

# Perceptions of Health Status and Lifestyle Health Behaviors of Poor People in Mauritius

Smita S. D. Goorah and Melisha Panchoo

**Abstract**—In Mauritius, much emphasis is put on measures to combat the high prevalence of non-communicable diseases (NCDs). Health promotion campaigns for the adoption of healthy behaviors and screening programs are done regularly by local authorities and NCD surveys are carried out at intervals. However, the health behaviors of the poor have not been investigated so far. This study aims to give an insight on the perceptions of health status and lifestyle health behaviors of poor people in Mauritius. A cross-sectional study among 83 persons benefiting from social aid in a selected urban district was carried out. Results showed that 51.8% of respondents perceived that they had good health status. 57.8% had no known NCD whilst 25.3% had hypertension, followed by diabetes (16.9%), asthma (9.6%) and heart disease (7.2%). They had low smoking (10.8%) and alcohol consumption (6.0%) as well as high physical activity prevalence (54.2%). These results were significantly different from the NCD survey carried out in the general population. Consumption of vegetables in the study was high. Overweight and obesity trends were however similar to the NCD survey report 2009. These findings contrast with other international studies showing poor people having poor perceptions of health status and unhealthy behavioral choices. Whether these positive health behaviors of poor people in Mauritius arise out of choice or whether it is because the alternative behavior is too costly remains to be investigated further.

**Keywords**—Health behavior, non-communicable diseases, poor people.

## I. INTRODUCTION

**P**OVERTY is a broad term which could be classified into two categories: absolute poverty is a fixed measure of poverty whilst relative poverty varies according to the mean expenditure or income of a country [1]. According to 2011 figures, Mauritius has a population of 1,286 million and is classified as an upper middle income country [2]. 7.9% of households in 2006/07 were estimated to be poor [3]. Poor people, the unemployed and those in employment but whose salary is not sufficient for a decent living benefit from Social Aid.

According to the World Health Organization's report [4], non communicable diseases (NCDs) account for 87% of mortality in Mauritius with cardiovascular diseases as the leading cause followed by diabetes. These diseases are caused to some extent by the advent of urbanization and changing lifestyle patterns.

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Efforts to combat NCDs by local authorities include health promotion campaigns to encourage healthy behaviors in the population as well as screening programs on a regular basis.

NCD surveys are carried out regularly to provide information on the current status of NCDs and on the prevalence of healthy behaviors in the population.

According to the literature, the adoption of healthy behaviors by different socioeconomic segments of the population is not uniform. Studies have demonstrated that socioeconomic differences underlie behavioral choices [5] with a marked socioeconomic gradient in health behavior as people of lower socioeconomic classes have poorer diet, smoke more, exercise less, have a more pessimistic perception of health and are also more exposure to external hazards (accidents, homicides, pollution) [6]. A recent study in the United Kingdom [7] which investigated four healthy behaviors namely not smoking, moderate alcohol intake, fruit and vegetable consumption and physical activity levels in a large sample and compared these to neighborhood deprivation scores found that participants were more likely to smoke and to consume less fruits and vegetables as the deprivation increased. However, they were also less likely to consume any alcohol and less likely to drink in excess as compared to more affluent participants. Although increased neighborhood deprivation was associated with an increased body mass index in the study, the relationship with physical activity was less clearly established.

Understanding health behaviors allows for better targeted health promotion efforts especially in resource-poor countries. In Mauritius, the health behaviors specifically of poor people have not been investigated. Hence this study aimed to describe the prevalence of healthy behaviors, the perceptions of health status as well as overweight and obesity trends and chronic disease status of poor people.

## II. METHODS

### A. Study Population

A cross-sectional survey among 83 persons benefiting from social aid in the district of Plaines Wilhems was carried out using questionnaires in a face to face interview. The selection of social security offices was done through cluster sampling whilst recruitment of participants in each cluster was done randomly. The total number of beneficiaries of social aid in the Island of Mauritius in 2009 was 30,723 [8]. Using 99% confidence interval and at 5% confidence level, a sample size of 652 was obtained for the 9 districts of the island. A

minimum of 73 participants for the district of Plaines Wilhems was targeted and 83 people consented to participate in the study.

### B. Questionnaire Design

The survey questionnaire was partly adapted from the Building Healthy Communities - Commonly used health questionnaires [9] with the addition of locally relevant questions. The final questionnaire included demographic data, socioeconomic details, self-rated health status, chronic disease status, daily eating habits, smoking habits, alcohol consumption habits, levels of physical exercise and self-rated "satisfaction with life" status. Both body weight and height were measured and body mass index was calculated. In addition waist circumference measurements were also taken.

### C. Ethics Clearance

Ethics clearance was obtained from the Research Ethics Committee of the Ministry of Health and Quality of Life on the 18<sup>th</sup> January 2012.

### D. Data Collection and Analysis

83 people participated in the study over a two month period. Data was collected at the time participants came in Social Security offices to collect their social aid benefit. Data was analyzed using statistical software SPSS 19.0.

## III. RESULTS

The profile of participants is described in the Table I. There was a high female participation.

TABLE I  
PROFILE OF PARTICIPANTS

		%
Age group	20-29	9.6
	30-39	26.5
	40-49	30.2
	50-59	24.1
	60-69	3.6
	>70	6
Gender	Male	19.3
	Female	80.7
	Single	10.8
Marital Status	Married	32.5
	Separated	31.3
	Divorced	18.2
	Widowed	7.2
Level of Education	None	18.1
	Primary	73.5
	Secondary	7.2
	Tertiary	1.2

As indicated in Table II, almost 70% appeared more or less satisfied with their life circumstances.

TABLE II  
PERCEIVED LIFE SATISFACTION OF PARTICIPANTS

I am satisfied with my life	Strongly agree	3.6%
	Agree	41%
	Slightly agree	25.3%
	Disagree	12%
	Strongly disagree	3.6%
	No response	14.5%

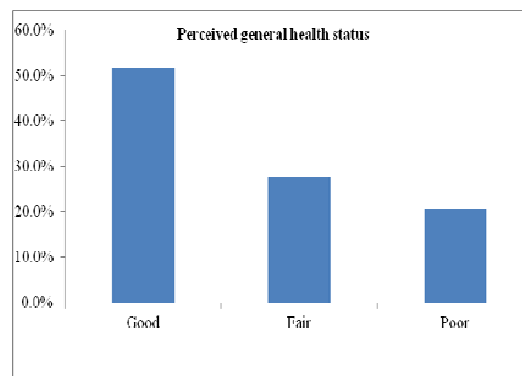


Fig. 1 Perceived health status of participants

79.5 % of participants perceived their health status as fair to good as shown in Fig. 1.

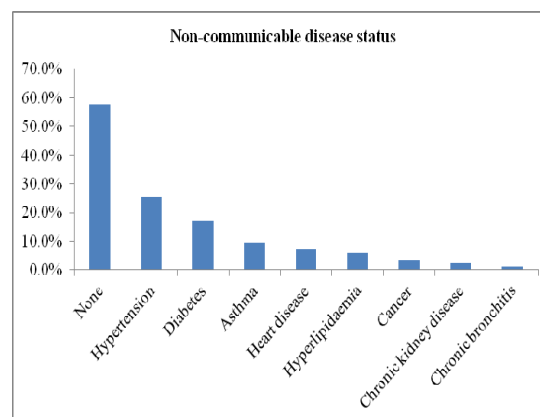


Fig. 2 Non-communicable disease status of participants

The non-communicable disease status of participants is shown in Fig. 2. 57.8 % of participants had no known NCD.

TABLE III  
COMPARISON OF LIFESTYLE HEALTH BEHAVIOR VARIABLE BETWEEN THE SAMPLE OF PERSONS BENEFITING FROM SOCIAL AID AND THE GENERAL POPULATION

Lifestyle health behaviour variable	Results of survey (n=83)	NCD survey report 2009 (n=6371)	Are the differences between the 2 proportions significant at $p < 0.05$
Smoking	10.8%	21.7%	Yes
Alcohol consumption	6%	48.5%	Yes
Daily physical activity	54.2%	16.5%	Yes

Reported in the NCD survey report 2009

As shown in Table III, there were statistically significant differences between our survey sample and the general population as reported in the NCD survey report 2009 [10]. Participants in our study smoked less, consumed less alcohol and had higher daily physical activity levels than the general population. However overweight and obese levels in both our study and the NCD survey were similar.

TABLE IV

COMPARISON OF ANTHROPOMETRIC MEASUREMENTS BETWEEN THE SAMPLE OF PERSONS BENEFITING FROM SOCIAL AID AND THE GENERAL POPULATION

Anthropometric measurement	Results of survey (n=79)	NCD survey report 2009 (n=6371)	Are the differences between the 2 proportions significant at $p < 0.05$
Underweight	5.1%	0%	Yes
Normal weight	43%	49.1%	No
Overweight	35.4%	34.9%	No
Obese	16.5%	16%	No

Reported in the NCD survey report 2009

Regarding daily eating habits, these are detailed in Table V. Of note, participants rarely consumed chicken, fish, meat or fast foods but regularly consumed vegetables and 66.3% also consumed two or more servings of fruit per week.

TABLE V  
DAILY EATING HABITS OF PARTICIPANTS

Variable	Percentage
Number of eating episodes	1
	6
	2
	32.5
	3
Chicken/Fish/Meat per week	48.2
	4
	12
	5
	1.2
Presence of vegetables in all meals	Daily
	1.2
	Frequently (3days/week)
	15.7
	Rarely
Number of servings of fruit per week	77.1
	Never
	6
	Yes
	91.6
Number of episodes of fast food consumption per week	No
	8.4
	1 or less
	14.5
	2-3
Daily water consumption/Litres	18.1
	4-5
	16.9
	6 or more
	31.3
Daily water consumption/Litres	Don't eat fruit
	19.3
	Daily
	1.2
	Frequently (3days/week)
Daily water consumption/Litres	6
	Rarely
	42.2
	Never
	50.6
Daily water consumption/Litres	<1
	4.6
	1.5
	10.8
	2
Daily water consumption/Litres	34.9
	>2.5
	9.6

#### IV.DISCUSSION

In the study, it was found that there was a higher female response with a male to female ratio of 1: 4.2 (male: 19.3% and female: 80.7%) while the expected ratio after taking into consideration the total number of male and female participants

benefiting from social aid in Mauritius in the Digest of Social Security Statistics 2009 [8], was found to be 1: 1.5 (male: 40.3% and female: 59.7%). This could be due to the fact that most women in the survey were separated or divorced with most of them being unemployed with one or more children to cater for which could explain the higher female to male ratio collecting social aid benefits.

Both perceived life satisfaction and perceived health status of participants were high in this study. Although this result may have been influenced by both gender and response bias, it also indicates the positive mindset of the participants. It is possible that non participants and those who did not come to collect their social aid benefits may have had different perceptions.

The majority of participants appeared to enjoy good health and smoked less, consumed less alcohol and had higher daily physical activity levels than the general population. However overweight and obese levels in both groups were similar. This results contrast with findings of other studies carried out in developed countries [5]-[7] which indicated better health status in higher socioeconomic classes as well as increased overweight and obese trends in lower socioeconomic classes as it appeared that more affluent people were more conscious of their health and adopted more health protective behaviors.

In addition, there was a high intake of vegetable and fruits in our study. Whether the positive health behavior indicators (smoking, alcohol consumption, physical activity and fruit and vegetable intake) in the participants of our study was the result of positive health choices or whether it was due to lack of alternative (non-healthy) choices remain to be investigated further. It is to be noted that the cost of cigarettes and alcohol is high in Mauritius due to high taxation. In addition, Mauritius has a strong agricultural base with abundant local fruit and vegetables but processed foods are imported and are expensive and fast food, meat, fish and chicken are costly. Regarding the physical activity levels in our study, this may be accounted by the fact that walking is a cheap mode of transport especially in urban areas where this study was carried out. More affluent people eat out more often and use cars as a mode of transport and may have more sedentary occupations.

Whilst the small sample size is a limitation and results must be interpreted with caution, there are indications those perceptions of health status and lifestyle health behaviors of poor people may differ in developing countries as compared to developed countries where there is more published research. This study also suggests that poor people may adopt positive health behaviors through lack of choice whereas for affluent people adopting positive health behaviors like refraining from smoking, reducing alcohol consumption, taking up physical activity and eating more fruit and vegetables is a matter of positive choice. This study did not investigate health risks due to infectious diseases, accidents, homicides and poor environmental conditions which may adversely affect poor people.

Despite the positive findings of the study, there is still need to target, sensitize and encourage all segments of the population to continue adopting good health behaviors thereby reducing the NCD burden of this population. Further research need to be carried out to consolidate the initial findings of this study.

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