



Awareness, Utilization and Satisfaction of Social Health Insurance Scheme among Residents of Letang Municipality, Koshi Province, Nepal

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ABSTRACT

Background: Social Health Insurance Scheme is a step towards attaining Universal health coverage. Health insurance program by government of Nepal has been scaled up nationwide to achieve one of the targets of Sustainable Development Goals by 2030. Ensuring the continued engagement of social health insurance scheme members remains a significant concern. This study aims to assess awareness, utilization and satisfaction of SHIS and the determinants for dropping out the scheme.

Methods: A community-based cross sectional study was conducted including 527 participants who were permanent residents of Letang municipality. Five out of nine wards were selected randomly. A semi structured questionnaire was used to interview the head of household. Descriptive and inferential statistics were used. Binary logistic regression analysis was done to assess independent predictors.

Results: Participants who were highly aware about the social health insurance scheme (SHIS) were 45.8% (215). Our study had SHIS enrollment rate of 73.24% (386) and utilization rate of 32.1% (124) whereas 16.6% (64) was dropout rate. 23.5% (124) of the participants were highly satisfied with the health services provided by SHIS. Age, gender and difficulty to pay SHIS cost had independent effect for dropping out of SHIS.

Conclusion: One in ten participants had no knowledge at all of the SHIS. More than half of the insurer need services that weren't covered by SHIS. Expanding coverage and attaining universal health care can be accomplished through raising government health spending and allocating proceeds from an effective sin tax.

Keywords: Healthcare, insurance, social security, utilization

BACKGROUND

Many countries are pursuing Universal Health Coverage globally—one of the targets of Sustainable Development Goal to be achieved by 2030.(1) In Low-middle income countries, most of the domestic health care expenditure is out-of-pocket (OOP) payment rather than prepaid insurance.(2) OOP is still the main way to finance health care accounting for 51.3% of total health expenditure in Nepal.(3)

SHIS is a mechanism that helps to mobilize resources, pool risks, and provide more access to health care services for all, particularly for the poor. This eventually helps in accessing UHC.(4) Health insurance program was implemented in 77 districts and 749 local levels of the country by Government of Nepal till the end of FY 2079/80.(5) Families with five or more members are required to prepay NPR 3,500 annually plus an additional NPR 700 for each person.

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For participants seeking medical care, it is a cashless system.(5) Upon presenting a referral slip from their initial point of contact, the insured individuals are able to obtain emergency and specialty care from designated healthcare facilities nationwide. However, they are required to select their first service point.(6)and is also key to Universal Health Coverage (UHC Benefit package of the SHIS consists of emergency services, outpatient and inpatient services, selected drugs and diagnostic services. However, some unnecessary or expensive services are on the exclusion list. These includes cosmetic surgery, secondary equipment such as artificial organs, vision glasses, hearing equipment, services relating to artificial insemination, abortion services, dental services and treatment for injuries resulting from fights or consumption of drugs or alcohol.(7)the Government of Nepal introduced a National Health Insurance Program (NHIP

According to published research, medicine shortages, inadequate benefit package content, poor health care, and unwelcoming medical staff conduct are among the reasons why Nepal's SHIS has not been able to fulfill the needs of its participants.(8) This study aims to assess awareness, utilization and satisfaction of SHIS and the determinants for dropping out the scheme as there is high out of pocket expenditure in the country and it has been a continuous challenge to maintain a good balance between enrollment and dropout from the program.

METHODS

This community-based cross-sectional study was conducted at Letang Municipality of Morang district. This municipality has 9 wards, which are scattered across 119 square kilometers of geographical area. Study was conducted from November to December 2023. Permanent residents who had given consent were included in the study while recent immigrants (<1 year) and those who can't respond were excluded. Each household were taken as sampling frame and head of household were considered for data collection.

The sample size was calculated using the previously reported prevalence of 45.1% awareness of health insurance (9) and 10% allowable error. Using one proportion sample size formula ($n = z^2pq/d^2$) and adding a 10% of non-response rate, the final sample size was 514. However, 527 participants were included in the study. Out of nine wards, five wards were selected randomly. Ward wise population of Letang municipality was collected from respective ward profile and the number of participants from each ward was selected purposively. Pen was rotated at a centrally located spot in each ward. The household was the direction pointed by the pen. Thereafter, every consecutive house was taken for the data collection.

Semi-structured questionnaire was developed with the help of past literatures and consultations with experts. Medical students during the Epidemiological Skills for Health Management posting were trained for data collection in the field by the faculties from School of Public Health and Community Medicine. After explaining the aims and objectives of the research participants' consent, head of household were interviewed face to face. In their absence, representative of household was interviewed.

Data was entered in the Excel and then transferred to SPSS version 25 for analysis. Descriptive and inferential statistics were used to interpret data. Frequency, percentages, means and standard deviations were used where appropriate to represent the data in tables in descriptive analysis and chi-square test was applied to see the association with dependent variables. Those variables which were found to be significant at the level of 20% or below in bivariate analysis were subjected to the multivariate analysis. Statistical significance has been tested with 95% confidence interval and p value less than 0.05 has been considered as significant. For the awareness and satisfaction, response of the participants for each question for "yes" was coded as 1 whereas "no" was coded as 0. The total score obtained was divided into quartile to categorize the level of awareness and satisfaction.

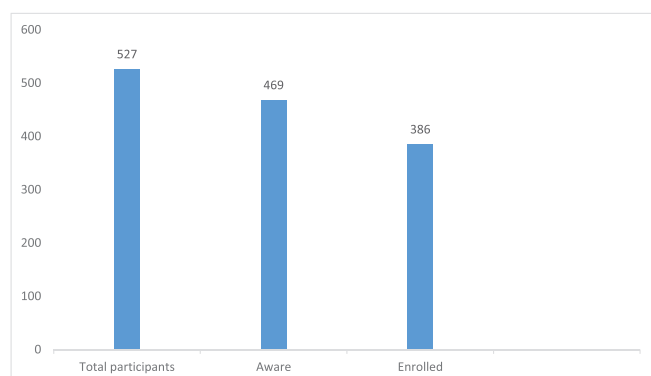
Ethical clearance was taken from the BPKIHS Institutional ethical review board [Ref.No:260/080/081-IRC] and informed consent was taken prior to the study among the participants.

RESULTS

The mean age of the participants in the study was 42.79 years with the standard deviation of 14.45 years. Age-wise distribution showed maximum number of the respondents (43.8%) belonged to the age group of 40- 59 years. A significant number of participants were female (60.5%). Nearly half of them were from the ethnic group, Janjati (46.7%). Three fourth (78.5%) were Hindu by religion. Around one third (35.3%) had completed secondary level of education. Majority were married (90.7%). There were almost equal number of participants having nuclear (51.6%) and joint (48.4%) family with most of the them having 4- 6 family members (64.1%). More than half of them (54.3%) were farmer. Participants with the family income below twenty thousand rupees was 63.2%. (Table 1).

Table 1. Socio-demographic profile of the participants (n=527)

Characteristics	Category	Frequency	Percentage
Age	18- 25	65	12.3
	26- 39	152	28.8
	40- 59	231	43.8
	60 and above	79	15
Sex	Male	208	39.5
	Female	319	60.5
Ethnicity	Brahmin/ Chhetri	231	43.8
	Janjati	246	46.7
	Dalit	50	9.5
Religion	Hindu	414	78.5
	Buddhism	82	15.6
	Kirat	31	5.9
Education	Illiterate	90	17.1
	Primary	149	28.3
	Secondary	186	35.3
	Higher Secondary	63	12
	Bachelors and above	39	7.4
Marital status	Married	478	90.7
	Unmarried	49	9.3
Family type	Joint	255	48.4
	Nuclear	272	51.6
Family size	Up to 3	100	19
	4- 6	338	64.1
	6 and above	89	16.9
Occupation	Farmer	286	54.3
	Civil servant	59	11.2
	Business	106	20.1
	Homemaker	76	14.4
Family income	Up to 10,000	163	30.9
	10,000- 20,000	170	32.3
	20,000- 30,000	89	16.9
	30,000- 40,000	43	8.2
	40,000 and above	62	11.8

**Figure 1. Awareness and enrollment of SHIS among participants**

Among the 527 (total) participants, 469 had heard about the SHIS. From these participants, awareness was accessed. Similarly, out of 469 participants, 386 were enrolled in the scheme. From these participants, utilization, satisfaction and dropping out of the scheme was evaluated. (Figure 1).

Out of total participants, 469 had heard about SHIS. Participants with minimal, moderate and high level of awareness of SHIS was 150 (32%), 104 (22.2%) and 215 (45.8%) respectively. Three fourth (74.8%) of the participants were aware about membership fee while half (52.8%) of them were aware about additional membership fee. Only 23.5% of the respondents had an idea of single unit. Participants who were involved in dissemination of information about SHIS was 62%. Majority (84.6%) felt SHIS can alleviate OOP expenditure for health issues. More than half of the participants thought that SHIS helps in early diagnosis (60.3%) and has benefits for medications and diagnostics (62.2%). (Table 2).

Table 2. Awareness of the participants about the SHIS (n=469)

Awareness	Frequency	Percentage
Membership fee		
Yes	394	74.8
No	75	25.2
Additional membership fee		
Yes	278	52.8
No	191	47.2
5 members considered as a single unit		
Yes	124	23.5
No	345	76.5
Involved in dissemination of SHIS		
Yes	327	62.0
No	142	38.0
SHIS can alleviate out of pocket expenditure for health issues		
Yes	446	84.6
No	23	15.4
SHIS helps in early diagnosis		
Yes	318	60.3
No	151	39.7
Benefits for medications and diagnostics		
Yes	328	62.2
No	141	37.8

Our study had SHIS enrollment rate of 73.24% (386) and utilization rate of 32.1% (124) whereas 16.6% (64) was dropout rate. 64.5% of the participants had health expenditure for services beyond benefit packages thus increasing their out of pocket expenditure. (Table 3).

Table 3. Utilization of SHIS among participants (n=386)

Utilization of SHIS for health services	Frequency	Percentage (%)
Yes	124	32.1
No	262	67.9

Participants with low, moderate and high level of satisfaction from SHIS was 130 (24.7%), 132 (25.0%) and 23.5% (23.5%) respectively. More than half (64.5%) of the participants thought all health requirements were met. Almost half of the participants (48.2%) found utilizing SHIS difficult. Around one third (34.2%) received services within 30 minutes of reaching the institute. Majority were comfortable with the health workers (90.2), could afford the premium (85%), were receiving all services within benefit packages (81.1%), were willing to continue (93.8), got clear information from scheme personnel (92.7%), found the performance of insurance agent effective (91.5%) and had enough information from service providers (93.5%). (Table 4).

In the bivariate analysis, age, gender, ethnicity, difficulty to pay SHIS cost, perception towards health services provided by SHIS, inclusion of all health requirements for family members, affordability of premium, getting all services provided by SHIS, willing to continue SHIS and enough information provided by service provider were found to be significant. In logistic regression, age (AOR: 0.43, 95% CI: 0.19- 0.96; p=0.04), gender (AOR: 0.47, 95% CI: 0.24- 0.92; p=0.02), and difficulty to pay SHIS cost (AOR: 2.04, 95% CI: 1.06- 3.92; p=0.03) had independent effect for dropping out of SHIS after adjusting for various significant variables. (Table 5).

DISCUSSION

Our study explored awareness, utilization and satisfaction of SHIS among the residents of Letang municipality. In our study, 89% participants were aware about SHIS in contrast with the study conducted by Sharma et al in Pokhara, Kaski only 45.1% were aware on the health insurance scheme.(9) SHIS utilization rate of 32.1% was reported in our study which was in line with the finding of annual health report where the national utilization rate was 38%.(5)

Our study revealed the dropout rate of 16%. Similarly, the study conducted in Bhaktapur by Ghimire et al showed 11.2% of study participants dropping out from

the health insurance program.(10) In contrary to our study, 55.6% participants were drop outs in the study conducted in Pokhara by Paudel et al.(11) The reason of high coverage of SHIS among the participants in our study could be due to the fact that our study area viz Morang is one of the leading top five districts based on the number of enrollments in FY2077/78.(5)

Table 4. Satisfaction of SHIS among participants (n=386)

Satisfaction	Frequency	Percentage
Inclusion of all health requirements (Adequate health packages)		
Yes	249	64.5
No	137	35.5
Difficulty in utilizing SHIS		
Yes	186	48.2
No	200	51.8
Receive services within 30 minutes		
Yes	132	34.2
No	254	65.8
Comfortable with health workers		
Yes	348	90.2
No	38	9.8
Affordable premium		
Yes	382	85.0
No	4	15.0
Receiving all services within benefit packages		
Yes	297	81.1
No	89	18.9
Willingness to continue		
Yes	362	93.8
No	24	6.2
Clear information from scheme personnel		
Yes	358	92.7
No	28	7.3
Effective performance of insurance agents		
Yes	353	91.5
No	33	8.5
Enough information from service providers		
Yes	361	93.5
No	25	6.5

Table 5. Binary logistic regression analysis of factors associated with dropping out of SHIS (n=386)

Characteristics	Drop Out SHIS		OR (95% CI)	AOR (95%CI)	p- value
	Yes n (%)	No n (%)			
Age					
18- 25	5 (12.5)	35 (87.5)	0.51 (0.17-1.54)	0.47 (0.14-1.56)	0.21
26- 39	21 (21.4)	77 (78.6)	0.98 (0.46-2.07)	0.95 (0.41-2.21)	0.91
40- 59	23 (12.8)	156(87.2)	0.53 (0.25-1.09)	0.43 (0.19-0.96)	0.04*
60 and above	15 (21.7)	54 (78.3)	1	1	
Gender					
Male	17 (10.9)	139(89.1)	0.47 (0.26-0.86)	0.47 (0.24-0.92)	0.02*
Female	47 (20.4)	183(79.6)	1	1	
Difficulty in paying					
Yes	35 (25.5)	102(74.5)	2.60 (1.50-4.49)	2.04 (1.06-3.92)	0.03*
No	29 (11.6)	220(88.4)	1	1	
Perception towards health services					
Good	31 (12.1)	226(87.9)	1	1	
Neutral / bad	33 (25.6)	96 (74.4)	2.50 (1.45-4.32)	1.41 (0.74-2.68)	0.29
Inclusion of all health requirements					
Yes	28 (11.2)	221(88.8)	1	1	
No	36 (26.3)	101(73.7)	2.81 (1.62-4.86)	1.83 (0.96-3.49)	0.06
Is premium affordable					
Yes	45 (13.7)	283(86.3)	1	1	
No	19 (32.8)	39 (67.2)	3.06 (1.62-5.76)	1.45 (0.66-3.17)	0.34
Getting all services					
Yes	36 (12.9)	261(87.9)	1	1	
No	28 (31.5)	61 (68.5)	3.32(1.88-5.86)	1.83 (0.90-3.70)	0.09
Willing to continue					
Yes	52 (14.4)	310(85.6)	1	1	
No	12 (50)	12 (50)	5.96 (2.54-13.9)	1.51 (0.51-4.43)	0.45
Service provider gives enough information when asked					
Yes	54 (15)	307 (85)	1	1	
No	10 (40)	15 (60)	3.79 (1.61-8.87)	2.22 (0.80-6.13)	0.12

In our study, enrolled participants receiving all services within benefit packages and services providers providing enough health information showed association with dropping out of SHIS. According to the study by Nepal Health Research Council, the people were reluctant to become a member of the SHIS scheme as the medicines and other services were not often available in the health facilities.(12) Study conducted by Sharma et al showed drop out was influenced by poor availability of drugs and perceived unfriendly behavior of service providers. (13) Not providing adequate and appropriate health information by health workers was associated with unwillingness to enroll and keenness to dropout.(8)

Also, our study showed association between inadequate benefit package provided by health insurance and drop out. Similarly, in the study done by Gurung and Panza the inadequacy of the benefit package (14.9%)

was third major reason for drop out.(12) While in the study conducted by Paudel et al, unavailability of medicines was the second major cause for the same.(11) A study conducted by Nepal Health Research Council (NHRC) suggests that insured >90% want to renew the health insurance scheme if it increases the coverage of the service package. About 36% faced difficulties in accessing health care facilities and not satisfied with health workers, and about 40% utilized health service out of scheme.(14)

Difficulty in paying for health insurance (AOR: 2.04, 95% CI: 1.06- 3.92; p=0.03) had statistically significant association with drop out from SHIS in our study. It can be difficult to pay for renewal fees as according to the National Statistics Office's (NSO) Fourth Nepal Living Standards Survey 2022–2023 report, 20.27% of the country's population still live below the poverty line.(15)

The median willingness to pay amount for insurance was capped at Rs 500 per household per annum (16) which is higher than payment of Rs 3500 for five members with additional Rs 700 per extra members. To add on the already weakened purchasing power for renewal; the lack of provision for installment payment makes it even more challenging for the participants.(17)

In our study, age (AOR: 0.43, 95% CI: 0.19- 0.96; $p=0.04$) and gender (AOR: 0.47, 95% CI: 0.24- 0.92; $p=0.02$) were found to be statistically significant with drop out from SHIS. There are limited studies done on this subject in our country. In comparison with the age group 60 and above, the participants within the age group of 40- 59 were less likely to drop out the SHIS. Similar to another study the utilization of services was more inclined to independent group who belonged to 20-59 years of age in comparison to dependent groups who were 60 years and above of age. This was attributed to younger age knowing about the advantage of social health insurance.(18) Elderly were also less willing to pay for community-based insurance. When compared to the younger responders, the pay-off time for any human capital investment in health at later ages yields less and lesser.(19,20)

Males were less likely to drop from SHIS compared to females which could be due to the reason that males are generally the bread winners in our social setting and thereby more exposed to become aware of SHIS. Because Nepalese society is patriarchal, males are typically regarded as the primary decision-makers when it comes to household finances (7), disparities in NHIS enrollment between men and women can be attributed to uneven power dynamics between genders within the home. (21) Similarly, male led household were more willing to pay for health insurance in Nigeria and North-west Ethiopia due to income gap between male and female gender with males earning more compared to their female counterpart.(22,23)

Due to cross sectional design of the study, a cause- effect relationship cannot be inferred. Also, study findings may not be generalizable to the geography other than Morang district of Nepal as we were not able to choose the sampling unit by random sampling technique due to limited time duration of the study.

CONCLUSION

One tenth of the participants were completely unaware about the SHIS. There was a need for services beyond the coverage provided by the insurance scheme. Major dissatisfaction was expressed in difficulty utilizing health insurance scheme and delayed rendering of services. In terms of drop out analysis participants had hard time paying for renewal. There seems a gap in coordinated service management and benefit

packages. SHIS is a voluntary program and the need for increased risk pooling seems imminent. For greater population coverage the insurance program must be made compulsory inclusive for all to increase revenues. Increasing government health spending as well as directing revenues from effective sin tax can all be employed towards greater coverage and achieving universal health care.

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Conflict of Interest

The authors declare no conflict of interest.

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