status	.265	.178	1.84*
N. of Children	.212	.194	1.72*
Family His of BC	.267	.370	4.29**

* $P < 0.05$
** $P < 0.01$

To predict the variables that correlated with and affect the knowledge of the causes and symptoms of breast cancer, multiple regression is used. Table 6shows this prediction. The data show that family history of breast cancer is a predictable variable for knowledge of both the causes and symptoms of breast cancer ($p < 0.01$) Moreover, the data show that economic status and number of children are predictable variables for knowledge of symptoms of breast cancer ($p < 0.01$).

Discussion

The current study examined the influence of socio-cultural factors on Kuwaiti women's acknowledgment and awareness of breast cancer risk factors and symptoms from an anthropological perspective. The present study showed that only few Kuwaiti women believe early menarche, late age of menopause, obesity, late age of conceiving a child, taking HRT, and aging are breast cancer risk factors. The study findings are comparable to the following cross-cultural studies: Somdatta and Baridalyne (2008), Al- Dubai et al. (2011), Alam (2006), Amin et al. (2009), Parsa et al. (2008), Ahmed et al. (2006); Seif and Aziz (2000), Opoku et al. (2012), and Yan (2009). All of these

studies reveal that few women identified the previous factors as a breast cancer hazard causes. Similar to the current findings is Somdatta and Baridalyne's (2008) study among Indian women, which revealed only one fourth (24%) of the respondents believed that breastfeeding protects against having breast cancer. Also, the findings show similar results to the Angolan study that considered obesity, extended use of oral contraceptives, and hormone replacement therapy as breast cancer risk factors (Sambanje & Mafuvadze, 2012).

This study illustrated that opposite to the Moroccan women, the kuwaitit women have less knowledge and a weaveues are more knowledgeable and aware than Kuwaiti women regarding the following breast cancer risk factors: duration of oral contraceptive use, previous history of developing a breast tumor, and having a child at an advanced age (Ghanem et al., 2011). Also, Yan (2009) demonstrated that Chinese women who participated in their study are more aware than the current study's Kuwaiti participants about identifying previous history of experiencing breast problems and family history as breast cancer risk factors. This can be attributed to the lack of knowledge among Kuwaiti women about health and medical information due to insufficient heath care programs and health institutions that aim to educate women and provide them with basic information about health issues and resources. These findings also can be attributed to the lack of an educational curriculum among girls in school and the weakness of integration between health information resources and community services in Kuwaiti society.

Cultural factors (cleaning breasts, wearing a tight bra) that the participants believed cause breast cancer were comparable to Somdatta and Baridalyne's (2008) findings among Indian women and Sambanje and Mafuvadze's (2012) findings among Angolan women. The current findings are also similar to Al- Dubai et al.'s (2011) study among Malaysian women that show aging and nulliparity were considered as breast cancer risk factors. Kuwaiti women believe that elder women have more exposure to chronic and critical diseases, and they link breast cancer with breastfeeding and number of children. They correlate high prevalence of breastfeeding with low probability of

developing a breast tumor. Also, Kuwaiti women believe that good personal hygiene is an important precaution that diminishes chances of contracting diseases caused by infections. They also believe that wearing tight underwear can cause abnormal development of breast tumors by pressing hard on the breast tissue.

The current study also demonstrated that Kuwaiti women show high awareness and knowledge regarding breast cancer warning signs than studies conducted in Iran, Ghana, Malaysia, and Nigeria. Kuwaiti women acknowledged breast cancer warning indications such as nipple retraction and bloody discharge more than Iranian women did in a study by Montazeri et al. (2008), among whom only a few participants identified these symptoms. Kuwaiti women also acknowledged more breast cancer signs than Ghanaian women in a study by Opoku et al. (2012), among whom only a few reported breast size alteration, nipple discharge and retraction as breast cancer symptoms. Also, the current study illustrated that half of the participants were able to identify uneven breast shape, itchiness, and discoloration of the nipple, and discoloration of the breast or nipple retraction as breast cancer warning signs, unlike Dubai et al.'s (2011) findings among Malaysian women and Oladepo's (2006) findings among Nigerian participants that showed the majority did not recognize breast skin alteration, painless lump, nipple discharge, and breast swelling as warning signs. This difference in awareness can be attributed to Kuwaiti women's higher awareness of their bodies more than to their knowledge of breast cancer risk factors. Kuwaiti women appear to be more alert and sensitive when they sense any uncomfortable and abnormal alteration in their breast color or size without necessarily knowing the causes that might lead to tumor growth.

Other studies illustrated that women show sufficient recognition and consciousness regarding breast cancer warning signs comparable to the current study findings. Somdatta and Baridalyne's (2008) findings reveal that about half of the Indian women in Delhi who participated in their study identified finding a lump or feeling pain in the breast as a sign of breast cancer; and Nafissi's (2012) findings show that almost half of Iranian respondents believed that bloody discharge

is a warning sign of breast cancer. A majority of Malaysian women identified swollen lymph nodes, breast lump and bloody nipple discharge as a hazardous signs of breast cancer (Al- Dubai et al., 2011) than did Kuwaiti women in the current study. These differences can be attributed to the high level of awareness and depth of health information of the women in these studies.

Moreover, the data show a significant relationship between socio-cultural factors (level of education, ethnic roots, marital status, and family history) and participants' awareness regarding breast cancer risk factors. Not surprisingly, women with higher education are more aware and conscious about breast cancer risk factors and symptoms than women with lower education, as they have more information that they acquired at higher education institutions and have access to the health information institutions that provide them with updated health issues. Women with higher education are more eager to acquire information about health and wellbeing, such as how to prevent getting sick and how to raise the body's immunity against chronic and critical diseases. This data is comparable to Somdatta and Baridalyne's (2008) finding among Indian women and Al- Dubai et al.'s (2011) finding among Malaysian women that reveal education level was significantly associated with women's awareness of causes and warning signs of breast cancer. Women with a higher level of education have more knowledge about breast cancer. The same findings were found in Iran (Haji-Mahmoodi et al., 2002), in Saudi Arabia (Amin et al., 2009), and the United States (Eileen, 2004).

Although the current study illustrates cultural assimilation in Kuwaiti society, the findings indicate that women with Bedouin roots are more aware of breast cancer risk factors than are women with urban roots. It could be the reason for the greater incidence of BC in the Bedouin population in general. This may be related to genetic factors or marriages among relatives. But in general, cultural assimilation plays a vital role. Both Bedouin and urban women have the same opportunity to enroll in an academic institution and receive equivalent educational information. Cultural differences about how women vary in their interpretation of getting sick, the perception of

illness and wellbeing, and the best healing methods diminished in Kuwaiti society due to social development after the discovery of oil. Moreover, the data show that married Kuwaiti women are more aware than unmarried Kuwaiti women about the causes and symptoms of breast cancer. The general belief among older women is that breast and uterine cancers are linked only to married women who have a different lifestyle than unmarried women; they attribute developing a tumor to taking birth control pills, number of pregnancies, and the duration of breast feeding. In contrast, they believe that unmarried women are safe from developing a breast tumor because they lead a different life style. Al- Dubai et al. (2011) among Malaysian women also showed a significant association between participants' marital status and their knowledge about breast cancer symptoms and warning signs. On the other hand, Sambanje and Mafuvadze's (2012) finding among Angolan women showed that marital status was not related to women's awareness and knowledge of breast cancer symptoms and risk factors.

Furthermore, the data show that women with a family history of breast cancer are more conscious and aware of breast cancer risk factors and symptoms than women with no family history of breast cancer. This difference can be attributed to the high level of anxiety and concern of developing a breast tumor similar to their family member due to the hereditary risk factor. That is why women have more desire to learn about the causes in order to prevent and lessen the probability of developing a breast tumor. The same finding was also reported in Al- Dubai et al.'s (2011) study among Malaysian women and Sambanje and Mafuvadze's (2012) study among Angolan women with a family member experiencing breast cancer, who are therefore more conscious and informed about warning signs and causes of breast cancer. Also the findings reveal that there is a significant association between Kuwaiti women's awareness regarding breast cancer symptoms and their age. Older women are more knowledgeable about disease warning signs than younger women, because at this age they experience a high incidence of being sick, hearing from family and friends about their experience with illness, and being more anxious and

fearful of getting sick. They believe that disease is associated with aging, getting old meaning to them experiencing more disease, deliberation in body functions, and retardation in wellbeing. The current finding is comparable to Al- Dubai et al.'s (2011) finding that presents Malaysian older women obtain more health information on breast cancer than younger women. The current study's findings are in contrast to those of Somdatta and Baridalyne (2008) and Sambanje and Mafuvadze (2012), that illustrated age was not associated with Indian women's awareness of breast cancer.

Recommendation

Current study show that inerease girls educational curriculum among in school must be upgraded to acknowledge girls about public health knowledge and awareness of breast cancer risk factors, warning signs, and screening programs. Moreover, the findings recommend to initiate heath care programs and health institutions that aim to educate women and provide them with basic information about health issues and resources about women's perceptions and attitudes toward breast cancer screening programs, such as clinical breast examination and mammography or women's breast self-examination. Mass media and social network can be used to integrate between community services in Kuwaiti society and health information resources among Kuwaiti's women.

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