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Re-testing theories on the correlations of health status, life satisfaction and happiness

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Abstract

Background: Empirical evidences have shown that happiness, life satisfaction and health status are strongly correlated with each other. In Jamaica, we continue to collect data on health status to guide policies and intervention programs, but are these wise? **Aims:** The current study aims to fill the gap in the literature by examining life satisfaction, health status, and happiness in order to ascertain whether they are equivalent concepts in Jamaica as well as the coverage of the estimates. **Materials and Methods**: The current study used a cross-sectional survey of 2000 men 55 years and older from the parish of St. Catherine in 2007 which is it also generalizable to the island. A132-item questionnaire was used to collect the data. The instrument was sub-divided into general demographic profile of the sample; past and Current Good Health Status; health-seeking behavior; retirement status; social and functional status. Ordinal logistic regression techniques were utilized to examine determinants of happiness, life satisfaction and health status. **Results**: Happiness was correlated with life satisfaction - Pseudo r-squared = 0.311, -2LL = 810.36, $\chi 2$ = 161.60, $P < 0.0001$. Life satisfaction was determined by happiness - Pseudo r-squared = 0.321, -2LL = 1069.30, $\chi 2$ = 178.53, $P < 0.0001$. Health status was correlated with health status age, income, education and area of residence - Pseudo r-squared = 0.313, -2LL = 810.36, $\chi 2$ = 161.60, $P < 0.0001$. **Conclusion**: The current study refuted the empirical finding that self-reported happiness depends on perceived health status for older men in Jamaica.

Keywords: Life satisfaction, happiness, health status, subjective health, older men, Jamaica.

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Introduction

For many centuries, health was measured on the further extreme of the illness pendulum. Health therefore meant that people were not experiencing illness (or ailments). This approach was negative in scope [1], but the advantage of this measure was its precision in objectification. Illness (or ill-health) denotes being diagnosed with a particular pathogen which caused the present state. It follows that the hospital system, technology, the study of medicine and treatment of ill-health was fashioned around this biomedical approach. The biomedical approach (or model) was more than dominant in medicine, technology, health care system and treatment of ill-health, but people used this as a definition of their wellbeing (or ill-being). Then in the 1940s, the World Health Organization recognizing the uni-dimensional nature of this measure forwarded a conceptual definition of health that argued for the inclusion of social, economic and psychological conditions in the study of health. This was documented in the Preamble to the WHO's Constitution in 1946 [2]. Engel, a psychiatrist, apparently adopted the broad conceptual framework offered by the WHO, when he forwarded a 'biopsychosocial model' in the treatment of mentally ill patient [3-6]. He opined that the people are as such body

as they are social, psychological and economic being. This means that patient care should not be solely about the biological conditions of the ill-patient, but on the psychosocial and economic components.

Many decades later, many scholars continue to use morbidities and mortality in the discussion of health and health outcome [7-12]. This is also the practice by Latin America and Caribbean scholars [13-25]. Again the dominance of morbidities and mortality studies are owing the (1) structure of the world around the biomedical model, (2) objectivity of those measures and (3) training of many scholars that knowledge through the objective science is superior to subjective (or "soft") science. This is reinforced by Bok who opined that the WHO's concepualisation of health is too broad and so can be objectively measured and operationalized for researchers to use with the element of subjectivity and by this reducing the objectivity of the measure. While the WHO's conceptual definition of health includes an element of subjectivity, this in no way diminish the quality of science or information that is obtained from people. The WHO introduced wellbeing in the discussion of health measurement, and this is an expansion from the negative approach to the conceptualisation of health.

Embodied in wellbeing is measure of people living standard or general life, which extends beyond illness (or ill-health) [2, 26, 27]. The dominance of positivism or quantitative scholars like the arguments raise in health opined that wellbeing must be measure using quantifiable approach such as income, expenditure, consumption, Gross Domestic Product or per capita income [28-30]. In a material entitled '*Objective measures of wellbeing and the cooperation production problem*', Gaspart [28] provided arguments that support the rationale behind the objectification of wellbeing. His premise for objective quality of life is embedded within the difficulty as it relates to consistency of measurement when subjectivity is the construct of operationalization. This approach takes precedence because an objective measurement of concept is of exactness as non-objectification; therefore, the former receives priority over any subjective preferences. He claimed that for wellbeing to be comparable across individuals, population and communities, there is a need for empiricism.

According to WHO, health is multifaceted. If "Health is state of complete physical, mental and social well, and not merely being the absence of disease or infirmity" [2], then subjectivity must be an aspect of its measurement. In order to forward an understanding of what constitutes wellbeing or ill being, a system must be instituted that will allow us to coalesce a measure that will unearth peoples' sense of overall quality of life from either economic-welfarism [31] or psychological theories [32-35]. The discourse on people's assessment of their lives was driven by their experiences including cognitive judgments and affective reactions [36]. This meant that the study of wellbeing could now expand to include subjective measures such as self-rated health, life satisfaction, and happiness [37]. Wilson [37] found that happier people were healthier, well-educated, well-paid, extroverted, optimistic, worry-free, religious, married, and of high self-esteem among other positive psychological conditions. One scholar opined that satisfaction with life and positive affective conditions were among subjective wellbeing as happiness [36]. The uses of subjective indexes such as happiness, life satisfaction, perceived quality of life or wellbeing have been examined by even some economists [38-44]. The economists have only concurred with what psychologists have been postulating for years [32-35].

An economist in the 1970 utilized another subjective index (i.e. self-reported health status or health status) to measure health [45]. Ringen [46] in a paper entitled '*Wellbeing, measurement, and Preferences*' argued that non-welfarist approaches to measuring wellbeing are possible despite its subjectivity. The direct approach for wellbeing computation through the utility function according to Ringen is not a better quantification as against the indirect method (i.e. using social indicators). The stance taken was purely from the vantage point that *utility* is a function 'not of goods and preferences' but of products and 'taste'. The constitution of wellbeing is based on choices. Choices are a function of individual assets and options. With this premise, Ringen forwarded arguments which show that people's choices are sometimes 'irrational', which is the make for the departure from empiricism.

Many empirical studies have been done on the using particular subjective indexes such as happiness, self-reported health status and/or health conditions to measure health or wellbeing. In the Caribbean Hambleton et al. [47] utilized health status and health conditions and found that a strong correlation between both variables. Another group of Caribbean scholars used self-esteem, life satisfaction, and health status to assess wellbeing, but that these were not all tested in one multivariate analysis [48]. They used illnesses (i.e. acute and chronic) to measure health. Concurrently, it was revealed that acute illnesses were not correlated with wellbeing but there was a statistical correlation between chronic illness and wellbeing. Using wellbeing and life satisfaction as dependent variable, they found that illnesses were not correlated with the dependent variable. In a non-Caribbean clinical gerontology study, the researchers found that neither self-rated health nor illness (i.e. chronic, neurological or surgical) was correlated with physical action on fear of falling [49]. There are also studies on happiness and health status [50]. However in Jamaica 2007 was the first time in 2 decades (1988-2008) that the Planning Institute and the Statistical Institute began collection data on health status and health conditions. In previous years, they collected data on illnesses, but is health and illness wide enough concept that measure wellbeing. The current study aims to fill the gap in the literature by examining life satisfaction, health status, and happiness in order to ascertain whether they are equivalent concepts in Jamaica as well as the coverage of the

estimates. This research will use primary cross-sectional survey data on older men (ages 55+ years) to assess the aforementioned issue.

Materials and Methods

The study used primary cross-sectional survey data on men 55 years and older from the parish of St. Catherine in 2007; it also generalizable to the island. The survey was submitted and approved by the University of the West Indies Medical Faculty's Ethics Committee. Stratified multistage probability sampling technique was used to draw the sample (2,000 respondents). A132-item questionnaire was used to collect the data. The instrument was sub-divided into general demographic profile of the sample; past and Current Good Health Status; health-seeking behavior, retirement status, social and functional status.

The Statistical Institute of Jamaica (STATIN) maintains a list of enumeration districts (ED) or census tracts. The parish of St. Catherine is divided into a number of constituencies made up of a number of enumeration districts (ED). The one hundred and sixty-two (162) enumeration districts in the parish of St. Catherine provided the sampling frame. The enumeration districts were listed and numbered sequentially and selection of clusters was arrived by the use of a sampling interval. Forty (40) enumeration districts (clusters) were subsequently selected with the probability of selection being proportional to population size (Table 1).

Table 1 Proportion of Survey (Sample) vs. Proportion of Population

Age Group	**Survey**		**2001 Census (St. Catherine)**		**2001 Census (Jamaica)**	
(yrs).	n	%	n	%	N	%
55-59	469	23.45	6577	26.7	38645	23.9
60-64	413	20.6	5179	21.1	31828	19.7
65-69	374	18.7	4391	17.8	28901	17.9
70-74	345	17.2	3594	14.6	24856	15.4
75-79	189	9.45	2402	9.78	17711	11.0
80+	210	10.5	2399	9.77	19552	12.1

The enumeration districts in the parish of St. Catherine provided the sampling frame and the sample size determined with the help of the Statistical Institute of Jamaica (STATIN). The enumeration districts were listed and single-stage cluster sampling was used to select the sample. The enumeration districts were numbered sequentially and selection of clusters was arrived at by calculating a sampling interval. From a randomly selected starting point, forty (40) enumeration districts (clusters) were subsequently selected with the probability of selection being proportional to population size. It was determined that 50 older men in each enumeration district would be interviewed yielding a sample size of 2000.

The parish of St. Catherine had approximately 233,052 males, (preliminary census data 2001) of which 33,674 males were 55+ years. STATIN maintains maps with enumeration districts or census tracts which included the selected EDs and access routes and had references to the selected site of a starting point household within each ED. The starting point was determined by randomly selecting a household with a man 55 years and over from the list of persons in the ED. With this information the interviewers would travel in a north-easterly or closest to north-easterly direction beginning with the first selected household, and would conduct interview until the requisite number of interviews for that ED was completed. (North-East was randomly selected by STATIN as the direction of travel from the starting point).

Where the selected household was found to be subsequently devoid of an older man (due to out-migration or death), an adjacent household was canvassed. Where households had a man 55+ years as a resident and he was not at home a call-back form was left indicating a proposed time that the interviewer would return which would not be longer than two days after the initial visit. In households where there was more than one man 55 years old and over, then all were included in the survey.

The sample population does not only speak to the parish of St. Catherine, it is generalizable to the island of Jamaica. The sampling frame was men fifty-five years and older in the parish of St Catherine. The parish of St. Catherine was chosen as previous data and surveys [13, 17, 27] suggest that it has the mix of demographic characteristics (urban, rural and age-composition) which typify Jamaica.

Measures

Happiness. This is measured based on people's self-report on their happiness. It is a Likert scale question, which ranges from always to rarely happy.

Current Health Status. This variable is measured using people's self-rate of their overall health status, which ranges from excellent to poor health status. The question was 'How would you rate your health today?' (1) Excellent, (2) Good, (3) Fair and (4) Poor.

Life satisfaction is a Likert scale variable which is measured from 'Generally, are you satisfied with your life?' The options were (1) rarely, (2) sometimes, (3) most times, and (4) always.

Social network is self-reported involvement in church; civic organization; social clubs; or community groups. This is a binary variable, where 1=social network, 0=otherwise.

Education. What is [your] highest level of [education] attained? The options were (1) no formal education; (2) basic school; (3) primary school/all age; (4) secondary/high/technical school; (5) vocational (i.e. apprenticeship/trade); (6) diploma; (7) undergraduate degree; (8) post-graduate degree.

Performance of Activities of Daily Living (ADL) is used to describe the functional status of a person. It is used to determine a baseline level of functioning and to monitor improvement in activities of daily living (ADL) overtime [51, 52]. *Scoring the ADL findings (Katz)* Independence on a given function received a score of 1 point while if dependent, 0 point was given. There were 6 items ("eating" refers to feeding oneself; "dressing" denotes getting clothes and getting dressed, including typing shoes; "transferring" means to get in and out of bed as well as in and out of a chair; "using toilet" refers to going to the toilet and cleaning afterwards; "bathing" denotes to sponge bath, shower, tub bath, or washing body with a wet towel; "continence" denotes to control of urination and bowel movement). The reliability of the items was high, as Cronbach alpha was 0.696. Total scores thus could range from 0 to 6 with lower scores indicating low independence (i.e. high dependence) and larger scores indicating higher independence. If there was a score of 0 to 2 (i.e. none to 2 of the six ADL activities was chosen), the older person was classified as low independence; if 3 to 4 of the activities were selected, the older man was classified as moderately independent and if 5 to 6 items were selected the older was classified as highly independent.

Instrumental Activities of Daily Living IADL. The Instrumental Activities of Daily Living tool [53] was the basis for assessing participants' difficulty with IADL. IADL are those activities whose accomplishment is necessary for *continued independent residence* in the *community.* The independent activities of daily living are more sensitive to subtle functional deficiencies than ADL's and differentiate among task performance including the amount of help needed to accomplish each task. Hence, IADL for older men in this study used the 8-item choices as is used for women. These are preparing meals; shopping; management medication; money management; transportation; telephone and laundry. Scoring the IADL. IADL scores reflect the number of areas of impairment i.e. the number of skills/domains in which subjects are dependent. The data were coded as 1 if fully independent to 4 if lowly independent. Scores range from 0 to 8, with higher scores indicating higher dependence and lower scores greater independence (i.e. low dependence). If none to 3 activities were selected, the older person was classified as high dependence; if 4 to 6 activities were selected the elder was classified as moderately dependent and if 7 to 8 items were selected the elder was classified as highly dependent. The Cronbach alpha for the 8 item scales was 0.648.The classification outlined below (as developed based on Katz [51] and Katz et al [52]) was used to further describe the functional status of men with regard to ADL.

Statistical Analyses

For the current study descriptive statistics (frequency, percentages) were employed to provide background information on the sample; and chi-square was used to examine non-metric variables. Logistic regression was used to examine a binary dependent variable (i.e. physical exercise) and some socio-demographic variables (such as employment status, current health status, and health status in childhood, number of bother and/or sister (s) alive). Level of significance was $p<0.05$ and the only exclusion criteria was if more than 20% of the cases of a variable were missing. Using Cohen and Holliday [54] correlation coefficients – low, < 0, 4, moderate, 0.5-0.69; high, 0.7 – 1.0 - were used in the present study to exclude (or allow) a variable. Where collinearity existed (strong correlation), variables were entered independently into the model to determine which one should be retained during the final model construction. This was used to ascertain the variables' contribution to the predictive power of the model and the goodness of fit [55].

Model

In order to examine the effect of many variables on a single dependent variable, the researcher used multivariate analysis to test a single model. Using the literature the current study investigates the correlates of social networking of older Jamaicans within the context of the available data. The proposed model that this research seeks to evaluate is displayed (Eqn1):

$HAPP_i = f(H_{ti}, LS_i, AR_i, A_i, ED_i, MS_i, P_i, HH_i, ADL, IADL, \varepsilon_i)$.....[1]

$LS_i = f(H_{ti}\ SN_i, HAPP_i, AR_i, A_i, ED_i, MS_i, P_i, HH_i, ADL, IADL, \varepsilon_i)$.....[2]

$H_{ti} = f(HAPP_i, LS_i, AR_i, A_i, ED_i, MS_i, P_i, HH_i, ADL, IADL, \varepsilon_i)$.....[3]

Where happiness of person i, $HAPP_i$; current health status of person i, H_t; life satisfaction of person i, LS_i; area of residence of person i, AR_i; age group of respondent i, A_i; educational level of person i, ED_i; marital status of person i, MS_i; number of person in household of person i, P_i; head of household of person i, HH_i , ADL, IADL and an error term of person i, ε_i.

Results

Demographic Characteristic

Of the sampled respondents (n=2,000), 74.2% indicated that they had good health in their childhood; 74.4% reported good current health status; 51.0% lived in rural areas; 3.5% were mostly satisfied with life; 10.4% had moderate to high functional dependence; 89.6% had low functional dependence (i.e. independence); 21.9% were ages 75 years and older; 35.6% were ages 645 to 74 years and 42.6% reported ages 55 to 64 years. In addition, 94.1% had high cognitive functionality, 43.1% reported that they were depressed, 67.3% reported that they do some kind of physical exercise and 24.0% indicated being rarely happy, 4.5% mentioned that they were happy most time and 71.5% claimed occasional happiness.

One half of the sample indicated that they spent Ja.$100 (USD1.45) monthly for medical expenditure; 34% of the respondents bought their prescribed medication; 17.1% reported that they have been hospitalized since their sixth birthday and 65.8% reported that they took no medication.

Of those who mentioned that they were ill during childhood (17.5%, n=350), 34.9% said that the illness was measles or chicken pox, 26.3% mentioned asthma, 10.0% pneumonic fever, 8.9% polio, 6.6% accident, 4.6% jaundice, 1.7% hernia, and 5.1% indicated gastroenteritis. Twenty four percent of elderly men indicated that they were rarely happy, 40.5% said sometimes, 31.0% mentioned often and only 4.5% reported always. Furthermore, 17.7% of the sample reported that they were seriously ill in their children.

Table 2 Parameter estimates of happiness of older men in Jamaica

Variable	Est.	Std. Error	*P*	95% Confidence Interval	
Rarely happy	-4.376	1.002	0.000	-6.339	-2.412
Sometimes happy	-2.148	0.991	0.030	-4.091	-.205
Most times happy	0.669	0.981	0.495	-1.254	2.591
Age	-0.183	0.128	0.151	-0.433	0.067
Income	0.030	0.077	0.694	-0.120	0.181
ADL	0.103	0.117	0.380	-0.127	0.332
IADL	-0.079	0.048	0.101	-0.173	0.015
Head of household	-0.089	0.124	0.474	-0.331	0.154
No of people in household	-0.008	0.044	0.860	-0.094	0.078
Tertiary education =1	0.131	0.098	0.184	-0.062	0.324
Single	-0.064	0.417	0.877	-0.881	0.752
Married	-0.030	0.411	0.943	-0.836	0.777
Separated	0.414	0.539	0.442	-0.642	1.470
Common-law	0.530	0.502	0.291	-0.454	1.513
Widowed	0				
Urban	0.125	0.173	0.472	-0.215	0.464
Rural	0				
Life Satisfaction rarely=1	-3.854	0.481	0.000	-4.797	-2.911
Life Satisfaction sometimes =2	-2.800	0.473	0.000	-3.727	-1.873
Life Satisfaction most times =3	-1.193	0.463	0.010	-2.100	-.287
Life satisfaction always = 4	0				
Excellent health status	-0.251	0.288	0.384	-0.816	0.314
Good health status	-0.230	0.248	0.353	-0.716	0.255
Fair health status	0				

Pseudo r-squared = 0.311, -2LL = 810.36, Model $\chi2 = 161.60$, $P < 0.0001$, Goodness of fit $\chi2 = 767.67$, $P < 0.0001$

Table 3 Parameter estimates of life satisfaction of older men in Jamaica

Variable	Est.	Std. Error	*P*	95% Confidence Interval	
Life Satisfaction rarely=1	-3.157	1.021	0.002	-5.159	-1.156
Life Satisfaction sometimes =2	-1.481	1.018	0.146	-3.477	0.515
Life Satisfaction most times =3	1.428	1.002	0.154	-0.536	3.393
Age	0.002	0.130	0.990	-0.253	0.256
Income	0.034	0.078	0.662	-0.119	0.188
ADL	-0.006	0.118	0.957	-0.237	0.225
IADL	-0.019	0.049	0.703	-0.115	0.078
Head of household	-0.037	0.126	0.766	-0.284	0.209
No of people in household	0.007	0.044	0.879	-0.080	0.094
Tertiary education =1	0.131	0.098	0.184	-0.062	0.324
Single	0.753	0.441	0.088	-0.111	1.616
Married	0.763	0.436	0.080	-0.092	1.618
Separated	0.694	0.553	0.209	-0.389	1.777
Common-law	0.825	0.525	0.116	-0.204	1.853
Widowed	0				
Urban	-0.122	0.176	0.488	-0.466	0.222
Rural	0				
Rarely happy	-5.012	0.500	0.000	-5.993	-4.032
Sometimes happy	-3.075	0.463	0.000	-3.983	-2.167
Most times happy	-2.078	0.460	0.000	-2.979	-1.177
Always happy	0				
Excellent health status	0.317	0.290	0.275	-0.252	0.886
Good health status	0.209	0.251	0.405	-0.283	0.700
Fair health status	0				

Pseudo r-squared = 0.321, -2LL = 1069.30, Model $\chi2 = 178.53$, $P < 0.0001$, Goodness of fit $\chi2 = 2294.26$, $P < 0.0001$

Multivariate analyses

Table 2 presents information on determinants of happiness. Of the 10 variables that were tested in the model, only one was correlated with happiness – life satisfaction - Pseudo r-squared = 0.311, -2LL = 810.36, Model $\chi2 = 161.60$, $P < 0.0001$. Furthermore, the model was a good fit for the data - $\chi2 = 767.67$, $P < 0.0001$.

Table 3 shows information that was tested which examined life satisfaction and some variables. Happiness was the only determinant of life satisfaction of 10 variables that were tested in the model - Pseudo r-squared = 0.321, -2LL = 1069.30, Model $\chi2 = 178.53$, $P < 0.0001$. The model

was a good fit for the data - $\chi 2 = 2294.26$, $P < 0.0001$.

Table 4 highlights information that examined possible determinants of health status. Four social determined emerged as correlated with health status - Pseudo r-squared = 0.313, -2LL = 810.36, Model $\chi 2 = 161.60$, $P < 0.0001$. The model was found to be a good fit for the data - $\chi 2 = 767.67$, $P < 0.0001$. The determinants of the model were age, income, education and area of residence.

Table 4 Parameter estimates of health status of older men

Variable	Est.	Std. Error	*P*	95% Confidence Interval	
Excellent health status	0.409	0.996	0.681	-1.543	2.361
Good health status	3.371	1.011	0.001	1.389	5.354
Age	0.287	0.131	0.029	0.030	0.544
Income	0.685	0.080	0.000	0.528	0.842
ADL	-0.006	0.121	0.963	-0.243	0.231
IADL	-0.049	0.050	0.332	-0.148	0.050
Head of household	-0.054	0.128	0.675	-0.304	0.197
No of people in household	0.017	0.045	0.710	-0.072	0.106
Tertiary education =1	-0.733	0.107	0.000	-0.942	-0.525
Single	-0.302	0.438	0.490	-1.160	0.556
Married	-0.455	0.433	0.293	-1.304	0.393
Separated	0.107	0.563	0.849	-0.996	1.210
Common-law	-0.591	0.525	0.260	-1.621	0.438
Widowed	0				
Urban	0.407	0.180	0.023	0.055	0.759
Rural	0				
Rarely happy	-0.173	0.505	0.732	-1.163	0.817
Sometimes happy	0.130	0.491	0.791	-0.832	1.092
Most times happy	0.151	0.501	0.763	-0.831	1.133
Always happy	0				
Life Satisfaction rarely=1	0.182	0.515	0.724	-0.827	1.191
Life Satisfaction sometimes =2	0.196	0.519	0.705	-0.822	1.214
Life Satisfaction most times =3	-0.238	0.525	0.651	-1.268	0.792
Life Satisfaction always=4	0				

Pseudo r-squared = 0.313, -2LL = 810.36, Model $\chi 2 = 161.60$, $P < 0.0001$, Goodness of fit $\chi 2 = 767.67$, $P < 0.0001$

Limitation of study

The sample used for the current research is older men and cannot be used to represent males, older females, females or Jamaicans.

Discussion

The current study revealed that older men in Jamaica perceived health status narrower than life satisfaction and happiness. While happiness and life satisfaction are determinants of each other, neither of the two variables is correlated with health status. Health status is determined by social factors such as age, income, education, and area of residence, but these were not determinants of happiness or life satisfaction. The findings showed that happiness accounted for 32.1% of the variability in life satisfaction, and that life satisfaction accounted for 31.1% of the variance in happiness of older men, suggesting that more than 30% of respondents' happiness or life satisfaction can be explained by either life satisfaction or happiness. The disparity between the aforementioned figures indicated that happiness is a strong predictor of life satisfaction that is life satisfaction of happiness of older men. The study also indicated that the more older men are happier, the more likely that they are satisfied with life and vice versa.

The present research highlighted the dominance of illness in men's perception of health and there health status is synonymous with illness and not the borrower concept with which the term denotes in the literature. In a study by Ross and Mirowsky [56] measured health as "...physical functioning and perceived health. Physical functioning assesses physical mobility and functioning in daily activities" which emphasises the biological conditions (or the biological model) and not the intended broad concept of health that WHO offered in 1948. This extends even to the Caribbean as Hambleton et al's work [47] found that 88% of the variability in health status of elderly Barbadians was accounted for by illness. From the empirical findings, it can be extrapolated that illness are health status are synonymous concepts and that is limited to older men. In a study of oldest-old (i.e. Ages 85+ years) in China, Liu and Zhang [57] defined from the Likert scale connotation of good-to-very poor health, which denotes that the respondents would interpret self-rated health status within the perspective of illness continuum. This can be extrapolated from the findings as illness were strong correlated with self-rated health status and this reinforced the issue of health being the opposite of illness and illness denotes ill-health or poor health status, which highlights the dominance of ill-health in health research. In a study in Rawalpindi and Islamabad, Pakistan, Ali and de Muynck [58] found that street boys sought health care when illnesses are severe, and this speaks to their perception of health. Health is on the extreme of the illness pendulum, and that it is not conceptualised as broader that illness. If follows that illness is synonymous with ill-health which appears to be constant across the globe. If health is to be in keeping with broader conceptual framework written in the Preamble to the Constitution of WHO, then could life satisfaction or happiness be used measure this construct. The WHO used wellbeing in defining health, which is well-being – more that not having an illness. The literature showed that health is associated with happiness, but this is not the case for older men in Jamaica. Diener [36] noted that research had found that there was not a substantial correlation between happiness and health, but what the current research revealed is that not experiencing illness is

not associated with happiness or life satisfaction. The present results even more refuted a study which found a strong correlation between health status and happiness (r = 0.85) [58]. Older men's happiness or life satisfaction extends to their quality of life experiences which include aspirations, self-esteem, optimism job satisfaction, desires, virtue and/or holiness. It is for those reasons why ADL and IADL are not correlated with happiness and life satisfaction as old age of itself is an attainment for many people and this mean that others things now becomes important and not merely working, walking, seeing or ill-health.

The dominance of illness in conceptualising health is such that wellbeing should be the new thrust. This could be measure by way of happiness or life satisfaction and not use health as this goes back to the illness or health conditions and not the intended broader concept with which the WHO outlined in the Preamble to its Constitution. Happiness is the degree to which people judge their overall quality of life as favourable [34, 60, 61]. According to Konow and Earley [62], happiness was correlated with unemployment, positive and negative life-events, social networks and intimate friendships. The current study on older men therefore from within the context of the literature provides the explanation why happiness was strongly correlated with life satisfaction as both subjective indexes are broader than health status and incorporate many aspect of life. Hence, the finding that very happy older men are highly likely to be very satisfied with life and vice versa suggests that heart disease, hypertension, digestive disorders and headaches are temporal and as such in assess ones quality of life, they are lowly value and do not contribute to this overall measure of wellbeing.

Conclusion

Self-rated (or self-assessed, self-evaluated, self-reported) health which is referred to as health status is a narrow concept in measuring health with the broad ambit of the WHO's definition of health. The current study refuted the empirical finding that self-reported happiness depends on perceived health status for older men in Jamaica. This paper highlight the critical fact that the intervention and prevention programmes can be tailored to fit one nation based on the finding of another political locality. The determinants of happiness such as income and social factors as were found in the literature were not factors of happiness or life satisfaction of older men in Jamaica, which underlines the fact that the social factors can create differential between nation and within nations in measuring a particular phenomenon. Just like how cultures differ, people's perception also differs and this justifies why public health should rely on research findings within the geographically defined space with which it intends to apply the intervention campaign. Life satisfaction and happiness are broader construct than health status to measure quality of life for older men in Jamaica. In spite of the limitation the current study highlights the need for further research on the population in order to establish how health data should be collected in the future as happiness and life satisfaction appears to be more comprehensive a subjective index in assessing wellbeing than health status. Despite the limitation, health is a comprehensive concept, and so it is imperative that longitudinal studies be carried out to establish whether socioeconomic characteristics such as income, marital status, employment, education and others are parameters of happiness, and life satisfaction of Jamaican as well as if the findings of the current study are potent to the population as this should provide a new paradigm in the assessment of health.

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