

Evaluating Media Awareness Toward Breast Cancer Awareness Campaigns: A Case Study of Women in Kuwait in 2014

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Abstract

The increasing numbers of breast cancer cases around the world have led to various efforts to find ways of prevention, treatment, and diagnosis. Media campaigns have been utilized to spread breast cancer awareness, increase knowledge, change attitudes and behaviors. In addition to the increasing number of cancer cases, these campaigns are in response to a mixture of cultural factors and fear that hinders the public from confronting breast cancer. However, previous research has highly focused on measuring the effects of media campaigns rather than people's awareness toward the campaigns. This research study addresses a different question: how aware are targeted audiences to media awareness campaigns? This study attempts to investigate Kuwaiti women's media awareness toward breast cancer awareness campaigns and whether or not age, level of education and media use contribute to the awareness. On a sample of 500 Kuwaiti women, the study found the sample to be highly unaware of the awareness campaigns. Different levels of education and media use did not contribute to the awareness. Only age was found to be significantly related to breast cancer awareness campaigns with older age groups being more aware than the younger. This low level of awareness suggests ineffective media campaigns and/or personal factors pertaining to Kuwaiti women hindering their awareness toward the campaigns.

Keywords: Breast cancer, awareness campaigns, media, Kuwait

Introduction

It might be a surprising fact to some that breast cancer is the most common cancer among women worldwide and the second most common cancer overall ("Breast Cancer Research Foundation"). The number of breast cancer deaths is only exceeded by lung cancer. The *World Cancer Report* indicates that cancer rates are set to increase globally at an alarming rate over the next decade (1). Moreover, breast cancer represents one in four of all cancers in women. In the United States it is the most common cancer among women after skin cancer and it is estimated that 40,000 women will die from breast cancer in 2014 ("Breast Cancer Research Foundation").

Recent statistics from around the world show that the number of breast cancer cases is increasing. For example, in the 1990s cases of breast cancer in China were 25.1 per 100,000 and it is expected that the number will increase to 87.8 per 100,000 in 2021 (Wu, Liu, and Chung 1-8). Women in Kuwait have a rate of 50 cases for every 100,000 which is an immense increase over the last 33 years when the rate was 15 for every 100,000 (Alharbi, Alshammari, Almutairi, Makboul, and El-Shazly 75-82). In Qatar, breast cancer is the most common cancer and accounts for 29.9% of all female cancers (Abu Shaikha and Salama 8-21). This is similar to Bahrain where breast cancer is the highest type in general and among Bahraini women (Fikree and Hamadeh 1-8). In Saudi Arabia, breast cancer is the most common type of cancer and accounted for more than 25% of all newly diagnosed cancer among women (Radi 4307-4312). There has also been a significant increase in breast cancer cases in Sub-Saharan African countries in the last two decades (Fregene and Newman 1540-1550).

These increasing numbers of breast cancer cases have led to tremendous efforts around the world in order to find ways of prevention, treatment and diagnosis. Most importantly, media campaigns have been launched to spread breast cancer awareness. The month of October has been allocated as Breast Cancer Awareness Month in many parts of the world. During October of every year, non-profit, private and governmental organizations launch various events to raise awareness toward breast cancer ("National Breast Cancer Foundation"). Among these events are media placements in the form of advertisements or public service announcements, marathons, donations to cancer research, and media presence in public places such as malls and parks ("National Breast Cancer Foundation"). The objective of the campaigns is to spread awareness about breast cancer in order to acquire health-conscious knowledge, attitudes and behaviors. The campaigns also aim at alleviating fear of treatment and encouraging women to seek medical consultation. It has been reported that women, mainly from developing

countries, fear divorce if their husbands know they have breast cancer (Al-Khaja and Creedon 386). Others fear talking publicly about breast cancer believing it leads to “death” and think it is an “incurable disease” (Luquis and Cruz).

These awareness campaigns around the world have heavily used the media to reach the targeted audiences. Their presence has been extended to all media tools such as radio, television, print media, billboards, blogs and social networking websites. It stems from the belief that media campaigns are able to disseminate specific attitudes and behaviors to large audiences to consequently influence them. However, measuring people’s awareness toward media campaigns is as important as the message of the campaigns, which is what this research study attempts to investigate. The overarching research purpose of this study is to assess and measure women’s awareness toward breast cancer awareness campaigns (hereafter BCA campaigns). The following provides the relevant literature on media effectiveness toward health campaigns in general and cancer awareness in particular.

Media Effectiveness in Promoting Health Campaigns

Few research studies have been conducted investigating people’s awareness toward health-related awareness campaigns, particularly toward breast cancer. Despite the growth of BCA campaigns, little is known about people’s awareness toward them. Existing research has mainly focused on either people’s perceptions or knowledge of breast cancer, or on reporting percentages of breast cancer cases. This fact in the literature gives tremendous importance to this study especially in a country like Kuwait that has witnessed a high rate of breast cancer cases. Also, to the author’s knowledge, no research study has measured the level of awareness toward BCA campaigns in Kuwait, especially when these campaigns have a strong media presence during October of every year. The literature is rich with studies that have measured the effectiveness of media campaigns toward other illnesses and social problems such as smoking, driving under alcoholic influence, illicit drugs, HIV, and heart disease. According to Wakefield, Loken and Hornik, studies on media effectiveness toward anti-smoking campaigns are by far the most frequent in the literature (1261-1271). The following section shows recent studies on media effectiveness in promoting awareness and demonstrates the gap in the literature this current study attempts to tackle.

In a study measuring media campaigns toward adolescents’ smoking, Siegel and Biener found that television was the most influential media tool in changing and decreasing smoking among Massachusetts adolescents (380-386). They also measured the effectiveness of radio and outdoor advertise-

ments and found them to have no influence on adolescents. An earlier study by Popham, Potter, Bal, Johnson, Duerr and Quinn found that smokers in California were influenced by a state-wide anti-smoking media campaign but the influence was very minimal (510-513). Bala, Strzeszynski, and Cahill found a considerable decrease in smoking when media campaigns were supported with an increasing smoking taxation and smoke-free policies (1). According to a recent study by the National Cancer Institute, anti-smoking media campaigns were associated with a decline in smoking especially among younger smokers. These media campaigns were more effective when combined with programs in schools or in the community or both. These studies demonstrate that awareness to media campaigns can reduce smoking consumption.

Other research studies have tackled media campaigns toward alcohol consumption in general and while operating a vehicle in particular. Mass media campaigns to reduce alcohol consumption while driving have had little success (Wakefield et al. 1261-1271). Babor, Caetano, and Casserwell found that media campaigns in schools were successful in increasing knowledge toward drinking and driving. However, they also found that drinking behavior would remain unaffected by these campaigns. Spoth, Greenberg and Turrissi indicated media campaigns toward alcohol consumption and driving remain ineffective because media interventions should reach families, schools and local communities and not only outdoors (311-336). Elder, Shultz, Sleet, Nichols, Thompson and Rajab indicated that carefully executed and well-planned campaigns tend to have positive effects especially when they are combined with law enforcements (57-65). When it comes to industry sponsored awareness campaigns, the impact has not been great too. De Jong, Atkin and Wallack found that most awareness campaigns that are promoted by alcohol industries tend to promote their slogans and messages rather than promoting awareness (661-678). These commercially-led campaigns do not separate between the acts of drinking and operating a vehicle, thus confusing the targeted audiences whether the campaigns are about awareness or promoting the industries alcoholic products (De Jong *et al.* 661-678). A more recent study also found that industry-sponsored awareness campaigns tend to enhance sales and corporate image rather than awareness (Smith, Atkin, and Roznowski 1-11). Through the use of various media and public relations, people interpreted the campaign messages differently but generally their interpretations were favorable toward these industries (Smith et al. 1-11). As the literature shows, studies have produced mixed results about the effectiveness of campaigns with generally modest effects that are short-lived. As Babor et al., have indicated, long-term effects are possible when campaigns are continued with policy changes and law enforcements.

Other research attempts have investigated media campaigns toward heart disease, healthy lifestyles, HIV testing, nutrition and road safety. These studies have also found moderate effects from media campaigns. Campaigns that promote physical activity behaviors have seen some success but short-lived results (Cavill and Bauman 771-790). The success of these campaigns was more likely in community-wide walking campaigns targeting highly motivated adults (Cavill and Bauman 771-790). A study that evaluated the effects of a media campaign promoting HIV testing found that the campaign generated significant increases in call volumes and visits to HIV testing locations (Davis, Uhrig, Rupert, Fraze, Goetz, and Slater 1024-1039). However, no long-term effects were reported. Similar to the studies mentioned above about tobacco and alcohol use, media campaigns can create an impact on the targeted audience. The obstacle is the sustainability of this impact, as the studies have shown.

Barriers to Breast Cancer Awareness

When it comes to BCA campaigns, research studies measuring media awareness and effectiveness remain fewer than skin cancer, tobacco, alcohol use and road safety. The following demonstrate where the literature has reached in this matter. Media campaigns about breast cancer awareness in Australia and the US were associated with an increase in self-exams and mammography (Marcus and Crane 13-31). However, these increases were dependent on the availability and proximity of screening services. Two studies found similar results where television-based campaigns produced short-term increase in mammograms when reminder letters were sent by mail (Mullins, Wakefield, and Broun; Pasick, Hiatt, and Paskett). Al-Khaja and Creedon found that Emirati women highly regarded the media as playing an important role in spreading awareness toward breast cancer (386-388). However, respondents believed that the existing media campaigns did not influence them because the campaigns lack interpersonal elements that can interest the targeted audiences (Al-Khaja and Creedon 386-388).

Several research studies have measured barriers to breast cancer awareness, attitudes and behavior toward breast cancer. The following provides the main findings from these studies. In evaluating women's perceptions toward breast cancer, researchers found that the level of knowledge affects cancer screening behavior (Ford, Hill, Blount, Morrison, Worsham, Havstad, and Johnson 827-834). Also, women of a younger age appeared to lack awareness regarding breast cancer risk factors where they believed bras with wires, sports bras and lack of estrogen to be among the causes of breast cancer (Ford et al. 827-834). This lack of awareness among younger women

can be attributed to the lower rates of breast cancer screening in later periods. A similar study in Qatar measured women's knowledge and perceptions toward breast cancer and found smoking, family history, and exposure to radiation to be among the risk factors to breast cancer (Abu Shaikha and Salama 8-21). The study also found the most perceived barrier to practice self-examination was fear of not being able to do it properly (Abu Shaikha and Salama 8-21). Level of education was related to overcoming the perceived barriers. A study in Kuwait found that the majority of female teachers have insufficient knowledge about breast cancer and the practice of self-examination (Alharbi et al. 75-82). Alharbi et al. found 49.9% of the study's respondents have never heard of self-exams and 29% knew the procedure but never applied it (75-82). A similar study found that 94% of British women know "little" to "very little" of the signs and symptoms of breast cancer ("Break-through Breast Cancer").

A study conducted among university students in Angola found a significant lack of knowledge toward breast cancer and the preventive measures toward it due to personal and social reasons such as fear and isolation (Sambanje and Mafuvadze 70). Another study measured Hispanic women's knowledge and attitudes toward breast cancer in Pennsylvania, USA and found cultural factors, fear, sources of health information to be the most determinants (Luquis and Cruz 25-42). Among the findings was while numerous health promotion campaigns have emphasized breast cancer education and the importance of screening, fear of breast cancer ranks highly among this Hispanic group of women (Luquis and Cruz 25-42). A similar study also found personal barriers such as "taking action" and "seeing a doctor" for breast cancer diagnosis (Forbes, Atkins, Thurnham, Layburn, Haste, and Ramirez 1474-1479). Being worried, embarrassed, finding it difficult to make an appointment and being scared from seeing the doctor were among the reasons women did not take the action to go see a specialist (Forbes et al., 1474-1479). A similar study in China found the top three barriers for women were low priority, feeling OK, and lack of awareness or knowledge (Wu et al. 1-8). The majority of respondents in the study indicated they never had a mammogram which illustrated low knowledge and awareness toward breast cancer (Wu et al. 1-8).

Research Inquiries on Women's Awareness toward Breast Cancer Awareness Campaigns

As mentioned in the literature, the media have been used to spread awareness toward health-related issues. Studies show little to moderate impact of these media campaigns with demographic and psychographics

differences such as age, level of education and religious or ideological affiliation. In terms of breast cancer, previous research shows general lack of knowledge toward this type of cancer and asserts that there are few research attempts measuring the impact of BCA campaigns. According to Wakefield et al., there are far more studies that have assessed effects of media campaigns on tobacco use than any other health-related issue (1261-1271). In addition, most research evidence has been generated from studies that took place in high-income or advanced countries such as North America, Western Europe and Australia. These facts in the literature give a tremendous significance to this study because of research scarcity on BCA campaigns as well as using a relatively new country like Kuwait that has witnessed an increasing number of BCA campaigns recently. As mentioned earlier, Kuwait is among the world's highest in breast cancer cases and this has been attributed to lack of awareness and delay in detection (Alharbi et al.; Al-Bhrawi). Also, studying women's awareness toward breast cancer in Kuwait is important to understand because talking about or mentioning the word "breast" or "cancer" is considered a taboo in countries of the Middle East in general (Abu Shaikha and Salama; Alharbi et al.). Women in developing countries fear divorce if husbands know they have breast cancer (Al-Khaja and Creedon). In Qatar, they fear talking about breast cancer publicly (Abu Shaikha and Salama), while in China, they even fear thinking about it (Yan). This is in addition to the significance of knowing whether these media campaigns have contributed to the overall health and wellbeing of Kuwaiti society. Wakefield et al. found that mass media campaigns can directly and indirectly produce positive changes or prevent negative changes in health-related behaviors across large populations (1261-1271). To reiterate, the relatively recent popularity of BCA campaigns in Kuwait, general lack of knowledge and research about breast cancer as previous research has shown, Kuwait as a new case study, the scarcity of research measuring campaign awareness rather than knowledge, and evaluating current awareness campaigns in a saturated new and traditional media environment all give immense significance to conducting this study. Following similar research approaches to those mentioned in the literature, the following are the study's research question and hypotheses:

Research Question: What is the extent of Kuwaiti women's awareness toward breast cancer awareness campaigns in general, and in relation to age and level of education in particular?

Hypothesis 1: Women of different age groups have different levels of awareness toward breast cancer awareness campaigns, with younger women having less awareness toward the campaigns than older women

Hypothesis 2: Women with different levels of education have different levels

of awareness toward breast cancer awareness campaigns, with higher levels of education having more awareness toward the campaigns

Hypothesis 3: Media use is correlated with awareness toward breast cancer awareness campaigns

Methodology

This research study used a purposive sample of 500 Kuwaiti women aged 18 years and older. As the findings will show, the distribution of the sample in terms of age and education was relatively similar to the Kuwaiti population (National Report on the Development of Education, CIA World Factbook), where the majority of the sample indicated holding a Bachelor's degree and mainly within the 18-35 age groups. The sample also indicated high use of social media, particularly Twitter and Instagram, which is in tandem with data from Kuwait News Agency (KUNA) and Go-Gulf Web Design Company. The survey was distributed in different institutions in Kuwait that ranged from Kuwait University to governmental institutions such as Ministry of Education, Ministry of Social Work and Ministry of Health. Survey takers were assured that their participation would be voluntary and confidential.

To the knowledge of the author, no research study has measured and evaluated the level of awareness toward BCA campaigns in general, and in Kuwait in particular. Only Al-Khaja and Creedon measured awareness toward BCA campaigns in the United Arab Emirates but they measured one specific campaign which was called "United Against Breast Cancer, We Will Win" (386-388). Therefore, several measures and variables were borrowed from similar studies that measured age, education, media use and awareness toward media campaigns for tobacco use, HIV AIDS, and alcohol-related behaviors (Siegel and Biener; Forbes et al.; Wakefield et al.; Al-Khaja and Creedon) and from the Cancer Awareness Measure (CAM) from the United Kingdom's Cancer Research. The author added one item in the questionnaire to CAM in order to enhance the awareness measure (whether or not the sample knows that October is breast cancer awareness month).

The survey included a demographic section to acquire participants' information such as age, level of education, marital status, and knowledge of a relative or friend with breast cancer. Previous research has shown that these factors have the potential to influence level of awareness and knowledge toward breast cancer (McCready, Littlewood, and Jenkinson; Sambanje and Mafuvadze). Although breast cancer is more common in ages between 45-55 (Abu Shaikha and Salama), this study included women 18 years of age and above (8-21). According to the American Cancer Society, it is highly recommended that women in their late teenage period to early 20s should be

told about breast cancer and be knowledgeable about its risk factors, prevention and self-examinations. Also, this university age is very critical where they are most likely to know about breast cancer and to at least know how to perform self-exam and detect any breast changes at an early stage. The survey included participants' media habits in order to see whether they use new media applications such as the Internet and social networking websites or traditional media such as television, newspapers and radio. Media habits would indicate if participants' awareness of the BCA campaigns was a result of using new or traditional media.

A pre-test was conducted on 20 participants in order to test the survey in terms of its clarity and validity. The results of the pilot study were used to modify the wording of some questions and answers and to maximize the overall understandability of the survey. It was administered in different governmental institutions between November 4th to December 12th, 2014. All participants were provided with printed copies of the survey that they had to fill with a pen. The survey data were manually entered and analyzed using the Statistical Package for social Sciences (SPSS).

Data Analysis

SPSS was used for the data processing. The results were presented first through frequency and cross-tabulation tables to describe the nature of the findings and answer the research question (Chi-square was used to indicate the statistical significance of the relationships between age and level of education in relation to campaign awareness). Logistic regression was then used to predict the effects of age and education on BCA campaigns awareness (H1 and H2). Logistic regression is the most appropriate test where the dependent variable, awareness, has two categories (yes/no). The four measures of the sample's awareness toward BCA campaigns were computed into a composite variable for the regression tests. Correlations were used for media habits and awareness in order to find a relationship (H3). The significance level used in this study was .05 with a confidence interval of 95%.

Findings

As Figure 1 indicates, the "24-29" age group was the most frequent in the sample (30.6%), followed by the "18-23" age group (21.6%). The "36-44" age group was the least frequent (11%). The age categories use a five-year interval except in the "36-44" category. Two age categories in the survey (36-41 and 42-47) were collapsed during the analysis into one (36-44) because only one respondent indicated falling in "42-47" age category. Figure 2 shows the sample's level of education. The majority of the sample indicated holding a bachelor's

degree (65.4%). In fact, the distribution of age and education in the sample is somewhat similar to the Kuwait's population (National Report on the Development of Education; Kuwait Education Indicators Report, CIA World Factbook).

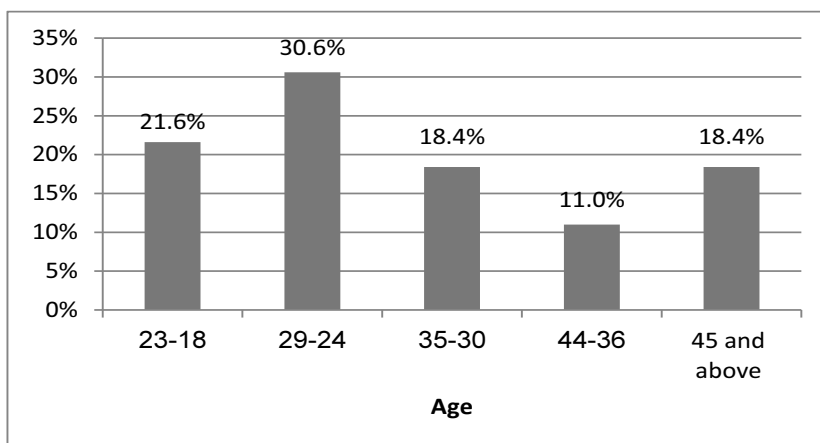


Figure 1. Sample's Age Distribution

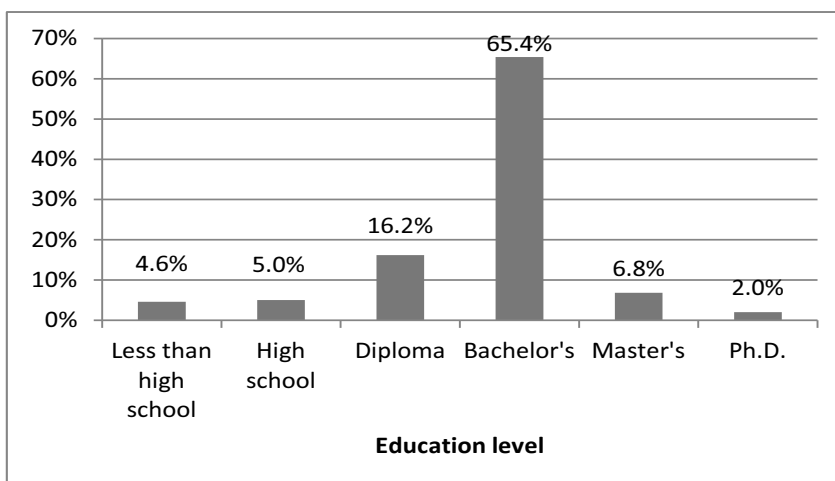


Figure 2. Sample's Education Level Distribution

In terms of the sample's daily media use, the findings indicate that the use of new and social media highly exceeds the use of traditional media. "A little" was the most frequent answer in terms of using traditional media (78.4%), while "A lot" and "Moderate" were the most frequent for using new media (37.4% and 49.2%, respectively). Among traditional media, television is the only medium where the sample indicated a "moderate" daily use and as the most frequent while use of radio

ranged between “moderate” and “a little,” with the latter being the most frequent. “I don’t use” was the most frequent answer for newspapers and magazines. Among social networking websites, “A lot” for Instagram, Twitter and social applications such as Viber and WhatsApp were the most frequent in new media daily use while “A little” was the most frequent for SMS and “I don’t use” for Facebook. The sample indicated a “moderate” daily use of general Internet websites. Thus, the sample highly uses social networking websites in their daily consumption of media while the opposite is true for traditional media. Figures 3 and 4 show the respondents’ daily use of media in general categories of “traditional media” and “new media.”

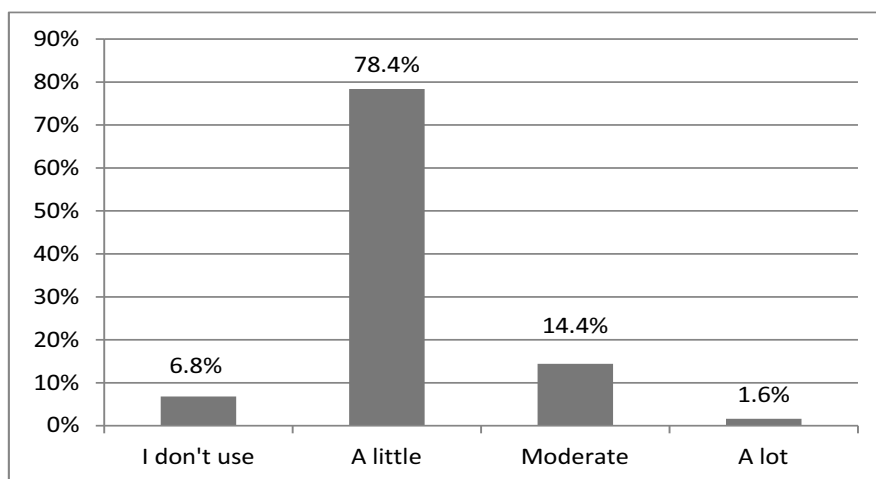


Figure 3. Daily Use of Traditional Media

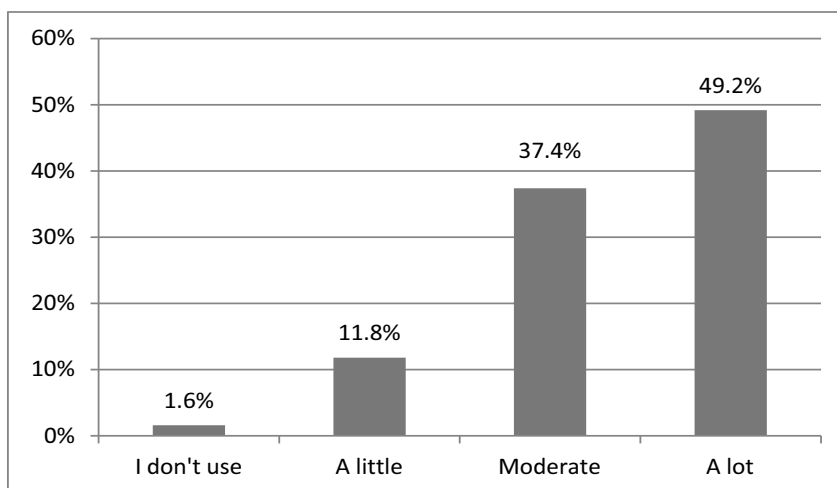


Figure 4. Daily Use of New Media

Women's Awareness toward Breast Cancer Awareness Campaigns

In regards to the first research question, four items were employed to measure awareness toward BCA campaigns: whether or not the sample is aware of October as being BCA month, if the sample knows of any previous BCA campaign in Kuwait, if campaigns influenced their overall knowledge toward breast cancer, and if the sample believes the current campaigns are satisfactory in spreading cancer awareness. The findings indicate the following:

- 57% indicated they do not know that October is breast cancer awareness month
- Only 33% indicated they have heard about breast cancer awareness campaigns in Kuwait
- 59% indicated breast cancer awareness campaigns did not influence their overall knowledge toward this type of cancer
- 73% indicated the current campaigns are not satisfactory in spreading breast cancer awareness

These findings indicate that more than half of the sample did not know October is BCA month and also indicated not knowing about BCA campaigns in Kuwait. More than half of the sample expressed being un-influenced by these campaigns while a great majority indicated their dissatisfaction toward the current media campaigns in spreading awareness. These findings clearly indicate a high level of unawareness toward BCA campaigns, particularly toward the fact that October is considered BCA month.

Cross-tabulations were used to describe the level of women's awareness toward BCA campaigns according to age and level of education. As Table 1 shows, the younger age groups did not know that October is BCA month while "36-44" and "45 and above" knew about it. Pearson Chi-Square indicated a significant relationship between age and awareness (significance.007). Table 2 shows if participants have heard about BCA campaigns in Kuwait. All age groups indicated low knowledge of previous campaigns. Chi-Square indicated a significant relationship between age and knowing about a previous campaign (.02).

Table 1.

Age	Do you know that October is Breast Cancer Awareness month?	
	Yes	No
18-23	36 (7.2%)	70 (14%)
24-29	75 (15%)	78 (15.6%)
30-35	27 (5.4%)	64 (12.8%)
36-44	28 (5.6%)	27 (5.4%)
45 and above	49 (9.8%)	46 (9.2%)
Total	215 (43.0%)	285 (57.0%)

Significance level.007 (Chi-Square = 14.12, degrees of freedom, df, = 4)

Table 2.

Age	Have you heard/known of any breast cancer awareness campaigns in Kuwait?	
	Yes	No
18-23	46 (9.2%)	62 (12.4%)
24-29	45 (9.0%)	108 (21.6%)
30-35	33 (6.6%)	59 (11.8%)
36-44	20 (4.0%)	35 (7.0%)
45 and above	23 (4.6%)	69 (13.8%)
Total	167 (33.4%)	333 (66.6%)

Significance level.021 (Chi-Square = 11.58, df = 4)

As for whether the awareness campaigns influenced participants, different age groups showed different findings (Table 3). The majority of the "18-23" age group indicated no influence from awareness campaigns. This finding was also true for the "24-29" and "30-35" age groups. Both of the remaining older age groups indicated no influence from awareness campaigns with a marginal difference in the answers. Chi-Square indicated a significant difference (.043) indicating a relationship between age and being influenced by media campaigns. As for the satisfaction level toward BCA campaigns, all

age groups indicated a “No” (Table 4). “36-44” age group was the most dissatisfied toward the campaigns while “18-23” age group was the least dissatisfied. Chi-Square indicated a significant relationship between age and satisfaction toward campaigns’ efforts (.012)

Table 3.

Age	Do you think breast cancer awareness campaigns have influenced your overall knowledge toward this type of cancer?	
	Yes	No
18-23	36 (7.2%)	72 (14.4%)
24-29	66 (13.2%)	87 (17.4%)
30-35	35 (7.0%)	57 (11.4%)
36-44	21 (4.2%)	34 (6.8%)
45 and above	45 (9.0%)	47 (9.4%)
Total	203 (40.6%)	297 (59.4%)

Significance level.043 (Chi-Square = 8.58, df = 4)

Table 4.

Age	Are you satisfied with the current awareness campaigns in spreading breast cancer awareness?	
	Yes	No
18-23	18 (3.6%)	23 (4.6%)
24-29	17 (3.4%)	33 (6.6%)
30-35	29 (5.8%)	64 (12.8%)
36-44	32 (6.4%)	133 (26.6%)
45 and above	39 (7.8%)	112 (22.4%)
Total	135 (27.0%)	365 (73.0%)

Significance level.012 (Chi-Square = 13.21, df = .012)

Level of Education and Awareness

Mentioned previously, the author found that most of the sample indicated holding a bachelor’s degree which is in tandem with the findings of the National Report on the Development of Education and Kuwait Education Indicators Report. Level of education was cross-tabulated with the four

measures of campaign awareness used in age previously. Table 6 shows that the majority of all levels of education did not know that October is breast cancer awareness month. Chi-Square indicates insignificant relationship (.051). When the sample was asked if it has heard or known about a previous awareness campaign in Kuwait, the majority indicated a "No" with an insignificant difference (.18), as indicated in Table 7.

Table 5.

Level of Education	Do you know that October is Breast Cancer Awareness month?	
	Yes	No
Less than high school	4 (0.8%)	14 (2.8%)
High school	9 (1.8%)	20 (4.0%)
College Diploma	29 (5.8%)	57 (11.4%)
Bachelor's Degree	197 (39.4%)	139 (27.8%)
Master's Degree	6 (1.2%)	15 (3.0%)
Ph.D.	4 (0.8%)	6 (1.2%)
Total	249 (49.8%)	251 (50.2%)

Significance level.051 (Chi-Square = 9.04, df = 5)

Table 6.

Level of Education	Have you heard/known of any breast cancer awareness campaigns in Kuwait?	
	Yes	No
Less than high school	8 (1.6%)	10 (2.0%)
High school	11 (2.2%)	18 (3.6%)
College Diploma	35 (7.0%)	51 (10.2%)
Bachelor's Degree	263 (52.6%)	71 (14.2%)
Master's Degree	8 (1.6%)	4 (0.8%)
Ph.D.	7 (1.4%)	14 (2.8%)
Total	332 (66.4%)	168 (33.6%)

Significance level.18 (Chi-Square = 2.21, df = 5)

Chi-Square indicates an insignificant relationship between level of edu-

cation and if the awareness campaigns have influenced the sample. Table 8 shows across all levels of education; most of the sample was not influenced by these campaigns, with the majority of these findings coming from Bachelor's degree holders. Table 9 shows a unanimous agreement among all levels of education that the current campaigns are not satisfactory in spreading breast cancer awareness. However, Chi-Square indicated an insignificant relationship (.073). These findings clearly indicate that level of education is not related to being aware of BCA campaigns.

Table 7.

Level of Education	Do you think breast cancer awareness campaigns have influenced your overall knowledge toward this type of cancer?	
	Yes	No
Less than high school	8 (1.6%)	10 (2.0%)
High school	11 (2.2%)	18 (3.6%)
College Diploma	33 (6.6%)	53 (10.6%)
Bachelor's Degree	129 (25.8%)	207 (41.4%)
Master's Degree	7 (1.4%)	14 (2.8%)
Ph.D.	4 (0.8%)	6 (1.2%)
Total	192 (38.4%)	308 (61.6%)

Significance level.20 (Chi-Square = 1.44, df = 5)

Table 8.

Level of Education	Are you satisfied with the current awareness campaigns in spreading breast cancer awareness?	
	Yes	No
Less than high school	7 (1.4%)	11 (2.2%)
High school	10 (2.0%)	19 (3.8%)
College Diploma	16 (3.2%)	60 (12.0%)
Bachelor's Degree	65 (13.0%)	281 (56.2%)
Master's Degree	8 (1.6%)	13 (2.6%)
Ph.D.	0	10 (2.0%)
Total	106 (21.2%)	394 (78.8%)

Significance level.073 (Chi-Square = 10.1, df = 5)

Age, Level of Education, and Media Use toward BCA Campaigns

While the frequencies and cross-tabulations showed low levels of awareness toward BCA campaigns, logistic regression was used to measure the relationship between age and level of education on campaign awareness (tables 9 and 10). Starting with age first (Table 9), the logistic regression model was statistically significant (Wald chi-square = 19.66, $p < .013$). Using Nagelkerke R-squared, the model explains that 37% of the variance in awareness toward BCA campaigns is due to age. As indicated in the reference category of the logistic regression, older age groups were associated with an increased level of awareness where they are 3.12 times more likely to be aware of the BCA campaigns than younger age groups. It can be concluded that H1 is supported indicating the effects of age toward BCA campaigns' awareness.

Table 9. Logistic regression for age and awareness toward BCA campaigns (Variable equation)

	Wald	Degrees of Freedom	Significance	Exp (B)
Age	19.66	4	.013	3.12

Applying logistic regression to levels of education and awareness toward BCA campaigns (Table 10), the test shows insignificant relationship between the two variables (Wald chi-square = 23.06, $p > .05$). The insignificant relationship was supported further by Nagelkerke R-squared which explains 1.7% of the variation associated with level of education toward awareness. Therefore, hypothesis 2 is rejected. This implies that level of education did not necessarily make the sample more or less aware toward BCA campaigns.

Table 10. Logistic regression for level of education and awareness toward BCA campaigns (Variable equation)

	Wald	Degrees of Freedom	Significance	Exp (B)
Level of education	23.06	4	.27	1.19

Hypothesis 3 attempts to measure the correlation between media use and awareness toward BCA campaigns (Table 11). As mentioned previously, types of media were divided into traditional media variable (combining TV, radio, newspaper, magazine) and new media variable (combining *Instagram*,

Facebook, Twitter, social applications such as Viber and WhatsApp, SMS, and general Internet websites). Daily use of traditional media was negatively correlated with campaign awareness ($r = -.7$) which means that using traditional media does not increase awareness toward BCA campaigns. The correlation indicates an insignificant relationship (.092). Daily use of new media was also negatively correlated with campaign awareness ($r = -.8$) with an insignificant correlation (.071). Therefore, whether it is traditional media or new media, type of media is not correlated with awareness toward BCA campaigns. Hypothesis 3 is rejected.

Table 11. Correlation between media use and level of awareness

		Level of Awareness
Daily use of traditional media	Correlation coefficient	-.7
	Significance	.09
	N	500
Daily use of new media	Correlation coefficient	-.8
	Significance	.07
	N	500

To reiterate, the findings indicate that the sample has a very low level of awareness toward BCA campaigns. The findings also show a significant relationship between age and awareness where older age groups are more aware of the awareness campaigns than the younger. However, education did not contribute to having an influence on awareness and different levels of education were not significant to indicate any campaign awareness. Media use was negatively and insignificantly correlated with BCA campaigns indicating that with the use of traditional or new media it does not necessarily contribute to women's awareness toward the campaigns. These findings are furtherly discussed in the next sections.

Discussion

Are women in Kuwait aware of BCA campaigns? The findings clearly indicate a high level of unawareness. To elaborate further, neither age (from 18 to 35 years old in particular), all levels of education (from less than high school to holding a Ph. D.) nor media use (traditional or new media use) had any relation to being aware toward BCA campaigns. For the few who are aware of the BCA campaigns, only age was found to be significantly related, with older age groups having more awareness than the younger.

The findings of this study provide alarming signs to those who launch these media campaigns, to women themselves and to the medical community in Kuwait. During the month of October, which is the global breast cancer awareness month, different private and governmental organizations launch media campaigns targeting women of all ages. They take place in populated spaces such as malls and parks and use different kinds of media to maximize exposure. The aim of the campaigns is to generally spread awareness about breast cancer, know how to perform self-exams, when and where to get mammogram tests, and equip women with all the needed knowledge and information toward this type of cancer. These awareness campaigns are a natural outcome to the global fact that breast cancer is widespread around the world and Kuwait is no exception. The rate of breast cancer in Kuwait is higher than the global rate (Al-Bhrawi 1) and it has increased by three folds for the last 30 years (Alharbi et al. 75-82). However, to find that a considerable number of Kuwaiti women of all ages and levels of education remains unaware of these media campaigns puts many doubts toward the campaigns' effectiveness. In other words, as the findings demonstrate, the majority of the sample is unaware of the existence of BCA campaigns which can be attributed to their ineffectiveness. Thus, it is very likely that women's knowledge, attitudes, and behaviors toward breast cancer would remain unchanged despite these campaigns. Moreover, the survey of this study was distributed at the beginning of November, 2014, which was days after the peak of breast cancer-related events that take place during the whole month of October. As the findings have shown, not only did the sample show low levels of awareness toward BCA campaigns, but they also showed that lack of awareness immediately after the month of October.

Future BCA campaigns should not only be present in the media, but should also be carefully and successfully executed by having a communication strategy that encourage people to be aware, seek information, change attitudes and adopt a health-conscious behavior. Previous research has shown that campaign messages can fall short and even backfire when they are inappropriately researched and poorly executed (Wakefield et al. 1261-1271). The results of this study suggest that current awareness campaigns seem to lack key components that attract women of all ages and levels of education to their messages. In order to be successful and effective, future campaigns should evaluate the content of their message, its delivery, who the audience is in terms of demographics, psychographics and media use, and launch well-planned campaigns. Doing so would create numerous chances for women to be exposed to the campaigns' messages. Despite the cluttered media environment, media exposure has been linked to effects on awareness

and information seeking and it is equally important that this awareness and information seeking is further reinforced by attitudinal and behavioral changes (Davis et al., 1024-1039).

Societal and personal factors cannot be ignored as possible barriers to BCA campaigns. A considerable number of studies have shown that women fear breast cancer and even the word "cancer" which might make them intentionally inattentive to BCA messages (Luquis and Cruz; Jacobellis and Cutter). It is also considered taboo in some countries where there is a general unwillingness to openly discuss breast cancer such as the Middle East, China, and Sub-Saharan Africa (Abu Shaikha and Salama; Wu et al.; Sambanje and Mafuvadze). Examining general knowledge of Hispanic women in the United States, Luquis and Cruz found that "fatal disease," "death," and "fear" were among the first impressions women get when they hear the word "cancer" (25-42). Wu et al. also found "fear of finding cancer" and "discomfort" to be among the first words for Chinese women to describe breast cancer (1-8). This might contribute to women's overall lack of awareness and knowledge toward breast cancer in general and BCA campaigns in particular.

Although this study is the first of its kind in measuring women's awareness toward BCA campaigns in Kuwait, in many ways the findings are in tandem with similar previous research. Siegel and Biener found that use of traditional media was low in general, which also created unawareness toward anti-smoking campaigns in Massachusetts, USA (380-386). Siegel and Biener's findings are similar to this study in that women in the sample generally ranked low in using traditional media, particularly the younger ages. Jones, Denham and Springston found that middle-aged women tend to be influenced by mass-mediated messages (94-113), which was similar in this study in that older age groups were more aware of the BCA campaigns and generally use more traditional media than the younger age groups. Ford et al. also found women of younger age groups generally to lack awareness of breast cancer (827-834). Numerous studies found that health-related media campaigns have had little success because of low media use, ineffective campaigns, lower level of education and commercial marketing strategies that overshadow the media awareness campaigns (Babor et al.; Sambanje and Mafuvadze; Spoth et al.; De Jong et al.; Smith et al.).

In a study published by the National Cancer Institute, media campaigns can spread awareness toward a particular illness when they are combined with programs in schools, universities, law enforcement and the community at large. In a similar vein, Babor et al. have indicated that policy changes and law enforcements increase the chances of campaign success. Wakefield et al. also suggested the application of multiple interventions to increase the

likelihood of a campaign's success and awareness (1261-1271). Kuwait has witnessed similar efforts that complement the media awareness campaigns. Non-governmental organizations (NGOs) and health professionals have been active during and beyond the month of October to spread awareness about breast cancer. For example, Hayatt Breast Cancer Foundation and Cancer Awareness Nation (C.A.N) have been providing workshops, discounts to clinics, public forums, and trips to schools in addition to their campaigns in traditional and new media. These workshops and forums range in topics from early detection, ways of prevention to risks and are carried out by health professionals. However, several factors might impede the effectiveness of these awareness efforts. A constant problem that NGOs face is their dependence on sponsors in order to have the finances required to launch their events. Also, the majority of these events take place during October, with few to no events throughout the year. This might contribute to the lack of awareness toward the campaigns. It is important to note here that the private sector in Kuwait has also taken part in breast cancer awareness efforts. Zain, a telecommunication company in Kuwait, has provided breast cancer workshops by health professionals to its employees. They have also displayed corporate social responsibility advertisements on billboards and newspapers encouraging women to take action toward breast cancer in terms of early detection and on the importance of periodical visits to health professionals. However, the majority of these efforts occurs during the month of October.

It can be suggested, therefore, that in order to spread the awareness even further, NGOs, governmental institutions and the private sector should not only spread breast cancer awareness by using the media and launch events that are limited to specific target audience and time of the year. The increasing threat of breast cancer requires continuous efforts throughout the year and by multiple change agents such as health professionals and breast cancer survivors. Breast cancer survivors can provide their own first-hand experience with the illness which can contribute to the public's overall awareness. In addition, organizations need to provide and publicize about the facilities that offer educational and medical programs in breast cancer, and not only be limited to launching media campaigns. Awareness can be achieved through nationwide efforts where the media, the government, NGOs, private organizations, and the medical communities of Kuwait are involved.

Conclusion

The study's aim was not to uncover flaws of Kuwait's BCA campaigns. It attempted to show women's level of awareness toward these awareness

campaigns. The findings demonstrated a general high level of unawareness at a time where breast cancer is among the most widespread type of cancer. Previous research has shown that media campaigns have the ability to produce positive or prevent negative changes in health-related issues (Wakefield et al. 1261-1271). However, in the case of Kuwait, BCA campaigns seem to be surrounded by doubts on their effectiveness on different levels. First, these campaigns do not seem to effectively reach the targeted audiences, creating the unawareness this study has found. Second, the messages and objectives of these campaigns are to increase and change the target audience's knowledge, attitudes and behaviors, which seem to be unreachable due to the fact that women are not aware these campaigns exist in the first place. Also, younger age groups, all levels of education, and media use did not seem to be influenced by these campaigns. Wakefield et al. provide the needed interventions to increase the likelihood of media campaigns' success and awareness (1261-1271). Along with media campaigns,

Concurrent availability of and access to key services and products are crucial to persuade individuals motivated by media messages to act on them. The creation of policies that support opportunities to change provides additional motivation for change, whereas policy enforcement can discourage unhealthy or unsafe behaviors. Public relations or media advocacy campaigns that shape the treatment of a public health issue by news and entertainment media also represent a promising complementary strategy to conventional media campaigns. (Wakefield et al. 1268)

The findings have increased the significance of this study on several aspects that are media-related and medically-related. Although there is an increase in BCA campaigns, this study suggests that these campaigns are not effective in reaching the targeted audiences and consequently cannot increase women's awareness. Future research should investigate the effectiveness, or lack of, of these media campaigns as well as get detailed insights into the reasons behind women's unawareness toward the campaigns. It will help communicators know how to reach the target audience and launch successful campaigns. This gives future researchers the opportunity to conduct qualitative and quantitative research studies to extract additional findings. Future research should also allocate more attention toward the role and effectiveness of new and social media in women's awareness toward BCA campaigns. C.A.N and Hayatt, for example, are present and active on social media (mainly Twitter, Facebook, Instagram, and YouTube, according to their official websites). However, presence on social media does not necessarily mean reach and impact on women. As shown in the findings, new

and social media are highly used by Kuwaiti women. Future research should investigate the reasons behind women's unawareness toward BCA campaigns despite online presence of these campaigns and women's high digital media use.

It is important to mention the limitations of this study. The study used a convenient sample of 500 Kuwaiti women the author surveyed at different locations. The study also used parametric statistical tests, the logistic regression and correlation, which assume randomization. The findings, therefore, cannot be generalized to all Kuwaiti women but only to those surveyed. In addition, few research studies have measured media awareness to health-related campaigns, let alone for breast cancer. This limitation was both an opportunity and an obstacle to this study. It was an opportunity to measure awareness toward media campaigns in a country like Kuwait where no previous and similar research to this one has been conducted, making it the first of its kind. It was an obstacle to find similar studies that measured awareness toward BCA campaigns, which the literature greatly lacks. Although the literature is rich in studies that measure media campaigns, the great majority of those were for smoking, HIV AIDS, alcoholism and narcotics or they measured attitudes and behaviors rather than awareness. This study has tackled a different research area which is women's level of awareness toward BCA campaigns.

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