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Determinants of Health Insurance Subscription among Women of Reproductive Age in Mozambique

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Abstract Health insurance is one of the major pillars of achieving the Universal Health Coverage, as emphasized in the Sustainable Development Goals (SDGs). However, in Mozambique, although the national health system is confronted by several limitations, uptake of health insurance is not emphasized by stakeholders in the health sector. This paper therefore analysed the determinants of health insurance subscription among women of reproductive age in Mozambique. The data were the 2022/23 data for the Demographic and Health Survey (DHS) which covered 9788 women in the 15-49 years age bracket. The data were analysed with Probit regression. The results showed a very low health insurance subscription (1.69%). Additionally, 31.50% of the women with higher education had health insurance. The Probit regression results showed that the probability of insurance subscription among the women was significantly promoted ($p<0.05$) by access to the internet, reading newspaper, perception of good, moderate and bad health status, ownership of bank account, working, and wealth index, while residence in some regions (Inhambane, Gaza, and Sofala), and religion affiliation (Evangelical/Pentecostal and no religion) reduced it. It was concluded that in the light of prevailing constraints confronting attainment of UHC in Mozambique, there is the need to create media and internet driven advocacies to promote health insurance subscription with more focus on the wealthy, working class, urban residents and educated women.

Keywords Universal Health Coverage, Health Insurance, Women, Reproductive Age, Mozambique

1. Introduction

The end of the Mozambique's civil war in 1992 marked the beginning of reforms to rebuild the country's economy and reposition the different sectors for sustainable development and growth [1]. Therefore, beyond the euphoria of attendant tranquillity that followed the Rome General Peace Accords on 4th October 1992, the challenges of structural restructuring of the different economic sectors were fundamental concerns that demanded domestic and international interventions [1,2]. Given its noteworthy significance in promoting several development indicators, the primary healthcare system was one of the major targets for permanent destruction during the civil war [3]. The ultimate challenge of the Mozambique post-conflict healthcare reform was perfectly underscored by the need to facilitate a poverty reduction process which cannot be attained without a proper installation of efficient healthcare service delivery system [4,5]. Moreover, although there was introduction of the Health Bill in 1977 by the Frelimo government with the goal of promoting a socialised medical care, civil war eroded most of the resources which could have been channelled towards building a stable social infrastructure [4].

Although not without noticeable lapses, the Mozambique government had over the years made substantial progress in revamping the healthcare sector and positioning it for efficient service delivery. Specifically, the national health system can be divided into four levels of administration [6]. The Japan International Corporation Agency [6] noted that the first is the primary level of care, which consists of health posts and health centres. The second level operates the district hospitals, rural hospitals, and general hospitals, which deliver some secondary forms of healthcare services. The third level comprises of hospitals which operate at the provincial level of governance for the delivery of tertiary medical services. The fourth level comprises of specialized hospitals, central hospitals, and military hospitals which are positioned for quaternary level of healthcare services [6]. Moreover, over past few years, Mozambique government had implemented some changes within the national health systems to facilitate Universal Health Coverage (UHC) as outlined in the Sustainable Development Goals (SDGs) [6]. Specifically, the Mozambique government expanded the number of health workers from 1000 in 2018 to 8300 in 2022. This expansion implied an estimated increase in the number of people to be reached from 240,000 in 2018 to about 2 million in 2022 [7].

However, with about 21% of the annual health expenditures being funded by international bodies in 2019, the country's healthcare financing is highly susceptible to global financial shocks [8]. Moreover, some improvements in the funding model can be highlighted given that foreign aid dominated the health expenditures in 2013 [8]. Although the budgetary allocation to the health sector is below the 15% benchmark that was emphasized in the Abuja Declaration [9], the Government is utilizing several available fiscal measures to expand funding allocation to the health sector. It should be noted that healthcare budgetary allocations declined from 12% in 2018 to 8.8% in 2019 [8]. However, due to the COVID-19 pandemic, budgetary allocations to the health sector increased to 10.20% in 2021 [10]. Similarly, international funding increased by more than three times from MT 2.1 billion to MT 6.8 billion in 2020 and 2021, respectively. Since 2019, there is a wide adoption of a decentralized healthcare governance model with more involvement of community health workers in attending to health problems at the grassroot level. Consequently, some progress had been made in some important health indicators such as child mortality and maternal mortality [11].

There are still some fundamental bottlenecks confronting healthcare administration in Mozambique. Specifically, the goal of UHC as amplified in the SDGs can be hampered by systematic regional and geographical inequity in the distribution of healthcare services [12]. Although Mozambicans are constitutionally eligible to access free healthcare services, medication stock-out and growing pressure on the limited facilities may undermine effective delivery of some required healthcare services [13,14]. In one of the previous geographical mappings of healthcare facilities in Mozambique, about 66.7% of the areas were underserved by primary healthcare services [15]. The growing problems of HIV and malaria, coupled with persistent distributional inequity and dwindling quality of care are issues of concern in healthcare service administration [16, 17, 18]

Another major concern in healthcare service utilization in Mozambique is the issue of catastrophic healthcare expenditure [19]. This may result from shortage of public healthcare facilities [18], and the fact that some patients sometimes require highly specialized medical services that are only available in some privately owned specialized hospitals. This situation has prompted healthcare policy makers to concentrate efforts on ensuring reintegration of medical insurances within the principal domains of healthcare service delivery. The fundamental intuition is that the medical needs of insured individuals are comprehensively covered without any worry of catastrophic healthcare expenditures and their associated welfare impacts.

However, information on health insurance uptake in Mozambique is not easily found in academic literature. In some previous studies, several variables have been found to influence health insurance subscription among women of reproductive age (henceforth WRA). In Mauritania, Dowou et al. [20] analyzed the determinants of health insurance subscription among women of reproductive age. It was found that health insurance coverage was 8.7% and the factors that increased the likelihood of being health insured were education, wealth index, working, watching television and use of internet. In a study that was conducted in Ghana, Amu and Dickson [21] found that among WRA, health insurance was promoted by wealth, religious affiliation, marital status, region of residence, and age. However, subscription reduced with urban residence and education levels.

In another study which was conducted in Ghana, Ayanore et al. [22] reported health insurance subscription rate of 51.90%, while the likelihood of health insurance subscription was promoted by secondary education, higher education, listening to radio, being pregnant and regions of residence. Aregbeshola and Khan [23] found that in Nigeria, health insurance subscription rate among WRA was 2.1% and the predictors of the probability of being health insured were education, employment, residence in some zones, economic status and age of women of reproductive age. Ramos Rosas et al. [24] found that in a study among Peruvian WRA, 25.3% had not form of health insurance. Also, using the multinomial logit regression model, the choice of Standard Insurance scheme was promoted by households' wealth, education and being a Spanish.

The objective of this paper is to analyse the determinants of health insurance in Mozambique using the 2023 Demographic and Health Survey data. The paucity of study on health insurance issues in Mozambique provides a significant justification for this study. In addition, women in Mozambique are at the centre of healthcare policy discussion because of their primary role in influencing two important health indicators – child mortality and maternal mortality – in Mozambique. Their overall health, which can be positively influenced by health insurance, is therefore of importance in several policy discourses. In addition, the policy response of this study will feed into Mozambique's health policy interventions for the promotion of UHC.

2. Materials and Methods

2.1. The Data

This study used the 2022/23 Demographic and Health Survey (DHS) dataset for Mozambique. The data comprised of the listed women of reproductive age (15-49 years) as provided in one of the data files. The survey was implemented between27 July 2022 and27 February 2023. The Mozambique's National Institute of Statistics implemented the survey, although fundings were received from the "Government of Mozambique, the United States Agency for International Development (USAID), the World Bank, UNICEF, the FCDO, the Office of the High Commissioner of Canada, and Gavi". The DHS and ICF assisted with some professional inputs. The data collected adopted two-stage sample design. At the first stage, enumeration areas (EAs) were identified following the 2017 General Population Census. Using the probability proportional to size, 619 EAs were selected with 232 from urban and 387 from rural areas. However, due to security concerns, some districts were excluded from the survey. The second stage involved a systematic selection of 26 households from each of the selected EAs. However, 16,045 households were sampled, which is lower than the expected 16,094 because security issues led to exclusion of two households (one in Cabo Delgado and one in Zambézia Province, both rural). Prior to data collection, complete listing of all the households in each of the EAs was done by visitation. The task also afforded them to collect the GPS data of the selected EAs. The women, 15-49 years of age, who were usual residents or visitors in the night before the interviews were conducted. The data comprised of 9788 women [25].

2.2. The Estimated Model

The Probit regression model was used to analyse the determinants of health insurance subscription among the women. This model is the ideal choice for estimating the correlates of a binary dependent variable which was generated in this model as 1 for the insured and 0 otherwise. The Probit model uses the normal Cumulative Distribution Function (CDF). The model is specified by assuming that the decision to be health insured is a function of unobservable utility index Yi, which can be expressed as:

$$Y_i = \beta + \sum_{j=1}^{36} \theta_j Z_{ij} + \epsilon_i \tag{1}$$

Where Y_i is the insurance variable denoted as 1 for yes and 0 otherwise. The Z_i are the explanatory variables denoted as region (Niassa is the reference group) [Cabo Delgado (yes=1, 0 otherwise), Nampula (yes=1, 0 otherwise), Zambezia (yes=1, 0 otherwise), Tete (yes=1, 0 otherwise), Manica (yes=1, 0 otherwise), Sofala (yes=1, 0 otherwise), Inhambane (yes=1, 0 otherwise), Gaza (yes=1, 0 otherwise), Maputo (yes=1, 0 otherwise), and Citade de Maputo (yes=1, 0 otherwise)], religion (Catholic is the reference group) [Islamic (yes=1, 0 otherwise), Zion (yes=1, 0 otherwise), Evangelical/Pentecostal (yes=1, 0 otherwise), Anglican (yes=1, 0 otherwise), and No religion (yes=1, 0 otherwise)], male household headship (yes=1, 0 otherwise), household head age (years), frequency of reading newspaper (none is the reference) [less than once a week (yes=1, 0 otherwise) and at least once a week], access to internet (yes=1, 0 otherwise), health status (very good is the reference group) [good (yes=1, 0 otherwise), moderate (yes=1, 0 otherwise), and bad (yes=1, 0 otherwise)], bank account ownership (yes=1, 0 otherwise), age at first birth (years), currently pregnant (yes=1, 0 otherwise), number of living children, terminated pregnancy (yes=1, 0 otherwise), emergency contraceptive (yes=1, 0 otherwise), breastfeeding, slept with mosquito net (yes=1, 0 otherwise), does not smoke tobacco (yes=1, 0 otherwise),working (yes=1, 0 otherwise), wealth index, urban residence and years of education.

3. Results

Table 1 shows the distribution of women's demographic characteristics in Mozambique. The results showed that 16.87% had health insurance. In terms of regions, most of the women were from Nampula (11.48%), followed by Cabo Delgado (10.94%), Manica (9.50%) and Tete (9.43%). When it comes to religion, the majority were Evangelical/Pentecostal (30.98%), followed by 23.37% of Catholics, 19.27% of Islams and 16.66% of Zion Christian denomination. The Table further shows that 65.84% of the women's households were male-headed and the average household head age was 41.40 years. The frequency of reading newspapers was also observed. The results revealed that 90.36% of the women did not read newspapers, compared to 6.18% and 3.45% of those that read newspapers less than once a week and at least once a week, respectively. The results also showed that 22.89% of women had access to internet.

In terms of their perceived health status, 60.42% of women perceived good health condition. However, 23.43% perceived moderate health condition, 14.32% indicated they had very good health condition, 1.76% perceived bad health condition and 0.07% perceived very bad health condition. The results showed that there were 11.67% of the women who owned a bank account. The average age at first birth was 18.54 years and 7.10% of the women were pregnant. It was also revealed that the average number of living children was 3.05, while 13.49% of the women had terminated pregnancy. There was 0.95% of the women who used emergency contraceptives, while 30.50%

of the women was breastfeeding. Women who slept under a mosquito net were 47.91% and there was 98.06% that did not smoke tobacco. Also, 39.74% of the women was working and the average wealth index was 3109.47. There was 39.15% of women who resided in urban areas and the average year of education was 2.94.

Table 1. Distribution of demographic characteristics of women of reproductive age in Mozambique

	% (mean)	Std. Err.
Insured	1.69	-
Region		-
Niassa	9.17	-
Cabo Delgado	10.94	-
Nampula	11.48	-
Zambezia	7.11	-
Tete	9.43	-
Manica	9.50	-
Sofala	9.19	-
Inhambane	7.46	-
Gaza	8.88	-
Maputo	8.84	-
Citade de Maputo	8.00	-
Religion		
Catholic	23.37	-
Islamic	19.27	-
Zion	16.66	-
Evangelical/Pentecostal	30.98	-
Anglican	2.02	-
No religion	7.22	-
Others	0.47	-
Household head sex	65.84	-
Household head age	(41.40)	.1405
Frequency reading newspapers		
Not at all	90.36	-
Less than once a week	6.18	-
At least once a week	3.47	-
Access to internet	22.89	-
Health status		
Very good	14.32	-
Good	60.42	-
Moderate	23.43	-
Bad	1.76	-
Very bad	0.07	-
Bank account	11.67	-
Age at first birth	(18.55)	.0381

Table 1 continued

Currently pregnant	7.10	-
Living children	(3.11)	-
Terminated pregnancy	13.49	-
Emergency contraceptive	0.95	-
Breastfeeding	30.50	-
Slept with mosquito net	47.91	-
Does not smoke tobacco	98.06	-
Working	39.74	-
Wealth index	(3109.46)	989.9127
Urban resident	39.15	-
Years of education	(2.94)	.0243

Note: means are in the parentheses

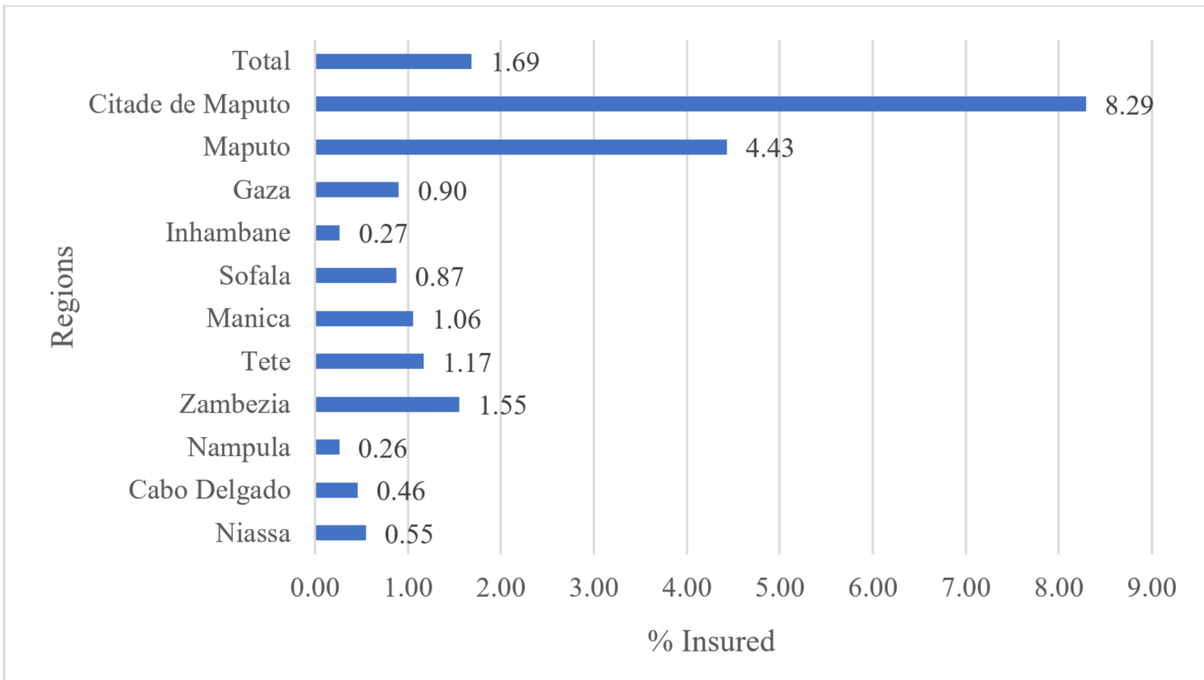

Figure 1. Distribution of health insured women across regions

3.1. Distribution of Women across Health Insurance Subscription

The results presented in Figure 1 show the distribution of insured women across the regions of residence. The results revealed that women with health insurance in Mozambique were mainly from Citade de Maputo (8.29%), followed by 4.43% from Maputo and 1.55% from Zambezia. The Figure also showed that Nampula, Inhambane and Cabo Delgado were among the least regions with 0.26%, 0.27% and 0.46% of health insured women, respectively.

The results in Figure 2 show the distribution of health insured women of reproductive age across gender of household heads, education level and geographical type. The results showed that 1.77% of those from male-headed households were health insured compared to 1.53% of their female-headed counterparts. The Figure further shows that 31.50% of women with higher level education had health insurance, followed by 2.69% of women with secondary level of education, 0.27% with primary level and 0.07% with no education. In terms of geographical type, 3.51% of women from urban areas were health insured compared to 0.51% of women residing in rural areas.

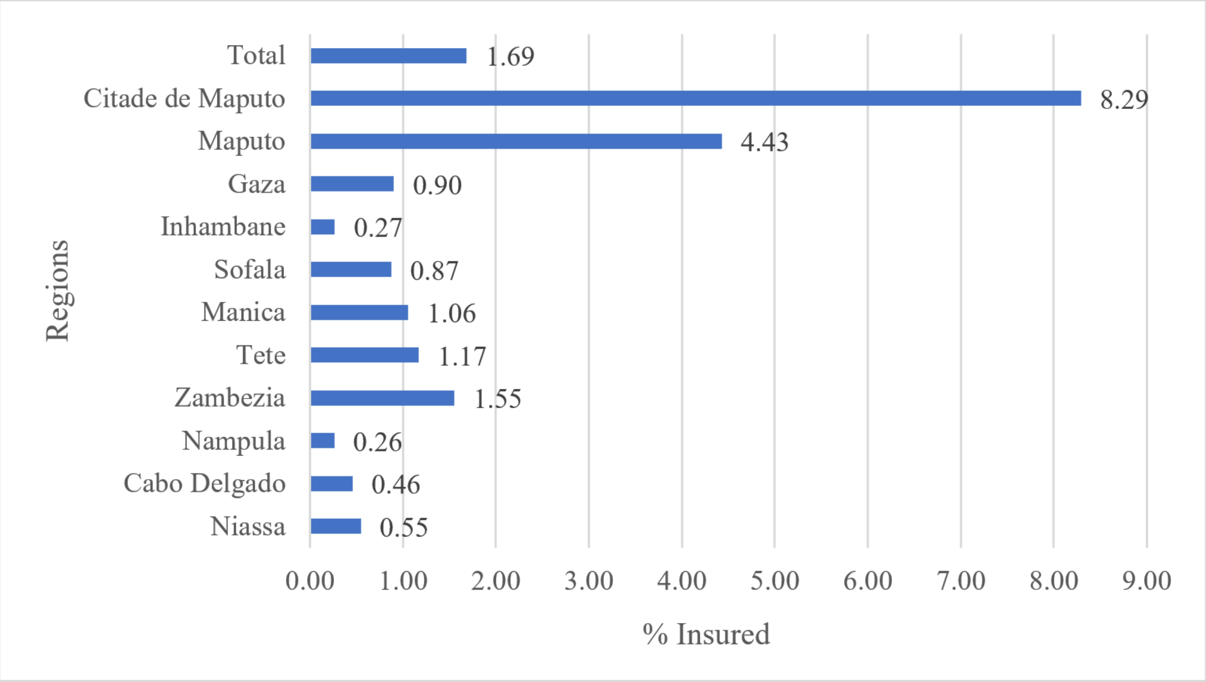

Figure 2. Distribution of health insured women of reproductive age across gender, education level and geographical type

3.2. The Results of Probit Regression

Table 2 presents the correlates of health insurance uptake among women of reproductive age in Mozambique. The independent variables were selected based on some previous studies. Although many of them were statistically insignificant ($p>0.05$), the results showed that the model produced a good fit for the data given the statistical significance of the F- statistics ($p<0.05$). This implies that estimated parameters cannot be said to be jointly equal to zero. The parameter of the wealth index is statistically significant ($p<0.05$) with positive sign. This implies that as wealth index increases by a unit, the probability of being health insured also increases. The parameters of Inhambane and Gaza regions are statistically significant ($p<0.05$) and with negative sign. This implies that women from Inhambane and Gaza regions had lower probability of being health insured, when compared with those from Niassa region.

The influence of religion affiliation on health insurance revealed that the Evangelicals/Pentecostals and those with no religion had significantly lower probabilities of being health insured ($p<0.05$). The parameter for reading newspapers at least once a week showed statistical significance with positive sign ($p<0.05$). This implies that women who read newspapers at least once a week had higher probability of being health insured, when compared with those who never read newspapers. In addition, the parameter of access to internet is statistically significant ($p<0.05$). This result showed that women with access to the internet had higher probability of being health insured. The models also included variables to capture the perceived health status of women. The results indicated that perceived health status had positive and significant impacts ($p<0.05$). These results imply that compared to those women who perceived their health to be very good, women with good, moderate and bad perceptions about their health had higher probabilities of being health insured.

Ownership of bank account parameters showed statistical significance ($p<0.05$) with positive sign. This implies that the women who owned bank account had a higher probability of being health insured when compared to those without bank accounts. In addition, the women who were working had a higher probability of being health insured ($p<0.05$). The parameter of wealth index also showed statistical significance ($p<0.05$). This implies that increase in wealth index increases the probability of being health insured.

Table 2. Results of Probit regression model of health insurance uptake among women of reproductive age in Mozambique

Variables	Coefficient	Std. Err.	t- stat	P>t
Region (Niassa is the reference group)				
Cabo Delgado	-0.2709	0.2833	-0.96	0.3390
Nampula	-0.4177	0.2941	-1.42	0.1560
Zambezia	0.2099	0.2497	0.84	0.4010
Tete	-0.0269	0.2475	-0.11	0.9140
Manica	-0.3464	0.3072	-1.13	0.2600
Sofala	-0.5646	0.2907	-1.94	0.0530
Inhambane	-0.9026	0.3934	-2.29	0.0220
Gaza	-0.5502	0.2661	-2.07	0.0390
Maputo	-0.4232	0.2782	-1.52	0.1290
Citade de Maputo	-0.2176	0.2554	-0.85	0.3950
Religion (Catholic is the reference group)				
Islamic	-0.2530	0.1754	-1.44	0.1500
Zion	-0.2817	0.1692	-1.67	0.0960
Evangelical/Pentecostal	-0.2263	0.1098	-2.06	0.0400
Anglican	-0.0064	0.2985	-0.02	0.9830
No religion	-0.6047	0.2949	-2.05	0.0410
Male household headship	0.1471	0.0978	1.50	0.1330
Household head age	-0.0049	0.0042	-1.15	0.2500
Frequency newspaper (none is the reference)				
Less than once a week	0.0424	0.1379	0.31	0.7590
At least once a week	0.4440	0.1369	3.24	0.0010
Access to internet	0.2630	0.1280	2.06	0.0400
Health status (very good is the reference group)				
Good	0.2939	0.1419	2.07	0.0390
Moderate	0.3113	0.1532	2.03	0.0430
Bad	0.9445	0.3501	2.70	0.0070
Bank account ownership	0.7414	0.1117	6.64	0.0000
Age at first birth	0.0164	0.0092	1.78	0.0760
Currently pregnant	-0.0047	0.3102	-0.02	0.9880
Living children	-0.0017	0.0317	-0.05	0.9580
Terminated pregnancy	0.1467	0.0982	1.49	0.1360
Emergency contraceptive	0.0510	0.2366	0.22	0.8290
Breastfeeding	-0.2270	0.1573	-1.44	0.1490
Slept with mosquito net	0.0132	0.0869	0.15	0.8790
Does not smoke tobacco	0.1353	0.3149	0.43	0.6670
Working	0.4130	0.1105	3.74	0.0000
Wealth index	0.0000	0.0000	4.87	0.0000
Urban residence	-0.1775	0.1368	-1.30	0.1950
Years of education	0.0117	0.0231	0.51	0.6130
Constant	-3.4015	0.4612	-7.37	0.0000
Sampling design				
Number of strata = 21				
Number of PSUs = 616				
F (36, 560) = 13.60***				

4. Discussion

A proper understanding of the correlates of health insurance uptake among women of reproductive age in Mozambique is of paramount importance for health policy and programme design. This is fundamental in enhancing the UHC for Mozambique and improving some health-related indicators like maternal and child mortality. The results showed a very low rate of health insurance subscription (1.69%). This can be compared to the health insurance coverage for Rwanda (78.7%), Ghana (58.2%) and Gabon (40.8%) [26]. However, the coverage level of health insurance in Mozambique is higher than those reported by Barasa [26] for Chad, Burkina Faso and Benin with 1.2%, 0.9% and 1.2%, respectively. Our findings also revealed regional differences in the rate of health insurance subscription with Citade de Maputo and Maputo having the highest rates with 8.2% and 4.43%, respectively. The finding shows the lopsidedness of health insurance coverage across the regions in Mozambique which may have some ethnic connotations which Osei-Akoto and Adamba [27] have highlighted to have impacts on health-related choices.

This goes in line with expectation since Citade de Maputo is the capital of Mozambique and expected to have a high concentration of private and public healthcare facilities that participate in health insurance schemes. In addition, in terms of affordability, the capital city is concentrated with high income earners who may be able to afford monthly subscription for health insurance. It should be noted that primary healthcare facilities dominate the Mozambique National Health System and utilization of health insurance may not be feasible at this level of service delivery [17]. Statistics have shown that in 2018, out of the 1643 health facilities in Mozambique, 95.9% were at the primary-level, 99.5% was owned by government and 84.4% were in rural areas [17].

Our results also showed the impact of religion affiliation in explaining the decision to be health insured among women of reproductive age. The role of religion in defining households' decisions towards health investment is complex [28]. In Mozambique, the distribution of religious beliefs is biased towards Christians with Roman Catholic accounting for the highest percentage [29]. It should be noted that the influence of religious beliefs on health insurance had been emphasized from different perspectives. Some authors noted that the belief that an individual holds can be a factor in advancing the requisite mindset for engaging with health promoting behaviours [30,31]. Individual's perception of health risk is often influenced by their religious beliefs [27]. Other scholars noted the social security promotional influence that religion can have within a society [32,33]. Therefore, depending on individual's belief, medical services may be abandoned or conditionally embraced [34].

The results also showed that access to the internet and newspapers promoted uptake of health insurance. Access to information from different media houses had been found to have positive influence on investment in health enhancing behaviours [35]. Inadequate knowledge about health insurance schemes will prevent potential subscribers from making positive decision. It had been emphasized that although few studies had integrated access to information in explaining health insurance subscription, the positive role being played by media in promoting positive perception of health policies cannot be over-emphasized [36,37,38].

The influence of perceived health status of women in promoting their subscription to health insurance was also highlighted by the findings. Our findings are in line with the theoretical propositions of adverse selection and moral hazards. Precisely, adverse selection hypothesizes a high likelihood of individuals who are prone to some health risks to subscribe to health insurance, while some insured individuals may be morally hazardous after being subscribed [39,40,41]. We also found that the majority of the health insured women had a higher level of education. This is expected because education facilitates positive health behaviour and can promote subscription to health insurance. This finding is in line with those of Dowou et al. [20], Ayanore et al. [22], Aregbesola and Khan [23] and Ramos Rosas et al. [24]. However, the finding is contrary to that of Amu and Dickson [21]. The result for education can as well be perceived from the tendency of educated women to be gainfully employed. In our findings, the women who were working were more prone to be health insured. This can also be linked to the finding that wealth index increased health insurance. Specifically, working class women will have the financial means to pay for health insurance subscription and this goes in line with the finding of Dowou et al. [20]. Similarly, a positive association between wealth index and health insurance subscription had been reported by Ramos Rosas et al. [24], Aregbesola and Khan [23], Amu and Dickson [21] and Dowou et al. [20].

The results further revealed the health insurance promoting tendency of reading newspapers and access to the internet. Information is a primary promoter of decision making, and this is of paramount relevance when it has to do with health. Therefore, awareness about a health promoting programme like health insurance can be promoted through access to news media and internet. This finding goes in line with that of Dowou et al. [20]. Finally, we found that resident in urban areas had a higher proportion of being health insured. Urban centres may be favoured in terms of hospital concentration, especially private operators who may be involved in delivery of healthcare services to health insured people. Our finding is however contrary to that of Amu and Dickson [21].

5. Conclusions

Promotion of health insurance is a fundamental requirement for preventing catastrophic health expenditure and a viable option to ensure UHC. This study analyzed the determinants of health insurance subscription among women of reproductive age in Mozambique. The findings have shown a very low uptake of health insurance. Therefore, given the heavy reliance of Mozambique on international donors to meet its annual health budget, and concurrent lapses on healthcare coverage, the need for a comprehensive reform that focuses on promotion of health insurance cannot be jettisoned. The findings of this study are emphasizing some policy directions to enhance health insurance subscription among women. There are differences in health insurance uptake across the regions, with majority of the subscribers resident in the capital city of Mozambique. It is therefore important to promote health insurance awareness creation across the regions. This should also evaluate the distribution of healthcare facilities and assess their eligibility to participate in health insurance schemes. Efforts to promote health insurance among women should also target educated and wealthy women. However, the role of education in understanding the operation and benefits of health insurance can be promoted through engagement with some media houses and the use of internets. The role of religion affiliation was also found. Specifically, proper education of religious leaders on the role of health insurance can have some influences on their subscription. This implies that promotion of positive health behaviour can be integrated within the functionality of some religious teachings in Mozambique.

REFERENCES

[1] Morier-Genoud, E., Cahen, M., do Rosario, D. “The civil war in Mozambique: a history still to be written”, in The War Within: Towards a New History of the Civil War in Mozambique, 1976-1992. Oxford: James Currey. 2018. Mozambique. https://www.unicef.org/mozambique/media/3846/file/Mozambique%20State%20Budget%20for%20Fiscal%20Year%202021.pdf (retrieved on 10 September 2024).

[2] Hastings, A. “Some reflections upon the war in Mozambique”. African Affairs, vol. 73, no. 292, pp. 263-276, 1974.

[3] Cliff, J., Noormahomed, A. R. “Health as a target: South Africa's destabilization of Mozambique”. Social Science and Medicine, vol. 27, no. 7, pp. 717-722, 1988. https://doi.org/10.1016/0277-9536(87)90331-5

[4] Sulemane, J. A., Kayizzi-Mugerwa, S. “The Mozambican civil service: incentives, reforms and performance”, WIDER Discussion Paper, No. 2001/85, 2001.

[5] Funada-Classen, S. “The origins of war in Mozambique: a history of unity and division”. Published by African Minds, 2013.

[6] Japan International Cooperation Agency. “Data collection survey on the health system in Mozambique”. May 2021, Japan International Cooperation Agency TA Networking Corporation Samauma Consulting LLC. https://openjicareport.jica.go.jp/pdf/1000045945.pdf (retrieved on 10 September 2024).

[7] World Bank. “Mozambique’s health system expands coverage with more frontline community workers”. 2023 Available online: https://www.worldbank.org/en/results/2023/10/17/mozambique-afe-health-system-doubles-coverage-with-more-frontline-community-workers (retrieved on 10 September 2024).

[8] UNICEF. “Budget brief: health Mozambique 2019”. https://www.unicef.org/mozambique/media/2761/file/Budget_Brief_2019_-_Health.pdf (retrieved on 10 September 2024).

[9] Ukeje, C. “The Abuja declaration and the challenge of implementing a maritime security strategy in the Gulf of Guinea and the South Atlantic”. Journal of the Indian Ocean Region, vol. 11, no. 2, pp. 220-235, 2015. https://doi.org/10.1080/19480881.2015.1074784

[10] UNICEF. “State budget for fiscal year 2021: analysis of the social and economic sectors”. 2021. https://www.unicef.org/mozambique/en/reports/state-budget-fiscal-year-2021 (retrieved on 15th September 2024).

[11] World Health Organization (WHO). “Strengthening primary health care with a community health strategy in Mozambique”, 2024. https://www.who.int/news-room/feature-stories/detail/strengthening-primary-health-care-with-a-community-health-strategy-in-mozambique (retrieved on 12 September 2024).

[12] USAID. “Global health”. https://www.usaid.gov/mozambique/global-health#:~:text=Health%20infrastructure%20is%20limited%3B%20more,the%20lowest%20in%20the%20world. (retrieved on 12 September 2024).

[13] Wagenaar, B.H., Gimbel, S., Hoek, R., Pfeiffer, J., Michel, C., Manuel, J.L., Cuembelo, F., Quembo, T., Afonso, P., Gloyd, S., Sherr, K. “Stock-outs of essential health products in Mozambique - longitudinal analyses from 2011 to 2013”. Tropical Medicine and International Health, vol. 19, no. 7, pp. 791-801, 2014. https://doi.org/10.1111/tmi.12314.

[14] Bravo, M.P., Peratikos, M.B., Muicha, A.S., Mahagaja, E., Alvim, M.F.S., Green, A.F., Wester, C.W., Vermund, S.H. “Monitoring pharmacy and test kit stocks in rural Mozambique: U.S. president's emergency plan for AIDS relief surveillance to help prevent Ministry of Health shortages”. AIDS Research and Human Retroviruses, vol. 36, no. 5, pp. 415-426, 2020. https://doi.org/10.1089/aid.2019.0057

[15] Audet, C.M., Burlison, J., Moon, T.D., Sidat, M., Vergara, A.E., Vermund, S.H. “Sociocultural and epidemiological aspects of HIV/AIDS in Mozambique”. BMC International Health and Human Rights, vol. 10, p. 15, 2010. https://doi.org/10.1186/1472-698x-10-15

[16] Llop-Gironés, A., Julià, M., Chicumbe, S., Dulá, J., Odallah, A.A.P., Alvarez, F., Zahinos, I., Mazive, E., Benach, J. “Inequalities in the access to and quality of healthcare in Mozambique: evidence from the household budget survey. International Journal of Quality Health Care, vol. 31, no. 8, pp. 577-582, 2019. https://doi.org/10.1093/intqhc/mzy218

[17] dos Anjos Luis, A., Cabral, P. “Geographic accessibility to primary healthcare centers in Mozambique”. International Journal for Equity in Health, vol. 15, p. 173, 2016.

https://doi.org/10.1186/s12939-016-0455-0

[18] Cane, R. M., Sheffel, A., Salomão, C., Sambo, J., Matusse, E., Ismail, E., Ismail, E., António, A., Manuel, E., Sawadogo-Lewis, T., Roberton, T. "Structural readiness of health facilities in Mozambique: how is Mozambique positioned to deliver nutrition-specific interventions to women and children?", Journal of Global Health Reports, vol. 7, 2023. https://doi.org/10.29392/001c.89000

[19] Marianela Castillo-Riquelme, Diane McIntyre, Karen Barnes, "Household burden of malaria in South Africa and Mozambique: is there a catastrophic impact?", Tropical Medicine and International Health, vol. 13, no. 1, pp. 108-1 22, 2008. https://doi.org/10.1111/j.1365- 3156.2007.01979.x

[20] Dowou, R. K., Atanuriba, G. A., Adzigbli, L. A., Balame, S. K., Tahidu, I., Aggrey-Korsah, J., Aboagye, R. G. "Determinants of health insurance coverage among women in Mauritania: a multilevel analysis". BMC Public Health, vol. 24, p. 229, 2024. https://doi.org/10.1186/s12889-024-17691-y

[21] Amu, H., & Dickson, K. S. "Health insurance subscription among women in reproductive age in Ghana: do socio-demographics matter?". Health Economics Review, vol. 6, pp. 1-8, 2016. https://doi.org/10.1186/s13561-016-0102-x

[22] Ayanore, M., Afaya, A., Kumbeni, M. T., Laari, T. T., Ahinkorah, B. O., Salia, S. M., Bam, V., Yakong, V.N., Afaya, R.A., Alhassan, R.K., Seidu, A.A. "Health insurance coverage among women of reproductive age in rural Ghana: policy and equity implications". Health Research Policy and Systems, vol. 21, no. 1, p. 75, 2023. https://doi.org/10.1186/s12961-023-01019-0

[23] Aregbeshola, B. S., Khan, S. M. "Predictors of enrolment in the National Health Insurance Scheme among women of reproductive age in Nigeria". International Journal of Health Policy and Management, vol. 7, no. 11, pp. 1015-1023, 2018. https://doi.org/10.15171/ijhpm.2018.68

[24] Ramos Rosas, E., Winkler, V., Brenner, S., De Allegri, M. "Identifying the determinants of health insurance coverage among Peruvian women of reproductive age: an assessment based on the national Peruvian demographic survey of 2017". International Journal for Equity in Health, vol. 19, pp. 1-9, 2020. https://doi.org/10.1186/s12939-020-01310-4

[25] Instituto Nacional de Estatística (INE) e ICF. "Inquérito Demográfico e de Saúdeem Moçambique 2022–23". 2024, Maputo, Moçambique e Rockville, Maryland, EUA: INE e ICF.

[26] Barasa, E., Kazungu, J., Nguhiu, P., Ravishankar, N. "Examining the level and inequality in health insurance coverage in 36 sub-Saharan African countries". BMJ Global Health, vol. 6, no. 4, p. e004712, 2021. https://doi.org/10.1136/bmjgh-2020-004712

[27] Osei-Akoto, I., Adamba, C. "Ethnic and religious diversity as determinants of health insurance uptake in Ghana". In 4th European Conference on African Studies, Uppsala, 2011. https://www.aegis-eu.org/archive/ecas4/ecas-4/panels/121-140/panel-128/Osei-Akoto-Isaac-full-paper.pdf (retrieved on 23 September 2024).

[28] Ouali-Fernández, S. "Religion, wealth, and health: exploring the economic dimensions of four major faiths". Journal of Religion and Health, vol. 63, pp. 4281-4302, 2024. https://doi.org/10.1007/s10943-024-02150-0

[29] United States Department of State. "International religious freedom report for 2019". 2019. https://www.state.gov/wp-content/uploads/2020/05/MOZAMBIQUE-2019-INTERNATIONAL-RELIGIOUS-FREEDOM-REPORT.pdf (retrieved on 13 September 2024).

[30] Bonelli, R. M., Koenig, H. G. "Mental disorders, religion and spirituality 1990 to 2010: a systematic evidence-based review". Journal of Religion and Health, vol. 52, pp. 657-673, 2013. https://doi.org/10.1007/s10943-013-9691-4

[31] Walters, K., Benjamins, M. R. "Religious beliefs about health and the body and their association with subjective health". Journal of Religion and Health, vol. 61, pp. 4450-4465, 2022. https://doi.org/10.1007/s10943-020-01178-2

[32] Scheve, K., Stasavage, D. "Religion and preferences for social insurance". Quarterly Journal of Political Science, vol. 1, no. 3, pp. 255-286, 2006. https://doi.org/10.1561/100.00005052

[33] Ruan, R. P., Liu, L. "Who supply the social security in China's rural areas? - A study on the security function in a religious society". Management World, vol. 4, pp. 46–57, 2011.

[34] Chai, M., Wu, L. "Belief in religion or participation in insurance? the impact of religious beliefs on the decision to participate in social health insurance in China". Religions, vol. 15, no. 5, p. 621, 2024. https://doi.org/10.3390/rel15050621

[35] Kansanga, M. M., Asumah Braimah, J., Antabe, R., Sano, Y., Kyeremeh, E., Luginaah, I. "Examining the association between exposure to mass media and health insurance enrolment in Ghana". The International Journal of Health Planning and Management, vol. 33, no. 2, pp. e531-e540, 2018. https://doi.org/10.1002/hpm.2505

[36] Durkin, S., Wakefield, M. "Comparative responses to radio and television anti-smoking advertisements to encourage smoking cessation". Health Promotion International, vol. 25, no. 1, pp. 5-13, 2010. https://doi.org/10.1093/heapro/dap044

[37] Meng, Q., Yuan, B., Jia, L., Wang, J., Yu, B., Gao, J., Garner, P. "Expanding health insurance coverage in vulnerable groups: a systematic review of options". Health Policy and Planning, vol. 26, no. 2, pp. 93-104, 2011. https://doi.org/10.1093/heapol/czq038

[38] Smith, B.J., Ferguson, C., McKenzie, J., Bauman, A., Vita, P. "Impacts from repeated mass media campaigns to promote sun protection in Australia". Health Promotion International, vol. 17, no. 1, pp. 51-60, 2002. https://doi.org/10.1093/heapro/17.1.51

[39] Browne, M. J. "Evidence of adverse selection in the individual health insurance market". Journal of Risk and Insurance, vol. 59, no. 1, pp. 13-33, 1992. https://doi.org/10.2307/253214

[40] Cutler, D. M., Zeckhauser, R. J. “Adverse selection in health insurance”. Forum for Health Economics & Policy, vol. 1, no. 1, pp. 1-33, 1998.

[41] Simon, K. I. “Adverse selection in health insurance markets? Evidence from state small-group health insurance reforms”. Journal of Public Economics, vol. 89, no. 9-10, pp. 1865-1877, 2005. https://doi.org/10.1016/j.jpubeco.2004.07.003