International Journal of Basic, Applied and Innovative Research
IJBAIR, 2016, 5(4): 120 - 129
ISSN: 2315 - 5388 **www.arpjournals.com; www.antrescentpub.com** **E-ISSN: 2384 - 681X**

RESEARCH PAPER

HEALTH-PROMOTING LIFESTYLES AND FREQUENCY OF HOSPITALIZATIONAMONG MARKET WOMEN IN AN URBAN SETTLEMENT IN SOUTH WEST NIGERIA

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Received: 26th November, 2016 **Accepted: 28th December, 2016** **Published: 31st December, 2016**

Endorsed By*: Innovative Science Research Foundation (**ISREF**) and International Society of Science Researchers (**ISSCIR**).*
IndexedBy*: African Journal Online (AJOL); Texila American University; Genamics; Scholarsteer; EIJASR; CAS-American Chemical Society; and IRMS Informatics India (J-Gate)*

ABSTRACT

Market women are exposed to stress in their efforts to make ends meet and this can significantly impact their health. This study assessed the health-promoting lifestyles of market women in Owo, Ondo State, Nigeria. The study employed a cross-sectional descriptive design. A structured questionnaire was used to gather information on the health promoting lifestyles of 290 market women selected through a convenient sampling technique. More than half (50.7%) of the respondents had an overall high health-promoting lifestyle profile. However, a high percentage (58.6%) had low scores on physical activity-related component of health-promoting lifestyles. The study found a significant association between women's health-promoting lifestyles and frequency of hospitalization (P< 0.05). Market women had low scores on physical activity-related health promotion lifestyles. There is a need for health education programmes with emphasis on physical activity for promotion of women's health.

Keywords: lifestyle, women, health education, health promotion, physical activity.

INTRODUCTION

Women's health promotion is a necessary activity during their reproductive years; the period when health issues such as pregnancy-related diseases and breastfeeding emerge. Promoting the health of women is also a positive approach towards improving the health of communities, as women's health influences the health status of their family members, especially their children.

Health-promoting behaviours in women vary in different populations because of the differences in socio-cultural determinants. The inconsistent results regarding health-promoting behaviour observed in different populations have been ascribed to the effects of a range of personal, social, economic, and environmental factors that determine an individual's health status (Baheiraei *et al*., 2011).

Worldwide, women represent a growing proportion of older adults, as they tend to live longer than men (Wang *et al*., 2013). In 2015, 49.6 per cent of the world's population was dominantly female and about 62 per cent were aged between 15 to 59 years, while 12 per cent were 60 or over. The number of persons aged 60 and above is expected to be more than double globally by 2050(United Nations, 2015). Most of the older women in the world reportedly live in less developed countries, and an estimated total of 555 million women aged 50 years or older, live in low-income and middle-income

countries, compared with 280 million in high-income countries. Because of population growth and ageing, these numbers are projected to increase to 1.5 billion in developing countries by 2050 (United Nations, 2011).

According to the Institute for Health Metrics and Evaluation, IHME (2013), the longer lives gained from global population growth and ageing are also filled with more sickness and disability. In most countries of the world, non-communicable diseases caused 50% or more of all healthy years lost except in the sub-Saharan Africa, where communicable diseases remain the chief causes of deaths for both men and women (IHME, 2013). Globally, cardiovascular diseases, for example, account for 45% of older women's deaths, while an additional 15% of deaths are reportedly caused by cancers (WHO, 2011). These figures are pointers to the need for urgent actions against non-communicable diseases and death in low and middle-income countries where such are grossly underreported. The World Health Organization (2016a) had stated that cardiovascular disease in women is often unrecognized and undiagnosed in low and middle-income countries where cardiovascular mortality rates for women age 60 and over, are more than twice as high as in high-income countries.

Health promotion, disease prevention, and a lifestyle of wellness are interrelated concepts that generally promote quality of life of people. Health-promoting behaviour improve health and prevent further de-compensation of the existing disease state. Health-promoting behaviours and healthy lifestyle are two major strategies for facilitating and maintaining health (Norouzinia *et al*., 2013). Health promotion incorporates a number of self-initiated health behaviours and stresses the need to enhance each person's responsibility and commitment to a healthy lifestyle. These actions may include physical activity, nutritional strategies, lifestyle modification, maintaining a positive attitude, health responsibility behaviours, and seeking and receiving interpersonal support (El Mokadem, 2013; Ertel *et al*., 2009).

Health behaviours are influenced by an array of factors such as socio-cultural practices and values of a society, religion, literacy level and mass media, among other factors. Available social support within a group has been viewed as integral to health promotion because of its assistance in reaching an individual's physical and emotional needs, as well as buffering the effects of stressful events on quality of life (Bomar, 2004; Baheiraei *et al.*, 2012). However, members of a social support network can be sources of either positive or negative feelings and may have beneficiary or detrimental consequences on a person's health (Richmond and Ross, 2008).

Women's knowledge and capacity for managing the risk factors contributing to the development of chronic diseases is limited in the low-income countries. This is alarming when considering the statistics of high burden of chronic non-communicable diseases, overweight, lack of regular physical activity among middle age women(Moriyama *et al*, 2008; WHO, 2011; WHO, 2016b). Market women engage in a continuous exposure to stress in their efforts to make a daily living. Most of these women are the primary bread winners who stay in the market for more than fifteen hours each day because they need to make ends meet; they are thus prone to various health problems.

Prevention and risk reduction cannot occur if those at risk are not identified. Many of these risk factors are modifiable, which is why an increased emphasis on behavioural change as a component of primary prevention was suggested by the WHO Regional Committee for Europe (WHO, 2008). Primary prevention presents a cost-effective strategy for targeting high-risk individuals for lifestyle changes and interventions.

Health promotion is receiving an increasing amount of attention because of the important role it plays in health care. The high costs of health care have demanded a shift from emphasis on care, to prevention of diseases, rather than strictly emphasizing the treatment of diseases (Acton and Malathum, 2000).This study aims at providing insight into the health behaviours of market women, and the factors that need to be considered towards evolving effective strategies and intervention programmes that could effectively promote women's health, and by extension, the health of their families. The study specifically intends to assess the health-promoting behaviours of market women in Owo, Ondo State, Nigeria, and ascertain the influence of such behaviours on their health; while also determining the relationship between demographic variables and health-promoting behaviours among women in typical market settings.

MATERIALS AND METHODS

Study Location: This study was conducted in Oja Oba market, Owo, Ondo state, a south-western state of Nigeria. The Oja-Oba market is in the central axis of Owo town, and enjoys a high patronage by market women who are major group of vulnerable women that are not usually visible to health and social services.

Sample Size Determination: The population size for this study was determined using Slovin's formula for sample size calculation. A convenient sampling technique was used to select the 290 women who participated in the study.

Data Collection: Data were collected using a questionnaire that contained open-ended and close-ended questions. The questionnaire had two sections (A and B). Section A assessed the demographic profiles of the respondents, such as age, religion, marital status and educational level, while section B contained 20 items adapted from the health-promoting lifestyle profile (HPLP) II scale by Walker *et al*., (1995). The 20-item HPLP II is composed of five subscales that measures behaviour in the theorized dimensions of a health-promoting lifestyle: interpersonal relations; nutrition; physical activity; health responsibility; and stress management. The items are scored as Never (N) = 1; Sometimes (S) = 2; Often (O) = 3; and Routinely (R) = 4. The overall health-promoting lifestyle score was obtained by calculating the mean of the individual's responses to all 20 items. The six subscale scores were obtained similarly, by calculating the mean of the responses to the subscale items. The use of means rather than the sums of the scale items is recommended to retain the 1 to 4 metrics of item responses and to allow meaningful comparisons of scores across subscales.

Data Analysis: The data analysis was conducted using the statistical package of social sciences (SPSS; version 20). The results are presented using frequency tables, percentages and charts to allow direct comparison.

RESULTS

Table1 presents the socio-demographic characteristics of the respondents. More than one third (39.7%) of the respondents were within the age range of 41-50years. About half of the respondents (49.3%) practice Islamic religion and majority (71.4%) were married. On level of education, most of the respondents (49.3%) had a primary education, while more than half (57.9%) were from a polygamous family setting. Of those with children, the highest proportion (29.3%) of respondents had three children, and a majority (58.3%) indicated no history of hospitalizations.

Table 2 presents the health-promoting lifestyles of the respondents. The health responsibility profile of the respondents showed that about two-thirds (61%), sometimes reported any unusual signs or symptoms to a physician or other health professional, while 73.4% sometimes read or watched TV programmes about improving their health.The physical activity profile of the respondents revealed that majority (55.5%) of the respondents never followed a planned exercise programme. The respondents' nutritional profile indicated that slightly more than a third (38.3%) often chose a diet low in fat, saturated fats and cholesterol. The interpersonal relations profile revealed that many respondents (41.7%) often maintained meaningful and fulfilling relationships with others, and the same percentage claimed they found it easy to show concern, love and warmth to others. The stress management profile of the respondents indicated 45.9% often balanced their time between work and play.

Table 3 presents the summary of the Health-Promoting Lifestyle Profile of the respondents. All the questions in the subscales of health responsibility, physical activity, nutrition, interpersonal relations and stress management were rated and scored as follows: Never (N) = 1; Sometimes (S) = 2; Often (O) = 3; and Routinely (R) = 4. The overall mean score of the respondents was determined and totalled 45.58; with a standard deviation of 6.94. The respondents' scores ranged from 27-58. Respondents with scores above the mean score (50.7%), were said to have a high health-promoting lifestyle profile, whereas those who scored below the mean score (49.3%), were said to have a low health-promoting lifestyle profile. The summary of the health-promoting lifestyle subscales revealed that more than half of the respondents had high scores in health responsibility (57.6%), nutrition (67.2%), interpersonal relations (61%) and stress management (61%). However, most of the participants (58.6%) scored low in the physical activity profile.

A chi square test was conducted to determine whether there were associations between the socio-demographic variables of the respondents and their health-promoting lifestyle profile (Table 4). The results showed a significant association between health-promoting lifestyle profile and the following variables: age (P = .001), religion (P = .001), marital status (P = .001), educational level (P = .001) and parity (P = .001). However, no significant association was found between the health-promoting lifestyle and family settings of the respondents (P = .608).

Also, an independent sample test was conducted to examine whether there was a difference in the frequency of hospitalization of the respondents with high profile health-promoting lifestyle and their counterparts with low profile of health promoting lifestyle. The test as shown in table 5 revealed a statistically significant differencein the frequency of hospitalization between the two groups ($t = -2.250$, $P < 0.05$). Respondents with high health-promoting lifestyle profiles

reported a reduced number of hospitalizations (Mean = .456, SD = .724), compared to those with a low health-promoting lifestyle profile, who reported a high frequency of hospitalization (Mean = .6434, SD= .696).

On the incidence of hypertension, diabetes, malaria and eye problem, the results showed that the respondents, most often reported that they did not have any of the listed diseases, but 26.6% of the respondents indicated that they had arthritis, while 13.1% had hypertension and other ailments (eye problems and malaria) respectively(figure 1).

TABLE 1: SOCIO-DEMOGRAPHIC CHARACTERISTICS

Variables (N = 290)		Frequency	Percentage
Age	11-20	18	6.2
	21-30	63	21.7
	31-40	39	13.4
	41-50	115	39.7
	Above 50	55	19.0
Religion	Christianity	129	44.5
	Islam	143	49.3
	Traditional	18	6.2
Marital status	Married	207	71.4
	Single	55	19.0
	Divorced	28	9.6
Educational level	Primary	143	49.3
	Secondary	84	29.0
	Tertiary	63	21.7
Family setting	Monogamous	122	42.1
	Polygamous	168	57.9
	No response	9	3.1
Number of children	One	18	6.2
	Two	65	22.4
	Three	85	29.3
	Four	57	19.7
	Five and above	56	19.3
Number of hospitalizations	None	169	58.3
	One	83	28.6
	Two	38	13.1

TABLE 2: HEALTH-PROMOTING LIFESTYLE PROFILE

S/N	Variables (n =290)	Never F (%)	Sometimes F (%)	Often F (%)	Rarely F (%)
1.	**Health Responsibility Profile**: Report unusual signs or symptoms to a physician or other health professional.	48(16.6)	177 (61)	47 (16.2)	18 (6.2)
2.	Read or watch TV programmes about improving health.	29(10)	213(73.4)	39(13.4)	9(3.1)
3.	Discuss health concerns with health professionals.	29(10)	169(58.3)	65(22.4)	27 (9.3)
4.	Ask for information from health professionals about how to take good care of myself.	38(13.1)	(45.2)	84(29)	37(12.8)
5.	**Physical Activity Profile**: Follow a planned exercise programme.	161(55.5)	73(25.2)	29(10)	27(9.3)
6.	Take part in light to moderate physical activity (walking 30-40 minutes 5 or more times a week).	133(45.9)	82(28.3)	38(13.1)	37(12.8)
7.	Do stretching exercises at least 3 times per week.	132(45.5)	93(32.1)	38(13.1)	37(12.8)
8.	Check my pulse rate when exercising.	245(84.5)	27(9.3)	18(6.2)	-
9.	**Nutrition Profile**: Eat breakfast.	18(6.2)	77(26.5)	123(42.4)	72(24.8)
10.	Choose a diet low in fat, saturated fat, and cholesterol.	67(23.1)	94(32.4)	111(38.3)	18(6.2)
11.	Limit use of sugars and food containing sugar (sweets).	18(6.2)	158(55.4)	86(29.7)	28(9.7)
12.	Eat 2-4 servings of fruit each day.	88(30.3)	174(60)	18(6.3)	10(3.4)
13.	**Interpersonal Relations Profile**: Maintain meaningful and fulfilling relationships with others.	27(9.3)	87(30)	121(41.7)	55(19)
14.	Spend time with close friends	28(9.7)	115(39.7)	93(32)	54(18.6)
15.	Find it easy to show concern, love and warmth to others.	18(6.2)	114(39.3)	121(41.7)	37(12.8)
16.	Settle conflicts with others through discussion and compromise.	18(6.2)	152(52.4)	102(35.2)	18(6.2)
17.	**Stress Management Profile**: Get enough sleep.	9(3.1)	76(26.2)	141(48.6)	64(22.1)
18.	Take some time for relaxation each day.	48(16.6)	132(45.5)	65(22.4)	45(15.5)
19.	Pace myself to prevent tiredness.	45(16.1)	160(54.8)	76(25.8)	9(3.2)
20.	Balance time between work and play.	9(3.1)	102(35.2)	133(45.9)	46(15.9)

TABLE 3: OVERALL SUMMARY OF THE HEALTH-PROMOTING LIFESTYLE PROFILE

Health-Promoting Lifestyle Profile (Mean = 45.58, SD = 6.94, Range = 27-58)	**Profile**	**f**	**%**
Overall Health-Promoting Lifestyle Profile	High	147	50.7
	Low	143	49.3
Sub Scales of Health-Promoting Lifestyle Profile			
Health Responsibility Mean = 8.94, SD = 1.83, Range = 5-13	High	167	57.6
	Low	123	42.4
Physical Activity Mean = 6.74, SD = 2.51, Range score = 4-14	High	120	41.4
	Low	170	58.6
Nutrition Mean = 9.39, SD = 1.91, Range score = 6-14	High	195	67.2
	Low	95	32.8
Interpersonal Relations Mean = 10.32, SD = 2.44, Range score = 4-16	High	177	61.0
	Low	113	39.0
Stress Management Mean = 10.16, SD = 2.26, Range score = 5-16	High	177	61.0
	Low	113	39.0

DISCUSSION

In a given population, each person's lifestyle influences their health status and contributes to the overall life expectancy within that group. Health-promoting behaviours and healthy lifestyles are two major strategies for facilitating and maintaining health (Norouzinia *et al.,*2013).The socio-demographic characteristics of the respondents in this study revealed that they were mostly within the age range of 41-50years; are married and from a polygamous family setting. Almost half of the respondents had only primary level education and most women had three or more children. More than half of the respondents indicated that they had not been hospitalized before. However, a sizeable number reported having diseases such as arthritis, hypertension, eye problems and malaria.

The results showed that about half of the respondents had a high health-promoting lifestyle profile, whereas 49.3% had a low health-promoting lifestyle profile. Most had high scores on health responsibility, nutrition, interpersonal relations and stress management. However, a greater percentage of the respondents had low physical activity profiles. This finding validate the report by the Health Resources and Services Administration (2004) that less than 30% of women engage in the recommended levels of physical activity that result in health benefits. A similar finding was made by El Mokadem (2013) in a study conducted on the health-promoting behaviours of women at high risk for cardiovascular disease at different outpatient clinics at Menofia University Teaching Hospital. The El Mokadem study also reported that women did not practice health-promoting behaviours. Women in this study also recorded their highest scores on the subscale of nutrition, and the lowest scores on the subscale of physical activity.

TABLE 4: RELATIONSHIP BETWEEN SOCIO-DEMOGRAPHIC VARIABLES AND HEALTH-PROMOTING LIFESTYLE PROFILE

Variables		Health-Promoting Lifestyle Profile					
		High profile	Low Profile	Total N=290	X^2	df	P-Value
Age	11-20	18	0	18	69.756	4	.001
	21-30	54	9	63			
	31-40	10	29	39			
	41-50	47	68	115			
	Above 50	18	37	55			
Religion	Christianity	72	57	129	25.575	2	.001
	Islam	57	86	143			
	Traditional	18	0	18			
Marital status	Married	93	114	207	27.925	2	.001
	Single	45	10	55			
	Divorced	9	19	28			
Educational Level	Primary	56	87	143	19.002	2	.001
	Secondary	46	38	84			
	Tertiary	45	18	63			
Family setting	Monogamous	64	58	122	.264	1	.608
	Polygamous	83	85	168			
Number of children	None	9	0	9	72.481	5	.001
	One	18	0	18			
	Two	18	47	65			
	Three	37	48	85			
	Four	47	10	57			
	≥ Five	18	38	56			

TABLE 5: MEAN SCORE OF THE HEALTH-PROMOTING LIFESTYLE OF THE RESPONDENTS AND THEIR FREQUENCY OF HOSPITALIZATION

	Health-Promoting Lifestyle Profile	N= 290	Mean	Std. Dev.	t	df	P-Value
Number of hospitalizations	High Profile	147	.4558	.72368	-2.250	287.964	.025
	Low Profile	143	.6434	.69612			

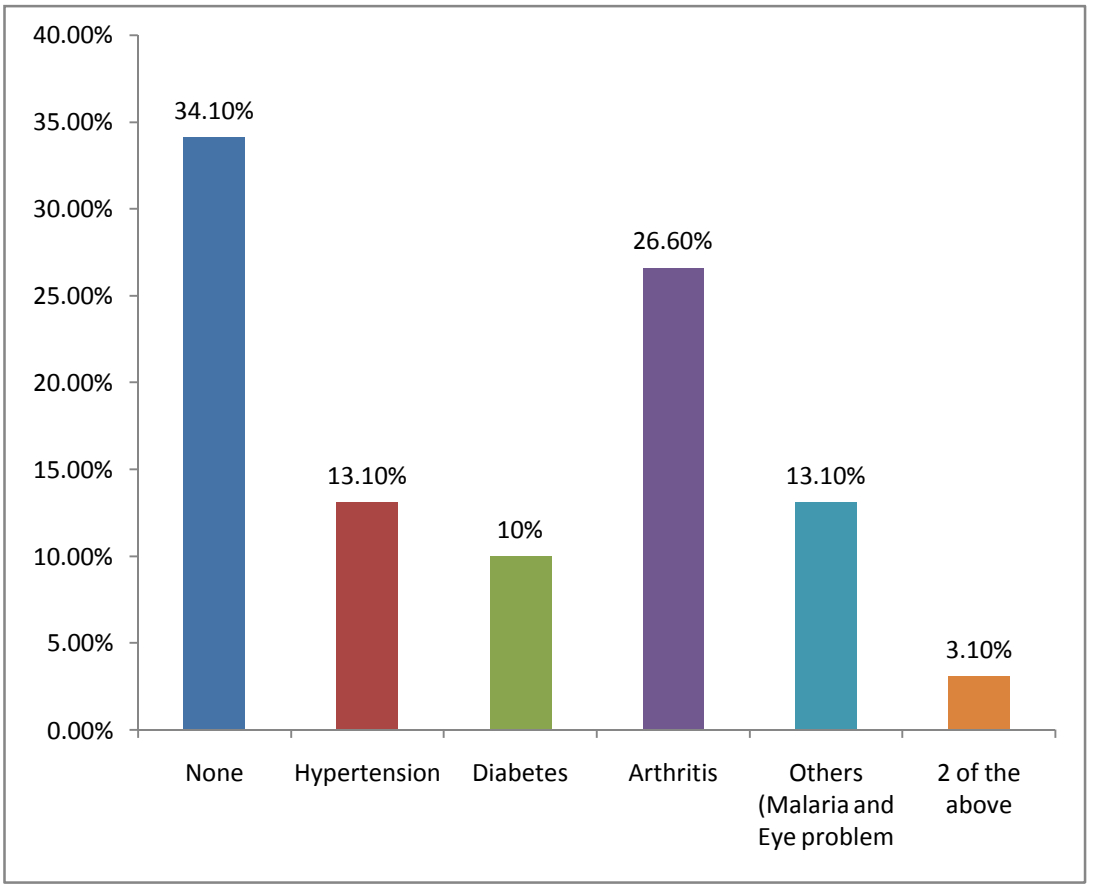

Figure 1: Assessment of Market Women's Health

The study also found a significant association between the health-promoting lifestyle profile and some socio-demographic variables such as age, religion, marital status, educational level and parity. However, no significant association was found between respondents' health-promoting lifestyle and family settings. This is consistent with Misra (2001), who asserted that the factors related to whether individuals exercised included gender, age, race/ethnicity, education and income level.

Furthermore, the study assessed whether there was a relationship between the market women's health-promoting lifestyle profile and the frequency of their hospitalization. The study found a statistically significant association between the two variables. Respondents with high health-promoting lifestyle profiles reported fewer hospitalizations (Mean = .46, SD = .72) than those with a low health-promoting lifestyle profile, who reported a high frequency of hospitalization (Mean = .64, SD= .70). According to Tol *et al*., (2013), health promotion is directly associated with disease prevention, and prevention is distinctly preferred to treatment. Evidence has shown that healthy practices in earlier life can effectively delay and/or prevent many chronic medical conditions in later life (Cicconetti *et al*., 2002). Health promotion is particularly important for middle-aged women because healthy behaviours such as regular exercise and stress management can effectively reduce the severity of their physical transitions and health problems (Moriyama *et al.,* 2008).

CONCLUSION

More knowledge is needed about women's health promotion behaviour and the characteristics that influence a healthy lifestyle, as this could enable the development of an integrated intervention to help women at high risk reduce and prevent the development and progression of preventable chronic diseases and ultimately death. Identification of the barriers to healthy behaviours is the first step towards the achievement of effective risk reduction interventions that are targeted and tailored to women at high risk for chronic diseases. Health care providers, especially nurses could be instrumental to

facilitating continuous community health education aim at reducing risk factors and promoting the optimal health of women of all ages.

ACKNOWLEDGEMENT

We thank all of the market women who voluntarily participated in this study. We also gratefully acknowledge the American Journal Experts for proof reading the first draft of this article.

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AUTHORS CONTRIBUTIONS

Olagunju O. E conceptualized the study, Ayamolowo S. J. drafted the manuscript and Sunmonu W. O analysed the data. All authors were actively involved in data collection, literature search and review of the paper. No conflict of interest declared.