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Original Research Article

Coping strategies for health care financing among informal sector workers in Dar es Salam, Tanzania

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ABSTRACT

Background: In low- and middle-income countries (LMICs) health financing systems has been dependent on out-of-pocket payments (OOP). This type of payment is thought to increase income to finance health care but it's unaffordable to economically disadvantaged persons. Health insurance was introduced in order to reduce catastrophic health expenditure caused by OOP but its implementation to informal sector workers is a challenge. Therefore, this study examines the coping strategies for managing health care costs among informal sector workers in Dar es Salaam, Tanzania.
Methods: This cross-sectional descriptive study was conducted between September and December 2020 to 889 informal sector workers. The study respondents were randomly selected and questionnaire was used to collect data. Chi-square test and multivariate logistic regression were used to analyze data through the use of Statistical Package for Social Sciences (SPSS) version 23.
Results: The findings showed that the mean age of the respondents was 34.8 years (SD±10.4) and majority, (90.1%) of the respondents were uninsured. The methods to carter for medical expenditures were cash payments (p=0.297; 95%CI=0.195-0.452), selling assets (p=0.672, 95%CI=0.507-0.891) and borrowing money (p=0.578, 95%CI=0.412-0.811).
Conclusions: The health care financing methods that the informal sector workers use in order to access health services are effective in reducing short run problems of health care accessibility but it contributes to impoverishment. Designing an affordable insurance scheme with consideration of the social economic aspects of individuals will improve uptake to insurance schemes and hence achievement of the Sustainable Development Goals (SDGs).

Keywords: Health insurance, Coping methods, Health care financing, Accessibility, Informal sector workers

INTRODUCTION

Health care access is still a global problem which attests to elusive health for all principles. The means of financing health care expenditure for any country are important in ensuring the health status of the country. Approximately, 1.3 billion people lack access to health services due to financial problems associated with affordability, availability and knowledge gap on social health insurance.[1] In LMICs many people experience inaccessibility to quality health care services and are unprotected against financial risks.[2,3] Out-of-pocket spending on health push people to extreme poverty each year.[4] Lack of financial protection made some people when they are sick to either forgo or delay seeking health care and hence increase on burden of diseases.[5–7] In 2010 the World Health Organization (WHO) report showed that in many sub-Saharan African countries individuals

with low income have high burden which lead to high levels of catastrophic health expenditures.[8]

Measures of health system effectiveness should be aligned with improvements in access to the quality of care and satisfaction of clients.[9] Health systems should control the rising expenditures for health services, regulate the modes of payment for health services, ensure availability and monitor shortage of health providers and medical supplies/drugs. The WHO and other global organizations are striving to attain Universal Health Coverage (UHC) through prepayment and risk pooling strategies in lieu of payments at the point and time of health care utilization.[10]

Accordingly, health insurance scheme is increasingly being preferred as a feasible strategy to finance health care costs in achieving UHC while protecting vulnerable populations such as the poor people and the informal sector workers from catastrophic health care expenditures. The prepayment systems in most developing countries have not included the informal sector workers either due to scarce resources or they are unable to afford the insurance premiums. This is partly because the informal sector workers have low and unstable income which make them fail to make prepayment for health care.[11]

In Tanzania, health insurance was introduced with the long-term goal of achieving UHC. The existing health insurance schemes include National Health Insurance (NHI), Social Health Insurance Benefit (SHIB) under National Social Security Fund (NSSF), private insurance schemes such as Africa Air Rescue (AAR), Jubilee insurance, Resolution Health, Metropolitan Insurance, Strategis, and Community Health Fund (CHF) schemes. From the beginning, NHI is compulsory for government employees but in 2013 it was expanded in terms of service coverage and membership whereby the informal sector workers are allowed to enroll and their membership is voluntary.[12]

Despite the efforts made by the government to include the informal sector workers into insurance schemes the uptake is still very low. In 2018, Okungu, Chuma, Malupi and McIntyre reported that 32% of Tanzanians had health insurance where as 8% had National Health Insurance (NHI), 23% are on Community Health Fund (CHF) and 1% have private health insurance.[13]

The gaps in our health insurance system affect many people especially those in informal sectors who are without health insurance cover and this had led to delays or lack of access to medical services which result to further injuries or death.[14] The inclusion of the informal sector workers has a cost implication to these health insurance schemes. Administrative challenges especially on premium collection from the informal sector workers who are widely dispersed and this cause logistical problems that increase administrative costs which in turn, increase insurance costs.

In Tanzania, households, including those employed in the informal sectors, lack health insurance to help them cover healthcare costs, despite the fact that the majority are exposed to higher risks.[15,16] On the absence of viable mechanism of including these people in the insurance scheme, households have to seek for alternatives to finance their health care. Such alternatives may include income from family members, savings or financial support from religious organizations, relatives, or other sources that are non-refundable. Other alternatives include sales of household properties including land, livestock, jewellery, borrowing from financial institutions or individuals.[17] Medical costs coping mechanisms are different depending on the level of household vulnerability. In rural areas, when people are faced with shocks of living like sickness they manage by selling livestock or other assets, or seek for help from social networks.[18,19] Vulnerable people hospitalized in public medical facilities pay for the medical services out of savings, or borrow money from friends, family or employers. Individuals in rural areas manage the medical costs by selling their land while those in town borrow money at interests.[15,20] If these approaches fail, households may increase labour supply, work more hours or borrow from private lenders at high interest rates.[21] Based on the foregoing observations, this study sought to examine the methods for coping with health care costs among workers in the informal sector in Dar es Salaam, Tanzania.

METHODS

This study was a quantitative cross-sectional study that involved 889 workers in the informal sectors. This research was carried out from September to December 2020 in Dar es Salaam, Tanzania. The region is located between -6.82 latitude and 39.27 longitudes and an elevation of 24 meters above the sea level. This region has three administrative municipalities and 90 wards with 4.36 million people (equals 10% of the country's population).[22]

This region was chosen due to the fact that this is the biggest region in the country and there many informal sector workers who are doing different activities that expose them to more health risks and also the region contributes up to 17.02% of the country's GDP.[13,19] Also, this region has health facilities at different levels and capacities under the ownership of either government, private organisations or individuals, Faith Based Organisations (FBO), or the military.[23] The selection criteria for participation in this study were: willingness to participate, 18 years of age and above, being involved in informal sector activities and residing in Dar es Salaam region. The study excluded all individuals who did not meet the mentioned criteria. Multistage sampling technique was used for selecting the sample units. This technique was used because the population was geographically diverse.[24] Firstly, through simple random sampling (lottery method), 6 wards (2 wards from each

municipal) were selected. Secondly, through similar technique as in stage one, 12 streets were selected from the 6 wards (2 streets from each ward) and lastly 889 respondents were randomly selected with the help of ward and street leaders. A pre-tested, semi structured interviewer-administered questionnaire was used to collect the data. This questionnaire was developed from reliable and validated questionnaire used in previous studies.[25–27] The questionnaire consisted of both open and close ended questions which captured socio demographic and economic information, insurance uptake status and the coping strategies that the informal sector workers use to manage the health care costs. During data collection, the researcher was assisted by six trained research assistants. Data were cleaned to remove incomplete responses and irrelevant information.[28] Clean data were entered into excel and then transferred to the Statistical Package for Social Sciences (SPSS Version 23) for analysis. Descriptive statistics (frequencies, means and standard deviation) were used to summarize the data. Bivariate and multivariate logistic regression analysis was carried out to determine the methods for coping with the health care costs. This study used uptake of health insurance as a dependent variable which is a binary choice. The independent variables were out of pocket payments, borrowing money from friends, relatives, banks and micro finances, and selling assets, request for a support from friends and relatives. A p value of <0.05 was considered statistically significant. This research was approved by Tanzania's National Health Research Ethics Review Committee (NHRERC) with reference number (NIMR/HQ/R.8a/Vol.IX/3375) on 7th March 2020. Informed consent (both written and verbal) for participation and publication of the study results was obtained from the participants before commencing the study.

RESULTS

Socio-economic and demographic characteristics of respondents

Data were collected from 889 workers in the informal sectors whereby majority 565 (63.6%) were male. The mean age of the respondents was 34.8 years (SD±10.4) and almost half, 439 (49.4%) of the respondents had attained primary education. Majority, 574 (64.6%) of the respondents had been married and belonged to households of 4-6 people as shown in Table 1.

Insurance coverage

Out of the 899 study participants, 810 (91.1%) were currently not members of any health insurance and only 79 (8.9%) were members of health insurance. Among the members, most of them 41 (51.9%) paid health insurance premiums for themselves while 11 (13.9%) had their insurance cover paid by their wives and 4 respondents (5.1%) had their insurance cover paid by their relatives and friends. More than three quarters 60 (77.2%) were enrolled in the National Health Insurance (NHI), while 13 (16.5%) were enrolled in private health insurance and 6 (7.6%) were enrolled in Community Health Fund (CHF). Furthermore, majority 605 (74.7%) of the uninsured informal sector workers were willing to uptake health insurance.

Table 1: Characteristics of the respondents.

Socio demographic characteristics	N (%)
Sex (n=889)	
Female	324 (36.4)
Male	565 (63.6)
Age (years) (n=889)	
<20	33 (3.7)
21-30	348 (39.1)
31-40	258 (29.0)
41-50	178 (20.0)
51-60	55 (6.2)
61+	17 (1.9)
Marital status (n=889)	
Married	574 (64.6)
Unmarried	315 (35.4)
Household size (n=889)	
1-3	297 (33.4)
4-6	484 (54.4)
7-9	98 (11.0)
10+	10 (1.1)
Education (n=889)	
No any formal education	40 (4.5)
Primary level	439 (49.4)
Secondary level	313 (35.2)
Tertiary level	97 (10.9)
Income ($)(1usd ~2310tsh) (n=889)	
<43.3	287 (32.3)
43.3-129.9	426 (47.9)
129.9-216.5	115 (12.9)
216.5-303.0	26 (2.9)
303.0+	35 (3.9)
Economic activity (n=889)	
Small businesses (petty traders)	540 (60.7)
Driver (car and tricycle and motorcycle	115 (12.9)
Mechanical workers	106 (11.9)
Food vendors	97 (10.9)
Farmer and herdsman	31 (3.5)
Facility of preference (n=889)	
Government health facilities	489 (55.0)
Private health facilities	350 (39.4)
Over the counter medication	31 (3.5)
Tradition healer	19 (2.1)

Coping strategies for managing health care costs

The current study found that most 810 (90.1%) of the informal sector workers were uninsured while 809 (91.1%) had no budget for health. In addition, 37 (46.3%)

they had a health budget which did not exceed 50,000Tsh (21.6$). The status of being uninsured and having small budget for health forces the workers in the informal sector to adopt different methods to finance their health service costs when the need arises. The findings showed that majority, 812 (91.3%) of the respondents reported paying out of pocket for health services while 28 (3.1%) were undecided and 49 (5.5%) disagree that they pay out of pocket for health services. More than three quarter of the respondents 747 (84.0%) agreed that they request for exemptions from medical facilities while 111 (12.5%) disagree. In addition, 661 respondents (74.4%) request for support from friends and relatives as a way to get money for medical costs while 197 (22.2%) disagree requesting for support from friends as a way to finance their medical costs. Most of the respondents, 570 (64.1%) reported to borrow some money from friends, relatives, banks and micro finances for coping with medical costs while 563 (63.3%) reported selling their assets to cover their medical costs (Table 2).

Table 2: Informal sector workers' methods for health care financing.

Methods for health care financing	Responses		
	Agree (%)	Undecided (%)	Disagree (%)
Out of pocket payments	812 (91.3)	28 (3.1)	49 (5.5)
Request for exemption at the health facility	747 (84.0)	31 (3.5)	111 (12.5)
Request for a support from friends and relatives	661 (74.4)	31 (3.5)	197 (22.2)
Borrowing from friends, relatives, banks and micro finances	290 (32.7)	29 (3.3)	570 (64.1)
Selling assets	563 (63.3)	27 (3.0)	299 (33.5)

Table 3: Multivariate analysis on the coping strategies for managing health care costs and uptake of health insurance.

Methods for health care financing	B	S.E.	Wald	Df	Sig.	Exp (B)	95% CI for EXP (B)	
							Lower	Upper
Request for exemption at the health facility	-0.039	0.199	0.038	1	0.845	0.962	0.651	10.422
Out of pocket payments	-1.216	0.215	31.998	1	0.000*	0.297	0.195	0.452
Request for a support from friends and relatives	-0.184	0.147	1.574	1	0.210	0.832	0.623	10.109
Borrowing from friends, relatives, banks and micro finances	-0.548	0.173	10.075	1	0.002*	0.578	0.412	0.811
Selling assets	-0.397	0.144	7.620	1	0.006*	0.672	0.507	0.891
Constant	3.178	0.610	27.107	1	0.000	23.994		

Source: Field Data (2020); Note: *= Significant p<0.05, B = Beta Coefficient; SE = Standard Error, Exp (B) = Exponential Value of B (Beta)

With regards to the relationship between the uptake of health insurance and coping strategies for managing health care costs in terms of Pearson $\chi 2$ value, the strategies which were statistically significant were request for exemption at the health facility (p=0.000), selling assets (p=0.000), paying out of pocket (p=0.000), request for support from friends and relatives (p=0.001), and borrowing from friends, relatives, banks and micro finances (p=0.004).

In a multivariate analysis between uptake of health insurance and coping strategies for managing the health care costs, the results revealed that workers in the informal sector were 0.3 less likely to uptake health insurance due to their ability to pay cash for medical service as a strategy to manage the health care costs (p=0.000; Exp (B), 0.297; 95% CI, 0.195-0.452). Also, workers in the informal sector were 0.6 less likely to uptake health insurance due to their ability to access opportunities of borrowing money from friends, relatives, banks and micro finances as a method for managing the heath care costs (p=0.001; Exp (B), 0.578; 95%CI, 0.412-0.811). The workers in the informal sector were 0.7 less likely to uptake health insurance due to possession of assets which could be sold as a coping strategy for financing health care services (p=0.006; Exp (B), 0.672; 95% CI, 0.570-891) (Table 3).

DISCUSSION

It should be remembered that the main objective of this study is to examine the coping strategies for managing the health care costs among the informal sector workers in Dar es Salaam, Tanzania. The study findings showed that

out of pocket payments, borrowing money from friends, relatives, banks and micro finances, and selling assets were the significant strategies for managing the health care costs among workers in the informal sector.

Out of pocket a payment was mentioned as a method that the informal sector workers use for managing health care costs. This finding is similar with several studies which documented that most of the informal sectors in LMICs have not enrolled to any health insurance schemes, therefore in order to manage medical costs OOP is the most common method.[5,29,30] The OOP may be from the little saving that they have or part of the capital of the economic activities that they are doing. Furthermore, the World Bank has reported that OOP expenditure for health care is at 43.65% in low-income countries, 37.38% in LMICs, 31.36% in upper middle-income countries and 20.01% for high-income countries. These expenditures are substantially over the threshold of 10% indicating a substantial risk and households are subjected to catastrophic health care expenditures.[31] Contrary to our findings, studies by Gnawal et al 2009, Parmar et al, Feeley et al 2017 have revealed that rich people have ability to enroll in different health insurance programs and they face less catastrophic health expenditures compared to poor people.[32–34] The difference on these results may be attributed by the fact that many households who are on informal sectors lack adequate financial capacity to contribute in any form of pre-payment schemes. Out of pocket becomes the main source of health financing because illnesses are unexpected and people have to pay and get health care services so as to save life. Also, the low contribution of the government to health spending forces individuals to pay in order to access health services.[35]

Moreover, the findings showed that selling assets is one of the methods for coping with health care costs among the workers in the informal sector. Similar studies conducted by Akazil et al 2018, Kabir et al 2019 and Tahsina et al, 2018 indicated that in order for the poor to afford medical costs, selling or mortgaging assets is the viable option for getting money to carter the medical bills.[36–38] Different results were revealed in Northern Ghana in 2011 that the presence of mutual health insurance that charges lower premiums attracted more people to demand more insurance and this ensured service accessibility without selling assets.[39] Selling of assets to get some money for medical expenses could be attributed by the necessity of accessing medical services despite the economic status of the individuals. The nature of the workers in the informal sector of having low and inconsistent income, low budget for health as well as lacking insurance cover compel the workers in the informal sector to sell assets so raise money to access health services. In the presence of affordable insurance schemes, poor people would have saved their assets for future gain.

Furthermore, the fact that most of the workers in the informal sector have neither health insurance (91%) nor the budget for health (91%), and those with some budget, the amounts were low (<50,000Tsh (21.6$), borrowing money from other members of the family, friends, neighbors and financial institution or moneylenders and were the mechanisms used so as to cope with the costs of health care. This result is similar to findings of several studies which reported that when medical bills exceed a household's income borrowing money from friends, or take out a loan using collateral are the coping mechanisms used by workers in the informal sector to finance their health care needs in order to save life.[14,30,34,38,40] The value placed in individual's health makes household to spend beyond their capacity in order to solve the short run problem of health service inaccessibility without considering the long run possible impoverishment that may be associated with high rates of interest.

CONCLUSION

The presence of different coping strategies to facilitate accessibility of health services has led to low uptake of health insurance. These strategies are effective for reducing the short-term problem of inaccessibility to health services but it led to future impoverishment due to the presence of debt and depletion of households' wealth. Involvement of the social welfare department at the district on the use of available strategies to pay insurance premium like how they use for accessing health services will increase insurance uptake and hence improved service accessibility. Also, Policy measures should establish a long-term opportunity such as having affordable health insurance schemes or having additional social protection programs such as exemptions and waivers that would not only improve accessibility to health care services but also it would lower the probability of catastrophic expenditures among the informal sector workers.

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