

The Use of Mammography among Jordanian Women: Findings from the Behavioral Risk Factor Surveillance System 2007

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Abstract

Introduction: This study aims to provide a national estimate of the rate of utilization of mammography among Jordanian women aged 35 years and above and the impact of the different variables affecting this utilization.

Methods: Data were derived from the Risk Factor Surveillance Survey conducted in 2007, focusing on all women aged 35 years and above with a total of 1161. Dependant variables were mammography utilization, while Predictor variables were; age, marital status, education, income, medical insurance, medical service providers, residency and health status as perceived by the respondents. Appropriate analysis was used to assess the relationships between these variables.

Results: Only 12.5% had mammography. Utilization increased with increasing age, level of education and with the higher income level. Non-insured and those who obtained medical service through the private sector had more utilization. Women in good health who are residing in the middle part of the country showed higher rates of mammography.

Conclusion: This national study has demonstrated underutilization of mammography. It provides basic data for future studies. Initiating a national program for screening helps to find out measures to facilitate utilization of mammography as easy access and reduced cost. Improvement of income, education level and insurance will positively influence mammography utilization.

Keywords: breast, cancer, screening, mammography, Jordan.

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Introduction

Breast cancer is the most common cancer among women worldwide and is only surpassed by lung cancer as a leading cause of death in the developed countries.

The Jordan National Cancer Registry (JNCR), which was established as a population-based registry in 1996, collects and disseminates data about cancer among Jordanians. The JNCR report of 2007 showed that breast cancer headed the list of all cancers affecting women (35.3%) with an alarming increase since its first report in 1996.¹

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Although no accurate data on the stage of the disease at the time of presentation is available, hospital-based observations on breast cancer suggest that the majority of patients present in an advanced stage.² Several reports³⁻⁶ indicated an advanced stage at presentation in the developing countries. In contrast, breast cancer in the United States and other developed countries is diagnosed at an earlier stage⁷ which is attributed to the comprehensive effort to implement the policy of early detection. Mammography, clinical breast examination and breast self examination (BSE) are the classical elements of early detection of breast cancer. Screening mammography has shown 25-30% decrease of mortality caused from breast cancer.⁸

Jordan is a developing country with limited resources, and as such, the investment in early detection of this common and lethal cancer will definitely save lives and reduce the cost of management. There are several significant steps taken in the right direction to improve the management of cancer in Jordan such as the establishment of JNCR in 1996, the foundation of Al Hussein Cancer Centre, the collaboration with international institutes and organizations⁹ such as (WHO, CDC, USAID), in addition to launching campaigns to train health workers and increasing public awareness.

No available information exists on the rate of use of mammography as a screening tool for the early detection of breast cancer or its determinants among Jordanian women. This study aims to provide a national estimate of the rate of utilization of mammography among Jordanian women who aged 35 years and above. Determinants of obstacles facing utilization of mammography are also explored. Possible ways to overcome these obstacles are suggested.

Material and Methods

Data for this study are derived from the Risk Factor Surveillance Survey conducted in 2007 by the Jordan Ministry of Health (MOH) in collaboration with Centres for Disease Control

the World Health Organization (WHO).¹⁰ The objectives of this cross-sectional national survey were to assess and monitor behavioral risk factors associated with chronic diseases including cardiovascular disease and cancer among adult Jordanians aged 18 years and above. A multistage random sampling design was applied by the Department of Statistics (DOS),¹¹ to select clusters and households to be included in the survey. The 2004 Jordan census enumeration clusters were used as the master sampling frame, stratified by administrative region (governorate), major city, other urban area and rural area. This stratification covered the northern, middle and southern parts of the country. Eight households were randomly selected from each cluster with a total of 3688 households. From each household, one adult aged 18 years and above was randomly selected and interviewed personally, yielding a total of 3654 adult persons, 1939 (53%) males and 1715 (47%) females.

Data were collected by means of a face-face interview using a pre-designed and pre-tested questionnaire. Verbal consent was obtained from each respondent. Further details of the survey design and instrument used for data collection are available elsewhere.¹⁰ The sample for this study consists of all female respondents aged 35 years and above with a total of 1161. The survey questions pertaining to this age group included the following sociodemographic variables: age, marital status, level of education, total monthly family income, medical insurance if any, main source of medical service, place of residence and geographic region in which the woman lived and general health status as perceived by the respondent. Adult female participants were asked whether they had ever had a mammogram. Respondents who answered (yes) were then asked how long it had been since their last mammogram. Medical services were assessed by asking: "What is the main source of the medical services you get?" "Medical insurance was assessed by asking: "Do you have medical insurance and what kind of insurance? For the purpose of the study, women were categorized according to their response; never had

and Prevention (CDC) in the United States and years before initiation of the survey and the last group are women who had mammography between 2-5 years.

Data Analysis

Data were analyzed using Statistical Package for Social Sciences (SPSS).¹² Descriptive results are presented as percentages and means. Associations between categorical variables were examined using chi-square test, wherever appropriate. Binary logistic regression analysis was used to assess the relationships between the independent predictor variables and response variables. Predictor variables included age, marital status, level of education, total monthly family income, medical insurance if any, main source of medical service, place of residence and geographic region in which the woman lived and general health status as perceived by the respondent. Response variables used are: Had mammography /never had and had a mammogram within 2 years versus mammogram done 2-5 years of survey initiation. Variables were entered in the initial model in the order specified by the researchers.

To ensure statistically sound results and to achieve further in-depth assessment of relationships, subsequent analytical runs tested different cut-off points for the predictor variables which took into consideration adequate number of observations. Odds ratios and 95% confidence intervals were calculated. A p value ≤ 0.05 was considered statistically significant.

Results

The study population consisted of 1161 illegible females aged 35 years and above. 144 respondents reported having had a mammogram, 1009 said they never had the test and 8 did not know. At this point, those who did not know were excluded from the study. Thus the final sample on which all analyses is carried out amounts to a total of 1153 with a mean age of 50.6 years, (S.E 0.4).

mammography, had mammography within two

Table (1) shows that 26.4% (n=304) of respondents are illiterate while 5% (n=53) hold a university degree. Almost 3/4 is married and 2/3 has some form of health insurance. More than half of the study sample obtains medical services through MOH and 20% (n=230) through the private sector.

Table (1): Distribution of the study sample by selected sociodemographic characteristics (N=1153).

Characteristic	Number	%
Age group(years)		
35-44	448	38.9
45-54	304	26.4
55-64	230	19.9
65+	171	14.8
Education(years of school)		
Illiterate	304	26.4
Basic (6)	407	35.3
Secondary (12)	253	21.9
Intermediate diploma (14)	136	11.8
University(>14)	53	4.6
Marital status		
Single	63	5.4
Married	876	76.0
Divorced or separated	16	1.4
widowed	198	17.2
Monthly income(JDs)		
<100	155	13.4
100-299	657	57.0
300-499	179	15.5
≥500	116	10.1
Refused/no answer	46	4.0
Health insurance		
Yes	770	66.8
No	383	33.2
Source of medical service¹		
MOH	627	54.4
Royal medical services	198	17.2
UNRWA	84	7.3
University hospitals	12	1.0
Private sector/others	230	19.9
Geographic region		
Middle	730	63.3
North	324	28.1
South	99	8.6
Perceived general health²		
Good	878	76.1
Fair/poor	274	23.8
Ever had a mammogram		
Yes	144	12.5
No	1009	87.5

(1) 2 missing cases

Fifty-seven percent (n=657) reported a monthly family income of JD 100-300, which is approximately equal to US\$ 150-450. Almost 2/3 of respondents (n=730) reside in the middle part of the country (80% of them are located in the 2 largest administrative regions; the capital Amman and Zarka governorates), 28% (n=324) in the northern part (64% of whom are in Irbid,

the largest governorate) and 8.6 % (n=99) in the southern part. Participants who never had a mammogram were 1009 (87.5%). Women who had mammography were 144 (12.5%). Eighty-one of them (56.3 %) reported having had mammography within two years preceding the survey, while 63 (43.7%) had the test beyond 2-5 years from the date of survey.

Several variables were tested to reveal their impact on the rate of utilization of mammography as is shown in table (2). It is observed that the rate of mammography increased with advancing age of respondents until the age of 65 years, when a sharp decline in the rate occurred. Respondents in the age group 65+ years showed the lowest rate (7.6 %). Differences in the rate of utilization of mammography by age groups were statistically significant ($p=0.047$). Similarly, increasing years of school and rising levels of income were significantly associated with higher rates of use of mammography ($p=0.000$, $p=0.000$, respectively). University graduates and those with a monthly income of JD ≥ 500 had the highest rate of mammography utilization (22.6% and 23.3%, respectively). Illiterate respondents and those with <JD 100 had the lowest rates (5.9% and 5.8%, respectively). Respondents with no health insurance coverage and those who obtained medical service through the private sector demonstrated statistically significant higher rates of utilization of mammography when compared to women covered with health insurance ($p=0.05$) and to women who used other health providers ($p=0.008$). Even though respondents residing in the middle region of the country and those who perceived their health to be good showed higher rates of mammography utilization, differences in the rate by geographic

(2) 1 missing case

statistical significance.

Comparison of the impact of the same variables on women who have had mammography within the two years preceding the survey and on those who have had the test 2-5 years since survey initiation is presented in table (3). Results showed a significant association between age and the time period since the last mammogram ($p=0.012$). Respondents in the age groups 35-44 and 65+ years had higher rates of having had a recent mammogram (70% and 68.7%, respectively) than women in other age groups. Those between 55-64 years had the lowest rate. Family income also showed a significant association with time period since last mammogram ($p=0.039$). Respondents with a family income between JD 300-499 had the highest rate of having had a recent mammogram. The remaining variables did not reveal any statistically significant differences between the two groups of respondents.

Predictors of utilization of mammography:

Predictors of mammography utilization among the study sample are shown in table (4). The binary logistic regression model revealed two common measures, which are predictive of utilization of mammography namely: monthly income and place of residence. Respondents with a family income of <JD 300 are 43% less likely to utilize mammography when compared to those with an income of \geq JD 300 (OR 0.569, $p=0.006$). Respondents residing in Amman (in the middle part of the country) are 2.4 times more likely to have mammography when compared to women residing in other parts of the country (OR 2.416, $p=0.001$). Similarly, residents of Irbid (northern part) are twice as likely to have mammography when compared to respondents residing in other parts of the country (OR 1.998, $P=0.028$).

Predictors of use of mammography within two years:

The binary logistic regression model showed that age and place of residence are predictive measures of recent use of mammography as shown in table (5).

location and perceived health status did not reach Respondents in the age group 55-64 years are 77% less likely to have had a recent mammogram when compared to women in the age group 35-44 years (OR 0.230, p=0.009).

Women residing in Zarka (middle part) are 5.9 times more likely to have recent mammogram when compared to those residing in other parts of the country (OR 5.9, p= 0.039).

Table (2): The impact of tested variables on women who have had mammography and Women who never had the test. Behavioural Risk Factors Survey, Jordan 2007.

Variable	Have had mammogram		Total Freq. (100%)	χ^2 , p value
	Yes (n=144) Freq. (%)	No (n=1009) Freq. (%)		
Age group(years)				
35-44	50(11.2)	398(88.8)	448	7.968, p=0.047 (sig./ 0.05 level)
45-54	46(15.1)	258(84.9)	304	
55-64	35(15.2)	195(84.4)	230	
65+	13(7.6)	158(92.4)	171	
Education				
Illiterate	18(5.9)	287(94.1)	305	20.551, p=0.000 (sig./ 0.01 level)
Basic (6 yrs.)	55(13.5)	352(86.5)	407	
Secondary (12yrs.) diploma (14yrs.)	40(15.8)	213(84.2)	253	
University (>14yrs.)	12(22.6)	41(77.4)	53	
Income(JDs)*				
<100	9(5.8)	146(94.2)	155	22.91, p=0.000 (sig./ 0.01 level)
100-299	71(10.8)	586(89.2)	657	
300-499	29(16.2)	150(83.8)	179	
≥500	27(23.3)	89(76.7)	116	
Health insurance				
Yes	86(11.2)	684(88.8)	770	3.697, p=0.054 (sig./ 0.05 level)
No	58(15.1)	325(84.9)	383	
Source of medical service				
MOH				
RMS	67(10.7)	560(89.3)	627	11.92, p=0.008 (sig./ 0.01 level)
UNRWA	21(10.6)	177(89.4)	198	
Private sector/others	10(11.9)	74(88.1)	84	
	46(19.01)	196(80.99)	242	
Geographic region				
Middle	100(13.7)	630(86.3)	730	3.976, p=0.137
North	37(11.4)	287(88.6)	324	
South	7(7.1)	92(92.9)	99	
Perceived general health				
Good				0.791, p=0.374
Fair/poor	114(13.0)	764(87.0)	878	
	30(10.9)	244(89.1)	274	

* excluding refused/no answer (n=46).

Table (3): Distribution of women who have had a mammogram by duration of time since last test and selected variables (n=144). Behavioral Risk Factors Survey, Jordan 2007.

Variable	have had a mammogram N=144		Total Freq. (100%)	χ^2 , p value
	Past 2 years (n=81) Freq. (%)	>2 yrs. ->5yrs. (n=63) Freq. (%)		
Age group(years)				

35-44	35(70.0)	15(30.0)	50	10.939,p=0.012 (sig./0.05 level)
45-54	26 (56.8)	20(43.2)	46	
55-64	12(34.1)	23(65.9)	35	
65+	9 (68.7)	4(31.3)	13	
Education				
Illiterate	11(64.7)	6(35.5)	17	4.688,p=0.321
Basic (6 yrs.)	26(47.4)	29(52.6)	55	
Secondary (12yrs.) diploma (14yrs.)	22(54.9)	18(45.1)	40	
University (>14yrs.)	14(70.2)	6(29.8)	20	
Income(JDs)*				6.469,p=0.039 (sig./0.05 level)
<300	42(52.5)	38(47.5)	80	
300-499	23(77.9)	6(22.1)	29	
≥500	15(55.6)	12(44.4)	27	
Health insurance				
Yes	52(60.9)	34(39.1)	86	1.542,p= 0.214
No	29(50.0)	29(50.0)	58	
Source of medical service				
MOH	45(67.2)	22(32.8)	67	7.312,p= 0.063
RMS	9(43.2)	12(56.8)	21	
UNRWA	5(50.0)	5(50.0)	10	
Private sector/others	22(47.8)	24(52.2)	46	
Geographic region				
Middle	59(58.5)	42(41.5)	101	3.976,p=0.137
North	20(55.5)	16(44.5)	36	
South	2(28.9)	5(71.1)	7	
Perceived general health				
Good	66(57.9)	48(42.1)	114	0.601,p=0.44
Fair/poor	15(50.0)	15(50.0)	30	

* excluding refused/no answer (n=8).

Table (4): Binary logistic regression model of predictors of utilization of mammography among the study sample. Behavioral Risk Factors Survey, Jordan 2007.

Variables	Odds(CI) ^a	P value
Age group		
35-54	0.959 (0.605,1.520)	0.860
55+	1.0 ^b	
Educational level		
Less than secondary	0.779 (0.510,1.188)	0.246
Secondary & above	1.0 ^b	
Income(JD)		
<300	0.569 (0.379,0.854)	0.006*
≥300	1.0 ^b	
Health insurance		
Yes	0.840 (0.567,1.245)	0.386
No	1.0 ^b	
Source of medical service		
MOH	0.767 (0.530,1.110)	0.160
Other	1.0 ^b	
Marital status		
Married	1.181(0.733,1.904)	0.494
Other	1.0 ^b	
Perceived general health		
Good	0.921(0.569,1.491)	0.737

Fair/poor	1.0 ^b	
Place of residence		
Amman	2.416(1.429,4.083)	0.001*
Zarka	1.319(0.639,2.721)	0.454
Irbid	1.998(1.079,3.699)	0.028*
Other	1.0 ^b	

a: 95% confidence interval

b: reference category

*: statistically significant

Table (5): Binary logistic regression model of predictors of recent use of mammography among women who ever -used a mammogram. Behavioral Risk Factors Survey, Jordan 2007.

Variables	Odds(CI) ^a	P value
Age group		
35-44	1.0 ^b	
45-54	0.521(0.191,1.422)	0.203
55-64	0.230(0.076,0.697)	0.009*
65+	1.161(0.241,5.596)	0.852
Educational level		
Less than secondary	1.079(0.415,2.806)	0.876
Secondary & above	1.0 ^b	
Income(JD)		
<300	0.420(0.162,1.087)	0.074
≥300	1.0 ^b	
Health insurance		
Yes	1.845(0.790,4.308)	0.157
No	1.0 ^b	
Source of medical service		
MOH	1.926(0.895,4.143)	0.094
Other	1.0 ^b	
Marital status		
Married	0.852(0.313,2.320)	0.754
Other	1.0 ^b	
Perceived general health		
Good	1.160(0.439,3.071)	0.764
Fair/poor	1.0 ^b	
Place of residence		
Amman	3.063(0.963,9.738)	0.058
Zarka	5.900(1.095,31.798)	0.039*
Irbid	2.050(0.562,7.479)	0.277
Other	1.0 ^b	

a: 95% confidence interval

b: reference category

*: statistically significant

Discussion

Since the foundation of JNCR in 1996, there is a steady increase in the incidence of breast cancer.¹ Although we lack accurate data about the stage of the disease in Jordan, our observation in clinical practice indicates a large proportion of patients presenting in advance stage.

Such an observation is supported by reports from neighbouring countries with similar demographic and socio-economic characters like Bahrain, Egypt and Saudi Arabia where 40%- 60% of cases present in advanced stage.^{3, 6, 9, 13}

Despite the presence of several modern medical institutions in Jordan, which implement the most recent international and costly guidelines for breast cancer management, screening and early detection policy is not yet established on a nationwide level.

The few studies that were published from Jordan had shed some light about breast cancer epidemiology; incidence, factors related to mammography use, breast self examination practices (BSE), women's awareness and lifestyle- related risk factors for breast cancer in Jordanian females.¹⁴⁻¹⁷ Most of these studies are hospital or small community- based. This study is probably the first one on a nationwide scale, which tests the pattern of utilization of mammography among Jordanian women.

The results indicate under utilization (12.5 %) of this important tool used for early detection of breast cancer, while in the United States the utilization rate reached 63.9% in 1989 and 84.8% in 1997 for women who were 40 years of age and above.¹⁸

Several factor, thought to affect the use of mammography, were measured in this study .We found that the frequency of using the test significantly increases with the increase of age. Nevertheless, only (15.17 %) of women between (45-64) years utilized mammography, which is a disturbing observation since this age group is at the highest risk.

This study tested the frequency of mammography use in women age 35 years and older because the breast cancer in our developing societies is usually diagnosed at an earlier age than in the western countries.⁶ Education level has a positive impact on mammography use, as it is used less by illiterate (5.9%) and its frequency is increased with increasing the level of education; being the highest in women with university degree and above (22.6%). This study has confirmed the results of other studies.¹⁹⁻²¹

The monthly family income was found to be highly significant regarding the use of mammography; women with the lowest family income (<100 J.D) demonstrated the lowest rate of mammography (5.8%), while women with a monthly family income of JD 500 or more had recorded the highest rate of doing the test (23.3 %). Low family income may have a major contribution to the under-utilization of mammography. This finding is concordance with other studies.^{20, 21} Women in the study who have MOH as the main source of medical care only 10.7% of them have had mammography while women utilizing the private sector as health provider scored 19%. This may indicate the presence of obstacles, which need to be looked for and overcome since MOH is responsible for the provision of medical care to 52.1% of Jordan population. Non- insured women do mammography more than the insured ones (15% and 11%, respectively).

These odd findings, contrary to other studies,^{21, 22} reflect problems in the insurance coverage or the lack of facilities provided by the insurers.

The southern region of Jordan demonstrated the lowest rate of mammography utilization (7%). This might be due to lack of health care facilities regarding mammography, difficult access to health care, poverty and less education. Many studies in literature classified women into two categories; women have had mammography in the last two years and women who ever had mammography. The reason for such categorization is to test the power of adherence to the screening program.²³

In this study, we could not test the level of adherence due the absence of such a program, but our results establish basic data to estimate trends of utilization of mammography when a national program of screening and early detection of breast cancer will commence in the near future.

We have found that women who had mammography in the last two years preceding the survey were of higher income. They also showed, without statistical significance, a higher level of education, residence in the middle region and use of different available sources of medical service compared to women who ever had mammography (Table 3). By modifying this factor, one could help in making targeted women to abide to screening protocols when become available in the future.

Finally, this study inherited several limitations, the self-reporting survey might be subject to reporting biases, and the questionnaire didn't include questions if mammography is done for screening or diagnosis of breast problems. Consequently, if some women had diagnostic mammography, and were excluded from the survey this probably will result in further lowering of rate of utilization of mammography as a test for breast cancer screening. Family income, as an independent variable, may not be accurately declared by the participants, which may lead to inaccurate estimation of its impact.

Conclusion

This national study has demonstrated the extremely under-utilization of mammography for screening and early detection of breast cancer. It provides basic data for future studies needed to analyze each determinant factor affecting mammography utilization. We suggest initiating a national comprehensive program for screening and early detection of breast cancer. Interventional measures to facilitate utilization of mammography should be considered such as improvement of technical facilities, easy access, and reducing cost of the test. Improvement of income, education level and insurance will also positively influence mammography utilization.

References

1. Ministry of Health. Cancer Incidence in Jordan: 2004 national cancer registry report booklet. Amman-Jordan: Ministry of Health; 2004.
2. Ala'din Alwan, Health in Jordan booklet, first Edition.2005.part one. Page 25.
3. Al-Moundhri M, Al-Bahrani B , Pervez I, et al. The outcome of treatment of breast cancer in a developing country- Oman. *Breast*. 2004; 13(2):139-145.
4. ValeroV , Buzdar A and Hortobagyi G. Locally Advanced Breast Cancer. *Oncologist*.1996; 1(1, 2):8-17.
5. Gabriel N, Hortobagyi, Aman Buzdar E, et al. Primary chemotherapy for early and advanced breast cancer.*Cancer Letters*. 1995; 90(1):103-109.
6. Omar S, Khaled I, GaafarI,et al. Breast cancer in Egypt: a review of disease presentation and detection *La Revue de Santé de la Méditerranée orientale*, 2003; 9(3): 448-463.
7. Bradley C, Given Ch, Race C. Socioeconomic Status, and Breast Cancer Treatment and Survival *Journal of the National Cancer Institute (JNCI)*. 2002; 94(7):490-496.
8. Buiatti, A. Barchielli, S. Bartolacci, M. et al. The impact of organized screening programmes on the stage-specific incidence of breast cancer in some Italian areas. *European Journal of Cancer*.2003; 39 (12): 1776-1782
9. Belbeisi A, Zindah M, Walke, et al. Assessing Risk Factors for Chronic Disease- Jordan, 2004. *Morbidity and Mortality weekly Report (MMWR)*. 55 (3): 653-655.
10. Ministry of Health. Department of Disease Control and Prevention. National Risk Factors Surveillance Survey, Jordan 2007. Amman, Hashemite Kingdom of Jordan.
11. The Preliminary Results of the Population and Housing Census. 2004. Department of Statistics. Amman, Jordan: 2004.
12. Statistical Package for Social Sciences (spss).Version 10. Chicago, Ill.
13. Akhtar S and Nadarah H. Assessment of the quality of breast cancer care: a single institutional study from Saudi Arabia. *International Journal for Quality in Health Care*. 2005; 17 (4): 301-305.
14. Sughayer M, Al-Khawaja M, Massarweh M, et al. Prevalence of Hormone Receptors and HER2/neu in Breast Cancer Cases in Jordan. *Pathology Oncology Research*, 2006; (12) 2: 83-85.

15. Petroc-Nustas W. Factors Associated with Mammography Utilization among Jordanian Women. *Journal of Transcultural Nursing*. 2001; 12(4): 284-291.
16. Madanat H and Merrill R. Breast Cancer Risk-factors and Screening Awareness among Nurses and Teachers in Amman, Jordan. *Cancer Nursing*. 2002; 25(4): 276-282.
17. Atoum M, and Al-Hourani H. Life style related risk factors for breast cancer in Jordanian females. *Saudi Medical Journal* 2004; 25 (9): 1245-1248.
18. Blackman D, Bennett E, Miller D. Trends in Self-Reported Use of Mammograms (1989-1997) and Papanicolaou Tests (1991-1997) -- Behavioural Risk Factor Surveillance System. *MMWR*.1999; 48(SS06); 1-22
19. Fernandez M, Tortolero -Luna G and Gold R. Mammography and Pap test screening among low-income foreign – born Hispanic women in the USA. *Cad. Saúde Pública, Rio de Janeiro*, 1998; 14(Sup. 3):133-147.
20. Burns B, McCarthy P, Freund K, et al. Black Women Receive Less Mammography Even with Similar Use of Primary Care. *Annals of internal medicine*. 1996; 125 (3): 173-182.
21. Wells K, and Roetzheim R. Health Disparities in Receipt of Screening Mammography in Latinas: A Critical Review of Recent Literature. *Cancer Control*.2007; 14 (4): 369-379.
22. Rodríguez M, Ward L and Pérez-Stable E. Breast and Cervical Cancer Screening: Impact of Health Insurance Status, Ethnicity, and Nativity of Latinas. *Annals of Family Medicine*. 2005; 3: 235-241.
23. Blackman D, Bennett E, Miller D. Trends in Self-Reported Use of Mammograms (1989-1997) and Papanicolaou Tests (1991-1997) Behavioral Risk Factor Surveillance System. *Morbidity and Mortality weekly Report (MMWR)*. 1999; 48(SS06); 1-22.

معدل استعمال تصوير الثدي (الماموغرام) بين السيدات الأردنيات والعوامل المؤثرة في استعماله

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الملخص:

تهدف هذه الدراسة إلى تعرّف معدل استعمال تصوير الثدي (الماموغرام) بين السيدات الأردنيات اللاتي تبلغ أعمارهن 35 عاماً أو تزيد، وتعرّف بعض العوامل المتغيرة ذات الأثر في استعمال (الماموغرام). وقد استعملت المعلومات التي جمعت عن نسبة استعمال الماموغرام من المسح الشمولي للمملكة، الذي قامت به وزارة الصحة في عام 2007. وبلغ عدد السيدات المستوفيات لشروط هذه الدراسة 1161 سيدة. وفي هذه الدراسة، تم الاستقصاء عن العوامل التي تؤثر في استعمال الماموغرام، وهي: العمر، والحالة الاجتماعية، ودرجة التعليم، ودخل الأسرة، ونوع التأمين الصحي، ومقدمي الخدمات الصحية، ومكان الإقامة، والحالة الصحية لتلك السيدات. واستعملت الطرق الإحصائية المناسبة لدراسة تلك العوامل والعلاقة بينها. وقد تبين أن 12.5% من السيدات قد عملن فحص الماموغرام، وأن معدل الاستعمال لذلك الفحص يزيد بزيادة العمر، ومستوى التعليم، ودخل الأسرة العالي. وقد وُجدت السيدات غير المؤمنات صحياً أكثر استعمالاً للماموغرام المتوافر لدى القطاع الخاص، وكانت السيدات ذوات الصحة الجيدة والقاطنات في أواسط المملكة أكثر استعمالاً لذلك الفحص. وأظهرت هذه الدراسة الوطنية قلة استعمال فحص الماموغرام لدى الأردنيات، وألقت الضوء على بعض العوامل ذات الأثر في استعمال الماموغرام لأول مرة في الأردن، مما يستفاد منه في عمل دراسات أخرى مستقبلية. إن إنشاء برنامج وطني مسحي لاكتشاف سرطان الثدي، وتسهيل وصول الأردنيات إلى مراكز الفحص، وتقليل الكلفة، والعمل على رفع دخل الأسرة، وتمكين السيدات من التحصيل العلمي العالي، والعمل على نظام تأمين صحي شامل ذي كفاءة وجاهزية، كل ذلك سيؤثر إيجاباً في زيادة استعمال الماموغرام، وبالتالي في التشخيص المبكر لسرطان الثدي.

الكلمات الدالة: سرطان الثدي، تصوير الثدي بالمماموغرام، برنامج وطني مسحي.