

Determinants of quality of life of youths in an English-speaking Caribbean nation

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Abstract

Background: Studies on quality of life (QoL) on youths are limited and have not examined determinants of QoL for this cohort. **Aims:** The current study seeks to examine the QoL of Jamaican youths and to build a model that identifies factors that explain QoL. **Materials and Method:** During the period June to August 2006, the Centre of Leadership and Governance, Department of Government, at the University of the West Indies, Mona Campus, conducted a stratified random probability survey of 1,338 respondents. Data were collected using a 166-item questionnaire. Of the sampled population (N=1,338), the proportion of those respondents age 18 to 25 years was 27% (N=364) and this constitutes the sample for the current study. The data were stored and retrieved in the Statistical Package for the Social Sciences (SPSS 12). Descriptive statistics were used to analyse the data, and logistic regression was used to establish the model. **Results:** The quality of life of Jamaican youths was determined by 4 factors which explain 20% of the variability in quality of life. The parents' economic wellbeing has the most influence on the quality of life of Jamaican youths (OR=1.348; 95% CI: 1.35, 3.04), followed by moderate religiosity (OR=3.594; 95% CI: 1.47, 8.82), the extent of the welfarism of the state (OR=5.273; 95% CI: 1.04, 1.69) and gender (OR = 1.329, 95% CI = 1.04, 1.69). **Conclusion:** The current work has offered us an understanding of the determinants of QoL of youths and how interventions can be planned for in the future.

Keywords: QoL, Youths, Religiosity, Welfare State, Determinants, Jamaica.

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Introduction

Studies on quality of life (QoL) of a population have substantially [1-12] focused on the elderly [13-25]. Research in the Caribbean in particular has primarily examined QoL of the elderly [14, 16-26] and outside of that studies have also examined a population's wellbeing [27-28], QoL of sickle cell patients [28] and QoL of Jamaican women [30]. Scholars like Gayle and Chevannes, among others [31, 32, 33, 34], have examined some aspect of the life of youths in Caribbean, and in particular Jamaica, but they have done so from the perspective of qualitative methodology. Those who have used quantitative methodology (i.e., survey research) like Lipps et al. [35, 36], Anglin-Brown et al. [37], Anderson [38],

and Bourne [39] have not examined the general QoL of youths.

Having pursued a plethora of literature on QoL in Jamaica and wider English-speaking Caribbean countries, it was realized that there is a lack of studies on the quality of life of youths in general. Youths constitute a significant segment of the working age population (i.e., productive population – people ages 15 through 60 years) and equally important about this age cohort is the fact that it represents the future of any nation. Therefore, we cannot deny the importance of this age cohort to current and future development, health of the workforce and population. QoL of this group must become crucial to clinicians, medical practitioners and policy makers. It is within this context

that this study seeks to fill the gap in the literature firstly by examining the QoL of Jamaican youths and secondly by identifying factors that explain their QoL.

QoL is widely accepted by medical researchers and clinicians as an alternative paradigm to dysfunction in the measurement of health and treatment of health-care customers (i.e., patients) [40-41]. The rationale for this paradigm is its maximization perspective [42-43]. Many scholars including economists such as Sen [44-45], Easterlin [5-6], Stutzer & Frey [3], and Di Tella, et al. [46] have proposed that QoL (or wellbeing) must incorporate subjective as well as objective conditions. They contend that any construct which may be used to capture QoL (or wellbeing) must be such that it embodies economic wellbeing (i.e., Gross Domestic Product per capita growth) and emotional reactions to events as they are a part of the whole life of an individual. This argument was also forwarded by psychologists such as Diener [11] and Veenhoven [9], that justifies the use of happiness or self-reported overall QoL to assess wellbeing [3, 5-6, 9, 11-12].

In order to assess overall QoL of an individual, it is argued that the “best” approach was to use a questionnaire that collects information on QoL [1, 47-50]. Kashdan [49] writes that the assessment of subjective wellbeing can be addressed with a questionnaire on happiness which the aforementioned literature has outlined as the proposition of other scholars. Murphy & Murphy [1] and Hutchinson et al. [28], on the other hand, believe that QoL assessment can be done by way of self-reported satisfaction with life and subjective assessment of the life by the individual. A part of this assessment was self-esteem; self-achievement (or actualizations) which are embodied in Abraham Maslow’s 5-level Hierarchy of Needs. Pacione [50] opines, “The simplest model states that satisfaction with life in general is a weighted sum of satisfactions with different domains or aspects of life (for example, job satisfaction) and that, in turn, these domain satisfactions are weighted sums of specific satisfiers and dissatisfiers...A more complex formulation is the hierarchy of needs of model...”[50]. Cummins [47], on the other hand, provides a contravening argument to the view of Pacione that needs must not be used as an assessment of life’s quality of an individual. He argues that the drawback to the use of needs is embedded in the fact that low degree of needs does not necessarily associate with QoL. Hence, Cummins’s delimitations will not hold in the current study as the needs index are moderate or high evaluations.

The rationale for this study was embodied in three main issues. This age cohort is vulnerable to specific risk (i.e., high crime and victimization, high teenage pregnancy, high unemployment) just as children (ages 0 to 15 years) and the elderly (60 years and older) are, and a research on the QoL of this age group will provide invaluable information about this group’s wellbeing status. In order to establish a model that can simultaneously examine and provide possible factors that influence QoL, this study uses econometric analysis—multivariate analysis—which

has been used by other scholars like Grossman and Smith & Kingston (see Theoretical Framework) to do similar studies.

Theoretical Framework

An econometric model was developed by Grossman [10] to evaluate the wellbeing of the world’s population which is in keeping with the WHO’s definition of wellbeing [8]. Grossman’s model reads [Eqn (1)]:

$$H_t = f(H_{t-1}, G_o, B_t, MC_t, ED) \quad (1)$$

In which the H_t (current health in time period t) is a function of stock of health in previous period, H_{t-1} ; good personal health behaviours (including exercise), G_o ; bad health behaviour (i.e., smoking and excessive drinking), B_t ; use of medical care, MC_t ; education of each family member, ED . The Grossman model encapsulates biological conditions, psychological and socioeconomic factors.

According to Smith & Kington [8], using $H_t = f(H_{t-1}, P_m, G_o, B_t, MC_t, ED, \bar{A}_t)$ to conceptualize a theoretical framework for “stock of health” noted that health in period t , H_t , is the result of health preceding this period (H_{t-1}), medical care (MC_t), good personal health (G_o), the price of medical care (P_m), and bad health choices (B_t), and a vector of family education (ED), and all sources of household income (\bar{A}_t). Embedded in this function is the wellbeing that that individual enjoys (or does not enjoy) [8].

This study was guided by econometric analysis. It is a modification of Grossman and Smith & Kington’s works. Modifications were made to the previous works in keeping with the culture, the literature and studied group. Another fundamental difference between the current research and that of Grossman and Smith & Kington is that it is area specific as it focuses primarily on youths which make up a substantial proportion of the Jamaican population. For any effective health education and private care to take place, this cohort’s general health status must be explained by way of scientific inquiry. The proposed model that this research seeks to evaluate is displayed below [Eqn. (2)]:

$$QoL_i = f(RE_i, W_i, RA_i, PPI_i, AR_i, X_i, SS_i, C_i, ES_i, TI_i, O_i, A_i, E_i, ES_i, \epsilon_i) \quad (2)$$

Where QoL_i of youths i is a function of religiosity, RE_i ; welfare index of youths i , W_i ; race of youths i , RA_i ; political participation index of person i , PPI_i ; area of residence of youths i , AR_i ; gender of youths i , X_i ; subjective social class of youths i , SS_i ; confidence in socio-political institution index of youths i , C_i ; economic situation of youths i , ES_i ; interpersonal trust of person i , TI_i ; occupation of person i , O_i ; age of person i , A_i ; educational level of person i , E_i ; employment status of person i , ES_i ; and an error term, ϵ_i .

Using empirical data QoL of sample can be determined by

$$QoL_i = f(RE_i, W_i, X_i, ES_i, \epsilon_i) \quad (3)$$

Materials and Methods

During the months of July to August 2006, the Centre of Leadership and Governance, Department of Government (CLG), The University of the West Indies, Mona Campus, conducted a stratified probability sample of 1,338 respondents. The sampling design used for the study was that used by the Statistical Institute of Jamaica. The survey was the first of its kind as it collected data on Jamaica's political culture. The themes ranged from democracy, civic culture, trust and confidence, perception of wellbeing using Abraham Maslow's 5-level Hierarchy of Needs, preference for whether the private or public sector should be solving problems in the economy, political participation and civic engagement, and finally, leadership, party, and electoral preferences. Face-to-face interviews were used to collect the data on an instrument which took about 90 minutes. The instrument consisted of 166 items that were taken from Latino barometer and Euro barometer Cross-Cultural Survey, the American National Election Studies Series, the Harvard/Washington Post Leadership Survey, the New Zealand Election Surveys, the Cross-Cultural Variations in Distributive Justice Perception Survey and the Carl Stone Surveys. The instrument was vetted by senior scholars and researchers as well as by interviewers within the data divisions of the Statistical Institution of Jamaica (STATIN) and Social Development Commission (SDC). After the vetting phase, the questionnaire was pretested in a number of communities across the 14 parishes of Jamaica as well as among UWI faculty and the student population. Modifications were made at a training symposium based on the comments of the different interviewers and remarks of trained researchers. All the interviewers employed by the CLG's team were either data collectors by STATIN or SDC.

Although the interviewers are trained data collectors, they were trained by the CLG team for a 3-day period. Dr. Lloyd Waller (project manager of the CLG) was assigned to travelling across the entire island as a verifier of the interviewers' collection of the information from Jamaicans. Furthermore, a part of this study was to examine Jamaicans' QoL, and so questions (needs, physiological needs, social needs, self-esteem and self-actualisation) were placed on the instrument that examined respondents' perceptions on Abraham Maslow's 5-level Hierarchy of Needs model. Prior to data entry, a data template was created by senior researcher in the Department of Government, Dr. Alfred Lawrence Powell, who also trained and familiarized the data-entry clerks with the instrument. The data were entered by trained data-entry clerks who are employed in the Department of Sociology, Psychology and Social Work. Three different groups independently entered the data and these were cross-reference by Paul Andrew Bourne, a demographer and reviewed by Alfred L. Powell for accuracy. Both Bourne and Powell were responsible for the cleaning and validation process of the entered data.

Data were stored and retrieved in the Statistical Package

for the Social Sciences (SPSS 16.0). The sampling error was $\pm 3\%$ at the 95% confidence level (i.e., CI). This was done to aid the external validity of the survey, as well as to enhance the associational and inferential statistics. Cronbach alpha was used to test the internal reliability of QoL (i.e., QoL), which was a 5-item Likert scale question. The Cronbach alpha for QoL was 0.841. Descriptive statistics were used to provide background information on the sample, t-test was used to examine the association between quality of life and gender, analysis of variance (ANOVA) was used to test whether a statistical correlation existed between quality of the three age groups and logistic regression (i.e., enter method) was used to establish the model. The predictive power of the model was tested using Omnibus Test of Model, and Hosmer and Lemeshow [51] was used to examine goodness of fit of the model. The correlation matrix was examined in order to ascertain whether autocorrelation (or multi-collinearity) existed between variables. Cohen and Holliday [52] stated that correlation can be low/weak (0 to 0.39), moderate (0.4-0.69), or strong (0.7-1.0). This was used in this study to exclude (or allow) a variable in the model. Finally, Wald statistics was used to determine the magnitude (or contribution) of each statistically significant variable in comparison with the others, and the odds ratio (OR) for the interpretation of each significant variable. The final model [Eqn. (3)] was determined by those variables that were statistically significant in Table 2 ($P < 0.05$).

Of the sampled population ($N=1,338$), the proportion of those respondents aged 18 to 25 years was 27% ($N=364$) and this constitutes the sample for the current study. The overall response rate for the survey was 95.7% and that of the youths was 96.4%. The power of the study is 0.98 with an alpha of 0.05 to detect a 10% difference between people who were classified in the reference group (i.e., low QoL) and those in the moderate to high group.

Measurement

QoL was defined as the overall self-reported life satisfaction of an individual. QoL is the summation of the 5-item need of Abraham Maslow's hierarchy. These items were safety needs, physiological needs, social needs, self-esteem and self-actualisation. Each item was on a 10-point Likert scale. Using Cronbach alpha for the five-item scale, reliability was 0.841 (or $\alpha = 84\%$). Hence;

$$QoL_i = 1/5 * \sum N_i \text{ where } i \text{ is each need (i.e., } i = 1, 2, 3, 4, 5)$$

Where the QoL index is: $0 \leq QoL_i \leq 10$. The index valuations can be interpreted as low (where the values can be interpreted as low (0 to 3), moderate (4 to 6) and high (7 to 10). For the purpose of logistic regression, the dependent variable, QoL, was a dummy variable where 1 = moderate to high QoL, 0 = otherwise or low.

Welfare Index, W, is the index of the extent of individual's or government's responsibility for particular functions within a society. The functions vary from health care, employment and retraining, adequate housing, child-care assistance, replacement income due to loss of job owing to

accident, retirement income, disability assistance, and educational assistance for tertiary training. Each function is on a 10-point Likert scale, where 1, the lowest, refers to this function being totally the individual's responsibility and 10, the highest, refers to this function being solely the government's responsibility. Hence, the Welfare Index is the mean summation of the 15-question, 10-point Likert scale response. The minimum score is 1 and the maximum is 10.

Political Participation Index, PPI. This is the extent of someone's involvement in conventional (road blocks, demonstrations, protest, riots, etc.) or unconventional political activities (internet blogging, etc). $PPI = \sum b_i$, $b_i \geq 0$, and b_i represents each "yes" response to a question on political behaviour, such as voting, involvement in protest which is given a value of 1 and a "no" was given a value of 0 $0 \leq PPI \leq 19$.

Religiosity denotes the frequency with which an individual attends church, mosque, or synagogue.

Results

Demographic characteristics of sample

Table 1 Demographic characteristics of sample

Variable	Number	%
Gender		
Male	150	42.7
Female	201	57.3
Educational level		
Secondary and below	191	54.1
Post-secondary (vocational or skill training)	68	19.3
Tertiary	94	26.6
Subjective Social Class		
Lower	186	53.0
Middle	154	43.9
Upper	11	3.1
Ethnic background		
African	274	76.3
Mixed	74	20.6
European	2	0.6
Other	9	2.6
Age Mean (SD)	21.6yrs. (\pm 2.3yrs)	
Welfare Index Mean (SD)	6.9 (\pm 1.4)	
Political Participation Index Mean (SD)	2.1 (\pm 2.7)	
Quality of Life Mean (SD)	6.9 (\pm 1.7)	

Table 1 examines the demographic characteristics of the sample. Of the sampled population (n=364), 96.4% responded to the question of gender (n=351). Of those who indicated a gender, 57.3% (n=201) were females. The mean age (SD) of the sample was 21.6 years (2.3 years). One-half of the population had a QoL of 7.2 out of a total index of 10, with most respondents having a QoL of 7.6 out of 10. Using Analysis of Variance (ANOVA), no statistical difference was found between the mean wellbeing of youths, other adults and the elderly. The

mean (SD) wellbeing of youths (N=364, 29.9%) was 6.9 (1.7), for other adults (N= 810, 64.4%) 6.8 (1.8), and the elderly (N=83, 6.6%) 7.0 \pm 1.7, with F-test [3, 1259] = 0.699, $P = 0.552$.

Multivariate Analysis

Table 2 presents a logistic regression of social and political variables on QoL of youths in Jamaica. The final model [Eqn (3)] explained 20% of the variance in QoL of respondents who were youths. Four variables account for the QoL of youths, and these factors are religiosity, extent of the welfare index, gender, and economic situation of the youths' parents.

Table 2 Quality of Life of youths by some explanatory variables

Variables	Std. Error	P	Odds ratio	95.0% C.I.
High religiosity	0.443	0.022	2.756	1.157-6.562
Moderate religiosity	0.458	0.005	3.594	1.465-8.815
†Low religiosity			1.000	
Welfare index	0.124	0.022	1.329	1.043-1.694
Dummy race (1 = black)	0.606	0.966	1.026	0.313-3.368
Political participation index	0.067	0.720	0.976	0.856-1.114
Dummy area of residence (1= urban area)	0.505	0.560	0.745	0.277-2.005
Male	0.348	0.045	2.011	1.016-3.980
Middle class	0.358	0.720	0.879	0.436-1.774
Upper class	0.971	0.326	2.595	0.387-17.394
†Lower class			1.000	
Confidence index	0.017	0.148	1.024	0.991-1.058
Economic situation Index	0.207	0.001	2.022	1.348-3.035
Dummy trust (1= yes)	0.359	0.118	1.753	0.867-3.543
Occupation	0.461	0.340	0.644	0.261-1.590
Age	0.083	0.495	0.945	0.803-1.112
Dummy education (1= tertiary)	0.401	0.973	1.013	0.461-2.226
Dummy employed	0.239	0.950	1.015	0.635-1.622

χ^2 (DF=16) =31.65, $P = 0.011$; -2Log likelihood = 225.62; Nagelkerke R-squared = 0.198

Discussion

Studies in the literature have shown that age, education, race, social class, employment, and occupation are statistically associated with QoL [5-6, 8, 10, 12].

However, these were not found to be the case in the current research. Some of the aforementioned factors are not statistically significant in determining QoL of youths, although this is well-established in other cohorts. One-quarter of youths are below the age of 20 years and may still be residing with parents, which can indicate the reliance on parental or family support.

Some of the important findings that emerged from the current research are the role of parents' economic situation on QoL of youths, the importance of moderate religiosity, and the significance of the nation's social security programmes on youths' wellbeing. Embedded in those findings are the capacities of parents and the nation to provide for this age cohort of Jamaicans as well as the positive attributes of religiosity on wellbeing. It follows that a slowing of economic growth and development of the nation will impact not only the ability and capacity of the nation, but also the likelihood of youths becoming increasingly involved in criminality to subsidise for the state's lowering of social assistance to this age cohort.

Religion is associated with wellbeing [53-57] as well as low mortality [58]. Religion is seen as the opiate of the people from Karl Marx's perspective, but theologians hypothesised that religion is a coping mechanism against unhappiness and stress. According to Kart [59], religious guidelines aid wellbeing through restrictive behavioural habits which are health risks such as smoking, drinking of alcohol, and even diet.

Scholars found that the relationship was even stronger for men than for women, and that this association was influenced by denominational affiliation. Graham et al.'s study [57] found that blood pressure for highly religious male heads of household in Evan County was low. The findings of this research did not dissipate when checked for age, obesity, cigarette smoking, and socioeconomic status. A study on the Mormons in Utah revealed that cancer rates were lower (by 80%) for those who adhered to Church doctrine [60, 61] than for those with weaker adherence.

In a study of 147 volunteer Australian males between 18 and 83 years old, a study by Jurkovic & Walker [55] found that the stress levels of non-religious were higher than those of religious men. The researchers in constructing a contextual literature quoted many studies that made a link between non-spirituality and "dryness", which results in suicide. Even though Jurkovic & Walker's research was primarily on spiritual wellbeing, it provides a platform that can be used in understanding linkages between psychological status of people and their general wellbeing. In a study which looked at young adult women, the researchers found that spirituality affects the physical wellbeing of its populace [62]. Edmondson et al. [62] did a study of 42 female college students of which 78.8 percent were Caucasian, 13.5 percent African-American, 5.8 percent Asian and 92 percent were non-smokers in which they established an association between spirituality and wellbeing of female Caucasians and African-Americans.

In examining the limitation of this study, this research, which is a cross-sectional study, cannot be used the same way as an experimental design, which is to establish causality. In addition, based on some of the findings presented in this study, questions have emerged that must be addressed (such as, why male youths have higher QoL than female youths), but the current study will not be able to provide all of the answers to those questions. Hence, the researcher recommends that an ethnographic methodology be utilised to unearth the cultural underpinnings that will explain everything further.

Conclusion

QoL of Jamaican youths is substantially determined by the household economic situation, religiosity and the perceived reported extent of welfare state. The study revealed that a youth who had moderate religiosity was 4 times more likely to have a greater QoL with reference to one who reported low religiosity. Whereas a youth who reported high religiosity is 3 times more likely to report a greater QoL with reference to a youth who reported low religiosity. The current work has offered us an understanding of possible causal factor of QoL of youths, but this must be further studied using longitudinal study in order to establish with finality the causal explanatory factors of QoL.

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