

# Knowledge, Attitude, and Practices towards Breast Cancer Among Women Aged Between 15 And 70 Years Living Inperiurban Center; A Case Study of Maina Center, Laikipia County.

Peter NdiranguGithuna,

Master of Science in Public Health

Dr. John Gachohi; Researcher; Epidemiology and Public Health; JomoKenyaatta University Of Agriculture and  
Technology

Dr. Dennis Magu; Lecture; School of Public Health; JomoKenyaatta University Of Agriculture and Technology.  
Corresponding Author: Peter NdiranguGithuna

---

## Abstract

**Background:** Breast cancer is the most prevalent cancer worldwide.

**Methods:** The study aimed to assess the level of knowledge, attitude and practices towards breast cancer among women aged between 15 and 70 years living in the periurban center; Maina slum in Laikipia County, Kenya. A cross-sectional descriptive study was administered to female aged between 15 and 70 years residing in Maina Slum. Data was analyzed using SPSS Version

**Results:** The results showed that most women (69.2%) do not have any knowledge of the risk factors that cause breast cancer.

The attitude of the participants once they learn that they have breast cancer was that majority of the participants 44.9% would consult a doctor.

However, concerning the practice, only 44.1% of the women underwent Self Breast Examination by the time the study was conducted

---

Date of Submission: 20-08-2018

Date of acceptance: 03-09-2018

---

## I. Introduction

Breast cancer is the most prevalent cancer in the world (4.4 million survivors up to 5 years following diagnosis) and the second most common cause of cancer-related mortality in women wide world (Parkin et al., 2005). It also accounts for 23% (1.38 million) of the total new cancer cases and 14% (458,400) of the total cancer deaths in 2008 and ranks second most common cancer overall (10.9% of all cancers) but ranks fifth as the cause of death (Ferlay et al., 2010). Approximately 1.15 million New cases of breast cancer were recorded in 2004 and over 500,000 deaths reported around the world and more than half of all cases occurred in industrialized countries (Parkin and Fernandez, 2006)

Breast cancer incidence rates vary from 19.3 per 100,000 women in Eastern Africa to 89.7 per 100,000 women in Western Europe. They are normally high in developed regions of the world (except Japan) and low in most of the developing regions. Due to the more favorable survival of breast cancer in developed regions, the range of mortality rates is very much less, approximately 6-19 per 100,000. Notwithstanding, it is still the most frequent cause of cancer death in women in both developing (269 000 deaths, 12.7% of total).

Information on cancer patterns in Sub-Saharan Africa is very sparse. Cancer-specific mortality statistics are available for only three countries, but they were considered of only medium quality in two (Mauritius and Reunion) and of low quality in the Republic of South Africa (Parkin et al., 2014). National estimates of cancer incidence and mortality are predominantly based on data from population-based cancer registries (PBCR), most of which cover relatively limited subnational populations (Parkin et al., 2014)

In Kenya, there are two population-based cancer registries, one in Eldoret (recording data on cases arising in UashinGishu County) and the second in Nairobi (registering cancer cases in residents of Nairobi County). The registry uses active case finding methods where trained registry personnel actively search for eligible cases in all possible sources (korir et al., 2002). The average annual age-standardized incidence rate was 161 per 100,000 among males and 231 per 100,000 among females in the period 2004–2008. Patient demographic information is captured in the medical records documents, and the registry staff retrieves and abstracts information only for Nairobi residents. Every effort is made to obtain the true place of residence of cancer patients, although, since this depends on accurate information being provided by patients to admissions

---

clerks it is possible that some nonresident subjects are misclassified (Mutuma et al., 2013). Breast cancer screening and research are not well established in Kenya because most funding over many years has been directed toward HIV/AIDS and malaria and policymakers have not been recognizing breast cancer as an immediate priority (Musimbi et al., 2008). Very few laboratories are well equipped to undertake breast cancer research and the present cancer management infrastructure is unable to handle all newly diagnosed cases (ibid et al.,2008). Factors related to women's knowledge, attitude and perception of breast cancer and its management may contribute significantly to medical help-seeking behavior's (Okobia et al.,2006).

## **II. Methods**

This was a cross-sectional, descriptive study carried out between August and December 2017.

Among women aged 15 and 17 years residing in maina slum, Laikipia county in Kenya. The study was approved by the Kenya National Hospital-University of Nairobi Ethical Clearance Committee on Human Rights Related to Researches Involving Human Subjects (KNH-ERC/RR/614). The categories of female included 15 and 70 years. The minimum sample size required for the study was 288 using the formula of Fisher et al, (1998) for a population greater than 10,000 was used in sample size determination.

Maina slum has approximately 2886 households with an estimated population of 10,243 people (CBS, 1999). Systematic random sampling was used to determine the number of households to be visited. The sampling interval was used to determine intervals by dividing the total number of households by the sample size and every 10th household will be visited as described by Mutai (2000). A total of out 205of 288 eligible female aged between 15 and 70 years filledthe questionnaires, for a response rate of 71.1%. Information was collected on sociodemographic characteristics, knowledge of risk factors for breast cancer, and screening methods and practice of Self Breast Examination.Knowledge of risk factors was assessed by requesting respondents to determine which of the following were risk factors for breast;Is increasing in increasing age a factor for developing breast cancer? Is positive family history a factor for developing breast cancer ?, Is a High-fat diet a risk factor for developing breast cancer? Is Smoking a risk factor for developing breast cancer? Is breast cancer related to Race/ethnicity?, Is obesity a factor for developing breast cancer ?,Is Alcohol consumption a factor for developing breastcancer?, Does having a first child at late age a factor for developing breast cancer?, Does an Early onset of menarche a factor for developing breast cancer?, Do late menopause a factor for developing breast cancer? Do Larger breast a factor for developing breast cancer? Are oral contraceptive pills a factor for developing breast cancer? , Does breastfeeding decrease rate of developing breast cancer? Is painless breast lump a factor for developing breast? Is breast cancer related to witchcraft? The response was either Yes or No.

Practice of breast cancer was assessed by identifying the methods of examination that you know that are used in examining of breast cancer by answering Yes or No: Pathological examination of breast tissue; Self-Breast Examination (SBE), Clinical Breast Examination by doctor, Mammography (picture of the breast to detect signs of breast cancer) and Ultrasound. Do you know how to perform self- breast Examination?, Do you know how often clinical breast examination should be done until a women should reach the age of 40 years; Once in a year, Once in two year ,Once in three year or I don't know ,Do you know the recommended age for mammography (picture of the breast to detect signs of breast cancer) examination to start?, At the age of 30years ,At 35 years ,At 40years ,At 45 years of age.

The attitude was assessed by If you develop breast cancer what will be your attitude? I Don't know, I will be scared, I will consult a doctor, I will use traditional medicine, I will go to prayer house, I will agree to perform Mastectomy (If necessary). If you develop breast lump how fast would you will go to see a doctor; Within one week, Within 1 months, Within 1-3 month, Not bother at all and I don't know.Will you allow the male doctor to examine your breast?

Please give your perceived risk for developing breast cancer (Tick only one answer); Not at risk, Lower risk, Medium risk, Higher risk, I don't know, Do you think you have any factors that cause breast cancer? None,1factors, 2 factors, 3 factors, More than 3 factors, I don't know[.Do you think breast cancer is a curable disease? Do you think long-time survival (more than five year) is rare due to Breast cancer? Do you practice Self Breast Examination? If yes, then how often do you practice self -Breast Examination?; Once a month, Once in 3 months, More than once in four months a year and Never in a year. At what age did you start practicing Breast Self-Examination?; Less than 25 years of age, 25-30 years, 30-35years, More than 35 years of age and I don't know. If you don't practice Self Breast Examination regularly then what are the reasons; I don't have the breast problem, I don't think I should, I don't feel comfortable doing this, I don't know how to do that, Carelessness and Unsure about its benefit. Have you ever been done a breast examination by any Doctor?, (If Yes) what is the frequency of examination?;Once,1-3times ,3-5 times, More than 5 times, (If no .) why are you reluctant to participate in Clinical Breast Examination?, Concern about extra money, Concern about extra time ,Fear of outcome ,Too young to participate , No sign symptom of breast cancer ,No one recommended, Unsure about the benefit and I don't know, the respondent ticks where appropriate.

### III. Results

#### Demographic Information.

##### Socio-demographic characteristics of the respondents

Demographic Characteristics	Frequency	Percent
<b>Religion</b>		
Christian	238	94.0
Muslim	15	6.0
<b>Marital Status</b>		
Single	92	35.4
Married	142	54.6
Living with partner	26	10.0
<b>County of Birth</b>		
Laikipia	69	30.6
Nakuru	17	7.5
Isiolo	5	2.4
Nyeri	61	27.1
Nyandarua	73	32.4
<b>Education Level</b>		
Primary school	16	6.1
Secondary school	122	46.4
College/University	121	46.0
<b>Age bracket</b>		
15-30	100	38.0
30-50	138	52.5
50-70	25	9.5

#### Knowledge of breast cancer

##### Summary of the average knowledge of participants about risk factors for breast cancer.

	Frequency	Valid Percent
Yes	80	30.8
No	180	69.2

#### Knowledge of respondents about risk factors for breast cancer.

	Frequency	Percent
Family history on breast cancer	36	13.7
Have any breast cancer	19	7.2
Increasing age a risk factor	119	45.2
Positive family history a risk factor	175	66.5
High fat diet a risk factor	111	42.2
Smoking a risk factor for breast cancer	179	68.1
Is breast cancer related to race	49	18.6
Is obesity a risk factor for breast cancer	92	45.0
Alcohol consumption a risk factor for breast cancer	141	53.6
Does having the first child at late age a risk factor	112	42.6
Does an early onset of menarche a risk factor	122	46.4
Do late menopause a risk factor for breast cancer	81	30.8
Do larger breast a risk factor for cancer	73	27.8
Are oral contraceptive pills a risk factor	120	45.6
Does breastfeeding decrease a risk of cancer	154	58.6
Is painless breast lump a risk factor	134	51.0
Is breast cancer related to witchcraft	26	9.9

#### The practice of breast cancer

##### Respondent's opinion of diagnosis of breast cancer.

Pathological Tissue Examination	Frequency	Valid Percent
Yes	107	40.7
No	154	58.6
Don't know	1	.4
<b>Self-Breast Examination</b>		
Yes	213	81

	No	49	18.6
	Don't know	1	0.4
<b>Examination by a doctor</b>			
	Yes	228	86.7
	No	33	12.5
	Don't know	2	0.8
<b>Picture of the breast</b>			
	Yes	196	74.5
	No	66	25.1
	Don't know	1	0.4
<b>Sonography</b>			
	Yes	173	65.8
	No	87	33.1
	Don't know	3	1.1

**The practice of SBEs by respondents**

	Frequency	Percent
Yes	116	44.1
No	147	55.9

**Frequency one does SBEs**

	Frequency	Percent
Once a month	73	27.8
Once in 3 months	31	11.8
More than once every four months	8	3.0
Never	151	57.4

**Age respondents started practicing SBEs**

	Frequency	Valid Percent
Less than 25 years of age	59	22.4
25-30 years	28	10.6
30-35 years	11	4.2
More than 35 years	1	.4
Don't know	164	62.4

**Reasons why participants don't practice SBEs**

	Frequency	Valid Percent
Don't have a breast problem	34	23.0
I don't think I should	18	12.2
I don't feel comfortable doing this	23	15.5
I don't know how to do that'	60	40.5
Carelessness	9	6.1
Unsure about the benefits	4	2.7

**Attitude towards breast cancer**

**Attitude towards breast cancer**

	Frequency	Percent
Don't know	66	25.1
I will be scared	46	17.5
Will Consult doctor	118	44.9
I will use traditional medicine	16	6.1
I will go to a prayer house	3	1.1
I will agree to perform the mastectomy	14	5.3

**The frequency of seeing a doctor**

	Frequency	Valid Percent
Within a week	130	49.4
Within one month	25	9.5
Within 1-3 months	14	5.3
Not bother at all	4	1.5
Don't know	90	34.2

**Perception of self to developing breast cancer**

	Frequency	Percent
Not at risk	74	28.1
At a lower risk	42	16.0

	Medium risk	16	6.1
	Higher risk	16	6.1
	Don't know	115	43.7

**Participants ever examined by the doctor**

		Frequency	Valid Percent
	Yes	59	22.5
	No	203	77.5

**The frequency of Examination by a doctor.**

		Frequency	Valid Percent
Valid	Once	5	7.6
	1-3 times	43	65.2
	3-5 times	11	16.7
	More than 5 times	7	10.6

**Reasons why participants are not examined by a doctor**

		Frequency	Valid Percent
	Concern about extra money	19	9.7
	Concern about extra time	15	7.7
	Fear of outcome	24	12.2
	Too young to participate	13	6.6
	No sign/symptom of breast cancer	95	48.5
	No one recommended	11	5.6
	Don't know	19	9.7

The association between knowledge, attitude and practice and the socio-demographic variables.

**The association between knowledge, attitude and practice and socio-demographic variables.**

Variable	Pearson chi-square	df	p-value
<b>Knowledge: Do you know the risk factors for breast cancer</b>			
Education Level	10.729	3	<b>0.013</b>
The religion of a person	0.600	2	0.741
Marital Status	5.900	3	0.117
Age of respondent	0.469	2	0.792
<b>Practice: Whether one practice SBEs</b>			
Education Level	5.474	3	0.140
The religion of a person	2.889	2	0.236
Marital Status	1.764	3	0.627
Age of respondent	1.832	2	0.400
<b>Attitude: Attitude towards cancer if developed</b>			
Education Level	20.694	15	0.147
The religion of a person	37.897	10	<b>0.000</b>
Marital Status	20.166	15	0.166
Age of respondent	8.127	10	0.616

**IV. Discussion**

About 13.7% of the respondents said that they had knowledge of family history of breast cancer, 7.2% said that they had the disease. 45.2% of the respondents indicated that they knew that increase in age is a risk factor for breast cancer, 66.5% of the respondents said that having a positive family history on cancer is a risk factor for breast cancer. Regarding the high-fat diet as a risk factor for breast cancer, 111 (42.2%) indicated that it is a risk factor for breast cancer. On whether smoking is a risk factor for breast cancer 179 (68.1%) indicated that it is a risk factor for breast cancer. Less than a quarter of the respondents said that breast cancer is related to race. Regarding whether alcohol consumption is a risk factor for breast cancer, more than half of the respondents 53.6% indicated that alcohol consumption is a risk factor. Less than half of the respondents, 112 (42.6%) indicated that having a first child at the late age is a risk factor for breast cancer. 46.4% of the respondents indicated that having an early onset of menarche is a risk factor for breast cancer. More than a quarter of the respondents, 30.8% said that having late menopause is a risk factor for breast cancer. 27.8% reported that having large breasts is a risk factor for the development of breast cancer. Less than half of the respondents, 45.6% said that use of contraceptives pills is a risk factor for breast cancer. 58.6% reported that when a woman breastfeeds they reduce the chance of having breast cancer. On the knowledge of whether having a paid the participants to know about diagnosing cancer. 40.7% indicated that they know pathological tissue examination, 81% said that they know self-breast examination as a method of diagnosis of breast cancer, 86.7% reported that examination by a doctor is a method of diagnosis of breast cancer, 74.5% reported that through a picture of the breast and 65.8% indicated that sonography is a method of diagnosis of breast cancer.

The attitude of participants, majority 44.9% of the participants said that they will consult a doctor, 25.1% said that they do not know what they will do, 17.5% of the respondents said that they will be scared, 6.1% indicated that they will use a traditional medicine, 5.3% said that they will agree to perform mastectomy, and the least 1.1% indicated that they will go to a prayer house.

The tests of associations showed that educational status and knowledge of the risk factors for cancer were highly associated, (chi-square = 10.729;  $p < 0.05$ ). This implies one's level of education is highly associated with a woman knowing the risk factors associated with breast cancer. Religion status reached significance only with attitude, whereby the majority of the women Christians would consult a doctor, (chi-square = 37.897,  $p$ -value  $< 0.05$ ).

## V. Conclusion

This was a case study of women aged between 15 to 70 years residing in Maina Slum, Nyahururu in order to determine their knowledge, attitudes, and practices towards breast cancer. The results showed that most women (69.2%) do not have any knowledge of the risk factors that cause breast cancer. However, only 44.1% of the women underwent SBEs by the time the study was conducted. Concerning the attitude of the participants once they learn that they have breast cancer was that majority of the participants 44.9% would consult a doctor.

In conclusion, participants demonstrated a poor knowledge of the risk factors for breast cancer. However, the majority demonstrated that they would consult a doctor in an event that they have breast cancer. This study showed the need to establish a sustainable awareness campaign concerning the risk factors for breast cancer and further emphasizing the importance of a nationwide population-based screening program across primary health centers for breast cancer.

## References

- [1]. Coleman. M., Quaresma.M., Berrino. F., (2008). Cancer survival in five continents: a worldwide population-based study (CONCORD). *Lancet Oncol* 2008; 9:730-56.
- [2]. Bombonati, A., &Sgroi, D. C., (2011). The Molecular Pathology of Breast Cancer Progression. *The Journal of Pathology*, 223(2), 307–317.
- [3]. Rakha, E. A., Reis-Filho, J. S., Baehner, F., Dabbs, D. J., Decker, T., Eusebi, V. ...Ellis, I. O. (2010). Breast cancer prognostic classification in the molecular era: the role of histological grade.*Breast Cancer Research*.
- [4]. Siegel. R., Naishadham. D., Jemal. A., Watson M, Saraiya. M., Benard.V., (2012).Cancer statistics, 2012. *CA Cancer J Clin* 2012; 62:10-29. 3).
- [5]. Gnant.M., Harbeck. N., Thomson. C., (2011).Summary of the Consensus Discussion. *Breast Care (Basel)* 6: 136–141
- [6]. Howell, A., Anderson, A. S., Clarke, R. B., Duffy, S. W., Evans, D. G., Garcia-Closas, M., ... Harvie, M. N. (2014).Risk determination and prevention of breast cancer. *Breast Cancer Research : BCR*, 16, 446.
- [7]. Begg, S., Vos, T., Barker, B., Stevenson, C., Stanley, L., Lopez, A. (2007).The burden of disease and injury in Australia 2003. Canberra, Australia
- [8]. Bodai, B. I., &Tuso, P. (2015). Breast Cancer Survivorship: A Comprehensive Review of Long-Term Medical Issues and Lifestyle Recommendations. *The Permanente Journal*, 19(2), 48–79.
- [9]. Zheng T, Holford T, Tessari J, et al. (1998) Breast cancer risk associated with congeners of polychlorinated biphenyls, *Am J Epidemiology* 152: 50–58
- [10]. Romero, R. (2011). A celebration of Steven Gabbe's contributions and accomplishments: Associate Editor, *American Journal of Obstetrics and Gynecology* 1990-2010. *American Journal of Obstetrics and Gynecology*, 205(1),
- [11]. Turnbull, C., Ahmed, S., Morrison, J., Pernet, D., Renwick, A., Maranian, M., Easton, D.F. (2010). Genome-wide association study identifies five new breast cancer susceptibility loci. *Nature Genetics* 42(6), 504–507.
- [12]. Nedelcheva.K., Harada, N., Yoshimura, N., Haraldsen, E., Lonning, P.E., Erikstein, B., Karesen, R., Kristensen, T. and Borresen-Dale, A.L., 2000. Genetic variants of CYP19 (aromatase) and breast cancer risk. *Breast cancer research*, pp.1-2.
- [13]. Tyrer, J., Duffy.W.And Cuzick, J., 2004. A breast cancer prediction model incorporating familial and risk, 23(7), pp.1111-1130.
- [14]. Carney, A., Miglioretti, L., Yankaskas, C., Kerlikowske, K., Rosenberg, R., Rutter, C.M., Geller, B.M., Abraham, L.A., Taplin, S.H., Dignan, M. and Cutter, G., 2003.nnals of internal medicine, 138(3),pp.168-175.Individual and combined effects of age, breast density and hormone replacement therapy use on the accuracy of screening mammography.138(3),pp.168-175.
- [15]. Hecht, S.S., 2002. Tobacco smoke carcinogens and breast cancer. *Environmental and molecular mutagenesis*, 39(2-3), .119-126.
- [16]. John, E.M., and Kelsey, J.L., 1993.Radiation and other environmental exposures and breast cancer. *Epidemiologic review*, 15(1), pp.157-162.
- [17]. Nishikawa, M., Hikosaka, M., Yonemoto, T., Gondou, A., Tabata, S., Ogawa, Y., Kawasaki, M., Miyake, Y., Piper, J.M., Xenakis, E.M.J. and McFarland, M., 1996. B50 Growth and development: *Miscellaneous.Paediatr Res*, 39, p.175.
- [18]. Payne-Sturges, D., Gee, G.C., Crowder, K., Hurley, B.J., Lee, C., Morello-Frosch, R., Rosenbaum, A., Schulz, A., Wells, C., Woodruff, T., and Zenick, H., 2006. Workshop Summary: Connecting social and environmental factors to measure and track environmental health disparities. *Environment research*, 102(2), pp.146-153.
- [19]. Haji-Mahmoodi M, Montazeri A, Jarvandi S, Ebrahimi M, Haghighat, S., Harirchi Breast self-examination: knowledge, attitudes, and practices among female health care workers in Tehran, Iran. *Breast J* 2002, 8:222-225.
- [20]. Ahmed F, Mahmud S., Hatcher Juanita H., Khan S., Breast cancer risk factors knowledge among nurses in teaching hospitals of Karachi, Pakistan: a cross-sectional study.*BMC Nursing*2006,5:
- [21]. Semiglazov, F., Moiseyenko, M., Manikhas, G., Role of breast self-examination in early detection of breast cancer: Russia/WHO prospective randomized trial in St.Petersburg.*Cancer Strategy*1999; 1:145–5
- [22]. Benjamin, O., Anderson, Susan, B., Susan. L., Robert .A., Stephen, T., Early detection of breast cancer in countries with limited resources. *The Breast Journal* 2003, 9(suppl.): S51-S59
- [23]. Michael, O., Clareann, H., Friday. E., Okonofua, and UsifoOsime: Knowledge, attitude, and practices of Nigeria women towards Breast: Cross-sectional Study. *World Journal of Surgical Oncology* 2006; 4:11

- [24]. Paul Terry: a prospective study of major dietary patterns and the risk of breast cancer. *Cancer Epidemiology Biomarkers and prevention*. December 2001; Vol 10, 1281-1285.
- [25]. Chong, P., Krishnan, M., Hong, T., Swash, T., Knowledge, and practice of Breast Cancer Screening Amongst Public Health Nurses in Singapore. *Singapore Med J* 2002 VOL 43(10):509-516
- [26]. Maria, R., Schettino, M., Hernández, V., Rocio, M., Richard, A., Hajek (2014) L., Assessing Breast Cancer Knowledge, Beliefs and Misconception among Latin's in Houston, Texas, *Journal of Cancer Education*, Vol. 21, No. 1, suppl: pages S42-S46 Kenya Demographic Health Survey, Ministry of Health 2014
- [27]. Okobia. M. N., Bunker, C. H., Okonofua, F. E., & Osime, U. (2006). Knowledge, attitude, and practice of Nigerian women towards breast cancer: A cross-sectional study. *World journal of surgical oncology*, 4, 11. Dundar, P. E., Ozmen, D., Ozturk, B., Haspolat, G., Akyıldız, F., Çoban, S., & Cakiroglu, G. (2006). The knowledge and attitudes of breast self-examination and mammography in a group of women in a rural area in western Turkey. *BMC cancer*, 6, 43.

Peter Ndirangu Githuna,. “Knowledge, Attitude, And Practices Towards Breast Cancer Among Women Aged Between 15 And 70 Years Living Inperiurban Center; A Case Study of Maina Center, Laikipia County.” *IOSR Journal of Nursing and Health Science (IOSR-JNHS)* , vol. 7, no.4 , 2018, pp. 24-30.