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WILLINGNESS TO PAY FOR HEALTH INSURANCE: THE CROSS-SECTIONAL STUDY IN SAUDI ARABIA

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KEYWORDS

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ABSTRACT

Due to rapid changes in disease pattern, demand for advance healthcare services has been increased extensively in Saudi Arabia. In Saudi Arabia, health facilities are provided free to general public. This has increased the burden of communicable and non-communicable diseases expenditure on ministry of health. On other hand, to private sector employee cooperative health insurance program is established. Saudi Government plan to extend this program to the public sector as well. In this study willingness to pay for health insurance opinion was taken from general public as they are main stakeholder. In case if government extend this private employer cooperative insurance program to other sectors whether people are willing to pay for private insurance or not. Non-probability convenience sampling technique was used to select sample size. Findings revealed that majority of people in Saudi Arabia have no chronic disease and likewise they have no private insurance ownership as well. On the basis of gender, education, income, insurance ownership, family size, chronic disease and obstacles people are significantly willing to pay for health insurance. Policy makers, & MoH can take benefits from findings of the current study and it would help them to formulate insurance premiums & provide additional source of funding for healthcare in Saudi Arabia.

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INTRODUCTION

Willingness to pay means a maximum amount one is willing to pay for commodity or service. Saudi Arabia is one of high-income countries with highest population in the Middle East. In Saudi Arabia life expectancy for both male and female has been increased to 75 years which leads to the high demand for healthcare services. Saudi Arabia is providing free of charge healthcare services to its citizens at point of use. Being one of rapid growing economies in the world with almost more than 35 million population, government of Saudi Arabia has realized that this model is not sustainable in long run (Alharbi, 2022; Alharbi, 2022). Therefore, decision makers in Ministry of Health (MoH)

are thinking to introduce sustainable health system through introduction of contributory health insurance in which members have to contribute regularly. Since last two decades budget allocated for MoH has been increased significantly. In 1970 it was 2.8% while in 2020 it was 7.82%. Besides, there is significant changes introduced in health system that has significant impacts on population health status but a huge burden on communicable and non-communicable diseases expenditure on MoH (2020). Along with financial burden there are challenges like increase in population, citizens with age of more than 60 years need health services, increase in cost and shift in pattern of diseases, due to these factors' healthcare spending increased to 6.4% in 2018 (World Bank, 2020; Walston, Al-Haribi & Al-Omar, 2008).

In order to control the cost healthcare policy makers and decision makers have urged to establish new health insurance system. In 2006 one system which is called employer sponsored cooperative health insurance is already established. This plan was introduced to cover those individuals who are working in private sector organizations. Policy makers have highlighted the importance of such system to spread it to cover all those working in the public sector (Setegen, Andargie, Amare Debie, Setegn, 2021; Akwaowo, Umoh, Motilewa, Akpan, Frank, Nna, Okeke & Onwujekwe, 2021). It is essential for those working in government sectors to understand the importance of willingness to pay for health insurance. Opinion of the general public could be obtained to bridge the gap among real situation and new proposed plan. Health policy makers should involve the general public as they are the stakeholders and it is important to get opinion before introducing any health financing reforms (Rahman & Alsharqi, 2019; Saudi Arabia Monetary Agency 2021). In the Saudi Arabia, limited studies have been conducted in cities on willingness to pay (WTP) for health insurance. Past studies of Al-Hanawi et al. (2020) reported that family size, income, education, health facility and quality of life are significant factor of predicting WTP. Big cities have adequate health facilities and medical infrastructure as compared to small cities but the current study has focused on general population of Saudi Arabia.

RQ1: Are Saudi citizens willing to pay for the health insurance?
RQ2: Which demographic factors significantly affect Saudi citizens WTP for health insurance?

LITERATURE REVIEW

In order to obtain universal health coverage, insurance is used as tool in the developing countries. Health insurance provided by government is to provide its citizens financial protection (Akwaowo et al, 2021). One of the aims of health insurance is to provide the quality health services to citizens (Donfouet, Mohamed, Otieno, Wambiya, Mutua & Danaei, 2020; Almutairi & Moussa, 2014). In Saudi Arabia health services are provided free by government to its citizens at point of use. This is a huge burden on government's budget. These services are provided by primary healthcare centers, general and specialized hospitals of ministry of health (Alasmri, Almalki, Fitzgerald & Clark, 2020; Alzghaibi, Alharbi, Mughal, Alwheeb & Alhlayl, 2023). Currently all health services are funded by government without taking any contribution from citizens. Government expenditure on health is 75% & 25% is contribution of private sector. Due to increase in health services prices globally, cost of expenses upon health are increasing in Saudi Arabia (Alharbi, 2022; General Authority for Statistics, 2020). Due to increase in non-communicable diseases financial burden has significantly

increased (Alzghaibi et al., 2022). People above age of sixty years require more health services (Karlin, Weil & Flemban 2016).

The change in pattern of chronic diseases, aging population and increase in population increase financial burden. Due to free health services, overutilization of health services has increase waiting time. Vision 2030 has placed financing reforms to ensure that all citizens, expatriates, residents and visitors can have timely access to quality health services via insurance (The Saudi Ministry of Health, 2017). These reforms include to involve private health insurers, for this purpose market would be established for licensed and regulated insurers and they would provide national health insurance (NHI). The policy makers have highlighted the importance of such system to spread it to cover all those working in public sector (Alharbi, 2022). NHI main purpose is to get contribution from citizens to meet the increasing cost. This contribution is same as insurance premium with no refund policy. This model would be same like used by private health insurance. NHI is supposed to give relief to government and enhance quality services and performance of physicians & nurses (Alharbi, 2022; Mughal, 2023). To best of researcher's knowledge limited empirical evidences are available about Saudi population willingness to pay for national health insurance. This study would help policy makers to shape their decisions.

RESEARCH METHODOLOGY

The current study is quantitative in nature. The data collected was primary and cross-sectional. Data was collected online in January 2023 via Google forms. The respondents belong to different sectors like schools, colleges, universities (public & private), banks, Saudi posts, pharmaceuticals, food, healthcare organizations, hospitals and primary healthcare centers (PHCCs). Numbers of individuals working in these sectors are approximately 66 thousand. Keeping in mind the error of three percent, confidence interval 95% and sixty five percent of proportion of WTP for insurance. Total 1000 individuals were contacted. In this regard, total 720 completed questionnaires were received and used in the analysis. Non-probability Convenience sampling technique was used to select the sample size.

Measurement

The questionnaire was designed to get data of respondents' socio-economic variables like gender, marital status, age, education, income, size of family, household income having health insurance, having chronic disease, time and distance from home to health facility. Questionnaire was adopted form (Alharbi, 2022).

Data Collection Methods

Data was collected from general population. Respondents were explained about aim of study prior to data collection. It was made assured that this data would be used for academic purpose. 3-4 days were given for filling questionnaire.

Data Analysis Tools & Techniques

SPSS was used in the analysis of the data. Data was presented in tabular and percentages. Moreover, chi-square test and logistic regressions were also used to investigate the willingness to pay for the health insurance.

FINDINGS OF STUDY

Table 1 presents socio-economic information of the respondents. It was revealed form the findings in Table 1 there are 522 (72.5%) males followed by female respondents which are 198 (27.55) of the sample size. Further analysis of results revealed that majority of the respondents belong to age group of 35-44 years 274(38.1%) followed by those having age between 45-54 227(31.5%) only 7(1%) belong to age of 18-24 years. Regarding location majority of the respondents 589(81.8%) lived in urban areas and 696(96.7%) respondents were married. Besides, 313(43.55) respondents were having undergraduate education followed by those having master degrees 163(22.6%); 55 (7.6%) were having doctoral degrees, 107 with diploma and 82 with high school/below education participated in the study.

In Saudi Arabia majority of the respondents were having big family size with 6 or more members i.e., 384 (53.3%) followed by those having 3-5 members 281 (39%) and only 55 (7.6%) having 1-2 members. 495 (68.8%) have no chronic disease, and majority of the respondents revealed that it takes 15-30 minutes from their home to the health facility i.e., 541(75.1%). Moreover, majority 511 (71%) revealed that they face no obstacle with high level of satisfaction 347 (48.2%). The income level of individual is also investigated. They have revealed that 222(30.8%) have income between 6-12 thousand Saudi riyals (SAR), followed by those having 12-18 thousand SAR i.e., 209 (29%) only 67 respondents have income less than 6 thousand SAR. 114 have more than 24 thousand SAR while 108 have the income of 18-24 thousand SAR. 516 respondents said they do not possess any private health insurance.

Table 1 Socio-Economic Information

Variable	Characteristics	n	%
Gender	Female	198	27.5
	Male	522	72.5
Age	18-24	7	1
	25-34	62	8.6
	35-44	274	38.1
	45-54	227	31.5
	55-64	127	17.6
	65+	23	3.2
Location	Sub-urban/rural area	131	18.2
	Urban area	589	81.8

Table 1a Socio-Economic Information

Marital Status	Married	696	96.7
	Unmarried	24	3.3
Education	High School or Below	82	11.4
	Diploma	107	14.9
	Undergraduate	313	43.5
	Master	163	22.6
	Doctoral	55	7.6
Size of Household	1-2 Members	55	7.6
	3-5Members	281	39
	6 or above	384	53.3

Chronic Disease	No	495	68.8
	Yes	225	31.3

Table 1b Socio-Economic Information

Travel Time	<15 Minutes	4	0.6
	15-30 Mints	541	75.1
	30-60 Mints	136	18.9
	>60 Minutes	39	5.4
Obstacles	No	511	71
	Yes	209	29
Satisfaction	Yes	347	48.2
	No	373	51.8
Income of Household	<6k SAR	67	9.3
	6-12k SAR	222	30.8
	12-18K SAR	209	29
	18-24K SAR	108	15
	>24K SAR	114	15.8
Insurance	Yes	204	28.3
	No	516	71.8

Table 2 present findings of chi-square results. it was evident that on the basis of gender, education, family size, chronic disease, obstacles, income and insurance were found significant, the remaining location, marital status, satisfaction, distance were found insignificant. Findings revealed that male respondents significantly more willing to pay for the health insurance as compared to their female counterparts. Moreover, individuals with undergraduate degrees are more willing to pay and found statistically significant along with those having no chronic disease with more willing to pay for the insurance. Likewise, those with no obstacles, income and possessing insurance are found significant in the results.

Table 2 Chi square for Willingness to Pay and Not Willing to Pay for Health Insurance

Variables	WTP (No)	WTP (Yes)	Chi X2	p
Female	63(18.4%)	135(35.8%)	27.404***	0.000
Male	280(81.6%)	242(64.2%)		
18-45 Years	276(80.5%)	294(78%)	0.671	0.413
46-65 Years	67(19.5%)	83(22%)		
Sub-urban Area	71(20.7%)	60(15.9%)	2.762	0.097
Rural Area	272(79.3%)	317(84.1%)		
Unmarried	12(3.5%)	2(3.2%)	0.055	0.814
Married	331(96.5%)	365(96.8%)		
High School	39(11.4%)	43 (11.4%)	9.491*	0.50
Diploma	55(16%)	52(13.8%)		
Undergraduate	158(46.1%)	155(41.1%)		
Master	61(17.8%)	102(27.1%)		
Doctoral	30(8.7%)	25(6.6%)		
1-2 Members	9(2.6%)	46(12.2%)	24.28***	0.000
3-5 Members	135(39.4%)	146(38.7%)		
6 or Above	199(58%)	185(49.1%)		

Table 2a Chi square for Willingness to Pay and Not Willing to Pay for Health Insurance

Variables	WTP (No)	WTP (Yes)	Chi X2	p
Chronic Disease (No)	223(65%)	272(72.1%)	4.25**	0.039
Yes	120(35%)	105(27.9%)		
1-30 Mints Distance	256(74.6%)	289(76.7%)	0.399	0.527
31-60 Mints	87(25.4%)	88(23.3%)		
Obstacles No	255(74.3%)	256(67.9%)	3.615*	0.057
Yes	88(25.7%)	121(32.1%)		
Not Satisfied	183(53.4%)	190(50.4%)	0.628	0.428
Satisfied	160(46.6%)	187(49.6%)		
Income <6K SAR	34(9.9%)	33(8.8%)	23.414***	0.000
6-12K SAR	94(27.4%)	128(34%)		
12-18K SAR	125(36.4%)	84(22.3%)		
18-24K SAR	51(14.9%)	57(15.1%)		
>24K SAR	39(11.4%)	75(19.9%)		
Insurance No	270(78.7%)	246(65.3%)	16.037***	0.000
Yes	73(21.3%)	131(34.7%)		

Table 3 presents the findings of logistic regression in order to examine the desired prediction. It was revealed that on basis of gender, marital status, doctoral degree holders, house hold size, chronic disease, obstacles, level of satisfaction, income as well as insurance ownership are found statistically significant.

Table 3 Binary Logistic regression Analysis

Variables/Predictors	B	S.E.	Sig.	Odd Ratio
Gender (1)	1.002	0.196	0.000	2.723
Age (1)	-0.323	0.218	0.138	0.724
Location (1)	-0.097	0.229	0.674	0.908
Marital Status (1)	-1.674	0.599	0.005	0.187
Education			0.015	
Education (1)	0.417	0.401	0.298	1.517
Education (2)	0.664	0.386	0.086	1.943
Education (3)	0.475	0.338	0.159	1.609
Education (4)	1.092	0.358	0.002	2.979
Household Size			0.000	
Household Size (1)	2.334	0.503	0.000	10.323
Household Size (2)	-0.028	0.185	0.879	.972
Chronic Disease? (1)	0.535	0.190	0.005	1.707

Table 3a Binary Logistic regression Analysis

Variables/Predictors	B	S.E.	Sig.	Odd Ratio
Distance (1)	0.108	0.202	0.593	1.114
Obstacles (1)	-0.795	0.210	0.000	0.451
Level of Satisfaction (1)	-0.483	0.184	0.009	0.617
Household Income			0.000	
Household Income (1)	-1.115	0.378	0.003	0.328
Household Income (2)	-0.449	0.295	0.129	0.639
Household Income (3)	-1.144	0.279	0.000	0.319
Household Income (4)	-0.411	0.304	0.176	0.663

Insurance Ownership (1)	-0.813	0.198	0.000	0.443
Constant	1.021	0.458	0.026	2.775
Negelkerke's R2=0.229				

DISCUSSION

The main aim of this study was to investigate the willingness to pay for health insurance among general population of Saudi Arabia. Findings revealed that most of people are happy to purchase the private health insurance. On the basis of gender, family members, education, chronic disease, obstacles, income level & insurance ownership people show willingness to buy cooperative health insurance. Findings of the current study are consistent with findings of Al-Hanawi and Alsharqi (2020). Likewise, the findings of this study also got support from findings of (Alharbi, 2021; Alharbi, 2022). These studies also reported that socio-economic factors such as gender, education, distance, income, insurance ownership play their significant role in WTP (Alkhamis & Miraj, 2020). There is a positive response found among general population to join health insurance system as people in Saudi Arabia are aware about the benefits of health insurance. Health insurance would reduce the financial burden on government health expenditures as well as ensure the provision of the quality services to the citizens of Saudi Arabia. As increase in ageing the population, non-communicable diseases and pattern of diseases and diabetes there is significant increase in financial burden on government financial budget every year. Health insurance would not only reduce financial burden but increase quality of services. On the other hand, some citizenship shows unwillingness to pay for health insurance. On the basis of the age, marital status, distances from home to health facility are found insignificant.

CONCLUSION

This study has significantly contributed towards literature of health finance reforms. It would help policy makers and decision makers to establish new health insurance system in Saudi Arabia. This study also adds value in attaining the general public opinion regarding buying the private health insurance. Policy makers and decision makers can introduce the sustainable health system in Saudi Arabia by taking benefits from the findings of the current study. It is concluded that increasing burden of communicable and non-communicable diseases has extensively increased the financial burden on MoH, therefore: introduction of health insurance program for general population reduced the financial burden on MoH. This study has collected the data using single method which might be a source of common method bias (CMB) it is recommended to collect qualitative method to have in depth and better understanding of the subject matter in future. Moreover, longitudinal data, mix method could also be used in future studies. Like wise use of non-probability convenience sampling can also cause biasness therefore it would be better to use another sampling method to generalize the findings.

REFERENCES

Akwaowo, C. D., Umoh, I., Motilewa, O., Akpan, B., Frank, E., Okeke, U., & Onwujekwe, E. (2021). Willingness to Pay for a Contributory Social Health Insurance Scheme: A Survey of Rural Residents in Akwa Ibom State, Nigeria. *Front Public Health*, 17: 9:654362.

Alasmri, M., Almalki, M., Fitzgerald, G., & Clark, M. (2020). The public health care system and primary care services in Saudi Arabia: A system in transition. *East Mediterr Health Journal*, 26 (04): 468–76.

Al-Hanawi, M. K., Alshargi, O., & Vaidya, K., (2020). Willingness to pay for improved public health care services in Saudi Arabia: a contingent valuation study among heads of Saudi households. *Health Economics, Policy and Law*, 15 (1), 72-93, 2020.

Alharbi, A. (2022). Willingness to pay for a National Health Insurance (NHI) in Saudi Arabia: a cross-sectional study. *BMC Public Health*, 12: 22(1): 951.

Alharbi, M. F. (2022). Willingness to Pay for Employment-Based Health Insurance: A Study among Government Employees in Qassim Region, Saudi Arabia. *Universal Journal of Public Health*. 10(4), 402-412.

Alharbi, N. S. (2021). "Determinants of willingness to pay for employment-based health insurance among government school workers in Saudi Arabia," *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*, 58 (1-7), 2021.

Alkhamis, A., & Miraj, S. A. (2020). "Access to health care in Saudi Arabia: development in the context of vision 2030," In: Laher, Handbook of healthcare in the Arab world. *Cham: Springer, I ed*, doi:10.1007/978-3-319-74365-3_83-1.

Almutairi, K. M., & Moussa, M. (2014). Systematic review of quality of care in Saudi Arabia. A forecast of a high-quality health care. *Saudi Medical Journal*, 35 (8): 802–9.

Alzghaibi, H., Alharbi, A. H., Mughal, Y. H., Alwheeb, M. H., Alhlayl, A. S. (2023). Assessing primary health care readiness for large-scale electronic health record system implementation: Project team perspective. *Health Informatics Journal*, 29(1).

Alzghaibi, H., Mughal, Y. H., Alkhamees, M., Alasqah, I., Alhlayl, A. S., Alwheeb, M. H., & Alrehiely, M. (2022). The impact financial resources on implementation of large-scale electronic health records in the Saudi Arabia's primary healthcare centers: Mixed methods. *Frontiers in Public Health*, 10:1037675.

Donfouet, P., Mohamed, S. F., Otieno, P., Wambiya, E., Mutua, M. K., & Danaei, G. (2020). Economic valuation of setting up a social health enterprise in urban poor-resource setting in Kenya. *Social Science & Medicine*, 266, 113294.

General Authority for statistics - Kingdom of Saudi Arabia. Population Estimates [Internet]. 2020. Available from: https:// www.stats. gov. sa/ en/ 43.

Ministry of Health, Kingdom of Saudi Arabia, "Statistical Yearbook (2020) chapter 1 health indicators",https://www.moh.gov.sa/en/Ministry/Statistics/book/Pages/default.aspx.

Mughal, H. (2023). Impact of transformational leadership upon physicians & nurses' performance in Saudi healthcare organizations. *Journal of Social Research Development*. 4(2). 241, 251

Rahman, R., & Alshargi, O. Z. (2019). "What drove the health system reforms in the Kingdom of Saudi Arabia? An analysis," International Journal of Health Planning and Management, 34 (1), 100–110, 2019.

Saudi Arabian Monitory Agency (SAMA), Kingdom of Saudi Arabia, "57th Annual Report – (2021)", https://www.sama.gov.sa/en-US/EconomicReports/Annual Report/ANNUAL_ Report_57th_2021. pdf (accessed Jan. 17, 2022).

Setegen, A., Andargie, G., Amare, G., Debie, A., & Setegn, A. (2021). "Willingness to pay for social health insurance among teachers at governmental schools in Gondar town, Northwest Ethiopia," *Risk Management and Healthcare Policy*, 14, 861-868.

The Saudi Ministry of Health (MoH). Health Sector Transformation Strategy. 2017 [Internet]. [cited 2022 May 10]. Available from: https://www.moh. gov. sa/en/Minis try/ vro/Docum ents/ Healt hcare-Trans forma tion- Strategy. pdf.

Walston S, Al-Harbi Y, Al-Omar B. (2008). The changing face of healthcare in Saudi Arabia. *Ann Saudi Medicine*. 28(4): 243–50.

World Bank, "World Bank Data-Saudi Arabia", World Bank Group, 2020. https://data. worldbank.org/country/saudiArabia.