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Hypertensive patients: knowledge, self-care management practices and challenges

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Abstract

Introduction: Hypertension is a common and serious health problem in many developed and developing countries; yet self-management practices of hypertensive have never been empirical examined in the Caribbean.

Objectives: This research seeks to: 1) examine the knowledge level on hypertensive among hypertensive patients at a hypertensive clinic in urban St. Andrew; 2) evaluate the knowledge level on hypertension among the sampled respondents differ based on particular socio-demographic characteristics; 3) determine the factors that influence knowledge level on hypertension among hypertensive patients at an urban clinic in St. Andrew, Jamaica; 4) examine the self-care management practices level among hypertensive patients at a hypertensive clinic in urban St. Andrew, Jamaica; 5) evaluate self-care management practices among the sampled respondents differ based on particular socio-demographic characteristics, and 6) determine the knowledge on hypertension influence self-care management practices level among hypertensive patients at a hypertensive clinic in urban St. Andrew, Jamaica.

Methods: Convenience sampling was used to collected data from 50 hypertensive patients in clinic in an Urban Jamaican Hospital. The data were entered, retrieved and analysed using SPSS for Windows version 19.0.

Findings: The average knowledge of hypertension index was 34.7 ± 2.11 compared to 23.4 ± 3.2 for self-care management. The number of medications taken and the length of time being diagnosed with the health condition influence the knowledge level the individual has on the disease, with those factors accounting for 44.1 percentages of the variance in knowledge level on hypertension.

Conclusion: The findings provide key ingredients to effect policies changes and social interventions.

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INTRODUCTION

Hypertension is a common and serious health problem in many developed and developing countries. The World Health Organization [1] estimated that hypertension caused 4.5% of current global disease burden. Two Jamaican scholars opined that hypertension is the most common disease and the main cause of illness and death in Jamaica and the Caribbean [2]. Statistics from the Statistical Institute of Jamaica

[3] revealed that hypertension is among the top 10 leading cause of mortality in Jamaica, suggesting that hypertension is undoubtedly a serious public health concern. In 2005, the cause of death for 888 Jamaicans was hypertension, which increased by 23.6% by the end of 2009 [3]. A study conducted by Bourne, et al., [4] found that diabetes and hypertension can be classified at a pandemic level in Jamaica. In another study, Wilks et al. [5] found that in 2000 the prevalence of hypertension among Jamaicans aged 15-to-74 years

old was 20.9% and that this increased to 25.2%, representing a 20.5% increase over the period. Other studies have equally outlined that hypertension is a health problem in the Caribbean and that this is twinned with diabetes, particularly among the elderly [6-9]. The purpose of this research is to evaluate the knowledge of hypertension and self care practices among patients with hypertension at the University Hospital of the West Indies Hypertension Clinic.

Jamaica has a point prevalence of 30.8% of hypertension in the 15-and-over age group with the main risk factors being: female, advancing age, obesity, having diabetes and a family history of hypertension [10]. While numerous drugs and combination therapies have demonstrated the ability to reduce blood pressure and cardiovascular morbidity and mortality, controlling high blood pressure remains disappointing as can be extrapolated from the continuous increase in prevalence rate. On an average, only 30% of treated patients with hypertension practice lifestyle modifications as a method of controlling their blood pressure [11].

According to Lubaki and colleagues [12], the problem of uncontrolled hypertension revolve mainly around non-compliance due to the side effects of the medication, lack of information and support, difficulty obtaining the medication, poverty, low education and poor access to health care in rural communities, which was also found by other scholars [13-16]. It has been suggested that knowledge about hypertension influences blood pressure control and self-management practices in patients with hypertension [17]. However, a study on elderly men aged 55 years and older in Jamaica by Bourne, Morris and Charles et al. [15] found that health literacy does not translate into healthier lifestyle practices (or management). Another researcher on young street boys in Pakistan found that health care seeking behaviour increases when ill-health is severe or it interfaces with job (income opportunity) [18]. The unwillingness to seek health care is equally the same outside of Jamaica [13-16] to Pakistan [18] and Nairobi, Africa [19]. According to Taff and Chepngeno [19] the rationale for the low willingness to seek medical care was when it affects physical functioning. People unwillingness to seek medical care was found in a research conducted by Bourne, Glenn, Laws, & Kerr-Campbell [20] on health care practitioners as they found a high unwillingness to utilize health care services.

Undoubtedly the culture can bar health care practice as was found in the study by Bourne, Glenn, Laws, & Kerr-Campbell [20] on health care practitioners. The reality is, while knowledge is important and should change behaviour, self-care management practices can be barred despite ones knowledge level [21]. Bourne, McGrowder and Holder-Nevins [21] found that an

individual who experiences an illness was 10.3 times more like to seek medical care, suggesting that on average less Jamaicans practice preventative care. Within the aforementioned context, the rise in the hypertension as well as death owing to hypertensive issues means that a research on knowledge and practices of hypertensive is critical to patient care. A group of Caribbean scholars opined that "The demand for health is important and critical in health education and health promotion, as it provides a platform upon which health practitioners can plan" [21] and this offers a basis upon which a research on the knowledge and practices of hypertensive is important as it provide insights into their practices.

Grant & Hezekiah [22] opined that "Hypertension is a major health problem in the Caribbean Region, and justifies the number of studies in this area. The studies on hypertension [10, 23-26] including Grant & Hezekiah [22] and Mendez, Cooper and Wilks, et al. [27] none has examined the knowledge on hypertension among hypertensive, self-care management practices, and model factors that accounts for self-care management practices. Hence, the objectives of the paper are: 1) To examine the knowledge level among hypertensive patients at a hypertensive clinic in urban St. Andrew; 2) To evaluate the knowledge level of hypertensive and identify differences bases on particular socio-demographic characteristics; 3) To determine factors that influence knowledge level among hypertensive patients; 4) To examine self-care management practices among hypertensive patients; 5) To evaluate self-care management practices among hypertensive and differences by particular socio-demographic characteristics, and 6) To determine whether knowledge level of hypertensive patients influence their self-care management practices.

METHODOLOGY

This study utilized secondary as well as primary quantitative data. Primary data was garnered by gathering data using a standardized survey questionnaire to investigate the knowledge of hypertensive patients registered in a Jamaican urban hospital, and how it influences their behaviour in blood pressure control (or management). The primary data was collected over a two-week period at the clinic site. Non-probability sampling technique was used to ascertain the sample, and the sample was 50 respondents. The population was hypertensive patients, particularly those who attend a particular urban hypertension clinic at a hospital in St. Andrew, Jamaica and between 18 and 65 years old. Hence, the population that is excluded is 1) non-hypertensive, 2) people ages less than 18 years and more than 65 years old, and 3) hypertensive who do not attend the clinic.

The hypertensive clinic is each Monday between 7:59 and 12:01 p.m. The participants were informed of their rights within the study and only willing and those who gave concern were placed in the research. A single person was used to collect the data from all the participants in order to standard the approach in data collect and reduce interviewer's biases. The data collector was trained in research methods, ethnic of research, survey techniques and how to reduce personal biases in conducting survey research. The study sought and received ethical approval from the University of the West Indies Ethical Committee.

The questionnaire had mostly close-ended items and it was written in English, as this is general language in Jamaica. There were 32 questions on the instrument, with two being open-ended items (Questions 6 and 7 – How long have you been diagnosed with hypertension? and How many medications are you taking for hypertension? respectively). The questionnaire had two set of items for 1) knowledge of hypertension and 2) self-care management practices.

For the survey instrument (questionnaire), the large volume of data were stored, retrieved and analyzed using the Statistical Packages for the Social Sciences (SPSS) for Windows version 19.0 (SPSS Inc; Chicago, IL, USA). Descriptive statistics were performed on the data as well as percentages and frequency distributions. Box plots were used to present bivariate findings (i.e. two variables - of which one was metric and the other was non-metric (dichotomous or otherwise). Independent sample t-test was used to determine differences in dichotomous non-metric variables and a metric dependent variable (i.e. knowledge of hypertension index by gender and self-care management index and gender of respondents). Analysis of variance (ANOVA) was employed to examine a metric dependent variable and a single dichotomous non-metric independent variable. Univariate Analysis was used to examine the relationship between a single dependent variable and a set of independent variables. Statistical significance was determined a p-value less than or equal to five percentage points (≤ 0.05) – two-tailed.

Data Transformation

Knowledge on Hypertension Index (KHI) is the summation of twelve items on knowledge. Of the twelve items, three were reversed coded (4, 5 and 11). Neutral was coded as zero, agree = 3 and strongly agree 4. Hence,

\sum KHI = 48, where 0 indicates no knowledge and higher scores mean greater knowledge.

Self-care Management Practices Index (SMPI) is the summation of eight items on self-care management

practices. Of the eight items, two were reversed coded (2 and 3). Neutral was coded as zero, agree = 3 and strongly agree 4. Hence,

\sum SMPI = 36, where 0 indicates nothing and higher scores mean greater knowledge.

FINDINGS AND DATA ANALYSES

The socio-demographic characteristics of the sample were presented in Table 4.1. Fourteen out of every twenty respondents in the sample were 55-64 years old, with none being less than 35 years old. Of the sample (n = 50), the ratio of male to females was 1 to 3.2, with 30 percentages being married, 40 percentages being single, 58 percentages having had at most primary level education.

Eighty-eight percentages of the respondents were on at most three (3) medications, with 70 percentages being on two medications and two percentages on 6 medications. Marginally more respondents indicated taken two medications compared to one medication.

The average number of years being diagnosed with hypertension was 14.2 years (standard deviation = 10 years). One half of the sample has been diagnosed for 12 years (range = 36 years; maximum number of years being 37 and minimum being 1), with a skewness of 0.671.

A skewness of 0.671 indicates a positively skewed distribution. Although the distribution is a positively skewed one, it is mildly skewed and so it can be used with transformation (i.e. logging the value).

Table 4.2 presents information on the percentage of responses in each item of knowledge of hypertension. The majority of responses were on agreed. When the respondents were asked "A blood pressure level of above 130/90 is considered normal", the majority disagreed with this statement (62%) compared to 32% who agreed and 6% were neutral. A statement which reads "A blood pressure of level of less than 120/80 is considered to be high", 70% of the sample disagreed with that statement compared to 22% who agreed and 8% being neutral. When they were asked "Corned beef and salted meat is good for a person with hypertension", 98% disagreed with the statement. In regard to the statement "Increased physical exercise actually decreases the blood pressure of a person with hypertension", 88% agreed with the statement compared to 6% who disagreed. Other statements were made and the responses are presented in Table 4.2 below.

Table 4.3 presents information on the percentage of responses choice when given particular statement on self-care management practices. In response to the

statement “I take my medication daily as prescribed by the doctor”, 66% indicated agreed and 26% strongly agreed with the statement. A statement read “I make every attempt to cut down on the amount of salt in my daily meals”, 82% indicated agree and 14% said strongly agreed. The majority of the respondents indicated that they agree with the statement “I make every attempt to avoid drinking alcohol” and the same percentage responded to the statement of “I make every attempt to avoid smoking cigarette”. A number of other statements were made and the responses are presented in Table 4.3 below.

The mean for the knowledge of hypertension index was 34.7 (standard deviation = 2.11) and the mean for self-care management index was 23.4 (standard deviation = 3.2). The maximum probable knowledge score is 48, indicating that the knowledge level of respondents on hypertension was very high (mean of 34.7 out of 48), with the maximum knowledge received by a respondent being 41. Three-quarters (or 75%) of the sample received a score of 36. Likewise, self-care management was very high among the sample (mean = 23.4 ± 3.2 out of a maximum probable score of 24), with one half of the sample getting a score of 23.

Using Independent sample t-test, there was no statistical difference between the knowledge level of males as it relates to hypertension (mean = 35.1 ± 0.996) and females (mean = 34.6 ± 2.354), t-test = 0.681, $P = 0.499$. Using the median to evaluate the average score for each gender, there is no difference between the scores for males and that of females.

No significant statistical difference was found among the knowledge level of respondents on hypertension based on marital status – F-statistic [4, 45] = 1.518. P value = 0.213. The aforementioned information is represented in Table 4.12.

Using Analysis of Variance (ANOVA), it was revealed that there is no significant statistical difference among the knowledge level of respondents on hypertension based on educational level (F-statistic [3, 46] = 2.215, P value = 0.690). Although it appears that the knowledge level on hypertension is lowest among those with vocational level education, the ANOVA test establishes that this is not the case ($P > 0.05$ or 5%, two-tailed test).

With the F-statistic being 2.299 and its P value is 0.520, it can be interpreted that there is no significant statistical difference among the respondents in regards to their knowledge level on hypertension based on income group.

A significant statistical difference in the knowledge levels of respondents on hypertension were revealed based F-statistic test [4, 26] = 6.260. The lowest

knowledge level on hypertension was recorded among those who had kidney disease (mean = 26.0). However, the knowledge level of respondents on hypertension was the same across the other typology of health conditions.

Using Independent sample t-test, there was no statistical difference between self-care management practices index of males (mean = 22.3 ± 3.47) and females (mean = 23.7 ± 3.13), t-test = - 1.321, $P = 0.193$. Using the median to evaluate the average score for each gender, there is no difference between the scores for males and that of females.

Based on the outcome of Analysis of Variance (ANOVA) test, there was no statistical difference among self-care management practices index by age group of respondents F-statistic [3, 46] = 1.533, $P = 0.219$.

Using Analysis of variance (ANOVA), it was revealed that there is no significant difference among the marital status for self-care management index – F-statistic [4, 45] = 1.846, $P = 0.137$. This means that hypertensive respondents irrespective of their marital status have the same self-care management practices.

A significant statistical difference emerged among the educational level based on self-care management practices – F-statistic [3, 46] = 29.934, P value = 0.03. The hypertensive patient with vocational level education had the greatest degree of self-care management practices, with those with tertiary level education having the least self-care management.

No significant statistical difference emerged among the income group based on self-care management practices – F-statistic [3, 46] = 2.432, P value = 0.08.

There exists a very weak statistical relationship between knowledge on hypertension and self-care management practices ($R^2 = 4.7\%$), suggesting that approximately 5 percentages of the variance in self-care management practices can be accounted for by knowledge on hypertension.

A multiple analysis of variance (Table 4.4) revealed that the number of medications that a hypertensive patient is taken as well as the length of time being diagnosed with the health condition influence the knowledge level the individual has on the disease. The two aforementioned factors account for 44.1 percentages of the variance in knowledge level on hypertension. It can be extrapolated from the results that particular socio-demographic characteristics (eg. age, gender, educational level and income) have no statistical influence on the knowledge level on hypertension among hypertensive patients.

There is no significant statistical correlation between

self-care management practices and any of the socio-demographic variables used in this study as well as length of time being diagnosed with hypertension (i.e.

length) and the number of medications taken for the conditions (meds) – Table 4.5.

Table 4.1. Socio-demographic characteristics of sample, n=50

Characteristics	n	%
Age group		
18-24 years old	0	0
25-34 years old	0	0
35-44 years old	4	8.0
45-54 years old	7	14.0
55-64 years old	26	52.0
65+ years old	13	26.0
Gender		
Male	12	24.0
Female	38	76.0
Marital status		
Single	20	40.0
Common-Law	5	10.0
Married	15	30.0
Divorced	1	2.0
Widowed	9	18.0
Educational Level		
Primary and below	29	58.0
Secondary	16	32.0
Tertiary	4	8.0
Vocational	1	2.0

Table 4.2. Percentage of responses in each category of knowledge on hypertension

Characteristic	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	n (%)	n (%)	n (%)	n (%)	n (%)
Hypertension is a serious condition that can lead to complications.	-	-	-	49 (98)	1 (2)
An individual with hypertension should go for check-ups regularly.	-	-	-	49 (98)	1 (2)
It is important for a patient with hypertension to have a reliable means of blood pressure monitoring between visits to their health care provider.	-	-	-	49 (98)	1 (2)
A blood pressure level of above 130/90 is considered normal.	-	31 (62)	3 (6)	16 (32)	-
A blood pressure level of less than 120/80 is considered to be high.	-	35 (70)	4 (8)	11 (22)	-
Smoking cigarettes has a negative effect on persons with hypertension.	-	1 (2)	-	49 (98)	-
Drinking alcohol has a negative effect on persons with hypertension.	-	1 (2)	-	49 (98)	-
Increased physical exercise actually decreases the blood pressure of a person with hypertension.	-	3 (6)	3 (6)	49 (98)	-
A diet which contains fruits and vegetables is good for a person with hypertension.	-	-	-	50 (100)	-
A diet consisting of low fat milk and whole wheat bread is good for a person with hypertension.	-	1 (2)	-	48 (96)	1 (2)
Corned beef and salted meat is good for a person with hypertension.	1 (2)	49 (98)	-	-	-
A meal rich in green bananas, baked chicken and beans is good for a person with hypertension.	-	3 (6)	1 (2)	46 (92)	-

Table 4.3. Percentage of responses in each category of self-care management practices

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I take my medication daily as prescribed by the doctor.	1 (2)	1 (2)	2 (4)	33 (66)	13 (26)
As soon as the blood pressure is lowered, it is OK to stop taking the medication.	2 (4)	32 (64)	2 (4)	14 (28)	-
It is OK for the hypertensive patient to substitute herbal or bush medications for the prescribed medication.	5 (10)	38 (76)	3 (6)	4 (8)	-
I make every attempt to cut down on the amount of salt in my daily diet.	-	1 (2)	1 (2)	41 (82)	7 (14)
I ensure that fruits and vegetables are included in my daily meals.	-	-	1 (2)	41 (82)	8 (16)
As a hypertensive patient, I ensure that I exercise regularly.	-	2 (4)	11 (22)	32 (64)	5 (10)
I make every attempt to avoid drinking alcohol.	2 (4)	-	-	40 (80)	8 (16)
I make every attempt to avoid smoking cigarettes.	1 (2)	-	-	40 (80)	9 (18)

Table 4.4. Univariate Analysis of Variance of knowledge on hypertension and particular variables

Source	Type III Sum of Squares	df	Mean Square	F	P value
Corrected Model	35.244(a)	7	5.035	2.032	0.107
Intercept	170.121	1	170.121	68.656	0.000
Age	3.894	1	3.894	1.571	0.226
Gender	4.314	1	4.314	1.741	0.204
Educational level	4.363	1	4.363	1.761	0.201
Income	.000	1	.000	.000	0.993
History on disease	3.157	1	3.157	1.274	0.274
Number of medication	14.966	1	14.966	6.040	0.024
Length of being diagnosed	8.147	1	8.147	3.288	0.050
Error	44.602	18	2.478		
Total	32070.000	26			
Corrected Total	79.846	25			

Dependent Variable: Knowledge on Hypertension Index
R Squared = 0.441

Table 4.5. Univariate Analysis of Variance on self-care management practices and particular variables

Source	Type III Sum of Squares	df	Mean Square	F	P value
Corrected Model	12.192(a)	7	1.742	0.262	0.961
Intercept	94.239	1	94.239	14.154	0.001
Age	0.081	1	0.081	0.012	0.913
Marital	0.007	1	0.007	0.001	0.974
Educational level	0.028	1	0.028	0.004	0.949
Income	0.221	1	0.221	0.033	0.857
Length	5.727	1	5.727	0.860	0.366
Meds	0.589	1	0.589	0.088	0.770
History of Health Conditions	0.438	1	0.438	0.066	0.801
Error	119.846	18	6.658		
Total	13657.000	26			
Corrected Total	132.038	25			

Dependent Variable: Self-care management practices

Limitations to the study

The nature as to how the sample was drawn (non-probability sampling techniques) hinders 1) generalizability, 2) predictability, 3) repeatability and 4) general conclusion on the matter. Another limitation is the use of survey research methodology. Not ascertaining the meanings, belief, biases and culture which are embedded into a decision like a comprehensive understanding of the subject matter. In addition to the aforementioned issues, having used one public health care facility in urban Jamaica over a particular period means that care must therefore be exercised in any attempt at generalizing the findings. However, the findings still provide insightful, rich and critical information about the studied phenomenon.

DISCUSSION

The health belief model (HBM) purported that knowledge influences behaviour of people [21]. Clearly, this is the case among hypertensive as their knowledge on the health conditions impacts on self-care management practices, which concurs with other studies on the matter [23, 34]. The HBM, on the other hand, did not stipulate the minimal influence of knowledge on health care seeking behaviour. Unlike the current study in Nigera which found that knowledge on hypertension was low among the sampled respondents [34], this one found that knowledge of the condition is very high among hypertensive patients and so was a self-care management practice. However, knowledge on hypertension for the present research accounted for only a 4.5% variance in self-care management practices. This work went further in the examination of the two aforementioned variables, and found that relationship is a non-linear one which concurs with another study of similar nature [23].

The non-linear relationship offers new insights into the influence of knowledge on practices and how hypertensives care for themselves. The non-linear relationship between two aforementioned variables was best fitted by a quadratic polynomial, which means that there is an inverse relationship between knowledge and self-care management practices among those with low knowledge and that this change among those with high knowledge. This findings somewhat concurs with Iyalomhe & Iyalomhe's work which found that "We conclude that patients' knowledge of hypertension in Auchu is low and their attitudes to treatment negative [34]. It can be extrapolated from the current work and those of the literature that merely arguing that knowledge influence behaviour is simplistic and does not clarify the extent of knowledge, how they relate, and omission of other variables of greater importance on behaviour than knowledge.

"Hypertension is the most common chronic disease in the West Indies, and is a major health problem today being among the 10 most common causes of death in the English-speaking territories of the region" [25] and with the high knowledge level among hypertensive; this should produce a fundamental lifestyle practices that would lower the disease. In Jamaica, this is the reverse was while educational levels, income and knowledge on the hypertension become more pervasive, the number of death caused by the condition has been rising [3, 4]. Using secondary data which was taken from a national probability cross-sectional survey, Bourne and colleagues [4] found that the prevalence of hypertension among Jamaicans rose and this corresponds to a minimal upward movement in the number of people seeking medical care. On disaggregating the data, Bourne et al. [4] found that in 2002, 14.8% of males reported having been diagnosed with hypertension and this increased to 17.0% in 2007. The health care seeking behaviour among males for the same period increased by less than 2% (in 2002, it was 60.7% which increased to 62.3% in 2007). On the other hand, among females the prevalence rate of hypertension in 2002 was 29.9% which fell to 27.0% in 2007; while their health care seeking behaviour increased from 66.0% to 67.7% for 2002 and 2007 respectfully.

Statistics from the Statistical Institute of Jamaica [3] revealed that there has been a significant rise in the number of deaths caused by hypertension and with the context of the current work which found that knowledge among hypertensive is very high and that this is marginally influencing self-care management practices; the issue of what accounts for behavioural modification is important. According to Grell "West Indians show a combination of personalistic, naturalistic, and modern medical beliefs, which need to be understood in order to mount effective programmes for the management of hypertension in the community" [25], which highlights other areas outside of knowledge in behavioural changes. Chevannes did a qualitative study on men in the Caribbean and found that a part of what explains their behaviour is the culture [50]. He asserts that the macho culture in the Caribbean accounts for men unwillingness to seek medical care and cry because those issues are interpreted as showing weakness, effeminate and are not characteristics of manhood. A study in Pakistan [18] concurred with Chevannes [50], and when further to state that men's willingness to seek medical care is based on 1) severity of illness (if illness may result in death) and 2) retards economic opportunities (including employment and reduced income).

Education which is critical component of primary socialization should have some influence on behaviour

modification, lifestyle practices and attitude. In Iyalomhe & Iyalomhe's work found that 33.3% of hypertensive patients regularly take the medication and attend clinics; 40.7% consumes a lot of alcohol, and 48% take medication if they believe that a symptom is occurring [34]. Among the findings in Iyalomhe & Iyalomhe's [34] study was the low educational level among respondents, which accounts could account for their behaviour. In the present study, the education level among the respondents is very low (58% had primary or below education); yet there is a high self-care management practice. This work also found that education does not influence the respondents' level of self-care management practices. Although Mendez, Cooper & Wilks, et al. [27] found that socioeconomic conditions (including education, income) were associated with blood pressure and hypertension in Jamaica, this study found that neither education nor income influence the self-care management practices of hypertensive.

Unlike other study, this one include age, marital status, length of time being diagnosed with hypertension and the number of medication that is taken by the hypertensive for the condition, and no emerged as being statistically related to self-care management practices. However, the degree of knowledge of the respondents is greater with length of time being diagnosed with the illness and by the number of medications taken, from which this study can extrapolate that other things - particularly the culture, fear of death, children, and other issues – are accounting for the high self-care management practices. Like Chevannes [50]; Ali & de Muynck [18]) and Taff & Chepngeno [19] noted that health care seeking behaviour, self-care management practices and attitude to health care are fundamentally embedded in the culture, interpretation of the individual of his/her health condition and how it affects his/her other function and socio-economic status in live. The HBM did not include those issues as a part of health care utilization and its emphasis on knowledge clearly is wrong as knowledge does not translate into rationality, and rationality does not mean better health care practices as the culture is critical to a person's interpretation of the world, attitude, beliefs, practices and attitude to life.

CONCLUSION

In summary, health belief model (HBM) should not be used to interpret self-care management practices of Jamaican hypertensive patients as knowledge has a small influence on self-care practices.

CONFLICT OF INTEREST

The authors have no conflict of interest at this time.

CONTRIBUTIONS OF AUTHOR

This paper is extracted from a Master of Science thesis which was principally supervised Paul A. Bourne.

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