Satisfaction from Utilization of National Health Insurance Program in Nepal: Service User's Perspective

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ABSTRACT

Background

Health insurance is recognized as a valuable resource for improving healthcare access for financially disadvantaged individuals, resulting in better health outcomes and increased productivity. The satisfaction and experiences of health insurance users are crucial for enhancing services and policies.

Objective

To assess the satisfaction of users within the national health insurance program.

Method

A household survey in Bhaktapur district of Nepal, conducted between September and November 2019, assessed satisfaction with health insurance services under the national program. Interviews were conducted with 173 individuals who had utilized the insurance scheme, using a structured questionnaire. Collected data were analyzed with STATA 13 software, and logistic regression analysis determined associations between satisfaction and independent variables. The study adhered to the STROBE Checklist guidelines for standardized reporting of results.

Result

The most satisfied domain was the registration and renewal process, while the least satisfied domain was the information about insurance services. In the adjusted analysis, literacy was the only variable significantly associated with satisfaction, with literate individuals (AOR 2.5, 95% CI 1.12-5.66) being more likely to be satisfied with the health insurance program compared to illiterate individuals.

Conclusion

The study found generally high satisfaction levels among individuals utilizing health insurance services. However, dissatisfaction was particularly linked to the information provided by health facilities about these services. Literacy was identified as a significant factor influencing satisfaction with the health insurance program. This highlights the need for an awareness program to educate the insured community about the diverse benefit packages available.

KEY WORDS

Health insurance, Health service users, Health service utilization, Satisfaction

INTRODUCTION

Access to healthcare significantly affects an individual's well-being, including their physical, mental, and social health, as well as their overall quality of life.[1] The main goal of a country's healthcare system is to offer accessible and high-quality healthcare services to everyone, promoting equity and preventing financial burdens. It is the responsibility of the state to ensure that healthcare is easily accessible, maintains high quality, and consistently meets appropriate standards, recognizing it as a fundamental human right.[2,3] Many countries worldwide have implemented various healthcare financing methods, such as health insurance programs and Universal Health Coverage (UHC) initiatives, to ensure healthcare access and financial protection.[4] In Nepal, the national health insurance system has been established to extend healthcare coverage to the entire population and improve health outcomes.[5]

While Nepal's national health insurance system aims to extend coverage and improve health outcomes, ensuring enrollment is vital for sustainability. Factors such as scheme design, payment schedules, awareness, and user satisfaction influence success.[6-8] User satisfaction directly affects clinical outcomes and patient retention, making it a crucial indicator of healthcare effectiveness.[9,10] Consequently, evaluating user satisfaction regarding the utilization of health insurance services within this program is essential.

Evaluating user satisfaction is crucial for gauging the program's effectiveness and achievements, as it represents the insured population's experiences, perceptions, and expectations.[11-13] Therefore, the objective of this study was to evaluate user satisfaction among insured residents in the Bhaktapur district when utilizing the national health insurance program.

METHODS

A descriptive household survey was conducted in the Bhaktapur district of Nepal from September to November 2019 to evaluate satisfaction with health insurance services provided under the national health insurance program.

The study was conducted in the Bhaktapur district of Nepal over a three-month period from September to November 2019. Interviews were conducted with 173 individuals from households that had utilized health insurance services, and who were the most recent service users above 18 years old in their respective insured households. The sampling technique employed for the survey has been explained elsewhere.[14] To evaluate user satisfaction, interviews were conducted with 173 individuals who were the latest service users above the age of 18 in their respective insured households with service utilization. It is worth noting that only clients who had utilized health services through the insurance scheme were included in this study.

A structured questionnaire tool was utilized to gather data for the study. The questionnaire included sections on sociodemographic characteristics, utilization history of health insurance services, and satisfaction with health insurance services. The development of the data collection tool involved a thorough literature review, ensuring its relevance and comprehensiveness. To maintain face and content validity, experts were consulted during the tool's development.

The questionnaire was pre-tested before administration for local validity and reliability. The questionnaire's accuracy in terms of content structure, ambiguous terminology, unclear questions, and language has been analyzed and updated in response to the expert's comments and suggestions. The questionnaire was translated into the Nepali language for collecting the data which was further back-translated to ensure the validity of the tool. Investigators frequently kept a careful observation of the data collection procedure to make sure that it was complete, accurate, and consistent. The Cronbach's alpha of the items of satisfaction was obtained as 0.8 which showed the tools as reliable.[15] The alpha reliability of each item of satisfaction showed greater than 0.7.

The dependent variable in this study was satisfaction with health insurance services. To measure satisfaction, a four-point Likert scale was used, ranging from "extremely satisfied" to "extremely dissatisfied." The satisfaction responses were then categorized into two broad categories by merging "extremely satisfied" and "satisfied" into "satisfied," and "extremely dissatisfied" and "dissatisfied" into "dissatisfied" to make binary outcome variables for measurement. Then, the two-point Likert scale satisfaction score of each service user was summed to get the total satisfaction score. Then, the variable on total satisfaction score was dichotomized into satisfied and unsatisfied using mean as the cut-off value.[16,17]

Independent variables included age, gender, literacy, education level, Occupation, marital status, having a chronic illness, having a disability, times of visit for uptaking health insurance services, duration of last visit, and place of visit. Ethical approval for the study was obtained from the Institutional Review Board at Patan Academy of Health Sciences. Informed consent was obtained from all participants.

Only clients who had utilized health services through the insurance scheme were included in the study. The family member not utilizing the national health insurance services are excluded from the study. The latest service users in the household who were unable or not provided consent to provide the information was excluded from the study.

The data were inputted, categorized, and edited using Epi Info 7 software. Afterward, the cleaned data underwent analysis using STATA 13 software. For descriptive analysis, mean (SD) and frequency was calculated. The total

satisfaction score was obtained by adding all the two-point Likert scale scores. The mean of total satisfaction score was obtained as 5.41. Finally, total satisfaction score was dichotomized into satisfied and unsatisfied using mean (5.41) as the cut-off value.

Bivariate logistic regression was applied to measure the association between the dependent and independent variables. In this analysis, each independent variable was considered individually, and unadjusted odds ratios (OR) with corresponding 95% confidence intervals (CI) were calculated. We checked the p-values from the bivariate analysis and selected variables with p-values less than 0.25 for inclusion in the multivariable model.

The variables age, literacy, and marital status displayed a significant association in the bivariate analysis. These variables were included in the multivariable logistic regression model. Furthermore, we assessed multi-collinearity using the variance inflation factor (VIF) for all eligible variables in the multivariate logistic regression.[18,19] Only variables with a VIF of less than two were considered for inclusion in the regression analysis.[20] All variables met this criterion and were included in the final multivariable logistic regression model. The level of significance was set at five percent.

RESULTS

Among the total respondents, the majorities (60.12%) were female, and the average age of service utilizers in the family was 47.71 years. In terms of literacy, 20.81% were unable to read and write, while 79.19% were literate. Education attainment information was available for 137 individuals, with the majority having completed secondary education (32.85%) and primary education (15.33%). Concerning recent occupation, the largest proportions (27.17%) were involved in agriculture/livestock/horticulture. Most of the insured service utilizers (89.60%) were married, with smaller percentages being, never married (4.05%) and divorced/separated (6.36%). Concerning chronic illness, 58.96% of insured service utilizers reported having a chronic illness, while 41.04% did not have a chronic illness (Table 1).

The most satisfactory domain was registration and renewal, followed by service accessibility, while information provision about insurance services was the least satisfactory. Overall, out of 173 participants, 102 (58.95%) expressed satisfaction with Nepal's health insurance program (Table 2).

When evaluating overall satisfaction in two categories satisfied and dissatisfied out of 173 participants, 102 (58.95%) expressed satisfaction with Nepal's health insurance program.

In the univariate/unadjusted analysis, the variables age, literacy and marital status showed the statistically significant association with the user's satisfaction on health insurance program. While, in the adjusted analysis of the association between the dependent and background variables, literacy was only the variable that showed a significant association with satisfaction with the health insurance program. After including variables that showed significant association in the final regression model, literate people were 2.5 times more likely (AOR = 2.5, 95% CI: 1.12 - 5.67) to get satisfied with the health insurance program benefits compared to the illiterate insured people (Table 3).

Table 1. Distribution of socio-demographic characteristics among insured service utilizers in Bhaktapur District, 2019 (n=173)

Variable	Frequency	Percentage
Gender		
Male	69	39.88
Female	104	60.12
Average Age of Service Utilizers in family = 47.71 ± 14.09		
Literacy Status		
Illiterate	36	20.81
Literate	137	79.19
Education Attainment (n=137)		
No formal education	18	13.14
Primary	21	15.33
Lower Secondary	14	10.22
Secondary	45	32.85
Higher Secondary	22	16.06
Above higher secondary	17	12.41
Recent Occupation of Respondent		
Agriculture /Livestock/ Horticulture	47	27.17
Business/Trade	44	25.43
Service	26	15.03
Daily wage/ Labour	9	5.20
Housewife/ Homemaker	39	22.54
Students	8	4.62
Marital Status		
Currently married	155	89.60
Divorced / Separated	11	6.36
Never married	7	4.05
Have Chronic Illness		
Yes	102	58.96
No	71	41.04

DISCUSSION

The study showed that the majority were satisfied with the service delivery from the health institution. These findings are in line with another study where the majority of the clients reported satisfaction with the reception of the services under health insurance.[21] Similarly, a study in Nigeria also demonstrated about only one-third (34.2%) of the participants were dissatisfied with the services.[22]

Table 2. **Distribution of satisfaction on Health Insurance program among insured service users in Bhaktapur district, 2019 (n=173)**

Satisfaction Item	Extremely dissatisfied	Dis Satisfied	Satisfied	Extremely satisfied	Mean ± SD	95% CI
Services provided by the health facility	5 (2.89)	42 (24.28)	124 (71.68)	2 (1.16)	2.71 ± 0.53	2.63 - 2.79
Information about insurance services provided by Health facility	24 (13.87)	83 (47.98)	63 (36.42)	3 (1.73)	2.2 ± 0.71	2.15-2.36
Benefit packages received from the Health facility	2 (1.16)	38 (21.97)	129 (74.57)	4 (2.31)	2.78 ± 0.49	2.70-2.85
Distance of health facility providing health insurance services	1 (0.58)	9 (5.20)	143 (82.66)	20 (11.56)	3.05 ± 0.43	2.98-3.11
Registration and renewal process	1 (0.58)	7 (4.05)	139 (80.35)	26 (15.03)	3.09 ± 0.45	3.03-3.16
Contribution amount	2 (1.16)	9 (5.20)	153 (88.44)	9 (5.20)	2.97 ± 0.38	2.91-3.03
Quality of care	8 (4.62)	44 (25.43)	117 (67.63)	4 (2.31)	2.67 ± 0.59	2.58-2.76

Table 3. **Multivariate Analysis of factors associated with satisfaction with the health insurance program**

Variable	Category	Satisfaction (n=102)	Unadjusted		Adjusted	
			OR (95% CI)	P value	OR (95% CI)	P value
Age			0.98 (0.95-1.00)	0.06*	.99 (0.96-1.02)	0.660
Gender	Male	44 (63.77)	Ref	0.29		
	Female	58 (55.77)	0.71 (.38 -1.33)			
Literacy	Illiterate	14 (38.89)	Ref	0.006*		
	Literate	88 (64.23)	2.82 (1.32-6.00)		2.52 (1.12-5.66)	0.025**
Education Attainment	No formal education	9 (50)	Ref	0.78		
	Primary	17 (80.95)	4.25 (1.01-17.72)			
	Lower Secondary	10 (71.43)	2.5 (.56-11.01)			
	Secondary	30 (66.67)	2 (.65- 6.08)			
	Higher Secondary	12 (45.45)	0.83 (.23- 2.90)			
	Above higher secondary	12 (70.59)	2.4 (.59- 9.67)			
Occupation	Agriculture /Livestock/Horticulture	29 (61.70)	Ref	0.3175		
	Business/Trade	22 (50.00)	0.62 (.26-1.42)			
	Service	14 (53.85)	0.72 (.27-1.90)			
	Daily wage/ Labour	8 (88.89)	4.9 (.57-43.07)			
	Housewife/ Homemaker	22 (56.41)	0.80 (.33- 1.90)			
	Students	7 (87.50)	4.3 (.49- 38.29)			
Marital Status	Currently married	93(60.00)	Ref	0.244*		
	Divorced / Separated/ widowed	4 (36.36)	0.38 (.10-1.35)		0.47 (.11- 1.89)	0.290
	Never married	5 (71.43)	1.67 (.31-8.86)		1.18 (.20- 6.99)	0.849
Having chronic illness	Yes	61 (59.80)	Ref	0.78		
	No	41 (57.75)	.91 (.49-1.69)			

*Significant at 0.25 and
** Significant at 0.05

This study demonstrated the least satisfaction with the information about insurance services provided by the Health facility. Insufficient clarity regarding benefit packages and user responsibilities upon enrollment has resulted in a disparity between individuals' expectations and their actual encounters. This discrepancy significantly contributes to the rising number of people discontinuing their health insurance coverage.[23] Similar findings were explained in the study conducted in India where the participants reported that proper information on the benefits was not provided.[24] However, in the study conducted in Bangladesh, most of the consumers were satisfied with the explanation they got about the treatment.[25]

The majority were satisfied with the benefits package they received under health insurance services. More than 90% of the respondents reported that they were satisfied with the accessibility of the services and a similar proportion was satisfied with the registration and renewal facility of the health insurance services. This may be due to the easy availability of the enrollment assistant. In a study conducted in three districts of Nepal, the majority of the

participants explained that the enrollment assistant will be available when they need it.[26]

The study indicated that only 6.36% of the participants were dissatisfied with the contribution amount they need to pay for getting enrolled with the health insurance program. Another study conducted in Baglung and Kailali districts showed that there was a high willingness to pay for the current contribution amount among the insured members. More than two-thirds of participants reported that they were satisfied with the quality of the services they received from the health facility.[27] Similar findings were observed in the study done in the same settings where 136 out of 179 service users were satisfied with the services.[28]

The current study showed that literacy was statistically significantly associated with the satisfaction level of health insurance services. Compared to the illiterate population, literate people tend to get two times more satisfaction. This could be because literate individuals are more likely to be informed about the available health insurance benefits and the process of utilizing them, while illiterate individuals may lack a detailed understanding of these benefits. This gap in knowledge could result in higher expectations among illiterate individuals, potentially leading to a sense of dissatisfaction.[29] However, another study conducted in the Kaski district of Nepal showed no association with socio-demographic factors.[21]

This study didn't show a significant association between gender, occupation, education level, and marital status with satisfaction level. The study is in line with another study conducted in Bangladesh where these variables were not significant.[25]

The present study has certain limitations. It solely evaluates the satisfaction of services provided under the national health insurance program, without considering the comprehensive quality of those services. The findings are derived from urban settings, limiting their generalizability to rural contexts. Additionally, the study only focuses on respondents who were enrolled in and utilized health insurance services, which may introduce bias in their questionnaire responses. Therefore, future research is necessary to explore the determinants of satisfaction with health insurance, particularly the broader societal factors that could not be examined in this analysis.

The findings of the study hold significant implications for policy improvement, healthcare access enhancement, health promotion initiatives, quality improvement, and equity considerations within Nepal's national health insurance program. Policy revisions informed by areas of dissatisfaction, such as inadequate information provision, can enhance user satisfaction and contribute to better healthcare access, particularly among financially disadvantaged individuals. Targeted health promotion campaigns aimed at improving health literacy can empower insured populations to make informed decisions about healthcare utilization. Furthermore, recognizing areas of strength, such as the registration and renewal process, provides opportunities for quality improvement efforts. Additionally, efforts to bridge literacy gaps can promote fairness and inclusivity within the health insurance program, ensuring equitable access to healthcare services and information.

CONCLUSION

The study examined the satisfaction of individuals utilizing health services within Nepal's national health insurance program. This study revealed high levels of satisfaction among users of Nepal's national health insurance program, with the registration and renewal process receiving the most positive feedback. However, dissatisfaction was notably linked to the information provided about insurance services. Literacy emerged as a significant determinant of satisfaction, with literate individuals more likely to express satisfaction with the program.

Strengths of the study lie in its rigorous household survey methodology, adherence to standardized reporting guidelines, and robust statistical analysis using logistic regression. Nonetheless, limitations include potential biases inherent in self-reported data and the limited generalizability of findings beyond the study population. The results of this study align with existing literature, highlighting the importance of health literacy in influencing satisfaction with health insurance services.

Moving forward, efforts should focus on addressing informational gaps through targeted awareness campaigns and educational initiatives aimed at enhancing health literacy among insured populations. This study underscores the need for ongoing evaluation and improvement of health insurance policies and services to ensure equitable access and user satisfaction. Recommendations include the development of tailored educational programs and strategies to improve the dissemination of information about health insurance benefits and services to enhance user satisfaction and promote health equity.

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