# ISRG JOURNAL OF ECONOMICS AND FINANCE (ISRGJEF)


**ISRG PUBLISHERS**

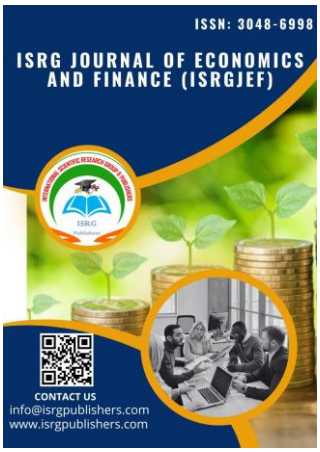
Abbreviated Key Title: ISRG J Econ Fin.

**ISSN: 3048-6998 (Online)**

Journal homepage: https://isrgpublishers.com/isrgjef-2/

**Volume – III Issue - III (May-June) 2026**

Frequency: Bimonthly





# RAISING AWARENESS OF SOCIAL SECURITY SCHEME AND WILLINGNESS TO PAY FOR SOCIAL HEALTH INSURANCE AMONG BASIC HEALTH STAFF IN YANGON REGION, MYANMAR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| **Received:** 17.06.2026 | **Accepted:** 19.06.2026 | **Published:** 24.06.2026



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## Abstract

***Background:*** *In many low- and middle-income countries, including Myanmar, out-of-pocket spending continues to be a primary method of financing healthcare, often placing households at risk of financial strain. The limited information is available regarding the level of financial protection among basic health staff.*

***Aim:*** *The study was conducted to raise awareness of Social Security Scheme and to identify willingness to pay for social health insurance among basic health staff at township health departments in Yangon Region, Myanmar.*

***Methods:*** *A cross-sectional institution-based study was carried out among basic health staff using structured questionnaires for data collection. Descriptive statistics and logistic regression analyses were applied to explore factors associated with awareness, perception and willingness to pay for social health insurance. Catastrophic health expenditure was assessed using the standard 40% threshold of household capacity to pay. Ethical approval was obtained, and informed consent was secured from all participants.*

***Findings:*** *The findings reveal that most participants financed healthcare through out-of-pocket payments (86.3%). Using the standard threshold of 40% of non-food expenditure, only 4.1% of households experienced catastrophic health expenditure. To cope with healthcare costs, respondents mostly relied on withdrawing savings, borrowing money, and, in some cases, selling assets. The awareness-raising procedure provided by the investigator was the most common source of information (99.5%). Only 26% of the study population had good awareness and 23.5% of them had a positive perception toward SSS by SSB. The study found that 81.6% of the study participants were willing to contribute 2% of their monthly salary to SHI. Econometric analysis using a logit model estimated the mean WTP at 22,544 MMK (10.74 USD). Higher income levels were significantly associated with better awareness of social health insurance, while the participants with higher educational attainment were more likely to have a positive perception*

*of social health insurance. Furthermore, a positive perception of social health insurance was significantly associated with willingness to pay, whereas respondents who experienced catastrophic health expenditure were less likely to be willing to pay.*

***Conclusion:*** *These results highlight the importance of strengthening awareness programs. Expanding social health insurance coverage and improving the quality of public health services could help lessen the financial burden and support progress toward universal health coverage in Myanmar.*

***Keywords: Awareness Raising, Catastrophic Health Expenditure, Out-of-Pocket Expenditure, Social Health Insurance, Willingness to Pay.***

## INTRODUCTION

Health systems of each and every country around the world are on the quest for achievement of Universal Health Coverage (UHC) which is one of the targets under the Sustainable Development Goals to be achieved by 2030. The UHC have two explicit goals: all people must have access to required health services of quality and protection from financial stress (WHO, 2021). In Southeast Asia and Asia context, indices related to financial risk are dominantly analyzed such as estimating out of pocket (OOP) payments and catastrophic health expenditure (CHE) since most countries are trapped in such problems for decades (Wagstaff and Neelsen, 2020).

The health system stewardship, the health financing mechanisms, and delivering health services have to be reviewed as the effective factors for reducing OOP payment in which health financing mechanisms has been found as the second most with three components such as revenue collection (19%), pooling and Resource management (57%), payment and purchasing (24%) (Jalali, Bikineh and Delavari, 2021).

Mandatory social health insurance of South Korea for industrial workers has been implemented in 1977 and extended to the self-employed until it covered the entire population in 1989. The system is also dealing with several challenges, including the strong presence of private providers who are paid on a fee-for-service basis, a rapidly aging population, and the growing role of private health insurance alongside rising demand and expectations for healthcare within the community (Kwon, 2008).

Patterns of OOP payments was studied among general population and social security members in Myanmar, 2015. The average OOP spending for healthcare during the most recent illness episode was about eight times higher in the general population compared to those in the SSS group (C.-Y. Myint, Pavlova and Groot, 2019a).

One study in 2015 showed that 4.4% households experienced CHE. There was found to be more than 50% of the total health expenditure by the households in which nearly 28% took loans and 13% sold their assets to cover their health spending. About 1.7 million people fell below the national poverty line due to health spending in 2015. The OOP payment for health expenditure is still the main source of health financing in Myanmar (Ergo *et al.*, 2019).

In Philippines, the Government Service Insurance System (GSIS) manages the social security scheme for workers in the public sector while the Social Security Scheme (SSS) manages the same for workers in the private sector (Manasan, 2009). Compared with other countries in the region, GSIS and SSS cover a smaller share of the population than the systems in Thailand, Malaysia, Singapore, and South Korea, but their coverage is still higher than in Indonesia. (Manasan, 2009).

In Myanmar, different sources of health care spending constitute government funding through Ministry of Health (MOH), out-of-pocket (OOP) payment, contributions from the Social Security Scheme (SSS) by Social Security Board (SSB), community and external aid. The health expenditure report (2019-2022) revealed that the cost for healthcare services were OOP expenditure (65%), the contribution of government (23%), and other private sources (12%) of total current health spending in 2022 (MOH, 2024). Nowadays, SSS adopted by SSB under the Ministry of Labour is the only dynamic SHI scheme in Myanmar.

According to law, government departments, organizations and regional administrative organizations carrying out business are also entitled to contribute SSS and those which do not carry out the business are not still entitled (The Social Security Law, 2012). The amount of contribution to SSS is 3% from the employer, 2% from the employee, and a capital contribution from the government. There are two main types of benefits which are free medical care and cash benefits. (SSB, 2023b).

According to Social Security Law 2012, non-business public sector such as ministries of general administration, health, education, religious affairs and culture are not entitled to the compulsory SSS and its benefits (The Social Security Law, 2012). Therefore, the civil servants in Ministry of Health are not compulsory contribution for SSS and its benefits at that moment. Assuming that if the SSS implementation is extended to the rest of the government sectors for filling the gap and getting nearly full coverage of SHI, the readiness and WTP for SHI of BHS would be mandatory to know for the decision makers.

Understanding the factors that influence willingness to pay may also assist policymakers in identifying potential challenges to participation and improving the design of future insurance programs. There are also limited studies on the factors influencing SSS contributions in Myanmar beyond the post-COVID-19 era and political transition period. Existing studies on health insurance in Myanmar have largely focused on the general population and Social Security Scheme members. Evidence regarding awareness, perception, and willingness to pay among Basic Health Staff remains limited. Moreover, BHS work at the community level and have close contact with the population through their routine service activities. Given their close interaction with communities and their responsibility for health promotion activities, understanding their views on social health insurance is essential for future policy implementation in order to achieve ultimate goals of UHC in Myanmar.

## LITERATURE REVIEW

Achieving UHC is one of the targets towards SDGs implemented in 2015. The two indicators in SDG that track the forward

movement of UHC are essential health services coverage (3.8.1) and the proportion of the population facing financial hardship due to OOP health expenditures (3.8.2) (WHO, 2021). The essential health service coverage, financial risk protection, and population coverage are three dimensions to measure progress towards UHC. The targets of setting up by WHO and the World Bank for UHC are that essential health services (at least 80% coverage), financial protection and 100% coverage for whole population (WHO, 2015). Using a Primary Health Care approach is the recommendation of WHO to reorientate the healthcare system in Myanmar. PHC is the most inclusive, equitable, cost-effective and efficient approach to enhance the physical, mental and social well-being of community (Ministry of Health and Sports, 2016).

The Myanmar government launched the National Health Plan (2017-2021) in December, 2016 which acts a distinctive occasion to shape a new way for Myanmar's health system. The ultimate goal of NHP 2017-2021 is to extend access to a Basic Essential Package of Health Services (EPHS) to the entire population by 2020 while increasing financial protection and has to expand to service availability and readiness (2021-2026). The basic essential package of health service intends to the major status of primary health care which distribute essential health services and interventions at and below the township level in Myanmar Thereafter the government has plan to implement NHP (2026-2031) with comprehensive EPHS by reducing catastrophic and impoverishing OOP spending on health (Ministry of Health and Sports, 2016).

The study of the national and subnational assessment of progress towards UHC in Myanmar showed that most of the healthcare service indicators' coverage was below UHC's targets which was 80%. More than 14% of households faced catastrophic healthcare payment and 2% of non-poor households became poor due to OOP for their health (Han *et al.*, 2018). In addition, the effective and efficient utilization of existing resources and capacity building at fundamental stage are crucial to defeat the health system's challenges (C. Myint, Pavlova and Groot, 2019a).

Out-of-pocket expenditure refers to any direct payments made by households when they receive healthcare services. The sources of health care spending in Myanmar consist of government funding, OOP payments by households, funding from the SHI, community contributions and external aid (Ministry of Health and Sports, 2016). In Myanmar, the majority of healthcare facilities are provided by MOH and other ministries. Only the small part is organized by not for-profit institutions (NPI) and for-profit private sector. People receive health services from all these providers through prepayment or OOP spending. The current health expenditure in Myanmar, OOP spending declined from 76 percent in 2019 to 65 percent in 2022 stated in National Health Account (2019-2022). It accounted for 23% coverage by government, 12% by NPIs and 65% by OOP spending which was still the main expenditure on health in Myanmar (MOH, 2024).

The financial burden of healthcare is considerable and is often assessed using catastrophic health expenditure (CHE). Globally, more than 12% of people face catastrophic spending. In addition, around 90 million people are pushed into extreme poverty—living on $1.90 or less per day because of out-of-pocket payments for healthcare (WHO, 2023b). Catastrophic expenditures are not identical to the high healthcare costs. Catastrophic health spending is not driven by OOP payments alone. It is shaped by a combination of factors, including poverty, access to and use of health services, and the weak ability of social systems to pool and share financial risk. These factors together explain why the level of catastrophic spending differs across countries. (Xu *et al.*, 2003).

In global health systems, three core health financing functions are commonly highlighted: revenue collection, pooling of funds and purchasing of services. Health insurance is a formal system that helps protect people from the high costs of medical care by covering services included in an insurance plan. Globally, two main health insurance models are commonly used: the Beveridge model and the Bismarck model (Wang *et al.*, 2012). Based on the two main models, health insurance can be financed and managed in different means with these four main approaches (National health insurance, Social health insurance, Private voluntary insurance, Community based health insurance) (World Bank, 2010).

For social protection of Indonesians, there are two types of social intervention. The first approach supports poor households through cash transfers and other assistance programs, but these often suffer from poor targeting and leakage of funds. The second approach uses contributory social insurance and mandatory savings for formal workers, yet coverage is still low, with only about 16 million out of 100 million workers enrolled (ADB, 2008). The Government Service Insurance System (GSIS) in the Philippines provides benefits such as compulsory and optional life insurance, retirement, separation, and employee compensation, with automatic life insurance coverage for its members (Manasan, 2009). South Korea introduced mandatory social health insurance for industrial workers in 1977 and achieved universal coverage in 1989. the system now faces challenges such as a strong private healthcare sector paid mainly through fee-for-service, a rapidly aging population, and the growing role of private health insurance (Kwon, 2008).

In Myanmar, the social insurance scheme (SSS) by Social Security Board (SSB) and the voluntary health insurance scheme by Myanma Insurance have critical sector in health financing. Myanma Insurance is the state-owned insurance organization and financed through voluntary health insurance contributions, mostly from households which implemented two main packages namely general insurance and life insurance (Myanma Insurance, 2023). SSB was founded in 1956 and is the administrator of Myanmar government and is one of the sectors of Ministry of Labour, Immigration and Population. Social security law was created and endorsed in 1954 and was reorientated in 2012. The government enacted the modified social security law to improve the contributions of health insurance premiums and to extend the health services including the purchaser-provider split system.

The social insurance scheme is the tripartite contributions from the employees, employers and the state. The current scheme is funded through contributions from employees and employers at 2% and 3% of the employee's monthly salary respectively (SSB, 2023a). Under the 2012 law, some government departments, organizations, and regional authorities are required to join the compulsory Social Security System. This is decided by the Ministry of Labour in coordination with the SSB and with approval from the Union Government (The Social Security Law, 2012).

WTP is the maximum price or cash that a customer is willing to pay for a product or service (Varian, 1992). The WTP for services are mostly determined by the contingent valuation (CV) method. The double bound dichotomous choice approach to estimate the WTP is a good statistical efficiency and is simple to conduct and it is widely used in the valuation (Gidey *et al.*, 2019a).

The study in Arba Minch Town of South Ethiopia showed that showed that the significant association between awareness, size of family, getting regular health information and inclusion at social networking and willingness to join SHI (Kebede *et al.*, 2023). The study of civil servants in Osun, south west region of Nigeria pointed out the government needs to perform awareness raising programme adequately to increase the knowledge of civil servants about NHIS (Olugbenga-Bello and Adebimpe, 2010).

One study of social security scheme in two different groups of insured and uninsured population of selected townships in Yangon revealed that poor awareness and low score of perception about social health insurance scheme and the estimation of CHE can vary according to the different approaches (C.-Y. Myint, Pavlova and Groot, 2019b). A community-based study in Myanmar also highlighted that socioeconomic factors and perceptions regarding the benefits of health insurance were important determinants of willingness to pay. (Oo et al., 2015). Another study of WTP for health insurance among attendees of selected urban health centres in Myanmar found that more than half of the respondents were willing to contribute to a proposed health insurance scheme and WTP was associated with factors such as age, income level, self-perceived health status, and previous experience of illness (Yee, Yadanar and Win, 2026).

# OBJECTIVES

**General Objective**

To raise awareness of Social Security Scheme (SSS) and to identify willingness to pay for social health insurance among basic health staff at township health departments in Yangon Region, Myanmar

**Specific objectives**

1. To assess the out-of-pocket expenditure and catastrophic health expenditure among the study population
2. To identify awareness of Social Security Scheme after giving the awareness raising programme among basic health staff at township health departments in Yangon Region
3. To describe the perception and willingness to pay for social health insurance among the study population
4. To identify the determinants of awareness, perception and willingness to pay for social health insurance among the study population

**Research questions**

1. What is the proportion of basic health staff with catastrophic health expenditure?
2. What are the determinants of willingness to pay for social health insurance among basic health staff?

# METHODOLOGY

**Study Design:** Cross-sectional, institution-based explanatory mixed method study design was carried out.

**Study Period:** This study was conducted from January 2024 to December 2025.

**Study Area:** This study was conducted at ten selected townships in Yangon Region, Myanmar.

**Study Population**: The basic health staff (BHS) from selected townships were chosen for quantitative study. The BHS not willing to pay for SHI were selected for qualitative study.

**Sample Size Determination**

Since multistage sampling technique was used, the design effect (2) was used with 95% confidence interval (1.96) and margin of error (10%). Thus, minimum sample size of 178 was needed for this study. Ten percent of sample size was added to compensate incomplete data or non-response (Bland, 2015). The total sample size was 196.

**Sampling Procedure**

The multistage sampling method was used to select the participants. In the first stage of the study, five districts were selected from the remaining twelve districts in Yangon Region after excluding the two districts that comprised only one township each using simple random sampling method (Lottery method). For the second stage, among selected five districts, lots were drawn again to select two TPHD in each district. At the third stage, 19–20 BHS were randomly selected from each of the 10 selected TPHDs that had more than 19 BHS, using the manpower lists as the sampling frame and applying the excel randomization technique.

**Data Collection Methods**

Before data collection, one awareness raising informative talk was delivered to each TPHD using power point presentation and handouts. The semi-structured questionnaires with both close and open-ended questions were asked using face-to-face method. The questionnaires contain four themes; (1) sociodemographic characteristics, (2) healthcare seeking behaviors, (3) healthcare services and expenditures: all medical services and expenditures by the participants and family members in last 12 months and (4) awareness, perception and WTP for SHI by SSB. The research team created the private Viber group for each township (≈25 members in each group) to distribute regular information and updates of the social health insurance weekly for 12 weeks.

To assess the level of understanding on questionnaires, the research team conducted the pertest with 10% of sample population from different district public health departments.

To reduce the recall bias, the main interviewer and two skilled assistant interviewers conducted the interview individually with each participants using the semi-structured questionnaire, allowing sufficient time for questioning. The medical expenses were asked separately by expenditure category, and the participants were requested to use available medical or financial records during the interview whenever possible.

**Data management and analysis**

Data were entered with Excel and were checked for missing values and exported to Stata version (14.0). For descriptive statistical analysis of categorical variables, frequency and percentage was computed and for continuous variables, mean (SD) for normal distribution and median (IQR) for non-normal distribution. Awareness, perception and WTP for SHI of SSB were dependent variables and sociodemographic factors and CHE were independent variables. In this study, awareness and perception were also considered as independent variables of WTP for SHI. Binary and multivariable logistic regression analysis were used. The independent variables with $P < 0.20$ from the binary logistic regression were taken into account. Assumption check for

multivariable logistics regression was done and the model fitness was assessed by using Hosmer-Lemeshow test. Adjusted odds ratios (AORs) with 95% confidence intervals were reported, and a p-value of less than 0.05 was considered statistically significant.

The total given score of awareness and perception questions were between 0 and 25 points and between 11 and 55 points respectively. These were categorized into good or poor awareness and positive or negative perception using modified Bloom's cut off which was 80% of total scores (Jubayer *et al.*, 2024).

In order to estimate WTP status and level of premium for SHI among participants, the contingent valuation method was applied using a bidding game approach. WTP for SHI was determined based on whether the participants were willing to contribute 2% of their monthly salary as an insurance premium.

And then, the catastrophic health expenditures was calculated using the standard WHO method; the capacity to pay approach (Sub-method 2) (Xu *et al.*, 2003) (Nguyen, Ahmed and Turner, 2023) and the formula is as follows:

$$\frac{Out\ of\ Pocket\ Payment}{Total\ household\ expenditure - a\ standard\ amount\ representing\ subsistence\ food\ spending} >$$

Threshold (40%)

Since the CHE occurs when OOP payments surpass a set proportion of a household's capacity to pay, the standard threshold for CHE was determined as 40% and above for this study. However, different threshold levels such as at 20%, 25% and 40% were described in this study for future policy implications.

To estimate the econometric mean willingness to pay from the bid data, a logit model is widely applied in health financing studies. From the logit model, Hanemann (1984) derived the mean WTP: $Mean\ WTP = -\frac{\alpha}{\beta}$

The negative coefficient of the bid variable indicates that as the bid amount increases, the probability of WTP decreases.

**Ethical consideration**

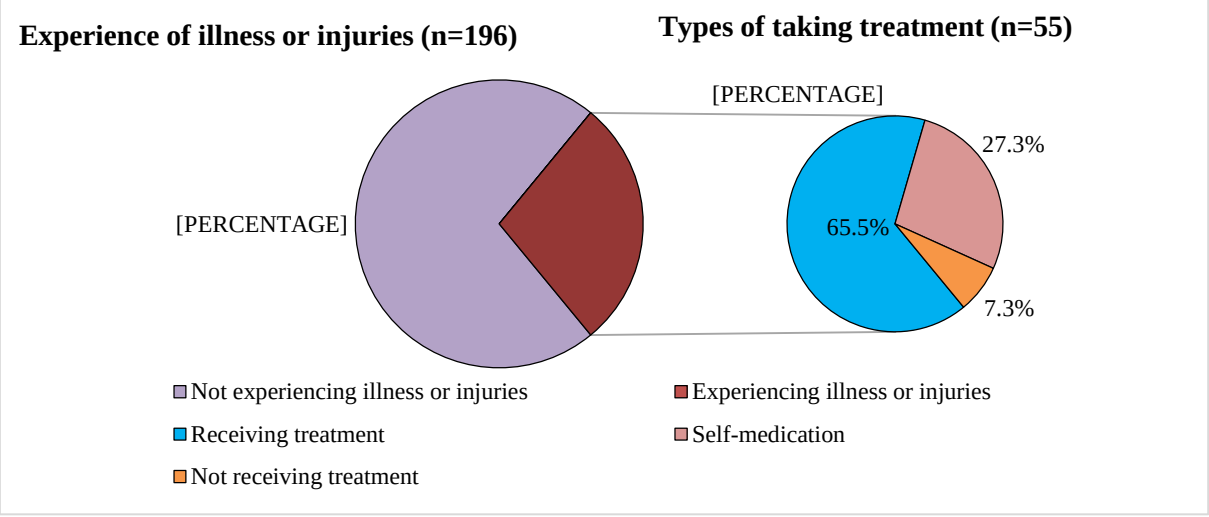
The study was followed the guidelines of University of Public Health, Yangon, Myanmar and received ethical approval with UPH-IRB (2024/PhD/3). Permission from Yangon Regional Public Health Department was taken before conducting research. Written informed consents from participants were obtained after explaining the objectives, procedure and benefits of research. Participants could voluntarily participate in conduction the whole process of research. The participants in this study were not caused the interference with their career. All collected information was kept securely and was accessible only to the research team. Privacy and confidentiality of the personal data were the most crucial point of the research.

## FINDINGS

The majority of participants were female (88.3%), and (50.5%) were aged between 18 and 40 years. Most respondents were married (64.8%). Regarding educational status, the majority of respondents (85.2%) had university, graduate, or postgraduate-level education. Regarding professional position, midwives constituted the largest proportion (41.3%), followed by Public Health Supervisor (2) (21.4%) and Lady Health Visitors (15.8%). Most respondents were in the 180,000–2000–190,000 MMK pay scale (63.3%). With regard to working service, (59.2%) of respondents had more than 10 years of service.

Most respondents (77.6%) had fewer than five family members. The majority of respondents (82.1%) had two or fewer income earners in their family. More than half of the respondents (56.6%) had monthly income more than 250,000 MMK. Regarding household income, 53.6% had a monthly household income of 500,000 MMK or less.

**Figure (1) Experience of illness or injury among the study population during the past 30 days (n = 196)**




As shown in Figure (1), the majority of the study population (72%) did not experience any injuries or illness during the past 30 days. Among those who reported health problems, 65.5% received treatment, 27.3% practiced self-medication and 7.3% did not receive any treatment. Among respondents who received treatment, 86.3% covered healthcare expenditures through out-of-pocket payments, while the rest of the participants didn't have to pay their healthcare expense in other mean which was free of charge.

The majority of the study population perceived their health status as good (62%), while only (1%) reported poor health status.

**Out-of-pocket expenditure and catastrophic health expenditure**

The OOP expenditures for different types of healthcare services among the study population. The most commonly reported service was buying medicine (76.0%), with a median expenditure of 100,000 MMK (IQR: 50,000–6,000,000). This was followed by outpatient services (51.0%), which had a median OOP expenditure

of 242,500 MMK (IQR: 120,000–3,800,000), and dental procedures (24.0%) with a median cost of 120,000 MMK (IQR: 54,000–7,320,000).

Only a small proportion reported cancer-related services (1.5%) and pregnancy or childbirth services (1.5%). The median OOP expenditure for cancer-related services was 750,000 MMK (IQR: 180,000–900,000), while pregnancy or childbirth services had the highest median expenditure of 1,730,000 MMK (IQR: 1,110,000–2,080,000).

The median food expenditure during the past (7) days was 156,500 MMK (IQR: 98,150–239,800). The median non-food expenditure during the past (30) days, including expenses such as water, electricity, phone, and internet bills, was 166,500 MMK (IQR: 101,000–282,500). In addition, the median non-food expenditure during the past 12 months, including expenses such as house rent, clothing, donations, and contributions, was 1,232,500 MMK (IQR: 560,000–2,835,000).

The prevalence of CHE decreased as the threshold increased. CHE was reported by 9.2% of the study population at the 20% threshold and 7.1% at the 25% threshold. At the commonly used 40% threshold, only 4.1% of the study population experienced CHE.

The most common coping mechanism for healthcare expenditures was withdrawing savings (38.3%), followed by borrowing money (28.6%) and selling assets (28.1%). A smaller proportion of respondents pawned assets (13.3%), while only 0.5% reported forcing children to drop out of school due to healthcare costs.

**Awareness and perception of Social Security Scheme among the study population**

The most common source of information about health insurance was awareness-raising procedure provided by the investigator (99.5%), followed by social media (Facebook, Viber, WhatsApp, …). Only (26%) of the study population had good awareness, while (74%) had poor awareness.

Based on the perception score, the results showed that (23.5%) had a positive perception, while the majority, (76.5%) had a negative perception toward SSS by SSB.

**Willingness to pay for social health insurance among the study population**

The majority of BHS (81.6%) were willing to pay a 2.0% contribution for Social Health Insurance from the monthly salary while (18.4%) were not willing to pay this amount. A higher proportion of participants expressed willingness to participate in the scheme when the proposed contribution rate was relatively low, such as 0.5% or 1%. However, as the bid amount increased to 1.5%, 2%, and up to 5%, the proportion of participants willing to pay gradually decreased.

**Econometric estimation of mean willingness to pay**

Based on the model estimation, the econometric mean willingness to pay was estimated to be 22,544 MMK. If the participants were willing to pay a premium 2% of their salary, the estimated mean willingness to pay calculated from the logit model was 22,544 MMK per month (~ 10.74 USD).

**Multivariable Analysis of factors associated with awareness of SHI among the study population**

Table (1) presents that average individual monthly income was significantly associated with awareness of SHI after multivariable logistic regression analysis. The participants earning more than 250,000 MMK per month were more likely to have good awareness of SHI (AOR = 2.16, 95% CI: 1.00–4.63, p = 0.049), while other variables were not statistically significant.

The educational status was significantly associated with perception of SHI as shown in Table (2). The participants with higher educational attainment were more likely to have a positive perception of SHI compared with those with lower educational levels (AOR = 10.01, 95% CI: 1.31–76.54, p = 0.027). Other variables were not statistically significant.

Table (3) indicates that positive perception of SHI was significantly associated with WTP for SHI, while respondents experiencing CHE >40% were less willing to pay for SHI after multivariable logistic regression analysis. Awareness of SHI was not significantly associated with WTP (p > 0.05). A statistically significant association was observed between CHE and WTP. Households with CHE above 40% had markedly lower odds of WTP for SHI than those with expenditure of 40% or less (OR = 0.19, 95% CI: 0.03–0.98, p value = 0.047).

**Table (1) Multivariable Analysis of factors associated with awareness of SHI among the study population (n=196)**

| Variables | Awareness of SHI | | AOR (95% CI) | P value |
|---|---|---|---|---|
| | Good n (%) | Poor n (%) | | |
| Gender | | | | |
| Male | 3 (13.0) | 20 (87.0) | 1 | |
| Female | 47 (21.2) | 126 (72.8) | 1.80 (0.49 – 6.61) | 0.376 |
| Average individual monthly income (MMK) | | | | |
| ≤250,000 | 13 (15.3) | 72 (84.7) | 1 | |
| >250,000 | 37 (33.3) | 74 (66.7) | 2.16 (1.00 – 4.63) | **0.049** |
| Average household monthly income (MMK) | | | | |
| ≤500,000 | 20 (19.0) | 85 (81.0) | 1 | |

| Variables | Awareness of SHI | | AOR (95% CI) | P value |
|---|---|---|---|---|
| | Good n (%) | Poor n (%) | | |
| >500,000 | 30 (33.0) | 61 (67.0) | 1.66 (0.82 – 3.37) | 0.162 |
| Rating of health status | | | | |
| Good | 36 (23.7) | 116 (76.3) | 0.60 (0.30 - 1.18) | 0.135 |
| Poor | 14 (31.8) | 30 (68.2) | 1 | |

**Table (2) Multivariable Analysis of factors associated with perception of SHI among the study population (n=196)**

| Variables | Perception of SHI | | AOR (95% CI) | P value |
|---|---|---|---|---|
| | Positive n (%) | Negative n (%) | | |
| Educational status | | | | |
| University/ Graduate/ Post graduate level | 45 (27.0) | 122 (73.0) | 10.01 (1.31–76.54) | **0.027** |
| Middle/ High school level | 1 (3.5) | 28 (96.5) | 1 | |
| Average individual monthly income (MMK) | | | | |
| >250,000 | 30 (27.0) | 81 (73.0) | 1.36 (0.66 – 2.80) | 0.409 |
| ≤250,000 | 16 (18.8) | 69 (81.2) | 1 | |
| Number of family member | | | | |
| ≥5 | 7 (15.9) | 37 (84.1) | 0.63 (0.24 – 1.68) | 0.355 |
| <5 | 39 (25.7) | 113 (74.3) | 1 | |
| Number of income earner in family | | | | |
| >2 | 4 (11.4) | 31 (88.6) | 0.41 (0.13 – 1.35) | 0.144 |
| ≤2 | 42 (26.1) | 119 (73.9) | 1 | |
| Awareness of SHI | | | | |
| Good | 17 (34.0) | 33 (66.0) | 1.98 (0.93 – 4.20) | 0.076 |
| Poor | 29 (19.9) | 117 (80.1) | 1 | |

**Table (3) Multivariable Analysis of factors associated with willingness to pay for SHI among the study population (n=196)**

| Variables | Willingness to Pay | | AOR (95% CI) | P value |
|---|---|---|---|---|
| | Yes n (%) | No n (%) | | |
| Awareness of SHI | | | | |
| Good | 44 (88.0) | 6 (12.0) | 1.98 (0.70 – 5.10) | 0.210 |
| Poor | 116 (79.5) | 30 (20.5) | 1 | |
| Perception of SHI | | | | |
| Positive | 43 (93.5) | 3 (6.5) | 4.59 (1.25 – 16.86) | **0.022** |
| Negative | 117 (78.0) | 33 (22.0) | 1 | |
| Catastrophic Health Expenditure | | | | |
| >40 | 5 (62.5) | 3 (37.5) | 0.19 (0.03 – 0.98) | **0.047** |

DOI: 10.5281/zenodo.20823577

| Variables | Willingness to Pay | | AOR (95% CI) | P value |
|---|---|---|---|---|
| | Yes n (%) | No n (%) | | |
| ≤40 | 155 (82.5) | 33 (17.5) | 1 | |

# DISCUSSION

This study aimed to assess the out-of-pocket expenditure and catastrophic health expenditure, to identify the awareness, perception, and WTP for SHI scheme among basic health staff.

**Socio demographic characteristics**

The sociodemographic characteristics of BHS influence their perception and WTP for SHI. The predominance of female respondents reflects the composition of Myanmar's primary healthcare workforce, where midwives and lady health visitors constitute a substantial proportion of service providers. Most respondents were relatively young and possessed higher educational qualifications, characteristics that may facilitate understanding of health financing mechanisms and the objectives of SHI. This aligns with findings from studies conducted in Ethiopia**,** where health professionals involved in social health insurance research were predominantly under 40 years and held university-level qualifications (Girmaw *et al.*, 2023b). Higher educational attainment is associated with better understanding of health insurance concepts and greater acceptance of SHI schemes (Nosratnejad, Rashidian and Dror, 2016).

In addition, the professional composition of the study population, particularly the large proportion of midwives, public health supervisors, and lady health visitors indicates regular exposure to the health and financial difficulties experienced by communities, which may increase recognition of the need for financial risk protection through health insurance. The high proportion of married respondents and those with dependent family members may also contribute to greater interest in mechanisms that help protect households from unexpected healthcare costs.

**Out-of-pocket expenditure and catastrophic health expenditure**

The financial burden of healthcare was assessed using OOP expenditure, CHE and coping mechanisms. The study revealed that the majority of basic health staff who received treatment financed their healthcare through OOP payments. Evidence from LMICs shows that OOP payments commonly account for a significant share of total health expenditure often around 30–40% or more which indicating inadequate financial protection systems (C.-Y. Myint, Pavlova and Groot, 2019c). Similar patterns have been observed in other LMICs, studies in Bangladesh reported that more than 70–80% of healthcare users depend on OOP payments, largely due to gaps in prepayment mechanisms (HUQ *et al.*, 2015).

Using the standard World Health Organization (WHO) threshold of 40% of non-food expenditure, 4.08% of households in this study experienced catastrophic health expenditure. This finding is comparable to a study in Pakistan reported CHE incidence of around 4.57% at the same 40% threshold (Bashir, Kishwar, and Salman, 2021). although the prevalence of CHE in this study was relatively low (4.08% at the 40% threshold), the coexistence of high OOP reliance with low CHE suggests a complex financial coping dynamic. It is possible that BHS have stable incomes and are familiar with the health system, can manage regular healthcare costs without facing catastrophic expenses. However, this should not be interpreted as adequate financial protection, as frequent OOP payments can still impose a significant economic burden.

In this study, the participants reported multiple coping mechanisms to manage healthcare costs, with withdrawing savings being the most common, followed by borrowing money and selling assets. This pattern is consistent with previous studies, where households often depend on informal financial mechanisms when facing health shocks (Kasahun *et al.*, 2020)**.** Although these strategies may provide short-term relief, they can undermine long-term financial stability by depleting assets and increasing vulnerability to future economic shocks.

**Awareness, perception and willingness to pay for social health insurance**

The level of awareness of SHI observed in this study remains relatively low, with a considerable proportion of respondents reporting no knowledge of any health insurance scheme in Myanmar. This finding is consistent with evidence from multiple LMICs (Adebayo *et al.*, 2015).

The findings of this study indicate that awareness-raising programme providing at their township public health department were the most common source of information about health insurance. Similar findings have been reported in other LMICs (Dror *et al.*, 2016). In addition to the awareness raising programme, the social media observed in this study is also consistent with emerging global trends. Evidence from a study of German demonstrated that dealing with prevention and health promotion can actually increase health literacy and lead to healthy changes in lifestyles and behaviour of the users (Loss and Von Uslar, 2021).

In this study, nearly one fourth of respondents had a positive perception of SHI. It is consistent with another study conducted in Myanmar (C. Myint, Pavlova and Groot, 2019b).

Studies in Indonesia similarly indicate that poor knowledge and negative attitudes toward the national health insurance scheme (JKN) are linked with lower compliance and payment contributions among informal workers, underscoring the role of perception in scheme sustainability (Trisnasari *et al.*, 2023).

In this study, more than 80 percentage of respondents were willing to pay the proposed 2% of the monthly salary contribution. This inverse relationship between contribution rate and willingness to pay is consistent with findings of a study in Ethiopia (Negera and Abdisa, 2022). Moreover, in Myanmar, more than three-quarters of the general population expressed willingness to pay health insurance premiums (C. Myint, Pavlova and Groot, 2019b).

The econometric estimation of WTP revealed that the mean WTP for the SHI premium was estimated to be 22,544 MMK (10.74 USD). The estimated WTP in this study was close to that reported in a community-based study in Myanmar, which found an average annual WTP of 19,767 MMK (9.41 USD) per person (Oo *et al.*, 2015) and a previous study in Myanmar, where 61.1% of

participants reported being willing to pay the proposed premium of 10,000 MMK per month per person (Yee, Yadanar and Win, 2026).

**Determinants of awareness, perception and willingness to pay for social health insurance among the study population**

The finding that higher income was significantly associated with better awareness of SHI in this study is consistent with evidence from other LMIC settings. For example, a study among street vendors in Chandigarh, India, reported that individuals with higher monthly family incomes were significantly more likely to have knowledge of health insurance, highlighting the important role of socioeconomic status in shaping insurance awareness (Vasudeva *et al.*, 2024). This finding is also consistent with a recent study in India, which reported significantly higher awareness scores among individuals with higher monthly incomes, indicating that socioeconomic status is an important determinant of knowledge and understanding of government-sponsored health insurance schemes. (M.G *et al.*, 2026).

The finding of this study indicates a strong and statistically significant association between educational status and perception of SHI which is supported by evidence from a systematic review and meta-analysis in LMICs, which identified education as a significant determinant of health insurance uptake (Dror *et al.*, 2016).

The present study found that a positive perception of SHI was significantly associated with WTP. A study among healthcare workers in the Gedeo Zone, Southern Ethiopia reported that respondents with a positive attitude toward SHI were significantly more likely to pay for the scheme compared with those with a negative attitude (Kaso, Merkeb, *et al.*, 2024).

The observed negative association between CHE and WTP may reflect the financial constraints faced by households already experiencing high healthcare costs, which limit their capacity to contribute to insurance schemes despite recognizing potential benefits. While some studies suggest that households with high OOP payments are more motivated to join SHI, extreme financial hardship can paradoxically reduce WTP (Kaso, Merkeb, *et al.*, 2024).

Similarly, a study found that households with prior exposure to high OOP expenditures demonstrated varied WTP depending on their perceived ability to pay, highlighting that financial vulnerability can limit willingness to contribute to SHI schemes despite awareness or recognition of benefits (Gidey *et al.*, 2019b).

**Strength and Limitation**

**Strength**

The benefit of conducting awareness raising programme of SHI in the township public health departments is that basic health staff have gained more knowledge and become more interested in insurance. And the study focused on healthcare workers because they are directly involved in the delivery of health services and have an important role in the implementation of SHI.

**Limitation**

First, the study employed a cross-sectional design, which limits the ability to establish causal relationships between the variables. Second, the study was conducted among basic health staff within selected township public health departments, which may limit the generalizability of the findings to other populations or regions. Third, although data were collected through face-to-face interviews using a semi-structured questionnaire as data collection tool, information on healthcare expenditures was obtained from participants' memory of past spending. As a result, some expenditures may not have been reported accurately and could have been either overestimated or underestimated.

Nevertheless, the study provides valuable insights into factors influencing healthcare workers' willingness to participate in the social health insurance scheme.

## CONCLUSION

The study measured the awareness, perception and WTP towards SSS by SSB. Findings from the study indicated that awareness and perception towards SHI were relatively low. The WTP reduced with an increase in the suggested premium. Most people incurred OOP payments for healthcare services. According to the analysis of econometrics, the mean willingness to pay for the SHI premium is 22,544 MMK (10.74 USD) per month. Individuals with a higher monthly income had a high awareness of the scheme. On the other hand, highly educated individuals had a positive perception of the scheme. Moreover, perception towards the SHI was a predictor of WTP as people who have positive perceptions were more willing to make payments for the SHI premium. Also, the experience of CHE was negatively associated with the WTP.

## RECOMMENDATIONS

If expanding SHI coverage is considered a strategy for achieving UHC, the following recommendations are proposed to the policy makers on the basis of the study findings.

1. Develop and implement targeted education and awareness campaigns to improve understanding of SHI.
2. Design affordable and flexible insurance contribution rates to encourage participation across income levels.
3. Engage BHS as key partners in the implementation and promotion of SHI. Their acceptance of and participation in the scheme can positively influence community attitudes toward SHI and support broader enrollment among the general population.
4. Conduct further research in larger and more diverse populations to explore additional factors influencing willingness to pay and participation in social health insurance programs.

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