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Factors Associated with Non-Enrollment in National Health Insurance Scheme in Kaski District, Nepal

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Abstract

Health insurance poses a vital role in developing countries, to attain an equitable health outcome to all citizens by ensuring universal health coverage. This study aims to assess the factors associated with non-enrollment in National Health Insurance Scheme (NHIS) in a setting of Nepal. A cross-sectional study was conducted among 492 households (246 non-enrolled and 246 enrolled) of Kaski district, Nepal from May to August 2020. Data were gathered from face-to-face interview. Data were entered in Epi data 3.1 and analysed by using statistical package for social sciences (SPSS16). Descriptive and inferential statistics were performed to analyze the data. The household without elderly family members were 2.06 times less likely to enroll in the scheme (AOR=2.060, CI=1.141-3.721, p<0.01). Similarly, non-enrollment increases with the decreasing wealth quintile of the family (AOR=4.312, CI=1.881-9.880, p<0.001). Families who perceived their family health status as fair was more likely to join the scheme than those as a good health status. Households who had poor or average knowledge on the scheme were almost five times more likely to non-enrollment (AOR=4.641, CI=2.841-7.582, p <0.001). Factors that determine the non-enrolment in NHIS are households had without elderly family members, poor wealth quintile, self-perceived good health status and poor knowledge on NHIS. Effective coordination from different stakeholders need to increase the health insurance coverage and increase the health literacy through the wide coverage of health communication program.

Key words: Factors, Kaski, Nepal, National health insurance scheme, non-enrolment,

1. BACKGROUND

The significance of National Health Insurance Scheme (NHIS) can be hardly exaggerated in the present age of health awareness. In the past 15 years, many countries have adopted universal health coverage (UHC) as an aspiration for national policy (Reich et al., 2016). Social health protection policies, such as health insurance, help expand affordable access to health care for vulnerable groups (Knepper et al., 2012). Health insurance is attracting more and more attention in low and middle-income countries as a means for improving health care utilization and protecting households against impoverishment from out-of-pocket expenditures (Spaan et al., 2012). According to WHO report on global spending on health, the concern for health spending is growing much rapidly, which is on an average 6% in low and middle-income countries, compared to high-income countries (4%) (WHO, 2019). Sustainable Development Goal (SDG), target 3.8 which clearly states "Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all" (Martin, 2019). Health insurance is a means of achieving universal health coverage (UHC) and SDG by 2030 in many countries including Nepal. The current total expenditure in health as a percentage of Gross Domestic Product (GDP) has been increasing i.e. 6.15 % in 2015 which is the highest over the 15 years Nepal (WHO, SEAR, 2017). Further, out of pocket (OOP) expenditure on health was 55.44% during 2018 in Nepal (World Bank, 2019). Recent data in Nepal shows that the enrollment status in the national health insurance is only 8% in 2019 among the total population of 26,494,504 (Health Insurance Board, 2020) . In Kaski district, non-enrollment is also high i.e. 20% and non-enrollment remains still high. (HIB Jan 13, 2020, Kaski Data). Increasing non-enrollment may lead to failure of the program and there might be several factors associated with it. Thus, this study aims to assess the factors affecting non-enrollment in NHIS in Kaski, Nepal.

1.1 Overview of NHIS in Nepal

National health insurance scheme is a social health security program run by government of Nepal, a family-based program to enable its citizens to access quality health care services without placing financial burden on them. The concept of health insurance in Nepal existed in many forms from community-based health insurance, community drug program, social health insurance and now national health insurance. This was possible with the support of many developmental partners. This is a voluntary based program and provides subsidy to the specific groups (100% exemption for ultra-poor, elderly population above 70 years old, severe disability, listed diseases and 50% exemption on premium amount to Female Community Health Volunteers (FCHVs) as envisaged in national health insurance policy (Nepal Law Commission, 2021).

2. METHODS

2.1 Study Setting

The study was conducted in rural and urban area of Kaski District, Nepal. Kaski lies in the Gandaki Province with its attitude ranging from 450 meters to 8091 meters from lowest to highest (District Administration Office, 2018). It has four rural municipalities with one

metropolitan city. The district is inhabited by multi- ethnic communities such as Gurung, Brahmin, Chhetri, Magar, Newar, among others. Of all the districts of Gandaki province, it has the highest number of population. Representative samples were taken from all the municipalities. According to the Health Management Information System (HMIS) the district's total population is 571032 of which 479963 inhabited in Pokhara metropolitan and remaining population live in four rural municipalities (Nepal in data, 2019). National health insurance has been implemented in this district since December, 2016. According to Health Insurance Board, Gandaki Province Office, enrollment in January 2020 was only 20% of the total population of the district.

2.2 Study Design, Sample Size and Data Collection

The study design was cross-sectional to gather the data. Sample size was determined by Daniel formula. The total sample obtained from the formula was 246. Then the total sample size was taken 492 (246=enrolled and 246=non-enrolled) households. To calculate sample size margin of error was taken 5%, proportion of enrolled population was 20% (Data taken from HIB, Gandaki Province Office) and Z statistic at 95% confidence level. Sampling was done by multistage probability sampling method. First Kaski district was taken, and then wards were selected by simple random method. Required sample size of the selected wards was determined based on the probability proportional to size (PPS). Enrolled and non-enrolled households from each selected wards were taken by simple random method.

Enrollment assistants of NHIS assisted the researcher to locate the required households. The inclusion criteria of the study were enrolled and non-enrolled households of selected wards of Kaski district who had been living for more than six months in that area. Likewise, an exclusion criterion was participants who were unable or not willing to participate in the study due to any reason were excluded. Data were collected through face-to-face interview from the household heads or spouses of household heads or family members who dealt with the financial or other household related works. Data collection tool was prepared based on the published and unpublished literatures and reports. Experts were consulted to design and finalize the tools. Pre-testing was done in similar setting on 10% (49 households) which were not included in the study wards of the research. The tool was slightly revised after pre-testing. The tool contained four sections, socio-demographic and economic characteristics, household morbidity and health status, knowledge, perception on NHIS and health service and enrollment status.

2.3 Data Management and Analysis

Data were entered in Epi data 3.1 and analysed using statistical package for social sciences (SPSS16). Descriptive analysis was performed to describe socio-demographic profile, health status and morbidity related characteristics, knowledge on NHIS, perception on NHIS and health services of participants and pattern of enrolled and non-enrolled people under NHIS. Pre-defined syntax on wealth quintile was used to categorize wealth quintile and inputs were given on the items like source of drinking water, toilet facility, floor quality, cheap and expensive utensils, number of sleeping room, TV, refrigerator, phone, bike, car and

electricity. Obtained ranges were used to allocate cut points, then based on the measured cut points each households' wealth quintile was categorized. Rooted in the hierarchy of cut-points households were divided into lowest quintile (Q1), second quintile (Q2), third quintile (Q3), fourth quintile (Q4) and fifth quintile or highest (Q5). Questions on knowledge were scored and each correct question has given 1 point and no points for incorrect responses. Then knowledge levels were categorized as good (3 or more correct answer) and average/poor (below ≤2 correct answer). Perception on NHIS and health services were summarized by using mean score of households' perceptions on the score of five point Likert scale. Below average score was considered "negative perception" and above average score was considered "positive perception". Inferential analysis (binary logistic regression) was applied to identify the most independent factors. The odds ratio, 95% CI and p values was reported while showing the association between outcome and independent variables. These results were considered significant at 5% level of significance.

3. RESULTS

Socio-demographic and Economic Characteristics

Table 1 represents the socio-demographic characteristics of the family. Most (77.2%) of the surveyed households were headed by males. On the other hand, higher proportions (32.1%) of the household heads were more than 60 years and the median age being 51 years ranging from 22 to 90 years. Nearly two thirds (65%) of the household head belonged to Brahmin/Chettri ethnic group and 9 in every 10 (92.5%) of the household ascribed to Hindu religion. Most (86.6%) of the household heads were married. More than half (55.9%) of the households had nuclear family type and three quarters (75.5%) of household had five or less family members. More than three quarters (82.3%) of the families lived in their own home and majority (36.4%) of the household head had secondary level. Of the 470 studied households, majority of the heads (24.3%) had agriculture as a main occupation. Likewise, majority (62.8%) of the family had 1-2 salary employed in the family and most (27.6%) of them had monthly income of NPR 10-30 thousand. In the same way, most (21%) of the families belonged to highest wealth quintile followed by (20.1%) third quintile and so on.

Table 1: Characteristics of Study Participants

Characteristics	Frequency (n)	Percentage (%)
Household Head Sex		
Male	380	77.2
Female	112	22.8
Household Head Age (Years)		
< 30	13	2.6
30 – 40	95	19.3
40 – 50	111	22.6
50 – 60	115	23.4
≥60	158	32.1
	Median= 51,Min= 22, Max= 90	
Ethnicity		
Brahmin/Chettri	320	65.0
Dalit	80	16.3

Characteristics	Frequency (n)	Percentage (%)
Janajati	77	15.7
Others (Giri, Thakuri Madhesi Muslim)	15	3.0
Marital Status		
Married	426	86.6
Widow/Widowed	61	12.4
Separated	5	1.0
Family Type		
Nuclear	275	55.9
Joint	211	42.9
Extended	6	1.2
Household Size		
≤5 members	372	75.6
≥6 members	120	24.4
Household Ownership		
Own home	405	82.3
Rented	74	15.1
Rent Free	13	2.6
Education Status of Household Head		
Cannot read and write	46	9.3
Informal education	68	13.8
Basic education	123	25.0
Secondary	179	36.4
Higher secondary	76	15.5
Occupation (n=470)		
Agriculture	114	24.3
Business	106	22.6
Service	97	20.6
Retired	54	11.5
Daily wages	37	7.9
Home maker	29	6.2
Abroad	18	3.8
Driving	12	2.5
Tailoring	3	0.6
Monthly income of the Family (NRs) (n=489)		
< 10000	23	4.7
10000 – 30000	135	27.6
30000 – 50000	134	27.4
50000 – 70000	88	18.0
≥70000	109	22.3
Median= 36400, Min= 2000, Max= 2050000		
Wealth Index		
Lowest Quintile (19-61)	100	20.3
Second Quintile (61-71)	97	19.7
Third Quintile(71-81)	99	20.1
Fourth Quintile(81-86)	93	18.9
Highest Quintile(≥86)	103	21.0

Health Status and Morbidity Related Characteristics

Majority (70.5%) of the families had no past illness events in the last six months. Nearly half (47.8%) had chronic illness or needed continuous health services in the families. Majority (51.0%) families perceived their health as a good followed by 42.7% fair health status.

Knowledge on NHIS

Most (93.3%) of families were aware about the existence NHIS. Among the families who were aware of NHIS, 52.3% were aware through Enrollment Assistants followed by 32.2% through friends/neighbor/relatives. Among the enrolled households more than half (52.3%) had poor/average knowledge and rest of the others had good knowledge on it

Perception on NHIS

Most (83.1%) of the household had positive perception on NHIS while rest of them had negative perception on it.

Reasons of Enrollment, Discontinuation of Membership and Non-enrollment

Table 2 represents the reasons of enrollment, discontinuation of membership and non-enrollment. Among enrolled families, majority 67.1% joined the scheme because premium fee is low compared to user fee followed by 39.8% illness and injuries occurs frequent in the family. Of the enrolled families who were not willing to continue their membership, majority (61.5%) of them said there was long waiting time followed by (52.8%) no adequate medicines and few (15.4%) said the NHIS process was tedious, there was unequal behavior in the hospital, had no near service point and covered elsewhere. Similarly, of the non-enrolled family majority (26.0%) were not enrolled because they felt family members were mostly healthy and no need to be enrolled followed by (22.8%) not interested in the scheme.

Table 2: Reasons of Enrollment, Discontinuation of Membership and Non-enrollment

Reasons	Frequency (n)	Percentage (%)
***Reasons of Enrollment (n=246)**		
Premium is low compared to user fee	165	67.1
Illness and injury occurs frequent in family	98	39.8
Risk protection and future security	28	11.4
Utilize health services	20	8.1
Utilize government free service	18	7.3
Support others	10	4.1
Forced by EA	8	3.3
Others (Sponsor, neighbor)	4	1.6
Enrolled Households who were not willing to continue their membership		10.6
***Reasons of Discontinuation of Membership (n=26)**		
Long waiting time	16	61.5
Not adequate medicines	14	53.8
No good health services	13	50.0
Not utilized NHIS	8	30.8
Others (tedious, unequal behavior)	4	15.4
***Reasons of Non-enrollment (n=246)**		
Mostly healthy and no need to be enrolled	70	26.0
Not interested in the scheme	56	22.8
Covered elsewhere	40	16.3
Not aware about scheme	38	15.4
Family problem	38	15.4
Not satisfied with the services	30	12.2
Bad compliments about the scheme	25	10.2

Cannot afford premium	24	9.8
EA did not come to enrol	9	3.7
Service point far	3	1.2
Others (Senior citizens, HIB office closed)	2	3.3
Non-enrolled household future plan to join the NHIS	135	54.9

*Multiple Responses

Factors Associated with Non-enrollment

Table 3 illustrates having no elderly population aged 60 years and above (COR=2.76, CI=1.89-4.01, p<0.001), non-privileged ethic caste groups (p<0.001), non-hindu religion (COR=0.39, CI=0.19-0.82, p<0.01), nuclear family type (COR=2.79, CI=1.93-4.40, p<0.001) and less household size (COR=2.25, CI=1.47-3.35, p<0.001) showed statistical significant association with non-enrollment while sex of household head, presence of children aged 0-5 years in the family, presence of children aged 6-16 years in the family and household head marital status did not show any significant association with non-enrollment. Decreasing educational level of household head, not having self-owned home (COR= 0.38, CI=0.23-0.67, p<0.001) and daily earners workers (p<0.001), less household monthly income, lowest wealth quintile were associated with non-enrollment.

Table 3. Factors Associated with Non-enrollment

Variables	**Enrollment Status**		**COR**	**CI**	**p value**
	No(%)	**Yes (%)**			
Sex of HH					
Male	192 (50.5)	188 (49.5)	**1.09**	**0.72-1.67**	**0.667**
Female	54 (48.2)	58 (51.8)			
Age group of HH					
<30	9 (69.2)	4 (30.8)			**<0.001***
30-40	63 (66.3)	32 (33.7)			
40-50	61 (55.0)	50 (45.0)			
50-60	57 (49.6)	58 (50.4)			
≥60	56 (35.4)	102 (64.6)			
Presence of children aged 0-5 years					
None	181 (51.1)	173 (48.9)	**1.17**	**0.79-1.74**	**0.422**
≥ 1	65 (47.1)	73 (52.9)			
Presence of elderly above 60 years					
None	179 (59.7)	121 (40.3)	**2.76**	**1.89-4.01**	**<0.001***
≥ 1	67 (34.9)	125 (65.1)			
Ethnicity					
Brahmin/Chhetri	124 (38.8)	196 (61.3)			**<0.001***
Dalit	59 (73.8)	21 (26.2)			
Janajati	54 (70.1)	23 (29.9)			
Others	9 (60.0)	6 (40.0)			
Religion					
Hindu	220 (48.4)	235 (51.6)	**0.39**	**0.19-0.82**	**0.01***
Non-Hindu	26 (70.3)	11 (29.7)			
Marital status					
Married	212 (49.8)	214 (50.2)	**0.93**	**0.55-1.56**	**0.79**
Widowed/Separated	34 (51.5)	32 (48.5)			
Family type					
Nuclear	168 (61.1)	107 (38.9)	**2.79**	**1.93-4.40**	**<0.001***
Joint/Extended	78 (35.9)	139 (64.1)			
HH size					
≤5 members	204 (54.8)	168 (45.2)	**2.25**	**1.47-3.45**	**<0.001***
≥6 members	42 (35.0)	78 (65.0)			
HH education status					
Cannot read and write	20 (43.5)	26 (56.5)			**0.004***

Variables	Enrollment Status		COR	CI	p value
	No(%)	Yes (%)			
Informal education	31 (45.6)	37 (54.4)			
Basic education	80 (65.0)	43 (35.0)			
Secondary	83 (46.4)	96 (53.6)			
Higher secondary	32 (42.1)	44 (57.9)			
HH ownership					
Self-owned	186 (45.9)	219 (54.1)	**0.38**	**0.23-0.67**	**<0.001***
Rented/Rent free	60 (69.0)	27 (31.0)			
HH occupation					
Agriculture	50 (43.9)	64 (56.1)			**<0.001***
Business	52 (49.1)	54 (50.9)			
Service	44 (45.4)	53 (54.6)			
Retired	21 (38.9)	33 (61.1)			
Daily wages	35 (94.6)	2 (5.4)			
Home maker	10 (34.5)	19 (65.5)			
Abroad	15 (83.3)	3 (16.7)			
Driving	8 (66.7)	4 (33.3)			
Sewing	2 (66.7)	1 (33.3)			
HH Monthly income (NRs)					
< 10000	17 (73.9)	6 (26.1)			**0.005***
10000 - 30000	78 (57.8)	57 (42.2)			
30000 - 50000	69 (51.5)	65 (48.5)			
50000 – 70000	37 (42.0)	51 (58.0)			
≥70000	44 (40.4)	65 (59.6)			
Wealth quintile					
Lowest Quintile	76 (76.0)	24 (24.0)			**<0.001****
Second Quintile	55 (56.7)	42 (43.3)			
Third Quintile	40 (40.4)	59 (59.6)			
Fourth Quintile	35 (37.6)	58 (62.4)			
Highest Quintile	40 (38.8)	63 (61.2)			

Logistic Regression Analysis

Table 4 represents the findings of logistic regression analysis. While adjusting those associated variables, factors associated with non-enrollment found to be presence of elderly population in the family, wealth quintile, self-perceived family health status and knowledge on NHIS. Data showed that having no elderly population in the family were 2.06 times less likely to enroll in the scheme (AOR=2.060, CI=1.141-3.721, p<0.01). Similarly, the odds of non-enrollment increases with the decreasing wealth quintile of family. Family who perceived their family health status fair was more likely to join the scheme. Likewise, knowledge also influences the willingness to enroll in the scheme. Households who had poor or average knowledge on the scheme were almost 5 times more likely to non-enrollment (AOR=4.641, CI=2.841-7.582, p<0.001).

Table 4: Unadjusted and Adjusted Odds Ratio using Logistic Regression Analysis

	Enrollment in NHIS					
Variable	UOR	95% CI	p value	AOR	95%CI	p value
Age of HH (years)						
< 40 (Ref)	1			1		
≥ 40 years	2.414	1.543-3.777	<0.001	1.172	0.589-2.333	0.651
Presence of elderly						
None (Ref)	1			1		
≥ 1	2.760	1.895-4.019	<0.001	2.060	1.141-3.721	**0.017**
Ethnicity						
Underprivileged	1			1		

Variable	Enrollment in NHIS					
	UOR	95% CI	p value	AOR	95%CI	p value
(Ref)						
Privileged	3.857	2.589-5.746	<0.001	1.754	0.981-3.135	0.058
Religion						
Non-Hindu (Ref)	1			1		
Hindu	2.525	1.218-5.232	0.013	2.030	0.749-5.499	0.164
Family type						
Nuclear (Ref)	1			1		
Joint/extended	2.798	1.936-4.044	<0.001	1.410	0.747-2.662	0.290
HH size						
≤ 5 (Ref)	1			1		
≥ 6	2.255	1.471-3.457	<0.001	1.034	0.457-2.342	0.936
HH education						
Below secondary (Ref)	1			1		
Above secondary	1.505	1.054-2.147	0.024	1.086	0.625-1.887	0.770
HH ownership						
Rented/rent free (Ref)	1			1		
Self-owned	2.616	1.596-4.920	<0.001	1.050	0.511-2.160	0.894
HH occupation						
Informal (Ref)	1			1		
Formal	1.548	1.048-2.287	0.028	0.758	0.445-1.289	0.306
HH monthly income						
<15000 (Ref)	1					
≥ 15000	1.410	0.858-2.317	0.175			
HH monthly expenditure						
<15000 (Ref)	1					
≥ 15000	1.554	1.013	2.385			
Wealth quintile						
Lowest quintile (Ref)	1			1		
Second quintile	2.418	1.314-4.450	0.005	2.062	0.942-4.512	0.070
Third quintile	4.671	2.539-8.594	<0.001	3.466	1.538-7.813	**0.003**
Fourth quintile	5.248	2.818-9.772	<0.001	3.905	1.726-8.835	**0.001**
Fifth quintile	4.987	2.720-9.145	<0.001	4.312	1.881-9.880	**0.001**
Past illness events						
No (Ref)	1			1		
Yes	1.774	1.196-2.629	0.004	1.275	0.760-2.138	0.357
Continuous health services needed						
No (Ref)	1			1		
Yes	2.009	1.465-3.009	<0.001	1.206	0.716-2.030	0.481
Self-perceived health status						
Good (Ref)	1			1		
Fair	2.426	1.674-3.517	<0.001	2.829	1.662-4.817	**<0.001**
Poor	1.138	0.411-3.148	0.804	1.707	0.401-7.264	0.469
Knowledge on NHIS						
Poor/average (Ref)	1			1		
Good	4.856	3.260-7.233	<0.001	4.641	2.841-7.582	**<0.001**
Perception on NHIS						
Negative (Ref)	1			1		
Positive	2.242	1.367-3.677	0.001	1.764	0.927-3.358	0.084
Perception on HS						
Negative (Ref)	1					
Positive	0.706	0.485-1.029	0.070			

4. Discussion

The objective of the study was to assess the factors associated with non-enrollment. It was found that the major factors associated non-enrollment were presence of elderly population in the home, wealth quintile, self-perceived family health status and knowledge on NHIS.
The result of the study found no any significant association of household head age with the non-enrollment. This might be the fact that health is everyone's concern and it should not be limited by the household head age. But the many study revealed that non-enrollment decreases with decreasing age group of household heads (Jude et al., 2018; Manortey et al., 2014; Nsiah-Boateng et al., 2019). Similarly, proportion of male and female members in the families were not predictors of non-enrollment. The reason might be family health concern is not abide by the gender role. However, such studies do not exist to explore such association.
Having no elderly population aged 60 years and above in the family was a significant factor of non-enrollment in the NHIS. This might be due to the fact that younger age groups feel that they have less health problems as compared to elder population. Other reasons might be elderly population wants future health security in their life and Government of Nepal is also protecting elder population by subsidizing the premium of geriatric population aged above 70 years. Existing literatures of Nepal and Ghana are similar with the present study (Adhikari et al., 2019; Badu et al., 2018; Jehu-Appiah et al., 2011) however another literature of the Nepal showed the contradictory result (Ghimire et al., 2019).

This study found that ethnicity was not predictor of non-enrollment in the scheme. This could be due to the geographical setting and population characteristics. Nevertheless findings from other studies say that underprivileged ethnic group has higher non-enrollment (Adhikari et al., 2019; Ghimire et al., 2019). Likewise, present study found religion has no association with non-enrollment. This result is consistent with the findings of other studies (Adhikari et al., 2019; Paudel, 2019). Similarly, family type and household type were not predictors of enrollment. This findings is not in line with the other studies (Jehu-Appiah et al., 2011; Nsiah-Boateng et al., 2019; Paudel, 2019; Sarker et al., 2017). Furthermore, in this study household ownership was not a significant factor of non-enrollment. This might be the fact that all want future security in health and that is not restricted by whether people lives in self-owned home or other homes. This finding is coherent with the study of Ethiopia (Jehu-Appiah et al., 2011). Present study found education as a not important factor of non-enrollment. But other studies showed contrast result that odds of enrolling increases with the educational level (Acharya et al., 2019; Adhikari et al., 2019; Jehu-Appiah et al., 2011; Jude et al., 2018; Manortey et al., 2014; Paudel, 2019).
Facts from various studies have shown the positive association between socio-economic status and non-enrollment (Ghimire et al., 2019; Jehu-Appiah et al., 2011; Mirach et al., 2019; Paudel, 2019). The present study also showed that non-enrollment increases with the decreasing socio-economic status in the society. In Nepal there is a provision of subsidizing poor and ultra-poor population in the scheme but due to delay in governmental procedure of identifying and distributing poverty card, poor populations are left behind. Those populations are not able to pay the premium amount and are deprived of utilizing the necessary health services when they are in need. Another reason might be they are not aware about the existence of such scheme. The result of present finding contradicts to the findings of other

study of Nepal, which found that non-enrollment was higher in rich wealth quintile (Acharya et al., 2019). This differences might be due to the study setting because present study is conducted in urban and semi-urban area whereas the other study was conducted in NHIS piloted districts which may represent remote areas of Nepal so that data represents the more variant population characteristics than present study.

Previous study finding showed that past illness events in the household were positively associated with subscription to NHIS (Ghimire et al., 2019). However present study reveals contrast result. Correspondingly previous literatures showed having no chronic illness in the family increases non-enrollment (Ghimire et al., 2019; Mirach et al., 2019; Paudel, 2019). But this study didn't found any significant association. Self-perceived health status is an influencing factor of non-enrollment in NHIS. This study finding showed that the odds of non-enrollment was higher among those household who perceived their family health status as a good. This result is consistent with the finding of Kenya and Ethiopia (Mirach et al., 2019; Otieno et al., 2019). This is obvious that if household members do not have any health problems, they would never prefer to be enrolled until and unless they have severe health problems and may have a thinking that they should no waste money unnecessarily. Problem is that such people failed to understand the nature of the program. As we know, the nature of the NHIS in Nepal is contributory i.e. taking from rich and giving to poor and from healthy to unhealthy. This unawareness and misunderstanding of the program features might be one of the major reason of non-enrollment.

This study found that statistical significant association between perception on NHIS and non-enrollment. Nonetheless previous study presented the positive perception on NHIS tends to more enrollment (Jehu-Appiah et al., 2012). Another factor which affects the enrollment is knowledge about the scheme. Household having poor knowledge about the scheme have higher non-enrollment rate. This study is in line with the results of other studies of Nigeria (Ibukun et al., 2013; Yusuf et al., 2019). It is not easy to enroll each and every one until and unless they understand the depth of the program. Knowledge levels vary according to their educational level, need factor, individual interest, availability and accessibility of related advertisement and so on.

5. Conclusion

The non-enrolled households, nearly half of them had no future plan about joining the scheme. Major reasons of non-enrollment in the scheme are mostly healthy and no need to be enrolled in the scheme, not interested in the scheme, covered elsewhere, not aware about the scheme, family problems, not satisfied with the health services and bad compliments about the scheme from the enrolled. Besides that, factors that determine the non-enrolment in NHIS are households had without elderly family members, poor wealth quintile, self-perceived good health status and poor knowledge on NHIS.

A comprehensive social and behavior change communication program is necessary to change the perception of population towards health insurance. Consideration should also be given to mandatory enrollment of all family members. It is crucial to bring the poor population under the scheme to reduce the non-enrollment gap between rich and poor. Effective coordination from different stakeholders for the increase the health insurance coverage and ensure better quality of health services.

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