Research Article

Self-reported Well-being and Perceived Health Status of Women in Child-Bearing Age Living in Rural Communities on the Atlantic Ocean Coast in Southwest Nigeria

Dr. Bamgboye M. Afolabi*[1], Prof. Emmanuel N. Ezedinachi[2], Dr. Iwara Arikpo[2], Prof. Bassey Igri Okon[2], Prof. Martin Meremikwu[2], Dr. Sidney Oparah[2] and Damilola Fatimah Ganiyu[1]

[1]Health, Environment and Development Foundation, 34 Montgomery Road, Yaba, Lagos, Nigeria
[2]Institute of Tropical Disease and Research, University of Calabar, Calabar, Nigeria

ABSTRACT

Background: The health and well-being of women have not been studied extensively and had not been the major focus of policy fabricators and decision makers in Nigeria. It is imperative to explore the factors influencing health and the well-being of women in child-bearing age (WCBA).

Methods: This study was cross-sectional and descriptive in nature. It used semi-structured questionnaires in 9 domains of age-group, marital status, parity, educational status, religion, occupation, income of respondent, income of husband and pregnancy state, to collect data on perceived health and well-being from 829 WCBA living on the Atlantic Ocean coastline in Lagos, Southwest Nigeria.

Results: Majority of the surveyed women were aged 25-34 years (406, 49.0%), ever married (660, 79.6%), have had 1-2 children (347, 41.9%), had attained secondary level of education (548, 66.0%) and were traders (472, 57.6%). In all, 252(30.4%) had no monthly income and only 15(1.2%) had the highest monthly income of over US$166.8. In comparison, 331(39.9%) and 67(7.6%) of respondents' husbands had no income or had income of over US$166.8 respectively. Only 19(2.3%) perceived their well-being to be very poor while 70(8.4%) and 165(19.9%) respectively perceived it to be neither poor nor good or to be good. In all, 50(6.5%) respondents were very dissatisfied with their health compared to 254(30.6%) who were very satisfied with their health. Of those with no income, 31.6% and 48.0% respectively perceived their well-being to be very poor and their health status to be very unsatisfactory. In this group also 24.2% and 27.6% respectively perceived their well-being to be very good and their health status to be very satisfactory. Of those with income ≥US$166.8, 5.3% and 2.8% respectively perceived their well-being to be very good and health status to be very satisfactory. Significant relationships were observed between level of satisfaction with one's health, age, woman's income as well as pregnancy state.

Discussion: The findings indicate that the experiences of well-being and health status of women in child-bearing age, living on the Atlantic Ocean coastline varied by age, marital status and educational status. A more robust study is needed to appropriately measure these variances among women, accommodate them in policies for better empowerment of women.

Keywords: Well-being; Health Status; Women in child bearing age; Income; Atlantic ocean coastline; Nigeria

Introduction

From global perspective, well-being remains an optimistic consequence which informs that people perceive their lives are not only meaning but are going well. This hold true for various segments of the society and in communities as well. For almost, if not all human beings, good living conditions in respect to housing, employment that brings income, violence-free environment, access to medicine, food and water are fundamental. However, there are many more indicators to measure people's perception about their lives, such as intimate relationships, positive emotions and resilience, the realization of their potential, or their overall satisfaction with life [1,2]. Studies suggest that well-being largely comprises comprehensive findings of life fulfillment, contentment and feelings of joy or depression [3,4]. An earlier study reported that the concept of well-being is an integration of mental health (mind) and physical health (body) resulting in more holistic approaches to disease prevention and health promotion [5]. Though opinions differ on a single definition of well-being, there appears to be a general consensus that, at the least, well-being comprises the presence of positive emotions and moods (e.g., contentment, happiness), the absence of negative emotions (e.g., depression, anxiety), satisfaction with life, fulfillment and positive functioning [4, 6-8]. According to some authors, well-being can be described as judging life positively and feeling good [9,10]. Fundamentals for a healthy life, especially for women in reproductive age group include but are not limited to healthy diet, regular exercise and adequate rest, avoiding obesity, tobacco or drug use and avoiding or moderate use of alcohol, and recognizing and seeking help with mental health or abusive relationships [11]. Women's health and quality of life can be harmed by violence against them. In domestic violence, the perpetrator and victim are in an intimate relationship, where both are supposedly peers with equal rights and responsibilities within their relationship. In addition, women in general and

those in child-bearing age can enhance their well-being and live healthier and longer lives through regular screening for cancer and other illnesses, if screening centers are available. Unlike the situation in high-income countries, information on how Africans perceive their own health is very scanty [12]. Data on perception of health and health care in sub-Saharan Africa have been collected since 2005 by the Gallup Organization [13] which documented sub-Saharan Africa in the Global context, health outcomes at the individual level and health spending among others. Objective social indicators- income levels, consumption expenditures and housing standards- and subjective indicators – attitudes, needs and perception of social- are often used in assessing levels of poverty and inequality [14]. Poverty may also be abstracted and evaluated by determinants of well-being, or otherwise by the access people have to those determinants of well-being [15]. The '*inability of individuals, households or entire communities to command sufficient resources to satisfy a socially acceptable minimum standard of living*' may reflect poverty in its thin explanation [14].

Poverty may then be taken as an image of '*pronounced deprivation of well-being*' [16]. In contrast to other regions of the world, Africa is poor; and that poverty in Africa is not declining consistently or significantly. There has been no study on the diet, tobacco or drug use, alcohol consumption or abusive relationships of women in general on the Atlantic Ocean coastline in Lagos, Southwest Nigeria. However, studies have observed relatively high rate of non-use of contraceptives; the low perception of obstetric danger signs; and a relatively high prevalence of hypertension coupled with limited knowledge and misconception of the disease among WCBA in rural Atlantic Ocean coastline communities in Nigeria [17-19]. The geographic characteristics of the Atlantic Ocean coastline is unique. The Atlantic Ocean coastline in Lagos, Southwest Nigeria, stretches for approximately 80km, with extensive inland waters and both small and medium sized moderately populated isolated islands with very few existing government or private health facilities. Anecdotal reports indicate high consumption of alcohol, teenage pregnancy, domestic violence and high rate of unemployment among the youths. Some male adults either engage in deep-sea fishing, boat repair or serve as motorized boat drivers while most women are petty traders, mat-weavers, or fish-sellers. Common but undocumented practice of multiple sexual partners, easy availability of liquor and drugs, unreported sexual violence, unhealthy eating habits and lack of health facilities probably expose these WCBA to sexually transmitted diseases, unwanted pregnancies, early marriage, low educational status and compromised poor health outcomes associated with low opinion of their well-being. There are very few studies on well-being and perceived health status of women on the thickly populated Atlantic Ocean Coastline in Africa. The objective of this study was to document factors related to self-reported well-being and health status of older women in reproductive age-group living the Atlantic Ocean Coastline of South West Nigeria. The significance of the study lies in the fact that women are the mainstay of the family and of the community and their well-being and health should be the concern of governments and non-government organizations. Thus, data from this study could be useful for evidence-based policy formulation on women's health in general and on improving the quality of life of rural women, especially those living on the densely-populated Atlantic Ocean Coastline.

Materials and Methods

The study design, population of study, training, data collection and statistical analysis have all been described in our earlier paper [18]. In summary, two coastal communities-Elegushi in Ibeju-Lekki Local Government Area (LGA) and Ijede in Ikorodu LGA – were selected for the study. These two communities are separated by the Lagos Lagoon, Ibeju-Lekki LGA being the southernmost, on the Atlantic coastline (Figure 1). By the time the survey started in October 2012, the population of Elegushi community was approximately 30,500 while that of Ijede community was about 88,000. The survey ended in late March 2013.

The involvement of the two communities in the study necessitated that advocacy visits should be paid to various community gate-keepers to inform them of the study methodology and those who would be surveyed; to give assurance that no injury or any untoward event is expected to occur to any member of the community of study; to let them know that respondents who should fall ill would be either treated or referred to the nearest general hospital; and to carry the community gate-keepers along in the study. To this end,
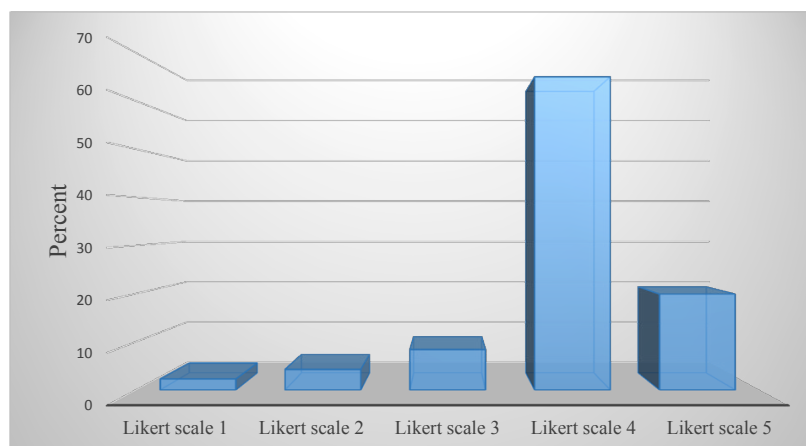
Figure 1: Likert scale of perceived well-being (1=very poor, 2=poor, 3=neither poor nor good, 4=good, 5=very good).

meetings were held with appropriate administrative staffs of government hospitals to expect reference letters from the survey lead investigator. Periodic meetings were also scheduled with the community gatekeepers to brief them on the findings of the survey.

One vital information discussed with the community gate-keepers was the eligibility criteria to be in the study. This was important because various surveys and programs such as Long-lasting Insecticide-treated Nets (LLINs), Indoor-Residual Spray (IRS) and localized diabetes screening (LDS) had taken place to involve the entire family within and outside these two communities. Most community gate-keepers would often like to have the entire family involved in surveys for its health benefits.

Another vital step taken by the community gate-keepers, which showed acceptance and legitimacy of the study, was to dispatch Community communicators (formerly known as town criers) to inform all community members at home, markets, religious houses and farms that a survey would take place at a certain period. Eligibility criteria were that (i) respondents should women in the reproductive age group of 15-45, (ii) they should have been living in the community for at least 10 years, (iii) they should be transiting such as a tourist or a visitor, (iv) of sound mind. Exclusion criteria were (i) women on admission at a health facility (ii) those moribund.

Based on an assumption that 25% of the population in each community of study would be women in reproductive age group, with 30% as an expected frequency of women in self-reported "good" well-being and "satisfactory" health status in each community, a confidence limit of 5%, and confidence level set at 95%. a sample size of 641 was arrived at using EPI-Info 7 statistical software. The figure arrived at was inflated by 30% to 833. All the women in reproductive age who consented to participate were interviewed. A total of 829 women in reproductive age group gave complete responses on self-reported well-being, health status and monthly income. Respondents were grouped into 3 age groups of <25, 25-34 and ≥35 years respectively; divided into 4 parity sets of 0, 1-2, 3-4 and ≥5 and segregated into 2 marital clusters of single and ever married. Ever married individual was regarded as respondent who, when this survey took place, was or had been in a conjugal relationship. Using systematic random sampling methodology, trained field workers interviewed respondents in the 1st, 4th, 7th, 10th house on streets radiating east, south, west and north from the community leader's house. Un-inhabitable dwelling or a dwelling without an eligible woman was omitted, replaced by the immediate next house for a respondent. Independent variables for the survey were age group, parity, marital status, highest level of education, religion, occupation, monthly income and whether pregnant or not. Because well-being is subjective, it is typically measured with self-reports as was done in this study [20]. The two selected dependent variables, self-reported well-being (in terms of physical, economic and social well-being) and level of satisfaction with one's health (in terms of current/recent illness of respondent or close families, expenditure on health of self or close families, inability to perform daily activities of self or close families) were graded by Likert's scale. Self-reported well-being

was scored as 1 if the response to each of the three terms is "very poor", as 2 if the response to two of the three terms is "poor", as 3 if the response to one term is "neither poor nor good", as 4 if the response to two of the terms is "good" and finally as 5 if the response to all the three terms is "very good." Similarly, level of satisfaction with one's health was scored as 1 if the response to each of the three terms is "very unsatisfactory", as 2 if the response to two out of the three terms is "unsatisfactory", as 3 if response to one of the three terms is "neither satisfactory nor unsatisfactory", as 4 if response to two of the terms is "satisfactory" and as 5 if the response to all the three terms is "very satisfactory." Well-being score for each sub-variable was recorded as frequency (f) multiplied by Likert score (Ls). Scores for each sub-variable were added up to make Total Score. Percent total score of <50 was regarded as poor well-being or health status, that of 50-80 as averagely acceptable well-being or health status and that >80 as good well-being. Monthly income equivalent to US$ was scored as no income=0, <US$66.6=1, US$66.6-333.4=2 and ≥US$333.4=3. When this survey was on-going, exchange rate between Naira and US Dollar was 150:1.

Data capturing

Trained field workers used mobile data capturing device (MDCD) to collect information from respondents on the field. Data collection from each respondent took about 45 minutes to complete. The captured data were electronically transferred to base laboratory in Calabar, Cross River State, where all data were stored and saved as an Excel spreadsheet.

Ethical approval

All respondents gave verbal informed consent to participate in the study. Each was assured of confidentiality of data and anonymity of the persona. Respondents or respondents' children who fell ill from illnesses unrelated to the study were referred to the nearest general hospital where they were promptly attended to. Ethics committee on human research of the State Government approved the study protocol.

Statistical analysis

This was part of a bigger survey. As reported in a previous paper, 2 respondents traveled out on the scheduled day of interview, 1 was away to the market but did not return on time, 2 others withdrew from the study for religious reasons, 2 were over the age of 50 years and 1 was hospitalized. Data were entered unadjusted into a laptop computer and cleaned. STATA 13 (StataCorps, College Station, Texas 77845, USA) statistical software was used for data analysis. Analyses carried out included frequency of proportions, appropriate bivariate (cross-tabulation) and multivariate regression analysis. Outcomes were given as mean (± standard deviation [SD]). Statistical variances between means were decided by Student's t-test when comparing 2 groups and by Kruskal-Wallis where comparing more than 2 groups. The significance of differences between two or more than two proportions was determined using Chi-square (χ^2) test. Level of significance was taken as $P < 0.05$. Odds ratio was determined at 95% Confidence Interval. Data were presented as Figures and Tables.

Results

Demographic and reproductive characteristics of respondents

A high proportion of the respondents (406, 49.0%) were aged 25-34 years, or those in their mid-reproductive age group while lower proportions (256, 30.9%; 167, 20.1%) were in the early (<25 years) and late (≥35 years) reproductive age groups respectively. Most WCBA were ever married (660, 79.6%) among whom 137(20.8%) were aged <25 years, 347(41.9%) had 1-2 children among whom were 105(30.3%) were aged <25 years and of the 129(15.6%) that were pregnant at the time of the survey, 36(27.9%) were aged <25 years (Table 1).

Social and religious characteristics of respondents

In all, 548(66.1%) had at least secondary education among whom (193 35.2%) were aged <25 years, most respondents (472, 57.6%) were traders but just 77(16.3%) were <25 years and no <25 years was in Traditional religion whereas 142 (29.6%) out of 480 Christians were <25 years and 114(33.0%) out of 345 Moslems were <25 years (Tables 2 and 3).

Income pattern of respondents

The mean (±sd) monthly income of respondents was US$59.5(98.6). A total of 252(30.4%) WCBA did not have a salaried income but 263(31.7%), 299(36.1%) and 15(1.2%) had monthly income of <US$66.6, US$66.6-333.3 and >US$333.3 respectively. Those aged 25-34 years, with post-secondary education, pregnant women, married women and those with parity of 5 or more had higher mean monthly incomes than others in their category. Those aged 24 years and below were about 3½ times more likely to have no income than other age groups (χ²=62.01, P-value<0.001, OR=3.44, 95% CI=2.51, 4.71).

The level of perceived well-being of study subjects, in terms of in terms of physical, economic and social well-being, according to Likert's scale. Very few WCBA (19, 2.3%) reported a very poor well-being (scale 1), a slightly higher proportion (36, 4.3%) agreed on a poor well-being (scale 2), still a higher proportion (70, 80.4%) said that their well being was neither poor nor good (scale 3). However, majority of the WCBA (539, 65.00%) believed their well-being was good (scale 4). A lesser proportion (165, 19.9%) thereafter believed that their well-being was very good (scale 5). When scored however, only few WCBA had acceptable well-being status, including ever married women (2609, 79.5% score), those with secondary education (2166, 66.0% score) and those not pregnant (2780, 84.7% score) (Table 4). Of those who reported very poor well-being, none was HIV positive but 5 each had 1 and 3 fever episodes respectively a month prior to the survey. Of those that stated poor well-being, 4(11.1%) were HIV positive and 8 each 1 and 2 fever episode a month before the survey. Of the

Table 1: Demographic and reproductive characteristics of the respondents.

Variable	Category	Freq.	%	Marital Status				Parity								Pregnancy state			
				Single		Ever married		0		1-2		3-4		≥5		Pregnant		Not pregnant	
				Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Age group	All	829	100.0	169	20.4	660	79.6	182	22.0	347	41.9	231	27.9	69	8.3	129	15.6	700	84.4
	<25	256	30.9	119	70.4	137	20.8	126	69.2	105	30.3	22	9.5	3	4.3	36	27.9	220	31.4
	25-34	406	49.0	45	26.6	361	54.7	51	28.0	200	57.6	125	54.1	30	43.5	82	63.6	324	46.3
	≥35	167	20.1	5	3.0	162	24.5	5	2.7	42	12.1	84	36.4	36	52.2	11	8.5	156	22.3

Table 2: Educational, occupational and religious characteristics of respondents.

Variable	Item	Age group (years)							
		All		<25		25-34		≥35	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%
Educational status	No formal education	45	5.4	15	33.3	21	46.7	9	20.0
	Primary	130	15.7	26	20.0	69	53.1	35	26.9
	Secondary	548	66.1	193	35.2	255	46.5	100	18.2
	Post-secondary	83	9.6	17	20.5	48	57.8	18	21.7
	Other	23	2.8	5	21.7	13	56.5	5	21.7
Occupation	Trader	472	57.6	77	16.3	256	54.2	139	29.5
	Civil servant	19	2.3	2	10.5	12	63.2	5	26.3
	Farmer	3	0.4	2	66.7	1	33.3	0	0.0
	Student	93	11.3	69	74.1	23	24.7	1	1.1
	Unemployed	42	5.1	16	38.1	25	59.5	1	2.4
	Others	191	23.3	82	42.9	88	46.1	21	11.0
Religion	Christianity	480	57.9	142	29.6	236	49.2	102	21.2
	Islam	345	41.6	114	33.0	169	49.0	62	18.0
	Traditional	4	0.5	0	0.0	1	25.0	3	75.0

Table 3: Monthly income of participants.

Variable	Category	Monthly income of respondents in US$ (%)										Monthly income of respondents' husbands in US$ (%)									
		Mean	±sd	0		<66.6		66.6-333.3		≥333.4		Mean	±sd	0		<66.6		66.6-333.3		≥333.4	
				Freq.	%	Freq.	%	Freq.	%	Freq.	%			Freq.	%	Freq.	%	Freq.	%	Freq.	%
	All	59.5	98.6	252	30.4	263	31.7	299	36.1	15	1.2	112.3	208.2	331	39.9	105	12.7	326	39.3	67	7.6
Age group	<25	42.9	71.9	126	50.0	56	21.3	71	23.7	3	20.0	78.8	122.8	140	42.3	11	10.5	91	27.9	14	20.9
	25-34	67.4	112.0	91	36.1	143	54.4	166	55.5	6	40.0	134.6	259.0	126	38.1	67	63.9	176	54.0	37	55.2
	≥35	65.6	96.8	35	13.9	64	24.3	62	20.7	6	40.0	109.4	162.4	65	19.6	27	25.7	59	18.1	16	23.9
Marital status	Single	30.1	66.1	103	40.9	29	11.0	36	12.0	1	6.7	16.3	56.0	0	0.00	0	0.0	0	0.0	0	0.0
	Ever married	67.0	104.0	149	59.1	234	89.0	263	88.0	14	93.3	136.9	225.1	182	100.0	100	95.2	313	96.0	65	97.0
Parity	0	42.3	140.2	111	44.0	31	11.8	38	12.7	2	13.3	40.1	91.3	141	42.6	6	5.7	30	9.2	5	7.5
	1-2	61.4	74.7	84	33.3	118	44.9	142	47.5	3	20.0	138.4	246.7	100	30.2	48	45.7	163	50.0	36	53.7
	3-4	63.5	86.9	45	17.9	89	33.8	90	30.1	8	53.3	122.8	182.8	74	22.4	39	37.1	98	30.1	20	29.8
	≥5	82.0	103.8	12	4.8	25	9.5	29	9.7	3	20.0	136.5	254.0	16	4.8	12	11.4	35	10.7	6	9.0
Educational status	No formal	65.2	61.2	8	3.2	15	5.7	22	7.4	0	0.0	109.2	136.9	16	4.8	3	2.9	25	7.7	1	1.5
	Primary	56.5	88.7	29	11.5	53	20.1	45	15.0	3	20.0	103.4	153.5	43	13.0	20	19.0	59	18.1	8	11.9
	Secondary	57.6	80.9	173	68.7	164	62.4	202	67.6	9	60.0	111.0	212.5	220	66.5	65	61.9	219	67.2	44	65.7
	Post-Secondary	73.1	194.8	34	13.5	24	9.1	22	7.4	3	20.0	119.2	192.2	40	12.1	12	11.4	20	6.1	11	16.4
Occupation	Others	60.1	84.9	8	3.2	7	2.7	8	2.7	0	0.0	175.5	437.0	12	3.6	5	4.8	3	0.9	3	4.5
	Trader	64.1	81.9	83	32.9	190	72.2	189	63.2	10	66.7	114.4	160.1	147	44.4	86	81.9	197	60.4	42	62.7
	Civil servant	121.1	143.1	1	0.4	4	1.5	13	4.3	1	6.7	106.3	119.4	7	2.1	2	1.9	8	2.4	2	3.1
	Farmer	91.1	73.1	0	0.0	1	0.4	2	0.7	0	0.0	713.3	1116.1	0	0.0	2	1.9	1	0.3	0	0.0
	Student	31.3	175.2	72	28.6	13	4.9	8	2.7	0	0.0	29.6	80.6	76	23.0	4	3.8	10	3.1	3	4.5
	Unemployed	5.1	21.6	37	14.7	4	1.5	1	0.3	0	0.0	140.0	150.8	13	3.9	2	1.9	22	6.7	5	7.5
	Others	69.9	83.9	50	19.8	51	19.4	86	28.8	4	26.7	137.8	303.9	79	23.9	9	8.6	88	27.0	15	22.4
Religion	Christian	60.3	87.6	154	61.1	141	53.6	176	58.9	9	60.0	114.4	199.1	203	61.3	59	56.2	181	55.5	37	55.2
	Moslem	58.9	112.6	97	38.5	119	45.3	123	41.1	6	40.0	110.3	221.4	126	38.1	46	43.8	143	43.9	30	44.8
	Traditional	20.0	23.1	1	0.4	3	1.1	0	0.0	0	0.0	40.0	47.4	2	0.6	0	0.0	2	0.6	0	0.0
Pregnancy state	Pregnant	81.1	157.9	32	12.7	34	12.9	62	20.7	1	6.7	168.9	268.2	27	8.2	18	17.1	71	21.8	13	19.4
	Not pregnant	55.5	82.8	220	87.3	229	87.1	237	79.3	11	73.3	11.9	193.6	292	91.8	87	82.9	255	78.2	54	80.6

Table 4: Frequency distribution of perceived well-being.

Variable	Sub-variable	Self-reported well-being											
		Very poor = 1		Poor = 2		Neither poor nor good = 3		Good = 4		Very good = 5		Total Score	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
All		19	2.3	36	4.3	70	8.4	539	65.0	165	19.9	3282	100.0
Fever episode in past month	0	3	15.8	12	33.3	219	40.6	74	44.8	34	48.6	-	-
	1	5	26.3	8	22.2	173	32.1	50	30.3	19	27.1	-	-
	2	2	10.5	8	22.2	93	17.2	23	13.9	9	12.9	-	-
	3	5	26.3	4	11.1	40	7.4	12	7.3	3	4.3	-	-
	4	4	21.0	4	11.1	14	2.6	6	3.6	5	7.1	-	-
HIV status (n=565)	Positive	0	0.0	2	11.1	20	5.4	5	4.1	2	4.4	-	-
	Negative	19	100.0	16	88.9	350	94.6	117	95.9	43	95.6	-	-
Age group (years)	<25	7	36.8	9	25.0	26	37.1	158	29.3	56	33.9	1015	30.9
	25-34	10	52.6	14	28.9	30	42.9	274	50.8	78	47.3	1614	49.2
	≥35	2	10.5	13	36.1	14	20.0	107	19.9	31	18.8	653	19.9
Marital status	Single	6	31.6	4	11.1	15	21.4	106	19.7	38	23.0	673	20.5
	Ever married	13	68.4	32	88.9	55	78.6	433	80.3	127	77.0	2609	79.5
Parity	0	5	26.3	2	5.6	15	21.4	120	22.3	40	24.2	734	22.4
	1-2	6	31.6	16	44.4	28	40.0	228	42.3	69	41.8	1379	42.0
	3-4	7	36.8	14	38.9	22	31.4	149	27.6	39	23.6	892	27.2
	≥5	1	5.3	4	11.1	5	7.1	42	7.8	17	10.3	277	8.4
Educational status	No formal education	2	10.5	1	2.8	4	5.7	24	4.5	14	8.5	182	5.5
	Elementary	1	5.3	6	16.7	15	21.4	88	16.3	20	12.1	510	15.5
	Secondary	14	73.7	28	77.8	39	55.7	358	66.4	109	66.1	2166	66.0
	Post-Secondary	1	5.3	1	2.8	6	8.6	55	10.2	20	12.1	341	10.4
	Others	1	5.3	0	0.0	6	8.6	14	2.6	2	1.2	85	2.6
Occupation	Trader	10	52.6	22	61.1	34	48.6	313	58.1	93	58.1	1873	57.1
	Civil servant	0	0.0	1	2.8	0	0.0	12	2.2	6	3.8	80	2.4
	Farmer	0	0.0	0	0.0	0	0.0	2	0.4	1	0.6	13	0.4
	Student	3	15.8	3	8.3	7	10.0	65	12.1	15	9.4	365	11.1
	Unemployed	4	21.1	7	19.4	22	31.4	121	22.4	37	23.1	753	22.9
	Others	2	10.5	3	8.3	7	10.0	22	4.1	8	5.0	157	4.8
Religion	Christianity	13	68.4	22	61.1	45	64.3	302	56.0	98	59.4	1890	57.6
	Islam	6	31.6	14	38.9	25	35.7	233	43.2	67	40.6	1376	41.9
	Traditional	0	0.0	0	0.0	0	0.0	4	0.7	0	0.0	16	0.5
Pregnancy state	Pregnant	5	26.3	4	11.1	16	22.9	79	14.7	25	15.2	502	15.3
	Not pregnant	14	73.7	32	88.9	54	77.1	460	85.3	140	84.8	2780	84.7

165 that reported very good well-being, 2(4.4%) were HIV positive and 19(27.1%) had 1 fever episode a month preceding the survey. Those with no salaried income, 31.6%, 25.0%, 38.6%, 31.5% and 24.2% perceived their well-being very poor, poor, neither poor nor good, good and very good (Figure 2). Of those with income of <US$ 66.6, 26.3%, 44.4%, 27.1%, 31.9% and 30.9% respectively perceived their well-being to be very poor, poor, neither poor nor good, good and very good. Only 5.3%, 0.0%, 2.9%, 1.3% and 3.0% of those earning US$333.4 or more on monthly basis perceived their wellbeing as very poor, poor, neither poor nor good, good and very good. On the contrary, 48.0%, 36.1%, 25.4%, 29.9% and 27.6% of WCBA with no income reported very unsatisfactory, unsatisfactory, neither unsatisfactory nor satisfactory, satisfactory and very satisfactory level of health. Not surprisingly, among those with income of ≥US$333.4, none indicated a very unsatisfactory level of health and only 3.4% of them perceived their health as neither unsatisfactory nor satisfactory. However, just 1.2% and 2.8% indicated that their level of health was satisfactory and very satisfactory (Figure 3).

Overall, majority of the respondents (405, 48.9%) perceived their health as satisfactory while only a small proportion (50, 6.0%) were very dissatisfied with their health (Table 5, Figure

4). From scoring however, those aged<25(1017, 31.4% score), ≥35 years (626, 19.3% score) and those with parity 1-2(1361, 42.0% score), single women (648, 20.0% score), all ranges of parity, all ranges of educational status, except those with secondary education had unacceptable health status while traders (1829, 56.5% score) and Christian faith (1866, 57.6%) appeared to have average health status, and those ever married (2591, 80.2% score) and those not pregnant (2741, 84.6% score) may be viewed as having better health status.

Further analysis revealed that under-25s were approximately 1½ times more likely to be indifferent about their well-being (χ^2=1.36, P-value=0.24, OR=1.36, 95% CI:0.82, 2.26); those aged 25-34 were 1.2 times more likely to indicate "good" well-being (χ^2=2.13, P-value=0.14, OR=1.24, 95% CI:0.93, 1.65); those aged ≥35 years were about 2½ times more likely to indicate "poor" well-being (χ^2=5.96, P-value=0.01, OR=2.35, 95% CI:1.16, 4.73); pregnant women were almost twice more likely to indicate "very poor" well-being (χ^2=1.71, P-value=0.19, OR=1.98, 95% CI: 0.70, 5.58); and not-pregnant women were 1½ times more likely to indicate "poor" well-being (χ^2=0.57, P-value=0.45, OR=1.50, 95% CI:0.52, 4.31); (data not shown). Further analysis indicated that <25s were over 1½ times more
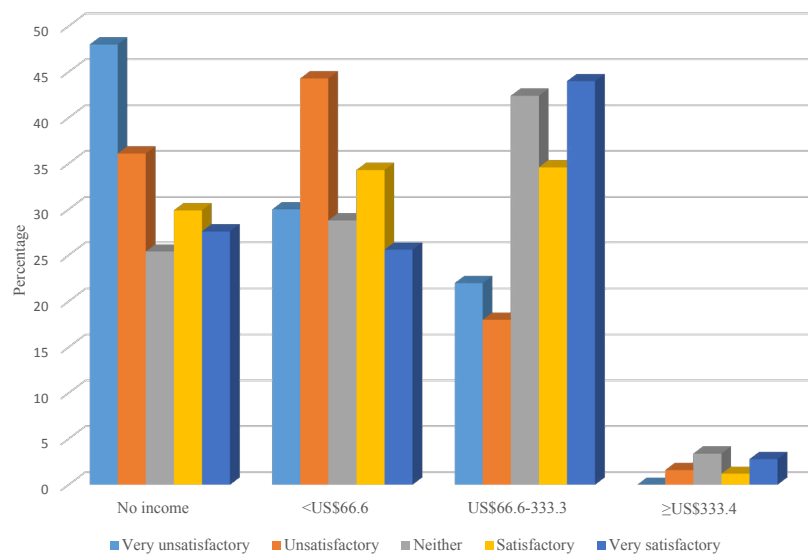

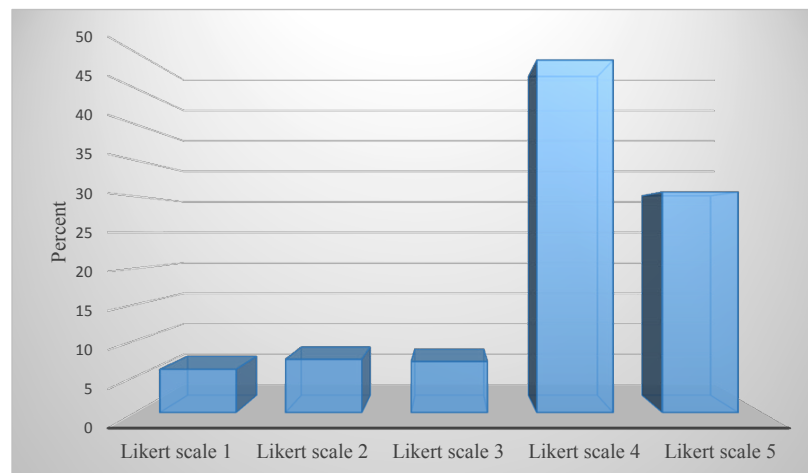**Figure 2:** Perceived well-being by monthly income (US$) of respondents.

Figure 3: Level of satisfaction with respondent's health relative to monthly income (US$).

Table 5: Respondents' level of satisfaction with own health.

Variable	Sub-variable	Satisfaction with health											
		Very dissatisfied = 1		Dissatisfied = 2		Neither satisfied nor dissatisfied = 3		Satisfied = 4		Very satisfied = 5		Total score	
		Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
All		50	6.0	61	7.4	59	7.1	405	48.9	254	30.6	3239	100.0
Fever episode in past month	0	17	34.0	17	27.9	156	38.5	131	51.6	21	35.6	-	-
	1	7	14.0	19	31.1	142	35.1	67	26.4	20	33.9	-	-
	2	8	16.0	11	18.0	71	17.5	34	13.4	11	18.6	-	-
	3	10	20.0	7	11.5	27	6.7	16	6.3	4	6.8	-	-
	4	8	16.0	7	11.5	9	2.2	6	2.4	3	5.1	-	-
HIV status (n=565)	Positive	0	0.0	4	9.1	16	6.2	5	2.5	4	12.1	-	-
	Negative	31	100.0	40	90.9	241	93.8	195	97.5	29	87.9	-	-
Age group	<25	20	40.0	8	13.1	23	39.0	113	27.9	92	36.2	1017	31.4
	25-34	21	42.0	28	45.9	28	47.5	210	51.9	119	46.9	1596	49.3
	≥35	9	18.0	25	41.0	8	13.6	82	20.2	43	16.9	626	19.3
Marital status	Single	15	30.0	12	19.7	11	18.6	79	19.5	52	20.5	648	20.0
	Ever married	35	70.0	49	80.3	48	81.4	326	80.5	202	79.5	2591	80.2
Parity	0	15	30.0	4	6.6	11	18.6	90	22.2	62	24.4	726	22.4
	1-2	17	34.0	30	49.2	23	39.0	170	42.0	107	42.1	1361	42.0
	3-4	16	32.0	18	29.5	22	37.3	108	26.7	67	26.4	885	27.3
	≥5	2	4.0	9	14.8	3	5.1	37	9.1	18	7.1	267	8.2
Educational status	No formal education	3	6.0	3	4.9	3	5.1	22	5.4	14	5.5	182	5.6
	Elementary	6	12.0	9	14.8	17	28.8	64	15.8	34	13.4	501	15.5
	Secondary	36	72.0	42	68.9	29	49.2	277	68.4	164	64.6	2114	65.3
	Post-Secondary	3	6.0	5	8.2	6	10.2	33	8.1	35	13.8	318	9.8
	Others	2	4.0	2	3.3	4	6.8	11	2.7	7	2.7	84	2.6
Occupation	Trader	26	57.8	38	62.3	32	54.2	249	62.1	127	50.0	1829	56.5
	Civil servant	1	2.2	1	1.6	0	0.0	9	2.2	8	3.2	79	2.4
	Farmer	1	2.2	0	0.0	1	1.7	1	0.3	0	0.0	8	0.2
	Student	7	15.6	4	6.6	5	8.5	42	10.5	35	13.8	373	11.5
	Unemployed	7	15.6	13	21.3	13	22.0	87	21.7	71	28.0	775	23.9
	Others	3	6.7	5	8.2	8	13.6	13	3.2	13	5.1	154	4.8
Religion	Christianity	36	72.0	32	52.5	36	61.0	222	54.8	154	60.6	1866	57.6
	Islam	14	28.0	28	45.9	23	39.0	180	44.4	100	39.4	1359	42.0
	Traditional	0	0.0	1	1.6	0	0.0	3	0.8	0	0.0	14	0.4
Pregnancy state	Pregnant	11	22.0	9	14.8	10	17.0	56	13.8	43	16.9	498	15.4
	Not pregnant	39	78.0	52	85.2	49	83.0	349	86.2	211	83.1	2741	84.6

likely to be "very dissatisfied" with their health status; those 25-34 years were 1.9 times more likely to be "indifferent" (i.e. neither satisfied nor dissatisfied) about their health status; those aged ≥35 years were over three times more likely to be "dissatisfied" with their health; pregnant women were over 1½ times more likely to be "very dissatisfied" with their health status while not-pregnant women were 1.3 times more likely to be "satisfied" with their health status (data not shown).

Multivariate regression analysis, with a constant, age group (years), parity, marital status, educational status, religion, occupation, incomes (wife [respondent] and husband) and pregnancy state were not significant factors (0.4%) that explain well- of the WCBA on the Atlantic Ocean coastline of Nigeria (R^2=0.004, F=0.3973, P-value=0.937) (Table 6). However, these same variables provided a significant 3.5% explanation of satisfaction with health status of respondents (R^2=0.035, F=3.249, P-value=0.0007).

Significant positive association was observed between pregnancy state and self-reported well-being (r=0.63, P-value=0.0001, 95% CI: 0.50, 0.76). Age group negatively correlated with level of satisfaction with one's health (r=-0.12, P-value=0.013, 95% CI:-0.22, 0.3) while a positive correlation was observed between respondents' income and level of satisfaction with one's health (r=0.002, P-value =0.006, 95% CI:0.0005, 0.0031) (Table 5).

Discussion

Condoleezza Rice, former US Secretary of State once remarked that it takes only one woman to make a difference, that empowering that woman with "information, and training, or a microloan, she can lift up her entire family and contribute to the success of her community." She further stated, "Multiply that one woman's impact by a hundred or a thousand, and perhaps a million lives can change" [21]. Women are vital potential resources that Africa is neglecting. The starting point of caring for women's health is probably to examine what they themselves think of their health and well-being and build on their self-evaluation. Gender empowerment reflects improvements in the standard of living and well-being of women. Gender empowerment is calculated by combining economic and political indicators.

Invariably, quality of life may be seen as intricately connected to availability or otherwise of cash. The Nigerian system mostly operates on the outdated availability of cash at the point of financial transaction and where cash is unavailable or not enough or where cash is available but not equitably distributed, quality of life and health indices are expected to fall with corresponding increase in crime, corruption and violence (especially against women) with concomitant rise in morbidity and mortality. In cashless societies, where credit is available, poverty is much less pronounced. Recently, Nigeria established a weak cashless policy where only credit cards are to be used but there was no enforcement and so far, majority of all financial transactions are still predicated on availability of raw cash, absence of which translates to imminent poverty.

There are certain major findings in this study. The first and most glaring is that a little over 30% of women and an almost 40% of their husbands reported zero monthly income. Further,

Table 6: Multivariate regression showing correlation coefficient outcomes and association between self-rated living standard, satisfaction with one's health and some other variables.

	Independent variable	Correlation Coefficient (r)	Standard error	t	P-value	95% Confidence interval	Multivariate regression analysis			
							RMSE	R2	F	P-value
Self-reported well-being	Age group (years)	-0.002	0.04	-0.04	0.971	-0.09, 0.08	0.7758	0.0044	0.3955	0.9376
	Parity	0.004	0.02	0.21	0.836	-0.03, 0.04				
	Marital status	-0.02	0.08	-0.26	0.794	-0.19, 0.14				
	Educational status	0.01	0.02	0.29	0.772	-0.03, 0.05				
	Religion	-0.02	0.05	-0.46	0.643	-0.13, 0.08				
	Occupation	0.02	0.02	1.09	0.277	-0.01, 0.05				
	Income (wife)	0.0004	0.001	0.69	0.491	-0.001, 0.001				
	Income (husband)	0.0001	0.0003	0.31	0.754	-0.0005, 0.0006				
	Pregnancy state	0.63	0.06	9.83	0.0001	0.50, 0.76				
	Constant	3.36	0.27	12.41	0.000	2.83, 3.90				
Level of satisfaction with one's health	Age group (years)	-0.12	0.05	-2.48	0.013	-0.22, -0.03	0.8946	0.0345	3.2165	0.0008
	Parity	-0.01	0.02	-0.68	0.494	-0.05, 0.03				
	Marital status	0.10	0.10	1.06	0.289	-0.09, 0.29				
	Educational status	0.005	0.02	021	0.832	-0.04, 0.05				
	Religion	-0.02	0.06	-0.40	0.692	-0.15, 0.10				
	Occupation	0.03	0.02	1.61	0.108	-0.01, 0.06				
	Income (wife)	0.002	0.001	2.74	0.006	0.0005, 0.0031				
	Income (husband)	0.0005	0.0003	1.55	0.122	-0.0001, 0.001				
	Pregnancy state	0.12	0.09	1.33	0.183	-0.06, 0.29				
	Constant	3.04	0.31	9.72	0.000	2.42, 3.65				

the proportion of those whose monthly income was N9, 999 (US$67) per month was higher among women (31.7%) than of among men (12.7%). The proportions of unemployed among women and men in this study was less than the 56% and 44% respectively that were reported from South Africa where it was suggested that the main determinants for those existing under or over the poverty line is employment and income generation [22]. Between 1996 and 1999, unemployment rate in South Africa rose from 33% to 36.2%, mostly among Black (44%) compared to White (6.8%) population groups [22]. The age-group mostly affected by nil or most minimal income in this study was women aged <25 years (30.9%) and their husbands (54.7%) had no monthly income. This catastrophic situation among the youthful population is an indication that a sizeable proportion of youthful women continue to live in extremely poor conditions in rural coastline of Atlantic Ocean, a geographical location characterized by lack of amenities, opportunities, infrastructure and mostly socio-economic development programs. Peer-group encouragement, access to education and skill training among women in this geographical location may be restricted, which is a major contributor to living below poverty line. The expected outcomes of the situation are possible health and safety hazards as these young women may be driving to become commercial sex worker which exposes them to unwanted pregnancies, sexually transmitted disease such as HIV, alcoholism and drug abuse. Such young women are also exposed to violence and crime. Access to and adequate use of information may prevent these unwanted social maladies [23].

A surprise finding was the effect of many variables (age, marital status, parity, religion, whether pregnant or not), on well-being of respondents. The lowest level (very poor) of reported well-being occurred more in mid-age (25-35 years), among those ever-married, in parity 3-4, among those with secondary education, traders, Christians and those not pregnant while the highest level (very good) occurred in mid age (25-34 years), married, parity 1-2, secondary education, traders, Christians, and those not pregnant. That the lowest level of well-being occurred in mid-age is in accord with what Steptoe et al., [24] earlier reported. In sub-Saharan Africa, that a person is poor or living in poor well-being or is in poor health or a general low-level well-being, is mostly a consequence of unacceptably low earning or no earning at all. Sen [25] has previously argued that well-being is "multidimensional, comprising capabilities such as good health, adequate nutrition, literacy, and political freedoms"]. Earlier works have also shown that, globally, there is an almost linear association between average Cantril ladder scores and the logarithm of per capita gross domestic product (GDP) [26,27].

Another major finding was that only 30.6% of all respondents were "very satisfied" with their health status a figure lower than the 55% and 50% reported from Somaliland and Ethiopia respectively but much higher than the 17-19% reported from Tanzania, Madagascar, DR Congo, Kenya and South Africa respectively and closer to the 38% reported in Nigeria [12].

Furthermore, the highest proportion of women who were "very satisfied" with their health was observed in the age group 25-34 years (119, 46.9%) with a total score of 1596(49.3%), followed by those aged <25 years (460, 36.2%) with a score of 1017(31.4%) and those aged ≥35 years (211, 16.9%) with a score of 626 (19.3%). The proportion of women who reported overall satisfaction (satisfied and very satisfied) with their health did not decline with increasing age but from 25-34 years (49.9%) to <25 years (31.1%) and finally to ≥35 years (19%). In view of this, Deaton and Tortora [12] were of the opinion that perfect health deteriorates more rapidly at young ages, an assertion that aligns with finding in this study as women <25 years were 1½ more likely to be very dissatisfied with their health.

This paper reports a disturbing 14.7% or 15.2% of pregnant women that claimed good or very good well-being. In general, there is paucity of socio-economic programs, to support pregnant women who need special treatment and safe surroundings free of organophosphates and organochlorines used during Indoor Residual Spraying (IRS) activities. Another reason why very few pregnant women reported good well-being may be because of very limited access to clean pipe-borne water, having to walk long distances for ANC clinic, poor inter-personal relationship with hospital staff, absentee husbands, loneliness and low socio-economic status.

Results from this study suggest an urgent need for physical investment in societal infrastructure such as school, agro- and market-economy which, expectedly would promote creation of jobs, raise the income of the population, raise human capital and improve skills.

Conclusion

This study examined how women in reproductive age, living on the Atlantic Ocean Coastline in South West Nigeria, perceive their well-being, health status. A third of these women and about 40% of their husbands had no income. Majority of these women gave a subjective rating of their well-being as "good". This rating may be higher than that in other regions in sub-Saharan Africa though obviously lower than that of women in the same age groups in industrialized regions of the world. Only 2.3% said their well-being was very poor. On the other hand, most respondents were just "satisfied" with their health status while very few were very dissatisfied with it. Our results suggest that variables such as age, marital status, parity, and educational status are high determinants of both well-being and health status of women on the Atlantic Ocean Coastline of South West Nigeria. Rural women's limited access to productive resources, lower educational levels, and social norms about appropriate work for women tend to confine them to lower paid, lower status work where opportunities for skills training and advancement are reduced, thus perpetuating their lower status [28]. We must also keep in mind that WCBA living in rural communities on the Atlantic Ocean coastline in Southwest Nigeria are also likely to "*pay high price for the lack of infrastructure…and reaching health services for themselves and their families. This 'time poverty' limits their ability to engage in other productive or income-earning activities*" [29].

Acknowledgement

References

1. Diener E, Seligman ME (2004) Beyond money. Toward an economy of well-being. *Psychol Sci in Public Interest.* 5:1-31.

2. Diener E (2009) Assessing well-being: the collected works of Ed Diener. New York: Springer.

3. Diener E, Scollon CN, Lucas RE (2009) The evolving concept of subjective well-being: the multifaceted nature of happiness. In: E Diener (ed.) Assessing well-being: the collected works of Ed Diener. New York: Springer. 2009:67-100.

4. Frey BS, Stutzer A (2002) Happiness and economics. Princeton, NJ: Princeton University Press.

5. Dunn HL (1973) High level wellness. R.W. Beatty, Ltd: Arlington.

6. Andrews FM, Withey SB (1976) Social indicators of well-being. New York: Plenum Press. 1976:63-106.

7. Diener E (2000) Subjective well-being: the science of happiness and a proposal for a national index. *Am Psychol.* 55:34-43.

8. Ryff CD, Keyes CLM (1995) The structure of psychological well-being revisited. *J Pers Soc Psychol.* 69:719-727.

9. Diener E, Suh E, Oishi S (1997) Recent findings on subjective well-being. *Indian J Clin Psychol.* 24:25-41.

10. Veenhoven R (2008) Sociological theories of subjective well-being. In: M Eid , RJ Larsen (eds). **The science of subjective well-being**. New York: Guilford Press.

11. Utah Department of Health. Report on maternal and infant health.

12. Deaton AS, Tertora R (2015) People in Sub-Saharan africa rate their health and health care among the lowest in the world health affairs. 3:519-527.

13. Gallup (2015) How does the Gallup World Poll work? [Internet]. Washington (DC): Gallup; 2014 Oct 14 [cited 2015 Jan 16].

14. May J, Woolard I, Klasen S (2000) The Nature and Measurement of Poverty and Inequality". In: J May (Ed.) 2000. Poverty and Inequality in South Africa: Meeting the challenge. Cape Town: David Philip Publishers.

15. Dasgupta P, Weale M (1992) On measuring the quality of life. World Development, 1992; 20. In: Kehler J. Women and Poverty: The South African Experience. *JIWS.* 3:41-53.

16. World Bank. 2001. World Development Report 2000/2001: Attacking Poverty. World Development Report; New York: Oxford University Press. © World Bank.

17. Afolabi BM, Ezedinachi ENU, Arikpo I, Ogunwale A, Ganiyu DF, et al. (2015) Knowledge, non-use, use and source of information on contraceptive methods among women in various stages of reproductive age in rural Lagos, Southwest Nigeria. *J Contracept.* 6:1-11.

18. Afolabi BM, Ezedinachi ENU, Opara S, Arikpo I, Ogunwale A, et al. (2016) Perception of obstetric danger signs among women living on the coastline of the Atlantic Ocean in rural Lagos, Nigeria. *J. Public Health Epidemiol.* 8:1-11.

19. Afolabi BM, Ajibade A, Ganiyu DF, Abu RA (2015) Prevalence and Perception of Hypertension among Female Adults Living on the Atlantic Coastline of Rural Lagos State, South-West Nigeria- A Baseline Exploration. *BJESBS.* 5:354-367.

20. Larsen RJ, Eid M. Ed Diener and The Science of Subjective Well-Being. In: RJ Larsen and M Eid, (Eds.) *The Science of Subjective Well-Being.* New York: Guildford Press, 2008:1-12.

21. Ernst and Young (2009). Women of Africa: A powerful untapped economic force for the continent.

22. Kehler J (2001) Women and Poverty: The South African Experience. *Int J Womens Stud.* 3:41-53.

23. Okello D (2007) Empowering women through ICT: Enhancing access to information by rural women.

24. Steptoe A, Deaton A, Stone AA (2014) Subjective wellbeing, health, and ageing. *Lancet.* 2014 Nov 6. [Epub ahead of print].

25. Sen A (1987) "The Standard of Living: Lecture II, Lives and Capabilities." In The Standard of Living (Geoffrey Hawthorn, editor) Cambridge: Cambridge University Press. pp:20-38.

26. Deaton A (2008) Income, health, and wellbeing around the world: evidence from the Gallup World Poll. *J Econ Perspect.* 22:53-72.

27. Stevenson B, Wolfers J (2008) Economic growth and subjective well-being: reassessing the Easterlin paradox. Brookings Pap Econ Act. Spring.

28. Investing in skills for socio-economic empowerment of rural women. http://www.fao.org/docrep/013/i2008e/i2008e02.pdf.

29. http://www.fao.org/docrep/013/i2008e/i2008e04.pdf.

Address of Correspondence: Dr. Bamgboye M. Afolabi, Health, Environment and Development Foundation, 34 Montgomery Road, Yaba, Lagos, Nigeria, Tel: +234(0) 803 049 0729; +234(0) 808 0081946; E-mail: bmafolabi@gmail.com