

Self-reported health and medical care-seeking behaviour of uninsured Jamaicans

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Citation: Bourne PA. Self-reported health and medical care-seeking behaviour of uninsured Jamaicans. *North Am J Med Sci* 2010; 2: 71-80.

Doi: 10.4297/najms.2010.271

Availability: www.najms.org

ISSN: 1947 – 2714

Abstract

Background: On examination of the literature in Latin America and the Caribbean, and in particular Jamaica, no study could be found that investigated the health and health care-seeking behaviour of uninsured people. This study bridges the gap in the literature by evaluating uninsured Jamaicans' medical care-seeking behaviour and good health status. **Material & Method:** The study extracted a sample of 5,203 uninsured respondents 15 years and older from a national probability cross-sectional survey of 6,782 Jamaicans. Descriptive statistics were used to provide background information on the sample; cross-tabulations evaluated bivariate analyses, and logistic regression was used to model health and medical care-seeking behaviour. **Results:** Good health of uninsured Jamaicans is correlated -reported biological condition (OR = 0.114, 95% CI = 0.090 -0.145) followed by age (OR = 0.952, 95% CI = 0.946- 0.959); gender (OR = 1.501, 95% CI = 1.221–1.845); consumption (OR = 1.000, 95% CI = 1.000–1.000); social class (upper class OR = 0.563, 95% CI = 0.357–0.888); education (secondary and above OR = 0.622, 95%CI = 0.402–0.963), and area of residence (other towns OR = 1.351, 95% CI = 1.026–1.778). Medical care-seeking behaviour is associated with age (OR = 1.020, 95% CI = 1.006 – 1.033); poor health status (OR = 2.303, 95% CI = 1.533–3.461), and marital status (married OR = 0.518, 95% CI = 0.325–0.824). **Conclusion:** The findings are far reaching and provide an understanding of the uninsured, and the information can be used to aid public health intervention and education programmes.

Keywords: Uninsured, health status, self-reported illness, medical care-seeking behaviour, public health, Jamaica

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Introduction

Poverty is among the reasons for some people in developing nations not seeking medical care; and it also explains premature death owing to low health care utilization. The World Health Organization (WHO) [1] opined that 80% of chronic illnesses were in low and middle income countries, suggesting that poverty interfaces with illness and creates other socio-economic challenges. Poverty does not only impact illness, it causes premature deaths, lower quality of life, lower life and healthy life expectancy, low development and other social ills such as crime, high pregnancy rates, and social degradation of the community. According to Bourne and Beckford [2], there is a positive correlation between poverty and unemployment; poverty and illness; and

crime and unemployment. Sen [3] encapsulated this well when he put forward the idea that low levels of unemployment in the economy are associated with higher levels of capabilities. The WHO [1] opined that 60% of global mortality is caused by chronic illness, and within the context that four-fifths of chronic dysfunctions are in low-to-middle income countries, health insurance coverage reduces the burden of out-of-pocket medical expenditure for the individual and the family.

Jamaica is among those countries classified as developing nations. Hence, the challenges stated earlier also influence the quality of life of some people within the society. In 1988, Jamaica's unemployment rate was

18.9% and 2 decades later (2007), it fell by 67.2% (to 6.2%) which indicates close to full-employment [4]. This significant reduction in unemployment rates cannot be the only indicator used to evaluate the socio-economic status of Jamaica, or for a hasty conclusion to be drawn that the quality of life of Jamaicans is better in 2007 compared to 1988. In 1988 the inflation rate in Jamaica was 8.8% and this increased by over 90%, suggesting that the economic cost of living for Jamaicans was substantially higher than twenty years earlier. It is important to note that the inflation rate in 2007 (16.8%) increased by 194.7% over 2006. A national representative probability sample cross-sectional survey of 1,338 Jamaicans conducted in 2007 revealed that 68.7% of respondents claimed that their current economic situation was at most the same compared to 12 months ago, and of this figure 25% mentioned that it was worse [5]. Furthermore, 62% of the sample indicated that their salaries were not able to satisfactorily cover their basic needs, and 71.9% claimed that they were concerned about the likelihood of being unemployed in the next 12 months. Those realities, then, explain why in 2007, the number of Jamaicans seeking medical care fell to 66% over 70% in the previous year; while the self-reported figures rose to an unprecedented 15.5%.

In Jamaica, rural poverty is twice (15.3%) that of urban poverty (6.2%) [4]. This may create the impression that urban poverty is low and does not demand an examination. Poverty is poverty and whether it occurs in rural, peri-urban and urban areas; its effect is the same. Hence, when poverty is coupled with unemployment, chronic illnesses will require health care for either preventive or curative measures which must lead to a financial commitment that can erode their resources or that of their families. [5] In 2007, statistics on health in Jamaica showed that 50.8% of people in the poorest income quintile (i.e., below the poverty line) indicated that they were unable to afford to seek medical care, compared to 36.7% of those just above the poverty line and 7.1% of those in the wealthiest income quintile [4]. It is private health insurance and social security that facilitate access to medical care for the poor and do assist in reducing the financial commitment of individuals and families for those with chronic or recurring illnesses. Twenty-one of every 100 Jamaican in 2007 has health insurance coverage, suggesting that the majority of people pay for medical care out of their pockets.

Many studies have examined the insured and health care demand of the general populace [6-10] but on reviewing the literature no study was found in Latin America and the Caribbean, in particular Jamaica, that has investigated the uninsured in regards to their medical care-seeking behaviour and health status. According to Call and Ziegenfuss [7], health insurance is a significant predictor of access to medical care services, and people who do not have access to health insurance have less possibilities of accessing health care services. This was contradicted by Bourne [11], who found that health

insurance is not significant when correlated with the medical care-seeking behaviour of Jamaicans or a predictor of the good health of Jamaicans [11] or female Jamaicans [12]. Call and Ziegenfuss [7] added that rural residents are more restricted from access to health insurance coverage than urban citizens, suggesting that medical care-seeking behaviour would be lower for rural than urban residents. While Call and Ziegenfuss' perspectives provide us with basic information about the insured, it is inadequate for this cohort of people based on the findings of Bourne [11], and Bourne and Rhule [12].

For 2007, statistics revealed that 21.2% of Jamaicans had health insurance coverage and 66% sought medical care, indicating that most of the people who utilized medical care services did not use health coverage. Within the context of the global economic downturn, increased job redundancies and prices of commodities, the uninsured will be asked to pay more for medical care. Apart from the increased odds of not utilizing health care services, little is known about the uninsured in Latin American and the Caribbean, and in particular Jamaica. This study will bridge the gap in the literature, by evaluating their health status, medical care-seeking behaviour, and the medical conditions of uninsured Jamaicans in order to establish whether there are differences in the three geographical regions, and to use the information for public health intervention and policy formulation. The researcher used data from the 2007 Jamaica Survey of Living Conditions to evaluate medical care-seeking behaviour, medical conditions, purchased medication, and the health status of uninsured Jamaicans as well as building two models for good health status and health care-seeking behaviour of this uninsured group.

Materials and Methods

Data

The current study extracted a sample of 5,203 respondents 15 years of age and over from a national probability cross-sectional survey (Jamaica Survey of Living Conditions, JSLC) of 6,782 Jamaicans [13-15]. The cross-sectional survey was conducted between May and August 2007 from the 14 parishes across Jamaica and included 6,782 people of all ages [16]. The JSLC used stratified random probability sampling technique to draw the original sample of respondents, with a non-response rate of 26.2%. The sample was weighted to reflect the population. [13-15]

Study instrument

The JSLC used an administered questionnaire where respondents were asked to recall detailed information on particular activities. The questionnaire was modelled on the World Bank's Living Standards Measurement Study (LSMS) household survey. There are some modifications to the LSMS, as the JSLC is more focused on policy impacts. The questionnaire covers demographic variables, health, and other issues. Interviewers were

trained to collect the data from household members. Data on 5, 203 individuals who indicated not having health insurance coverage was used in data analysis.

Statistical methods

Descriptive statistics such as mean, standard deviation, frequency and percentage were used to analyze the socio-demographic characteristics of the sample. Chi-square analyses were used to examine the association between non-metric variables for area of residence, and gender of respondents. Logistic regression analyses examined 1) the relationship between good health status and some socio-demographic, economic and biological variables; as well as 2) a correlation between medical care-seeking behaviour and some socio-demographic, economic and biological variables. The statistical package SPSS for Windows version 16.0 (SPSS Inc; Chicago, IL, USA) was used to analyze the data. A p-value less than 5% was used to indicate statistical significance.

The correlation matrix was examined in order to ascertain if autocorrelation and/or multicollinearity existed between variables. Based on Cohen and Holliday [17] correlation can be low (weak) - from 0 to 0.39; moderate - 0.4-0.69, and strong - 0.7-1.0. The approach in addressing collinearity ($r > 0.6$) was to independently enter variables in the model to determine which one should be retained during the final model construction. The method of retaining or excluding a variable from the model was based on the variables' contribution to the predictive power of the model and its goodness of fit [18-24]. Wald statistics were used to determine the magnitude (or contribution) of each statistically significant variable in comparison with the others, and the odds ratio (OR) for the interpreting of each significant variable.

Models

The current study will employ multivariate analyses in the study of the health status (Equation [1]) and medical care seeking behaviour of Jamaicans (Equation [2]). The use of this approach is better than bivariate analyses as many variables can be tested simultaneously for their impact (if any) on a dependent variable.

$$Ht=f(A_i, G_i, HH_i, AR_i, \ln C, ED_i, MR_i, S_i, \sum MC_t, SRI_i, \epsilon_i) \quad 1$$

Where H_t (i.e., self-rated good current health status in time t) is a function of age of respondents A_i ; sex of individual i , G_i ; household head of individual i , HH_i ; area of residence, AR_i ; logged consumption per person per household member, $\ln C$; Education level of individual i , ED_i ; marital status of person i , MR_i ; social class of person i , S_i ; summation of medical expenditure of individual i in time period t , MC_t ; self-reported illness, SRI_i , and an error term (i.e. residual error).

$$MCSB_i=f(PH_t, A_i, G_i, HH_i, AR_i, \ln C, ED_i, MR_i, S_i, CR_i, \epsilon_i) \quad 2$$

Where $MCSB_i$ is medical care-seeking behaviour of individual i is a function of PH_t (ie self-rated poor current health status in time t of individual i); age of respondents A_i ; sex of individual i , G_i ; household head of individual i , HH_i ; area of residence, AR_i ; logged consumption per person per household member, $\ln C$; education level of individual i , ED_i ; marital status of person i , MR_i ; social class of person i , S_i ; logged consumption per person per household member i , $\ln C$; crowding of person i , CR_i ; and an error term (i.e. residual error).

From Equation (1) was derived Equation (3) and Equation (4):

$$H_t=f(A_i, \ln C, SRI_i, S_i, ED_i, AR_i, G_i, \epsilon_i) \quad 3$$

$$MCSB_i=f(PH_t, A_i, MR_i, \epsilon_i) \quad 4$$

Results

Socio-demographic characteristics of sample

The sample was 5,203 uninsured respondents (49.2% males and 50.8% females). Of the sample, 32.9% were children; 26.9% young adults; 30.0% other aged adults; 10.8% elderly. The majority of those sampled had good health status (82.9%); 73% were never married; 62.0% visited medical care-seeking behaviour; 60.3% had at most no formal education; 52.2% lived in rural areas; 21.0% in semi-urban areas and 26.8% in urban areas. Fifty-nine percent of the sample purchased the prescribed medication, and 14.2% reported an illness. Of those who reported ailments, 89.5% revealed that they were diagnosed by health care practitioners. Approximately 17% indicated cold; 3.5% diarrhoea; 9.8% asthma; 19.7% hypertension; 5.5% arthritis; 25.3% and unspecified dysfunctions. Forty-five percent of the sample was poor (23.1% below the poverty line), 20.9% in the middle class, and 34.1% were classified as wealthy (14.8% in the wealthiest group).

A significant statistical correlation was found between medical care-seeking behaviour and health status (χ^2 (DF = 2) = 36.199, $P < 0.001$, $n=752$). Seventy-six percent ($N= 160$) of those who reported poor health status sought medical care compared to 68.0% ($n = 174$) of those who reported fair health status and 50.6% ($n= 170$) of those who indicated good health status.

Table 1 revealed that significantly more rural residents were poor (58.7%) compared to 34.9% of semi-urban and 26.5% of urban dwellers. Only 21.2% of rural respondents were in the upper class which was significantly lower than those in semi-urban areas (42.6%) and the percentage is even greater in urban zones (52.5%).

A cross-tabulation between health status and area of residence revealed a statistical correlation ($P<0.001$). Further examination showed that substantially more rural respondents indicated poor health status (6.3%)

than semi-urban (3.3%) and urban (3.9%) (See Table 1). Significantly more rural dwellers reported being

diagnosed with a recurring illness (15.9%) than semi-urban (11.8%) and urban respondents (12.7%).

Table 1 Socio-demographic characteristics of sample

Variable	Area of residence			P
	Urban N (%)	Semi-urban N (%)	Rural N (%)	
Sex				0.284
Male	662 (47.4)	544 (49.9)	1354 (49.9)	
Female	735 (52.6)	547 (50.1)	1361 (50.1)	
Social class				< 0.001
Poor	370 (26.5)	381 (34.9)	1594 (58.7)	
Middle	294 (21.0)	245 (22.5)	546 (20.1)	
Upper	733 (52.5)	465 (42.6)	575 (21.2)	
Age group				0.002
Children	418 (29.9)	334 (30.6)	961 (35.4)	
Young adults	411 (29.4)	306 (28.0)	646 (23.8)	
Other aged adults	416 (29.8)	344 (31.5)	803 (29.6)	
Young old	93 (6.7)	72 (6.6)	199 (7.3)	
Old-old	48 (3.4)	27 (2.5)	82 (3.0)	
Oldest-old	11 (0.8)	8 (0.7)	24 (0.9)	
Health status				< 0.001
Good	1137 (81.7)	956 (87.6)	2202 (81.6)	
Fair	201 (14.4)	99 (9.1)	329 (12.2)	
Poor	54 (3.9)	36 (3.3)	169 (6.3)	
Education				< 0.001
No formal	841 (60.4)	687 (63.1)	1599 (59.1)	
Basic	174 (12.5)	118 (10.8)	362 (13.4)	
Primary/preparatory	168 (12.1)	158 (14.5)	429 (15.8)	
Secondary/High	166 (11.9)	111 (10.2)	300 (11.1)	
Tertiary	43 (3.1)	14 (1.3)	17 (0.6)	
Marital status				0.012
Married	177 (18.3)	132 (17.5)	382 (21.9)	
Never married	721 (74.5)	562 (74.6)	1245 (71.4)	
Divorced	18 (1.9)	17 (2.3)	15 (0.9)	
Separated	5 (0.5)	8 (1.1)	20 (1.1)	
Widowed	47 (4.9)	34 (4.5)	82 (4.7)	
Self-reported illness				0.001
Yes	176 (12.7)	128 (11.8)	432 (15.9)	
No	1215 (87.30)	958 (88.2)	2280 (84.1)	
Medical care-seeking behaviour				0.375
Yes	120 (66.3)	78 (59.5)	270 (60.9)	
No	61 (33.7)	53 (40.5)	173 (39.1)	
Number of visits to medical facilities	1.4 days (SD = 0.7)	1.4 days (SD = 1.3)	1.4 days (SD = 1.0)	0.846

significant statistical correlation was found between medical care-seeking behaviour and area of residence ($P=0.375$).

Seventeen percent of females reported a recurring illness which was significantly more than the 12% for males (Table 2). Of the diagnosed recurring illness, approximately twice as many females reported diabetes mellitus (11.3%) and hypertension (24.6%) than males (6.1%) and 12.6% respectively. While more males indicated cold (18.1%); diarrhoea (3.6%); asthma (11.3%); arthritis (6.5%); and unspecified (27.5%) compared to females – cold (15.6%); diarrhoea (3.4%); asthma (8.8%); arthritis (4.7%), and 23.7% unspecified

ailments.

A cross-tabulation between health status and self-reported illness found that there was a significant statistical correlation (χ^2 (DF = 2) = 989.552, $P < 0.001$). The association was a moderately strong one (contingency coefficient = 0.401). Further examination of the results revealed that 89.4% ($n=3,964$) of those who reported no illness had good health status, and only 43.7% of respondents with an ailment indicated poor health status. Approximately 22% of individuals with at least one dysfunction had poor health status compared to 2.3% of those who did not have an illness (Table 3).

A significant statistical correlation existed between self-reported illness and age cohort (χ^2 (DF = 5) = 407.365, $P < 0.001$, $n = 5,189$). The findings revealed that 12.4% children reported at least one illness

compared to 5.5% of young adults and following this age cohort self-reported illness increased to 14.7% for other aged adults; 33.3% of young old; 49.7% of old-old and 51.2% of oldest-old.

Table 2 Sociodemographic characteristic by sex

Variable	Sex		P
	Male	Female	
Self-reported illness			< 0.001
Yes	298 (11.7)	438 (16.6)	
No	2256 (88.3)	2197 (83.4)	
Diagnosed Self-reported illness			< 0.001
Cold	56 (18.1)	69 (15.6)	
Diarrhoea	11 (3.6)	15 (3.4)	
Asthma	35 (11.3)	39 (8.8)	
Diabetes mellitus	19 (6.1)	50 (11.3)	
Hypertension	39 (12.6)	109 (24.6)	
Arthritis	20 (6.5)	21 (4.7)	
Other (unspecified)	85 (27.5)	105 (23.7)	
No	44 (14.2)	35 (7.9)	
Medical care-seeking behaviour			0.101
Yes	182 (58.5)	286 (64.4)	
No	129 (41.5)	158 (35.6)	
Purchase medication			0.251
Prescribed medicine	170 (56.9)	259 (60.1)	
Partial prescription	3 (1.0)	13 (3.0)	
Prescribed/over the counter	9 (3.0)	15 (3.5)	
Over counter	20 (6.7)	25 (5.8)	
Prescribed/did not buy	9 (3.0)	17 (3.9)	
None prescribed required	88 (29.4)	102 (23.7)	
Number of visits to medical facilities Mean (SD)	1.3 days (0.7)	1.4 days (1.1)	0.252

Table 3 Health status by Self-reported dysfunction

Health Status	Self-reported Dysfunction		Total (%)
	No ailment (%)	At least one ailment (%)	
Good	3964 (89.4)	320 (43.7)	4284 (82.9)
Fair	372 (8.4)	255 (34.8)	627 (12.1)
Poor	100 (2.3)	158 (21.6)	258 (5.0)
Total	4436	733	5169

χ^2 (DF = 2) = 989.552, $P < 0.001$

Multivariate Analysis

Table 4 examines variables that seek to explain the good health status of insured Jamaicans. Good health statuses of uninsured Jamaicans are correlated with socio-demographic, economic and biological factors. The correlates of good health status of uninsured Jamaicans are statistically significant (χ^2 (DF = 15) = 993.114, $P < 0.001$; -2 Log likelihood = 2554.359; Nagelkerke R^2 = 0.390; Hosmer and Lemeshow goodness of fit χ^2 = 11.159), and 84.6% of the data were correctly classified: 94.9% of cases in good health status were correctly classified and 46.6% were cases with poor

health status.

Table 5 presents information on variables that determine (or not) the medical care-seeking behaviour of uninsured Jamaicans. The correlates that explain medical care-seeking behaviour of uninsured respondents are statistically significant χ^2 (DF = 14) = 47.79, $P < 0.001$; -2 Log likelihood = 648.32; Nagelkerke R^2 = 0.117; Hosmer and Lemeshow goodness of fit χ^2 = 4.480), and 67.5% of the data were correctly classified: 88.1% of data correctly classified medical care-seeking behaviour and 30.0% of data otherwise.

Table 4 Ordinary logistic regression: correlates of good health status of uninsured Jamaicans

Variable	Coefficient	Std Error	Wald statistic	Odds ratio	95.0% C.I.
Age	-0.049	0.004	191.667	0.95	0.95 -0.96***
Logged consumption per capita	0.000	0.000	11.692	1.00	1.00 - 1.00**
Self reported illness	-2.168	0.121	323.527	0.11	0.09 -0.15***
Middle class	0.086	0.154	0.314	1.09	0.81 - 1.47
Upper class	-0.575	0.233	6.107	0.56	0.36 - 0.89*
†Lower class				1.00	
Married	0.138	0.129	1.154	1.15	0.89 -1.48
Divorced/separated/widowed	-0.217	0.192	1.277	0.81	0.55 - 1.17
†Never married				1.00	
Primary schooling	19.089	40192.970	0.000		0.00 -0.00
Secondary and above	-0.475	0.223	4.525	0.62	0.40 - 0.96*
†No formal education				1.00	
Urban area	-0.115	0.124	0.870	0.89	0.70 -1.14
Other town	0.301	0.140	4.593	1.35	1.03 -1.78*
†Rural area				1.00	
Man	0.406	0.105	14.872	1.50	1.22 -1.85***
Household head	0.097	0.113	0.741	1.10	0.88 -1.37
Cost of public medical care	0.000	0.000	0.040	1.00	1.00 - 1.00
Cost of private medical care	0.000	0.000	3.003	1.00	1.00 -1.00

χ^2 (DF = 15) =993.114, P < 0.001, -2 Log likelihood = 2554.359, Nagelkerke R² =0.390, Hosmer and Lemeshow goodness of fit χ^2 =11.159, P = 0.693, Overall correct classification = 84.6%, Correct classification of cases of good health status = 94.9%, Correct classification of cases of poor health status = 46.6%, †Reference group, *P < 0.05, **P < 0.01, ***P < 0.001.

Table 5 Ordinary logistic regression: correlates of medical care-seeking behaviour of uninsured Jamaicans

Variable	Coefficient	Std. Error	Wald statistic	Odds ratio	95% C.I.
Man	-0.282	0.205	1.894	0.76	0.51 - 1.13
Age	0.019	0.007	8.213	1.02	1.01 - 1.03**
Middle class	0.544	0.284	3.675	1.72	0.99 - 3.00
Upper class	0.683	0.427	2.558	1.98	0.86 - 4.57
†Lower				1.00	
Poor health	0.834	0.208	16.139	2.30	1.53 - 3.46***
Urban area	0.070	0.248	0.079	1.07	0.66 - 1.75
Other town	-0.243	0.260	0.877	0.78	0.47 - 1.31
†Rural				1.00	
Crowding	0.111	0.067	2.749	1.12	0.98 - 1.27
Per capita consumption	0.000	0.000	0.017	1.00	1.00 - 1.00
Secondary and above	0.431	0.571	0.569	1.54	0.50 - 4.71
†No formal education				1.00	
Married	-0.659	0.237	7.720	0.52	0.33 -0.82**
Divorced, separated/widowed	-0.453	0.332	1.864	0.62	0.33 - 1.22
†Never married				1.00	
Head household	-0.210	0.218	0.933	0.81	0.53 - 1.24

χ^2 (DF = 14) = 47.79, P < 0.001, -2 Log likelihood = 648.32, Nagelkerke R² =0.117, Hosmer and Lemeshow goodness of fit χ^2 =4.480, P = 0.811, Overall correct classification = 67.5%, Correct classification of cases of medical care-seeking behaviour = 88.1%, Correct classification of cases of no medical care-seeking behaviour = 30.0%, †Reference group, *P < 0.05, **P < 0.01, ***P < 0.001.

Discussion

Caribbean societies, in particular Jamaica, have seen an increase in illnesses such as HIV/AIDS, malignant neoplasm, diabetes mellitus, hypertension, ischaemic heart disease, and arthritis [28-33] which require continued treatment. Although this is a reality, only 21.2% of Jamaicans had health insurance coverage in 2007, indicating that the majority of people are without health insurance coverage and many people will not be able to afford medical care.

The current study found that approximately one-half of Jamaicans who do not have health insurance were poor compared to 34.1% of the wealthy and 20.9% of those in the middle class. Substantially more Jamaicans below the poverty line (23.1%) did not have health insurance compared to 14.8% of those in the wealthiest 20%. In addition, 33% were children compared to 11% who were older than 60 years. Although there is a preponderance of Jamaicans who are poor and uninsured, this research found that there was no statistical difference between medical care-seeking behaviour and social class; medical care-seeking behaviour and sex; and health care-seeking behaviour and area of residence. Embedded in this finding is the dominance of a non-medical care-seeking behaviour culture in Jamaica, and it is so fundamental that education, social class and income are not able to retard the practice. This is captured in an analysis of the study that had 44 out of every 100 respondents indicating that they were ill enough to seek medical care compared to 34 out of every 100 in the population; and 18 out of every 100 stated they preferred home remedies compared to 30 in 100 in the populace.

Sixty-six out of every 100 Jamaicans sought medical care, comprising the poorest 20%-to-wealthiest 20% in 2007. The current study revealed that 45 out of every 100 poor people were not covered by health insurance compared to 17 out of 50 for the wealthy and 21 out of 100 for the middle class. Concomitantly, 33 out of every 100 children (less than 15 years) and 60 out of every 100 Jamaicans who had no formal education were not covered by health insurance. The rationale which accounts for the fact that there is no significant difference in medical care-seeking behaviour among the social classes is embedded in the removal of user fees in the health care system; and how this has narrowed the health care-seeking behaviour gap between the poor and the wealthy.

In 2007, the government of Jamaica introduced national health insurance coverage for those who suffer from particular illnesses, as well as for those who are older than 60 years. This social security coverage commissioned by the Jamaican government eliminates health insurance for 'unwell' patients, suggesting that health is conceptualized as diseases, which is not in keeping with an operationalization of health offered by the WHO [34]. According to the WHO, health does not only mean the absence of disease, but it must include

social, psychological and physical wellbeing. The health insurance coverage offered by the government explains the low uninsured group among the Jamaican elderly. Hence, this means that most of those who possess health insurance would have private coverage; the high 'unwell' Jamaicans therefore justify the high non-insured group in the nation. This paper examines the uninsured or the 'unwell.'

This analysis has found that good health status can be determined by age, consumption, self-reported illness, social class, education, area of residence and gender of respondents, which concurs with other studies [35-39]. While this study is the first of its type in Jamaica, its findings are similar to other multivariate studies that have examined the health status of people. Using data for elderly Barbadians, the work of Hambleton et al. [35] found that dysfunction accounted for the most explanatory power in health status, which is confirmed by this analysis. The model that was developed for the good health status of uninsured Jamaicans was based on the 7 aforementioned variables with a coefficient of determination of the current study being 39.0% (Nagelkerke $R^2=0.390$). This predictive model seems weak; but the work with elderly Barbadians had a coefficient of determination of 38.2%, indicating that the analysis of this paper is relatively good in keeping with a non-Jamaican study of a similar nature.

In spite of the similarities, there are some notable differences with other studies. Eighty-three out of every 100 uninsured Jamaicans reported at least good health status; 20 out of every 100 were hypertensive; 9 out of 100 diabetic and 6 out of 100 arthritic compared to the percentage of respondents in the population with particular health conditions: hypertension, 22 out of every 100; diabetes mellitus, 12 out of every 100; and, arthritis, 9 out of every 100. It is interesting to note that Jamaicans have a preference for private health care utilization [15] but this is not the case for the uninsured. In 2007, 52 out of every 100 Jamaican visited private health care services compared to 6 out of every 100 of the uninsured. The percentage of uninsured who visited public health care facilities (34 out of every 100) was also lower than in the general populace (41 out of every 100).

The analysis of this study went further than that of other identified studies as it found that uninsured Jamaicans who resided in rural areas reported a greater percentage of illnesses, followed by urban, than other town residents. Marmot [40] opined that income influences health as it provides access to more resources, medical services, and lower infant mortality. The analysis of this work concurs with Marmot [40] and PAHO et al. [9] as consumption (which can proxy income) is positively correlated with good health status. With this reality, there seems to be a paradox, as those in the wealthy classes had lower good health status than those in the poor classes.

Income undoubtedly provides access to more resources,

better physical conditions and opens the way to better quality of water and food; it also offers individuals, societies or nations the highest quality medical services which cannot be accessed by the poor [40]. There is another side to this discourse in that the lifestyle practices of the wealthy help to erode the advantages of income. According to Bourne, McGrowder and Holder-Nevins [41], health behaviour which is a function of one's culture suggests that the wealthy will continue their involvement in parties and other social arrangements which will involve the use of alcoholic beverages, smoking, and other risky lifestyle practices that reduce the advantage of income. While income can buy access to better medical services, this paper highlights that it cannot buy good health. It is clear from the current study that wealthy uninsured Jamaicans are using their income the wrong way in regards to its negative impact on health. Insufficient money is associated with more illness; however, this study has revealed that there is no statistical difference between the wealthy and the poor seeking medical care. Although the wealthy substantially used private health care facilities and the poor utilized public health facilities [15] embedded in this analysis therefore is the fact that the quality of primary level care in Jamaica is of a high standard.

While there is no difference between the wealthy uninsured and the poor uninsured seeking medical care, the study revealed that those with poor health status were 2.3 times more likely to seek health care services than those in good health. The analysis of this work showed that 22 out of every 100 uninsured Jamaicans who indicated at least one health condition reported poor health status. Hence this study highlights the fact that there is a disparity between respondents' conceptualization of health status and that of illness, as 44% of uninsured ill respondents indicated that they had good health status.

The JSLC report revealed that the prevalence of recurrent (chronic) diseases is highest among individuals 65 years and over [41]. According to PIOJ and STATIN [42] individuals 60-64 years were 1.5 times more likely to report an injury than children less than five years old, and the figure was even higher for those 64 years and older (2.5 times more). It should be noted here that this increase in self-reported cases of injuries/ailments does not represent an increase in the incidence of cases as the JSLC for 2004 said that the proportion of recurring/chronic cases fell from 49.2% in 2002 to 38.2% in 2004 [43]. Eldemire [44] found that 34.8% of new cases of diabetes and 39.6% of hypertension were associated with senior citizens (i.e. ages 60 and over). Bourne, McGrowder, and Crawford [39] found that the poor health status of people 60 to 64 years was 33.2% and this increased to 36.1% for elderly 65 to 69 years, 49.4% for elderly 70 to 74 years and 51.7% for those 75 years and older, emphasizing the positive correlation between increased ailments and ageing of the Jamaican elderly.

An analysis of the current study revealed that there is no significant difference among the populations across the 3 geographical areas in Jamaica in regards to health care-seeking behaviour, suggesting that the uninsured medical care-seeking behaviour is the same in the 3 geographical areas. This research concurs with the finding of a study by Call and Ziegenfuss [7] meaning that the uninsured in Jamaica are not atypical as they are in keeping with those in Minnesota, United States. Further, no significant correlation was found among urban, semi-urban, rural and educational levels of uninsured Jamaicans which were similar to that of Call and Ziegenfuss.

Many studies have shown that married people (or those in unions) had greater health status than those who were never married [45-51]. The current work disagreed with those findings as it found that there was no significant statistical correlation between good health status of married uninsured people, and those who were never married, or separated, divorced or widowed. Analysis of this research revealed that those who were married were 48.2% less likely to seek medical care than those who were never married. The answer to this lies in the lifestyle practices of these people. Smith and Waitzman [49] offered the explanation that wives were able to dissuade their husband from particular risky behaviours such as the use of alcohol and drugs, and would ensure that they maintain a strict medical regimen coupled with proper eating habits [50,51]. Koo, Rie and Park's findings [48] revealed that being married was a 'good' cause for an increase in psychological and subjective wellbeing in old age. This study is the first of its kind in the Caribbean, in particular Jamaica, which models the health care-seeking behaviour of uninsured respondents, and so there is nothing to compare it with. The coefficient of determination for this model was 11.9%, which means that although it is low its validation will need further research.

Study Limitation

A single cross-sectional study cannot be used to examine causality, as well as a snap shot survey cannot effectively capture the continuous matter of the variables. The severity of illness was excluded from the medical care-seeking behaviour model because of missing cases and this could have been critical to the study.

Conclusion

The findings of this research are far reaching and provide an understanding of the uninsured, and the information can be used to aid public health intervention and education programmes.

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