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## Do people's perceptions and attitudes associate with enrollment in health insurance in a context of Nepal?

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### Abstract

The Government of Nepal introduced the health insurance [HI] program in three districts, in 2016 and now has been expanded almost all districts. Since it was a new initiative, there was no clear evidence on people's attitude, perception, and awareness, which continues until now. This study, therefore, intended to assess the perception and attitude of household heads towards enrollment in HI.

The descriptive research design was used and 810 households in Baglung and Kailali Districts of Nepal were selected randomly. The interview schedule used for data collection comprised positive and negative statements at a three-point scale as independent variables to explore the perception and attitude of people towards HI and enrollment in HI as a dependent variable.

Most of the respondents agreed with the statement where attitude and perception were significantly associated with the enrollment in HI. Among the 16 statements, 13 statements were observed statistically significant. Among them: 'anyone can enroll easily in HI', 'primary service point is appropriate', 'contribution amount is appropriate', 'coverage amount is appropriate', 'HI may solve the problem', 'proper dissemination of information, education, communication [IEC] materials may help to enroll', 'health services quality has not been improved after enrollment', 'IEC materials are not appropriate', 'HI related queries are addressed timely', 'relatives/neighbors do/did not request me to enroll', 'complaints are not addressed timely', and 'information is not adequate' were the significantly associated for enrollment in HI.

The perception and attitude of the household heads were significantly associated with the enrollment in HI. The study recommends an appropriate IEC campaign for positive perception and attitudes that leads to better participation in HI. The policymaker may consider the findings while planning the program intervention.

**Keywords: Attitude, Enrollment, Health Insurance, Perception**

### Introduction

Health insurance (HI) is a financial protection and pre-payment system for healthcare services. HI aims to minimize the gap of the utilization of health care between 'haves' and 'haves not' due to financial constrain. The Government of Nepal (GoN) introduced the health insurance program (HIP) in 2016 in three

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districts of Nepal (Acharya, 2020). And, now the program reached almost all districts except Kathmandu and Bhaktapur. However most of the people were unknown and only one out of ten people had adequate knowledge about it (KOICA-Nepal Health Insurance Support Project [NHISP], 2014). Since the HIP is recently introduced and a novel idea for Nepalese people, they may have misperception and misinterpretation regarding HI which may prevent them to enroll. In such instances, people's perception and attitude could be a matter for the success of the program.

'Attitude is a small thing but makes a great difference' is a well-known saying that exists in our society (Ballon & Skinner, 2008). Attitude influences behavior. People generally do not want to change because good behaviour is generally time-consuming, inconvenient, complicated, and even less awarded (Water Aid, n.d.). Adequate information is needed for making a positive attitude and perception. Perception towards the program could have a greater impression (Amo-adeji et al., 2016). A study in Kailali shows that only 11 percent of people had heard about health insurance [HI] whereas, only nine percent had good knowledge about it (KOICA-Nepal Health Insurance Support Project [NHISP], 2014).

Nepalese people are yet to be well-informed about HI. The concept of HI is relatively new for Nepal. People are still less known and aware of it (KOICA-Nepal Health Insurance Support Project [NHISP], 2014). Though, United Mission to Nepal had initiated the HI program as Lalitpur Medical Insurance Scheme in 1976. It could not be continued due to a lack of political commitment (KOICA/HIMAL Project, 2012). A study from Kenya shows that having knowledge regarding HI is positively associated with uptake of HI (Maina et al., 2016). Not having proper information may lead to negative perception resulting in poor enrollment in HI.

It is claimed that lack of having knowledge of HI is associated with poor utilization of health care services and delayed the health-seeking behaviour leading to the deterioration of the health condition and productivity as well (Nadpara, 2009). A study from Jordan indicates that parents of differently-abled persons, who had HI, were satisfied but not very much satisfied with the HI services available to them (Altarawneh et al., 2017) which means they were seeking quality health care services. It is supposed that enrollment in HI may protect people from catastrophic health care costs while receiving health services (Maina et al., 2016).

People expect quality health services from health care providers. There are eight dimensions of quality assurance: technical competence; access to services; service effectiveness; human relationship; service efficiency; service continuity; security; and amenities-hygiene/cleanliness (Agustin & Laksmono, 2019). Without a positive attitude or perception, even quality health services become worthless though they are being provided appropriately. Little or inadequate information on HI may lead to unwillingness toward enrollment and negative perception towards HI (Maina et al., 2016).

After the implementation of the social health security program in Nepal, the study has been conducted to find the people's perception and attitude on HI whether people are familiar or not with the program. Therefore, the study aims to examine the association between the people's perception and attitude, and their enrollment in HI.

## Literature review

Attitudes toward HI may be positive even knowledge remains poor (Adewole et al., 2015). However, a high level of knowledge on HI usually leads positive attitude and a higher level of education may not lead to higher enrollment in HI but higher knowledge on HI results in higher enrollment (Acharya et al., 2019). Misconception and misinformation lead to bad attitudes as well as perception which might result in poor enrollment on HI so a good understanding is a key to ensuring acceptance and participation (Agyei-baffour et al., 2013). It does not always mean that higher education and wealth status are more likely to enroll. A study from Ghana shows that the poorest men and uneducated women were more likely to enroll in HI compared to rich and educated men and women (Dixon et al., 2013).

A low level of perception and attitude about HI creates moral hazards. People may ask for health services even they are not sick. That kind of attitude and perception makes the program unsuccessful (Maina et al., 2016). Adequate information regarding HI must be needed for making a positive effort. A study conducted at Sunsari district on community-based HI shows that just more than half [54%] of the enrolled members were satisfied with the HI program (Subedi et al., 2018).

Socio-demographic characteristics of the subscribers such as residence setting, age, wealth status, and access to media influence the perceived quality of services provided to them in Ghana (Nketiah-Amponsah et al., 2019). 'Attitude does make big differences' even in decision making for treatment-seeking and acceptance of the recommendation of physicians (Orr et al., 2008, p. 150). A study carried out in India shows that treatment seeking for dental care was associated with HI and correlated with patients' acceptance. Where patient's acceptance was associated with patient's positive perception (Joshi et al., 2019). Patients' satisfaction also depends upon the patient's perception and attitude towards the expectation and services provided to them (Otto-sobotka et al., 2019).

Positive attitude and perception, and satisfaction with health services truly support and even sustain the enrollment in HI. Perception towards the program and quality services could have a great impression on the enrollment (Amo-adjee et al., 2016). HI program needs national solidarity especially from the political level, public support, and people's acceptance. Without a positive attitude and perception, and quality health services, it is not possible to operate the HI program successfully. Individuals' characters such as age, health status, perception and socio-demographic factors of the family are significantly associated with the enrollment in HI. Therefore, perception towards insurance is one of the significant predictors for enrollment (Mathur et al., 2015).

People may enroll in HI if they believe the program is potentially beneficial and perceiving of economic benefit (Dixon et al., 2013). Adequate information, education, and communication could lead to a positive attitude and perception and a higher chance of being enrolled (Adewale et al., 2016). A study undertaken in India shows that individual perception toward HI is associated with enrollment (Mathur et al., 2015). We could not find any study regarding perception and attitude and its association with the enrollment of HI in the context of Nepal. Therefore, the study aimed to find out whether there was any association between the individual perception and attitude towards HI and enrollment.

## Methods

### *Research design*

The study used a cross-sectional survey design.

### *Variables*

In this study, socio-demographic characteristics of the respondents, and attitudes and perception towards the HI were taken as independent variables and enrollment in HI was the dependent variable. In the socio-demographic features, some attributes such as caste/ethnicity [Dalit, Madhesi, Muslim, Dasnami, Thakuri as 'others'], religion [Buddhist, Islam and Christian as 'others'], mother tongue [Doteli Aachhami, and others as 'others'], and wealth status [as rich, middle and poor] of the variables were merged due to poor responses though these variables were not further analyzed.

### *Sample and sampling method*

The sample size was calculated by Daniel's formula (Acharya et al., 2019; Naing et al., 2006) adjusting five percent non-response rate as observed in the Nepal Demographic and Health Survey (Ministry of Health et al., 2017) and fifty-fifty prevalence probability of perception and attitude and its association with the enrollment (Acharya et al., 2020; Kothari, 2004).

$$\text{Sample size } (n) = [z^2 p(1-p)]/d^2 \text{ and then, adjusted } n = [n/\text{expected response rate}] = 405$$

[Where the level of confidence was 95%, response rate 95%, and margin of error 5%]

The sample size was 405 for both the enrolled family and the non-enrolled family. Therefore, the total sample was 810 families. The list of the enrolled households was obtained from Health Insurance Board [HIB], Districts Offices in Baglung and Kailali districts respectively. The sample was selected by using a simple random sampling method for enrolled households and proximal households were taken for non-enrolled households assuming that proximal households have similar access and utilization of healthcare services. The same method was applied for non-enrolled household samples if more than one household appeared in the proximity of enrolled households. The households enrolled from other organizations than HIB were excluded throughout the research process.

### *Research tool*

The interview schedule was used for data collection. For the validation of the tool, a total of five percent [42 = 21+21] of the total sample were pre-tested in Palpa District. Cronbach's alpha was calculated [Alpha = 0.734] and which was eligible to administer since the score was more than 0.70 which means 73 percent of the variance was reliable (Hair et al., 2014). The attributes of the response of statements were managed as agree, neutral, and disagree [whatever the nearness].

### *Collection of data*

A household-based survey was conducted in Baglung and Kailali Districts of Nepal where the program was initially implemented by the government of Nepal. Data were collected mostly from household heads. All enrolled households were the population of the study. The interview schedule [IS] was administered to collect the data predominantly from the household heads where they felt convenient to respond. In case of rejection or absence of household heads for responses, another member of household was requested. The IS consisted

of socio-demographic characteristics of individuals and households, and Likert's type three-point scale statements where one for disagree, two for neutral, and three for agree; for positive, and exactly reverse for negative statements respectively.

#### *Analysis of data*

Data were inspected, and edited before entry. We used IBM SPSS Statistics 20 software to analyze the data. Univariate, bivariate and multivariate analyses were used to interpret the data as per the study objective. But only univariate analysis was performed for socio-demographic characteristics of households and individuals.

#### *Ethical approval*

For ethical consideration, consent was taken before interviewing the respondents. The research proposal was reviewed for ethical approval from Nepal Health Research Council [Ref. 1807, Reg. no. 473/2017] and approved. The information obtained from the respondents was kept confidential as per the research ethics and guidelines (Nepal Health Research Council, 2011).

## Results

#### *Socio-demographic characteristics of the respondents*

Since the study was conducted in Baglung and Kailali Districts of Nepal, a total of 70 percent [566] of the household were assigned from Kailali and remains 30 percent [244] were from Baglung District as per the population proportion observed in the census 2011 (Central Bureau of Statistics, 2014).

Table 1: *Socio-demographic characteristics of the respondents (n=810)*

Character	Category	%	No.
District	Baglung	30.1	244
	Kailali	69.9	566
Residence setting	Urban	74.1	600
	Rural	25.9	210
Sex of respondents	Male	49.0	397
	Female	51.0	413
Household head	No	34.1	276
	Yes	65.9	534
The age group of respondents	Up to 25 years	15.1	122
	26 to 50 years	65.6	531
	More than 50 years	19.4	157
Caste/Ethnicity of respondents	Aadibasi/Janajatis	43.5	352
	Brahmin/Chhetry	36.2	293
	Others	20.4	165
Religion	Hindu	91.2	739
	Others	8.8	71
Native language	Nepali	58.3	472
	Tharu	29.8	241
	Others	12.0	97

Character	Category	%	No.
Literacy status	Illiterate	7.4	60
	Literate	92.6	750
Type of family	Nuclear	41.0	332
	Joint	59.0	478
Size of family	Up to 5 members	56.4	457
	More than 5 members	43.6	353
Wealth status	Poor	33.3	270
	Middle	33.3	270
	Rich	33.3	270
Ability to feed	Throughout the year	51.2	415
	6 to 11 months	18.6	151
	Less than 6 months	30.1	244
The family member having chronic diseases	No	65.4	530
	Yes	34.6	280

Source: Field Survey, 2021

Out of the total respondents, 74 and 26 percent were from urban [municipality] and rural [rural municipality] areas. More than half [51%] of the respondents were female and two-third were household heads. Sixty percent of the respondents' age was between 21 to 40 years and the median and mean age of the respondents were 37 and 39±13 years respectively. Forty-four percent of the respondents were Aadibasi/Janajatis and 36 percent belonged to Brahmin/Chhetry. Most of the respondents [91%] were Hindu. Thirty percent of the respondents spoke the Tharu language as their mother tongue and 58 percent of the respondents spoke the Nepali language as their mother tongue. Almost all [93%] respondents were literate. The median and average size of the family were five and 5.6±19 respectively with a minimum of two to a maximum of 14 members. The wealth status of households was divided into 33 percent each from rich, middle and poor. Nearly half [49%] of the respondents could not feed their families throughout the year. Nearly two-thirds of households [65%] had at least one family member having chronic diseases.

#### *Respondents' attitude and perception towards health insurance*

There were 16 statements related to HI. Among them, nine statements were positive and seven statements were negative. The respondents had to respond as disagree, unknown/neutral and agree which would be carrying one, two, and three scores respectively for positive statements and exactly opposite for negative statements. Most of the statements' results seemed as agreed except for the statement 'HI related queries are addressed in time'. Fifty-eight percent of the respondents agreed with the statement 'anyone can easily enroll in HI or there is no problem to enroll' and the mode of the statement was agreed [3] with a composite score of 1900 [2.35]. In the same way, 46 percent of the respondents agreed with the statement 'primary service point is suitable for me' with a score of 1713 [2.11] and the mode of the statement was 'agree' [3]. Fifty-five percent of the respondents agreed with the statement 'contribution amount for HI is appropriate' which score was 1898[2.34] and the mode of the statement was 'agree' [3].

The statement 'coverage amount of HI was appropriate' was agreed by 54 percent of the respondents with a score of 1891[2.33] and the mode of the statement was 'agree' [3]. More than half [53%] of the respondents agreed with the statement 'my family is susceptible to diseases and health problems which score was 1933[2.39] and mode 'agree' [3]. Nearly three fourth [74%] of the respondents were found to agree with the statement 'there may be financial loss and other problems if any of my family members become sick' with the score of 2153[2.66] and the mode was 'agree' [3]. However, more than one-third [36%] of the respondents expressed that they neither agreed nor disagreed with the statement 'enrollment in HI may solve aforementioned problems' yielding a total score of 1669[2.06] and the mode was 'neutral' [2]. Sixty-three percent of the respondents agreed the statement 'proper dissemination of information, education, and communication materials may help to enroll in HI' with a total score of 2017[2.49] and the mode of the statement was 'agree' [3].

Table 2: Respondents' perceptions regrading health insurance program

Positive Statements (n=810)	Disagree (1)		Neutral (2)		Agree (3)		Score [Mean]	Mode	Result
	No.	%	No.	%	No.	%			
Anyone can easily enroll in HI or there is no problem to enroll.	189	23.3	152	18.8	469	57.9	1900 (2.35)	3 [A]	A
Primary service point is suitable for me.	280	34.6	157	19.4	373	46.0	1713 (2.11)	3 [A]	A
The contribution amount for HI is appropriate.	164	20.2	204	25.2	442	54.6	1898 (2.34)	3 [A]	A
The coverage amount for HI is appropriate.	162	20.0	215	26.5	433	53.5	1891 (2.33)	3 [A]	A
My family is susceptible to diseases or health problems.	113	14.0	271	33.5	426	52.6	1933 (2.39)	3 [A]	A
There may be financial loss or other problems if any of my family members become sick.	63	7.8	151	18.6	596	73.6	2153 (2.66)	3 [A]	A
Enrollment in HI may solve aforementioned problems.	235	29.0	291	35.9	284	35.1	1669 (2.06)	2 [N]	A
Proper dissemination of IEC materials may help to enroll in HI.	113	14.0	187	23.1	510	63.0	2017 (2.49)	3 [A]	A
HI related queries are addressed in time.	361	44.6	281	34.7	168	20.7	1427 (1.76)	1 [D]	D
Negative Statements (n=810)	Agree (1)		Neutral (2)		Disagree (3)				
The health service quality provided by the GoN is not satisfactory.	311	38.4	244	30.1	255	31.5	1564 (1.93)	1 [A]	A
Health services quality has not been improved after the HI program launched	330	40.7	265	32.7	215	26.5	1505 (1.86)	1 [A]	A
Existing IEC materials for HI are not appropriate and sufficient.	379	46.8	229	28.3	202	24.9	1443 (1.78)	1 [A]	A

Positive Statements (n=810)	Disagree (1)		Neutral (2)		Agree (3)		Score [Mean]	Mode	Result
	No.	%	No.	%	No.	%			
HI related complaints are not addressed in time.	400	49.4	249	30.7	161	19.9	1381 (1.70)	1 [A]	A
It is not easy to take health services even after enrollment.	422	52.1	220	27.2	168	20.7	1366 (1.69)	1 [A]	A
Relatives or friends did not request/discuss for enrollment.	358	44.2	110	13.6	342	42.2	1604 (1.98)	1 [A]	A
HI-related information is not adequate from communication media.	383	47.3	196	24.2	231	28.5	1468 (1.81)	1 [A]	A

Note: A= Statement agreed by respondents, N= Neutral, and D= Statement disagreed by respondents

However, 45 percent of the respondents disagreed with the statement 'HI related queries are addressed timely with the score of 1427[1.76] and the mode was 'disagree'[1]. All the respondents agreed to all seven negative statements. However, the scores of the statements were different. Thirty-eight percent of the respondents agreed with the statement 'health service quality provided by the government of Nepal is not satisfactory' with a score of 1564[1.93] and the mode of the statement was 'agree'[1]. Forty-one percent of the respondents agreed with the statement 'health service quality has not been improved even after launching of HI program' with a score of 1505[1.86] and the mode was 'agree'[1]. Nearly half [47%] of the respondents agreed to the statement 'existing information, education, and communication materials for HI are not appropriate and sufficient' which score was 1443[1.78] with mode 'agree'[1]. In the same way, 49 percent of the respondents also agreed with the statement 'HI related complaints are not addressed timely' with a score of 1381[1.70] and the mode was 'agree'[1].

More than half [52%] of the respondents agreed to the statement 'it is not easy to receive health services even after enrollment' with a score of 1366[1.67] with a mode 'agree'[1]. In the same way, more than half [54%] of the respondents were found to agree with the statement 'relatives or friends did not request/discuss for enrollment' which score was 1604[1.98] and the mode of the statement was 'agree'[1]. Less than half [47%] of the respondents agreed with the statement 'HI related is not adequate from communication media' with the score of 1468[1.81] and the mode was 'agree'[1].

#### *Association of people's attitude and perception with enrollment in health insurance*

Almost all statements were associated with the enrollment in HI and 13 out of 16 statements were statistically significant in bivariate analysis. Sixty-three percent of the respondents who agreed with the statement 'anyone can easily enroll in HI or there is no problem to enroll' were enrolled compared to 42 percent of those who disagreed with that statement ( $p < 0.001$ ). Similarly, 60 percent of the respondents were enrolled and agreed with the statement 'primary service point is suitable for me' against 46 percent of those enrolled but disagreed with that statement ( $p < 0.001$ ). In the same way, 60 percent of the respondents who agreed the statement of 'contribution amount of HI is appropriate' were enrolled compared to 43 percent of those who disagreed with that statement ( $p < 0.001$ ). Fifty-nine percent of the respondents who agreed to the statement 'coverage amount for HI is appropriate' were enrolled compared to 46 percent of those who disagreed with that statement ( $p < 0.001$ ). The majority of the respondents agreed with the statements 'my



family is susceptible to diseases or health problems'; 'there may be financial loss and other problems if any of my family members become sick'; and 'proper dissemination of information, education and communication materials may help to enroll in health insurance' but not statistically significant.

Fifty-nine percent of the respondents who agreed with the statement 'enrollment in HI may solve aforementioned problems' were enrolled compared to 53 percent of those who disagreed with that statement ( $p < 0.001$ ). But, 57 percent of the respondents who disagreed with the statement 'health service quality provided by the government of Nepal is not satisfactory' were enrolled compared to 51 percent of those who agreed with that statement ( $p < 0.001$ ). Nearly two-third [65%] of the respondents who disagreed with the statement 'health services quality has not been improved even after HI program launched' were enrolled compared to 52 percent of those who agreed on that statement ( $p < 0.001$ ). Likewise, 58 percent of the respondents who disagreed with the statement 'existing information, education, and communication materials for HI are not appropriate and sufficient' were enrolled compared to 52 percent of those who agreed with that statement ( $p < 0.001$ ). A two third [67%] of the respondents who agreed to the statement 'HI-related queries are addressed timely' were enrolled compared to 49 percent of those who disagreed with that statement ( $p < 0.001$ ).

Fifty-eight percent of the respondents who disagreed with the statement of 'HI related complaints are not addressed timely' were enrolled compared to 52 percent of those who agreed with that statement ( $p < 0.001$ ). Similarly, fifty-nine percent of the respondents who disagreed with the statement 'it is not easy to take health services even after enrollment' were enrolled compared to 54 percent of those who agreed with that statement ( $p < 0.001$ ). In the same way, 64 percent of the respondents who disagreed with the statement of 'relatives or friends did not request/discuss for enrollment' were enrolled compared to 39 percent of those who agreed with that statement ( $p < 0.001$ ). Likewise, 60 percent of the respondents who disagreed with the statement of 'HI related information is not adequate from communication media' were enrolled compared to 49 percent of those who agreed with that statement ( $p < 0.001$ ).

Table 3: Respondents' feelings and perception towards health insurance and enrollment in health insurance cross tabulation

Statements	Response Category	Enrollment in health insurance				Total	p value
		No		Yes			
		N	%	N	%		
Anyone can easily enroll in HI or there is no problem to enroll.	Disagree	110	58.2	79	41.8	189	<0.001
	Neutral	122	80.3	30	19.7	152	
	Agree	173	36.9	296	63.1	469	
The primary service point is suitable for me.	Disagree	151	53.9	129	46.1	280	<0.001
	Neutral	106	67.5	51	32.5	157	
	Agree	148	39.7	225	60.3	373	
The contribution amount for HI is appropriate.	Disagree	94	57.3	70	42.7	164	<0.001
	Neutral	136	66.7	68	33.3	204	
	Agree	175	39.6	267	60.4	442	
The coverage amount for HI is appropriate.	Disagree	87	53.7	75	46.3	162	<0.001
	Neutral	139	64.7	76	35.3	215	
	Agree	179	41.3	254	58.7	433	
My family is susceptible to diseases or health problems.	Disagree	58	51.3	55	48.7	113	0.121
	Neutral	148	54.6	123	45.4	271	
	Agree	199	46.7	227	53.3	426	
There may be financial loss and other problems if any of my family members become sick.	Disagree	30	47.6	33	52.4	63	0.115
	Neutral	87	57.6	64	42.4	151	
	Agree	288	48.3	308	51.7	596	
Enrollment in HI may solve the aforementioned problems.	Disagree	111	47.2	124	52.8	235	<0.001
	Neutral	177	60.8	114	39.2	291	
	Agree	117	41.2	167	58.8	284	
Proper dissemination of IEC materials may help to enroll in HI.	Disagree	53	46.9	60	53.1	113	0.266
	Neutral	103	55.1	84	44.9	187	
	Agree	249	48.8	261	51.2	510	
The health service quality provided by the GoN is not satisfactory.	Agree	151	48.6	160	51.4	311	<0.001
	Neutral	145	59.4	99	40.6	244	

Statements	Response Category	Enrollment in health insurance				Total	p value
		No		Yes			
		N	%	N	%		
The health services quality has not been improved after the HI program launched.	Disagree	109	42.7	146	57.3	255	<0.001
	Agree	158	47.9	172	52.1	330	
	Neutral	171	64.5	94	35.5	265	
	Disagree	76	35.3	139	64.7	215	
Existing IEC materials for HI are not appropriate and sufficient.	Agree	177	46.7	202	53.3	379	<0.001
	Neutral	144	62.9	85	37.1	229	
	Disagree	84	41.6	118	58.4	202	
HI-related queries are addressed in time.	Disagree	184	51	177	49	361	<0.001
	Neutral	165	58.7	116	41.3	281	
	Agree	56	33.3	112	66.7	168	
HI-related complaints are not addressed in time.	Agree	191	47.8	209	52.3	400	<0.001
	Neutral	147	59	102	41	249	
	Disagree	67	41.6	94	58.4	161	
It is not easy to take health services even after enrollment.	Agree	194	46	228	54	422	<0.001
	Neutral	142	64.5	78	35.5	220	
	Disagree	69	41.1	99	58.9	168	
Relatives or friends did not request/discuss for enrollment.	Agree	218	60.9	140	39.1	358	<0.001
	Neutral	65	59.1	45	40.9	110	
	Disagree	122	35.7	220	64.3	342	
HI related information is not adequate from communication media.	Agree	196	51.2	187	48.8	383	<0.001
	Neutral	116	59.2	80	40.8	196	
	Disagree	93	40.3	138	59.7	231	

## Discussion

The respondents overall agreed since the average score was 2.28, where one represents 'disagree', two 'neutral', and three 'agree' for positive statements and the mean score of the negative statements was 1.82 where one refers to 'agree', two 'neutral', and three 'disagree'. So it can be concluded that the respondents agreed in both positive and negative statements which showed that the perception was associated with enrollment in the HI program. Individuals' attitude influences decision making and behaviour change as well. Misconception or misinformation regarding HI could lead to negative attitudes and poor participation (Agyei-baffour et al., 2013) since most of the people were unaware of it (Health Research and Social Development Forum [HERD], 2016). Sometimes general prediction may be a failure that educated and wealthy people may be expected to have more knowledge as well as more enrollment but it does not always be true (Dixon et al., 2013). So it needs further study to predict.

Universal health coverage [UHC] is a global concern and targeted to be achieved by 2030 (Department of Health Services, 2019) and as per the national health policy and insurance policy (Ministry of Health (MoH), 2017; National Health Sector Programme, 2014) and constitutional mandate (The Constitution of Nepal, 2015), the government is under pressure to implement the HI program. But one-fourth of the people are still unknown about it (Acharya et al., 2019). It is challenging to implement since a mass population is still unaware of it. Therefore, positive attitude and perception are prerequisites for the success of the program (Yin et al., 2019).

A study shows that more than 13 percent of people did not want to enroll because they felt that they were healthy (Machlin & Carper, 2005). In such instances, enrollment may be hard. HI packages should be competitive in the market. But in the context of Nepal, the government has initiated the program however HI from private sectors may influence the program since they may enter the community with a very creamy message which may attract the people quickly. Then, HIB may face the problem of poor enrollment and sustainability of the program since just over a quarter (28%) service receivers were satisfied by the health services provided by the government compared to 56 percent from private sectors (Acharya et al., 2018; KOICA-Nepal Health Insurance Support Project [NHISP], 2014). The same observation was seen in Nigeria (Morrison & Legaaga, 2017). In such a context, people may neglect the program considering poor satisfaction and negative attitude and perception of government health services.

Ghana's experience shows that HI subscribers from the rural area were more satisfied compared to subscribers from the urban area and access to mass media was found to be a significant predictor for perceived quality of health services (Nketiah-Amponsah et al., 2019). Another study shows that ever enrolled households were comparatively more negative towards HI compared to those who were never insured (Kwasi et al., 2018). It shows that even an insured family may have a negative perception of HI. The perception may be shaped by the experiences of treating differently while receiving the health services that lead to HI mechanism attractive or not attractive (Kwasi et al., 2018).

Quality health services need both a positive attitude and satisfaction of receivers as well as providers. A study from Morocco shows that most of the physicians were dissatisfied regarding mandatory HI (Zegraoui

et al., 2018). Then how they provide quality services to the patients. It may create a patient's dissatisfaction and negative perception and attitude towards the HI program. Therefore, not only the receiver but also the provider should be satisfied with the program which may assure quality health services. Another study from India shows that 87 percent of nurses had favorable and 13 percent had unfavorable attitudes reading HI scheme (Kaklottar & Sarate, 2019). Same results were observed in USA that most of the cancer survivors were satisfied with the quality and coverage of the insurance package (Park et al., 2016).

People's hesitation to participate in government-operated HI programs globally. An experience from Nigeria shows that just more than half [53%] of the respondents agreed to participate in the HI scheme. Similarly, poor knowledge and a fair joining attitude were also observed (Olugbenga-Bello & Adebimpe, 2010). But another study in that country shows that patients had high level of satisfaction regarding various health services received at hospitals (Garba et al., 2018).

A study in Uganda shows that 58 percent of the respondents did not know HI. Similarly, 43 percent of them did not know the importance, 43 percent of them knew about HI from insurance agents, 13 percent were covered by HI policy, 60 percent disagreed about the importance of HI to them, 78 percent expressed it as hard to understand, 55 percent agreed that HI is suitable for older people (Esther, 2018). All these data show that HI is considered as an asset of choice not a compulsion for all. Another study from Ethiopia shows that 55 percent of the households were satisfied with community-based HI, which was significantly associated with the knowledge on HI of benefits packages (Kebede & Geberetsadik, 2019) and suggested for information, education and communication campaigns to aware people.

Community-based HI has very a good impact in Bangladesh. It showed overall satisfaction in terms of health services however, it could be a chance of more improvement (Sarker et al., 2018). Such satisfaction makes people positive towards enrollment in HI and supports the global agenda of UHC. However, insurers were unsatisfied due to unclear terminology, high costs, and complexity of calculation of assets, unable to change the plan within a year. Such provision could make consumers anxious and feeling of wrong decisions that might lead to negative perception and attitude towards HI (Houston et al., 2016). A study from Ghana supports the study that there was a significant difference between the perception of health services quality between insured and non-insured clients where they expected more quality of health services than they received (Opoku, 2018). HI literacy and positive perception towards HI was a significant predictor for enrollment in HI and a low level of HI literacy was associated with the low level of enrollment (Norbeck, 2018) which also supports the study.

#### *Policy implication*

The study shows that positive perception towards HI leads to better enrollment in the HI program. Higher participation in the HI could lead to financial sustainability for health sectors and may fill the gap of inadequate budgets for healthcare and reduce the gap of utilizing healthcare services by rich and poor. It may lead to meet the targets of health and wellbeing for all, universal health coverage as well as ensuring the constitutional mandate of Nepal. Therefore, adequate information, education, and communication-related interventions are needed for better understanding and positive perception towards HI.

## Conclusion

Perception and attitude play vital roles in HI especially in promoting HI. As this study shows, the respondents agreed to most of the positive statements whereas they agreed on a few negative statements. Moreover, both the perception and attitude towards HI were found significantly associated with enrollment in HI. However, as the respondents expressed, they believed that enrollment in HI was not adequately managed to solve all types of health or disease-related problems. Nevertheless, various studies including this one showed that dissemination of appropriate and adequate information on HI was beneficial in making people positive about it.

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The authors declared that there is no potential conflict of interest concerning research, authorship and or publication of this article.

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## Author contributions

Conceptualization: Acharya, Devkota, Bhattarai, methodology: Acharya, Devkota; Software: Acharya; Validation: Acharya, Devkota; Formal Analysis: Acharya, Devkota; Investigation: Acharya, Devkota, Bhattarai Data Curation: Acharya, Bhattarai; Writing – Original Draft: Acharya; Writing – Review & Editing: Acharya, Devkota, Bhattarai; Visualization: Acharya, Bhattarai; Supervision: Devkota

## Disclosure Statement / Conflict of interest

The authors declare no conflict of interest.

## Ethical statement

The research proposal was reviewed for ethical approval from Nepal Health Research Council [Ref. 1807, Reg. no. 473/2017].

## Data deposition

Data will be available upon reasonable request from the corresponding author.

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