

Willingness to pay for social health insurance among staffs in Ethiopian Public Health Institute, Addis Ababa

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Abstract

Background: In Ethiopia, utilizations of health care services are low, for this reason the country is planning to implement social health insurance scheme.

Objective: To assess the level of willingness to pay and factors associated for social health insurance in Ethiopian Public Health Institute, Addis Ababa.

Method: A cross-sectional facility based study was employed among 368 randomly selected employees by 2016. Multivariate logistic regression analysis was done for with 95% CI to assess the level of willingness to pay for social health insurance.

Results: Nearly 24.1% (95%CI=19.9-29.1) of the employees were willing to pay for the social health insurance. Respondents' marital status of being divorced and widowed and having favorable attitude were identified as significant factors for willingness to pay for the scheme.

Conclusion: In this study level of willingness to pay for social health insurance scheme is very low, which was influenced by marital status and level of attitude. Therefore, training to improve attitude among the employees should be conducted for improving willingness to pay.

Keywords: Social health insurance; willingness to pay, out of pocket, risk pooling.

Introduction

Many low-income and middle-income countries (LMICs) are faced with the challenge of raising sufficient funds to finance health services in an equitable way. Although it is expected that governments should play an important role in this regard, most governments are embarrassed by the high proportion of informal workers. Also, other economic contexts such as high public debt and population growth rate have made difficulty to increase government expenditure on health (Adebayo et al. 2015). Health insurance schemes are risk pooling mechanism that pools together the relatively healthy with the relatively ill people. Hence in improving the health care financing of Ethiopia, the following policy options are considered, Community Based Health Insurance (CBHI) and Social Health Insurance (SHI). The SHI, which is a financing scheme where monies are pooled into a common fund and used for paying for healthcare costs of members (Kimani et al. 2012). SHI is in implementation phase and intended to cover 10.46% of the population who are occupied in formal sectors. In Ethiopia, enrolling in SHI is compulsory for all in the formal sectors similar to Ghana (Dibaba et al. 2014). However in some countries such as Iran are expanding the coverage through voluntary, contributory insurance schemes (Haile et al. 2014).

There has been little study of the factors affecting enrollment in SHI, probably because the mandatory nature of such schemes theoretically eliminates the decision-making process (Alkenbrack et al. 2015). In the absence of data on actual health insurance usage, economists measure willingness-to-pay for health insurance in low-income countries by contingent valuation methods which bring out what individuals would be willing to pay for health insurance package (Ahmed et al. 2016). Globally, it is anticipated that about 150 million people face catastrophic health costs annually because of direct payments for health whereas about 100 million are determined into poverty. For this reason, Innovative ways to increase funds for the provision of health services such as developing risk-sharing mechanisms are often sought (Noubiap et al. 2013).

There was increase in SHI coverage in China from less than 15% to more than 95% in 2011 took 10 years (Kusi et al. 2015). However, in Ethiopia, the coverage with formal health insurance is very minimal, as of 2008, only 1.1 % of Ethiopians had any kind of insurance. Studies conducted in Africa and Asia reported that socio-demographic and economic factors were responsible for low level of willingness to pay for SHI (Agago et al. 2014). A study conducted in Osunstate, Western Nigeria on

knowledge and attitude of civil servants, only 0.3% have so far profited from National Health Insurance Scheme (NHIS) while 199 (52.5%) of respondents agreed to join in the scheme. A significant association exists between willingness to participate in the NHIS scheme and awareness of options for health care financing and NHIS ($P < 0.05$) (Olugbenga-Bello and Adebimpe 2010). The study in Iran on willingness to pay for SHI showed that household heads with higher levels of education, income and those who worked had more willingness to pay for the health insurance. Besides, the willingness to pay increased in direct proportion to the number of insured members of each household and in inverse proportion to the family size (Nosratnejad et al 2014). Another study done in the Ethekwini and UGu districts of KwaZulu-Natal, South Africa showed that, only 7.1% of the respondents had no knowledge of the National Health Insurance (NHI) with over 92% having either good or satisfactory knowledge. Knowledge of the NHIS plays a major role in the decision-making process (Latiff-Khamissa and Naidoo 2016). Nurses have the greatest knowledge about NHIS when compared to artisans, clerical officers and teachers. This is not unexpected since the insurance policy has to do with health care provision which nurses play a very important role in considering the fact that nurses are involved in the implementation of the policy, 64% awareness among the nurses is therefore too low (Chubike et al. 2013). Study about the level of willingness to pay for SHI in Ethiopia is limited; therefore, this study was aimed to determine the magnitude of willingness to pay and its factors associated.

Materials and Methods

An institutional based quantitative cross sectional study was conducted among employees in EPHI. An Institution-based cross-sectional study in quantitative method was conducted among employees of Ethiopian Public Health in Addis Ababa which is the research wing of Federal Ministry of Health (FMoH). It has a total of 670 staff members during the study period. Out of which, 460 are technical and the rest 210 are administrative staffs. After having a list of subjects from the institute human resource office, study participants were selected by using simple random sampling technique. Sample size of 368 was determined by single population formula to determine the level of willingness to pay. The 95% Confidence interval, 5% margin of error and 0.71 proportions of willingness to pay in Wolaitasodo were taken as assumptions (Agago et al. 2014). The largest sample size which determined by the double population proportion formula was taken to assess the associated factors. Data were entered in to Epi-info

then analyzed using SPSS V.20. A descriptive statistical analysis was used to describe the findings for socio-demographic and other relevant variables. All variables were entered into binary logistic regression and those variables with p -value < 0.2 were again analyzed using multivariate logistic regression and those variables with p -value less than 0.05 were taken as significantly associated with dependent variable. The result were presented in text and tables based on the type of data.

Result

A total of 368 study participants were included in this study with 96.08% response rate. The mean age of participants was 32.53 years, ranging from 30-39 years. Among the participants, 63.6% were male; 76.8% were Orthodox Christian followers, by religion, 50.3% were single by marital status, 32.3% were undergraduates. About 39.7% of employees had one to two family members. The mean family size was 1.86 ± 0.76 people ranged from one to two members.

Table 1: Characteristics of study participants in Ethiopian Public Health Institute, Addis Ababa, Ethiopia, 2016(n=368)

Variable	Category	N	%
Gender	Male	234	63.6
	Female	134	36.4
Marital status	Single	185	50.3
	Married	173	44.8
	Divorced and Widowed	10	4.9
Education	Secondary school and less	23	6.3
	Certificate and Diploma	105	28.5
	Undergraduate	119	32.3
	Master's degree and above	113	30.7
	582-1586	58	15.8
Monthly salary	1587-3579	116	31.6
	3580-4662	59	16.1
	≥ 4663	134	36.5
	> 10 years	92	27
Heard about SHI	No	47	43.1
	Yes	312	86.9
Attitude	Unfavorable	89	44.1
	Favorable	113	55.9

Health and Health related characteristics of respondents: As presented in Table 2, 36.9 % of the members of the household had at least one member encountered illnesses 3 months prior to data collection. From those who got treatment, 88% of respondents covered the medical expenses by out of pocket payment. Fifty six percent of the members, who got illness 3 months prior to data collection, received their treatment from private health facility and the rest from public health facility.

Willingness to pay and not to pay for Social Health Insurance: The study identified that only 24.1 % of the participants (95% C.I.=19.9-29.1) were willing to pay 3% of salary for SHI. The respondent main reason for not to pay or the scheme were limited

health services given in SHI (39.3%); perceiving poor quality services delivery(21.1%); shortage of income (15.9%); free health services expectation and

believe for health professionals(13.7%); perceive as a governments responsibility (5.6%) and lack of knowledge about SHI (4.4%).

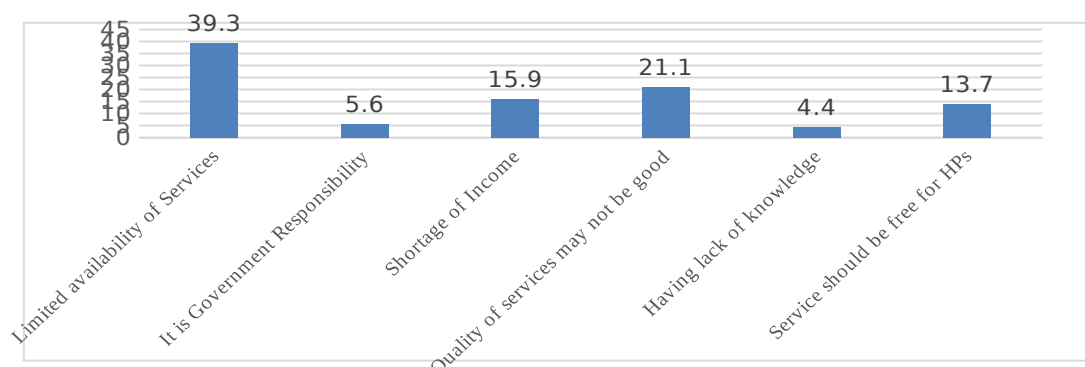


Figure 1: Reasons for not willing to pay for social health insurance at EPHI, 2016

Factors for willingness to pay: Being divorced and widowed was 6.05 times more likely willing to pay compared being to single (AOR=6.05, 95%CI=(1.017,35.969). Participants who had favorable attitude were 4.97 times more likely willing to pay as compared to those with unfavorable attitude

(AOR=4.97 95%,CI=(1.59,15.44). However, in this study the respondents' age, sex, year of experience, educational status, and monthly salary did not show statistically significant association with willingness to pay for SHI.

Table 2: Factors associated with level of willingness to pay for SHI scheme in EPHI, 2016

Variable		Willingness to pay		COR	AOR
		No	yes		
Sex	Male	171	62		1
	Female	103	25	0.67(0.40,1.13)	0.61(0.26,1.16)
Age	20-29	89	27		1
	30-39	115	36	1.03(0.58,1.83)	0.64(0.14,2.95)
	>40	30	16	1.76(0.86,4.38)	0.55(0.06,4.96)
	Single	143	40		1
Marital status	Married	120	40	1.19(0.72,1.97)	1.89(0.63,5.68)
	Divorced and Widowed	11	17	2.29(0.83,6.21)	6.05(1.02, 35.96)
Education	Secondary school and less	14	7		1
	Certificate and diploma	80	20	0.50(1.18,1.40)	0.29(0.04, 1.86)
	Undergraduate	92	27	0.58(0.22,1.60)	0.46 (0.01, 3.32)
	Master's degree and above	81	32	0.79(0.29,2.14)	0.22(0.01, 3.14)
Year of experience	1-5	82	16		1
	6-10	119	40	1.66(0.87,3.18)	1.04(0.23, 4.78)
	>10	64	28	2.35 (1.18,4.72)	1.34 (0.18, 10.09)
Monthly salary binned	582-1,586	37	19		1
	1,587-3,579	94	17	0.35(0.17,0.75)	0.29(0.05, 1.86)
	3,580-4,662	46	13	0.55(0.24,1.26)	0.45(0.04, 4.94)
	>=4,663	96	38	0.77(0.40,1.50)	2.72(0.20, 37.08)
Attitude	Unfavorable	81	7		1
	Favorable	81	31	5.23(2.07,13.21)	4.97(1.59,15.44)

1=Reference categories

Discussion

In Ethiopia, utilizations of health care services are low, for this reason the country is planning to implement social health insurance scheme. Study on the level of willingness to pay for SHI in Ethiopia is essential for implementing the social health insurance; therefore, this study was aimed to determine the magnitude of willingness to pay for social health insurance and its factors associated. Our result showed, the willing to pay for social health insurance scheme were lower compared to a study conducted in Wolayeta Sodo town (Agago et al. 2014); Nigeria (Wright 2013); Malaysia (Mohammad in Nigeria (Olugbenga and Adebimpe 2010), Ghana (Jehu et al. 2011) and India (Mathur et al. 2014). Therefore, awareness creation by giving training might be important to make favorable attitude.

The marital status also had positive significant association with willingness to pay for social health insurance in this study. Being divorced and widowed is more likely willing to pay for social health insurance compared to the single, but no significant association was shown with being married. This result was supported by another study done in Nigeria (Mohammed et al. 2014) and India (Gautam and Kumar 2012). This can be explained by difficult and precarious conditions facing the divorced (Yusuf 2009).

Our result showed the level of education is not significant which is consistent with the finding of the previous study conducted in China (Bärnighausen et al. 2007). However, this result was contradict with a study conducted in Addis Ababa (Obse 2015); Wolayeta Sodo town (Agago et al. 2014); Ghana (Dixon et al. 2013); Ghana (Brugiavini and Pace 2016) and Iran (Nosratnejad et al. 2014)). Even though participants with high degree holders more confident to accept the new system in their mind (Agago et al. 2014), they believe that since they were health professionals and should get the service freely.

Our result showed age and income were not significantly associated with willingness to pay for health insurance which is not consistent with the study conducted in India (Mathur 2014); India (Gautam and Kumar 2012); Vietnam (Lofgren et al. 2008); in St. Vincent and the Grenadines (Adams et al. 2015); Malaysia (Noor et al. 2017); Cotidivore (Dobe-Gbratto 2017) and Vietnam (Lofgren et al. 2008). However age and gender were not affected the willingness to pay for health insurance in the previous study in Tanzania (Tundui et al. 2014) and in Southern Nigeria (Omotowa et al. 2016) which is consistent with our result. This might be due to socio-cultural and health insurance practice difference of the country.

et al. 2015); and Vietnam (Lofgren et al 2008). This might be due to different attitude on the social health insurance and differences in the health insurance practice of the country. This was also supported by our result which is participants believe that limited availability of the service in the health center compared to the free service they got from St. Poul hospital. From this study, having favorable attitude had strong positive significant association to willingness to pay for social health insurance. This study was supported by the study done

Conclusions

In this study, level of willingness to pay for social health insurance scheme is very low, which will be influenced the implementation of the SHI at EPHI without changing their attitude. The willingness to pay for social health insurance scheme is affected by marital status and level of attitude. Therefore, conducting of training may be important to improve attitude of the employees for improving willingness to pay.

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