

# Utilization of Health Care Services and Health Seeking Behavior Among Adults of Letang Municipality, Morang, Nepal: An Observational Study

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## Abstract

**Background:** Curative services utilization in Nepal was hard hit by Coronavirus disease-19 pandemic in the fiscal year 2077/78. We aimed to compare the state of utilization and health seeking behavior at government and private health care service centers post pandemic in a rural area in Eastern Nepal.

**Methods:** A community based cross- sectional study included 317 participants who were residing in Letang Municipality of Eastern Nepal for the past five years. Households were selected from three wards out of nine through purposive sampling. Semi-structured questionnaire was used to interview the participants. Binary logistic regression was conducted to assess independent predictors for post-pandemic health care utilization.

**Results:** Our study revealed that half (53.3%) of the households visited the government health care facility. Nine out of ten households were vaccinated against Coronavirus disease-19 and about two thirds (63.7%) of them had completed booster dose. Education ( $p = 0.024$ ), religion ( $p = 0.001$ ) and preference of health care facility during emergency ( $p < 0.001$ ) showed statistically significant association with the type of health facility visited.

**Conclusion:** A significant number of the participants had visited the health care facility several times during one year with a greater preference towards government health facility during emergency. Good coverage for the Coronavirus disease-19 vaccination was observed among the study participants.

**Keywords:** COVID-19; Delivery of health care; Health attitude; Health behavior; Health facility

## Declarations

**Ethics approval and consent to participate:** Ethical approval obtained from the Institutional Review Committee, B. P. Koirala Institute of Health Sciences (Ref. No: IRC 2697/023) and informed consent has been obtained from participants prior to the enrollment.

**Consent for publication:** Not applicable.

**Availability of data and materials:** The full data set supporting this research is available with the corresponding author upon request by the readers.

**Competing interest:** None.

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## BACKGROUND

**H**ealth or illness-seeking behavior is defined as the kind of action performed by individuals who believe they have a health issue and are looking for an appropriate cure [1]. Health Care Utilization is the quantification of accounts concerning the service usage by individuals for instance to prevent and cure health issues, maintain good levels of optimism on personal condition, and prognosis [2].

A study on the elderly population in Nepal found that health-seeking behavior and use of health care services are influenced by social beliefs, socioeconomic status, education level, awareness about health conditions such as chronic disease and regular drug intake, among others. [3]. Similarly, healthcare utilization is affected by several factors and can be looked as a time dependent concept. A number of general factors like access, scope of provision and continuity in care contribute to the patterns of use observed in health facilities [4]. Other factors, such as poverty, illiteracy and trust in traditional healers further complicate the health needs of elderly Nepalese [5].

The provision of health care services is one key aspect that contributes to improvement of nation's status. Understanding people's behaviors related to health at the personal and community level is an important feature in achieving a healthy society [6]. In the year 2020-2021 health services were interrupted aside from the direct health risks posed by Coronavirus disease-19 [7]. Studies have already revealed fear of infection as the reason for delay/ avoidance in care during Coronavirus disease-19. On the contrary, issues including job loss anxiety; social separation fear and cost of testing have been identified as the underlying causes for avoiding Coronavirus disease-19 screening [8]. In the fiscal year for 2077-78 (2020-21 AD), admission rate dropped by 15 percent. Looking at the trend over previous five years, the hospital admission rate was slightly higher. Nevertheless, a remarkable decline was registered during the fiscal year of 2077-78 as an effect on the country caused by Coronavirus disease-19 pandemic. The figures reported for 2077/78 reveal a decline of 9% from that of the previous fiscal year. The provision of outpatient department services was disrupted in the second wave because some major tertiary hospitals were transformed into Coronavirus disease-dedicated centers [9]. This study aims to give us a snapshot of assessment of utilization of health services and health seeking behavior among the adults and to compare the utilization between the government and private health facilities.

## METHODS

**E**thical clearance was taken from the BPKIHS Institutional Review Committee and informed consent was taken prior to the study among the participants.

This community based cross-sectional study was conducted in Letang Municipality of Morang district. This municipality spans both Hilly and Terai Region. It has nine wards, and an area of 119 square kilometers. More than 70% of the people in this municipality are engaged in agriculture. This study was conducted from 29th January to 11th February 2023. All adults aged 18 years and above residing in Letang Municipality for the last five years were included in the study while people who had come to stay for a short period of time and those unwilling to participate were excluded. Each household was taken as a study unit.

The sample size of 317 was calculated using the previously reported prevalence of 58% health care utilization [10] and 5% allowable error. Adding a 10% of non-response rate, the final sample size was 317.

Ward wise population of Letang Municipality was collected from respective ward profile. Out of nine wards, three wards were selected purposively. A pen was rotated at a centrally located spot in each ward. The household in the direction pointed by the pen was selected. Thereafter, every alternate house was taken for the data collection until we met our sample size.

Health care utilization was assessed in terms of utilization of government and private health facilities. Coronavirus disease-19 vaccination coverage was used to assess the health seeking behavior of the participants. 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. All sets of questionnaires were translated into Nepali and translated back into English with the help of independent experts. Face and content validation were done by a team of public health experts from the School of Public Health and Community Medicine, BPKIHS. After explaining the aims and objectives of the research and obtaining participants' consent, representatives from each household (preferably head of the households or any willing member above 18 years) were interviewed face to face.

Data were entered in the Excel and then transferred to Statistical Package for the Social Sciences version 26 for analysis. Frequency, percentages, means and standard deviations were used to represent the data in tables in descriptive analysis and chi-square test was applied to see

the association with dependent variables. Binary logistic regression was applied to see the independent association with utilization of health services of government and private health facilities. Variables whose p values were less than 0.2 were considered for logistic regression. Significance level was set at 5% for all the tests.

## RESULTS

The mean age of the participants in the study was 45.96 years with standard deviation of 15.58 years. Age-wise distribution of respondents showed that

almost half (49.2%) of them belonged to the age group of 26- 49 years. Majority were females (67.5%), belonged to Janjati ethnic group (49.5%) and were Hindu (73.2%) by religion. More than one third (37.2%) were illiterate. There were almost equal number of participants from nuclear (50.5%) and joint (49.5%) families with most of the families having members up to 5 (62.1%). A significant number of the respondents were married (94%), labor/ daily wages by occupation (69.1%) and were below poverty line (83.3%). (Table 1).

More than half (53.3%) of the participants were found to use the government health facility. In the previous year, 48.9%

**Table 1: Socio-demographic profile of respondents (n = 317)**

Characteristics	Category	Frequency	Percentage
Age	18- 25	31	9.8
	26- 49	156	49.2
	50- 59	69	21.8
	60 and above	61	19.2
Sex	Male	103	32.5
	Female	214	67.5
Ethnicity	Brahmin, Chhetri	130	41
	Janjati	157	49.5
	Dalit	30	9.5
Religion	Hindu	232	73.2
	Buddhism	39	12.3
	Kirat	19	6
	Christian	27	8.5
Education	Illiterate	118	37.2
	Primary	73	23
	Secondary	81	25.6
	Higher Secondary and above	45	14.2
Marital Status	Never married	19	6
	Married	298	94
Family Type	Nuclear	160	50.5
	Joint	157	49.5
Family Size	Up to 5	197	62.1
	More than 5	120	37.9
Occupation	Labor/ daily wages	219	69.1
	Government/ non- government employee	32	10.1
	Self- employee	39	12.3
	Business	27	8.5
Per Capita Income	Below poverty line	264	83.3
	Above poverty line	53	16.7

of the households had up to five hospital visits. The distance from their residence to nearest health care facility was less than 30 minutes on foot for almost 80% of participants, hence the most common means of transportation was walking (52.4%). Health insurance was done by 66.2% of the respondents. Most (67.2%) of the households believed in faith healers, however distribution was almost equal for visiting (52.4%) and not-visiting (47.6%) faith healers in the past year. The majority (95.6%) had not been involved in any community programs. Nine out of ten participants were vaccinated against Coronavirus disease and about two thirds (63.7%) of them had completed booster dose. (Table 2).

Health care utilization was assessed in terms of services utilized between government and private health facility. In the bivariate analysis, education ( $p = 0.024$ ), religion ( $p = 0.001$ ) and preference of health care facility during emergency ( $p < 0.001$ ) were found to be significantly associated with the choice of health care facilities used. In logistic regression, preference of health care during emergency (AOR: 3.86, 95% CI: 2.06- 7.23) had an independent effect on choosing the type of health institution after adjusting for various significant variables. Also, Buddhism (AOR: 0.32, 95% CI: 0.13- 0.76) and Kirat (AOR: 0.20, 95% CI: 0.06- 0.71) religions were found to be significant predictors of the choice of health care facility (Table 3).

**Table 2: Health Seeking Behavior among participants (n = 317)**

Indicators		Frequency	Percentage
Type of health care facility	Government	169	53.3
	Private	148	46.7
Number of hospital visits	No visit	44	13.9
	Up to five visits	155	48.9
	More than five visits	118	37.2
Distance to health center	Less than 30 mins	253	79.8
	More than 30 mins	64	20.2
Transportation	Walking	166	52.4
	By vehicle	151	45.6
Health insurance	Done	210	66.2
	Not done	107	33.8
Belief on faith healers	Believes	213	67.2
	Does not believe	104	32.8
Visit to faith healers in past year	Yes	166	52.4
	No	151	47.6
Participation in community program	Yes	14	4.4
	No	303	95.6
Vaccinated for COVID-19	Yes	303	95.6
	No	14	4.4
Doses of vaccine	Without booster	110	36.3
	Booster	193	63.7

Table 3: Binary Logistic Regression Analysis of factors associated with Health Care Utilization (n = 317)

Characteristics		Health Service Utilization in N (%)		OR (95% CI)	AOR (95%CI)	p- value
		Government	Private			
Age in years	18- 25	13 (41.9)	18 (58.1)	0.40 (0.16-0.98)	1.48 (0.40- 5.39)	0.54
	26- 49	78 (50)	78 (50)	0.56 (0.30-1.03)	1.15 (0.52- 2.55)	0.72
	50- 59	39 (56.5)	30 (43.5)	0.73 (0.36-1.48)	1.04 (0.47- 2.30)	0.9
	60 and above	39 (63.9)	22 (36.1)	1	1	
Sex	Male	49 (47.6)	54 (52.4)	0.71 (0.44-1.13)	0.82 (0.47- 1.42)	0.49
	Female	120 (56.1)	94 (43.9)	1	1	
Ethnicity	Brahmin, Chhetri	77 (59.2)	53 (40.8)	1.11 (0.49-2.47)	1.57 (0.64- 3.83)	0.32
	Janjati	75 (47.8)	82 (52.2)	0.69 (0.31-1.53)	1.20 (0.49- 2.93)	0.68
	Dalit	17 (56.7)	13 (43.3)	1	1	
Religion	Christian	15 (55.6)	12 (44.4)	0.86 (0.38- 1.93)	1.29 (0.51- 3.27)	0.53
	Buddhism	12 (30.8)	27 (69.2)	0.30 (0.14- 0.63)	0.32 (0.13- 0.76)	0.009*
	Kirat	5 (26.3)	14 (73.7)	0.24 (0.08- 0.71)	0.20 (0.06- 0.71)	0.008*
	Hindu	137 (59.1)	95 (40.9)	1	1	
Education	Illiterate	73 (61.9)	45 (38.1)	2.67 (1.31-5.42)	2.04 (0.82- 5.10)	0.12
	Primary	41 (56.2)	32 (43.8)	2.11 (0.98-4.51)	1.66 (0.68- 4.04)	0.25
	Secondary	38 (46.9)	43 (53.1)	1.45 (0.69-3.06)	1.62 (0.68- 3.82)	0.26
	Higher Secondary and above	17 (37.8)	28 (62.2)	1	1	
Marital status	Never married	6 (31.6)	13 (68.4)	0.38 (0.14-1.03)	0.49 (0.12- 2.00)	0.32
	Married	163 (54.7)	135 (45.3)	1	1	
Per capita income	BPL	145 (54.9)	119 (45.1)	1.47 (0.81-2.66)	1.16 (0.60- 2.22)	0.65
	APL	24 (45.3)	29 (54.7)	1	1	
Health center preference during emergency	Government	65 (73.9)	23 (26.1)	3.39 (1.97-5.88)	3.86 (2.06- 7.23)	<0.001*
	Private	104 (45.4)	125 (54.6)	1	1	
Perception towards modern medicine	Good	139 (51.5)	131 (48.5)	0.60 (0.31-1.14)	0.59 (0.29-1.22)	0.15
	Bad/ OK	30 (63.8)	17 (36.2)	1	1	
Presence of water borne disease	Yes	73 (58.4)	52 (41.6)	1.40 (0.89-2.21)	1.06 (0.63- 1.79)	0.8
	No	96 (50)	96 (50)	1	1	
Type of latrine	Sanitary	79 (49.7)	80 (50.3)	0.74 (0.47-1.16)	0.75 (0.46- 1.23)	0.26
	Unsanitary	90 (57)	68 (43)	1	1	

## DISCUSSION

Our study aims to assess health care utilization and health seeking behavior among residents of Letang municipality. Health care utilization was assessed in terms of utilization of government and private health facilities. In contrast to the study done by Bhattarai et al. which showed the majority of the participants visiting the private health care centers (79.3%) compared to the government facility (20.7%), we found an almost equal share of participants visiting government and private facilities [11]. More than half (53.3%) of the participants were found to use the government health facility. In the past year, almost half (48.9%) of household members had up to five hospital visits. Illiterate participants were 37.2%,

the majority (69.1%) were involved in labor/ daily wages for earning and 83.3% were below the poverty line as per the World Bank global poverty line revised in September 2022 [US\$ 2.15 per day] [5]. This might possibly explain the high number of enrollees of health insurance (66.2%) and utilization of government health services. Also, about 80% participants had the health care facilities within the reach of 30 minutes which could explain why half of the participants used to walk to the health center as means of travel. This proximity of health centers could be due to the government action to address the health necessity of all age groups. The national policy aims to expand and establish at least one basic health service centers in every ward of the local level, one primary hospital for basic emergency

operation and primary trauma care in every local level, a secondary level hospital, provincial hospital and a highly specialized hospital under each province and at least a highly specialized hospital and academy of health science in every province under the authority of federal level [9].

A significant association between choice of health care facility and religion was found in our study. Our study showed that Buddhist (AOR: 0.32, 95% CI: 0.13- 0.76) and Kirat (AOR: 0.20, 95% CI: 0.06- 0.71) had 68% and 80% less tendency to utilize the government health facility than Hindu respectively. The findings can be correlated to the similar study done by Baral and Sapkota [12]. Participants who preferred government services during emergency were almost four times more likely to visit government health facility in general than those who preferred private. Long waiting lines in the government center could repel civilians towards private centers but high cost and the existence of only government health facility in their vicinity could sway them towards government health care facility. It could be either because emergency service has improved in government facilities and when people trust government facilities in treating emergency cases they will surely trust for general services. Health insurance might be another big reason for the preference of government health facilities during emergency as more than half of the households were enrolled in government health insurance scheme.

Alternative healing practices have long been an integral parts of indigenous Nepali cultures. Faith healing is usually seen among the hill communities and practiced in different parts of Nepal even today [13]. Around two third (67.2%) of the participants had belief on faith healers and half (52.4%) of the participants had visited the faith healers in the last year. Similar study conducted by Adhikari and Rijal among senior citizens of Dharan, 97.2% used to first visit faith healers for the health problems [14]. The study conducted in Ilam by Bhattarai et al found 81.3% utilized modern medicine and 18.7% used traditional healing whereas this study found the equal proportion of participants visiting faith healers and modern health facilities. However, the majority of the respondents had good perception towards modern medicine.

As of last fiscal year, the admission rate has decreased for the fiscal year 2077/78. If we see the trend of last five years, the hospital admission rate had increased slightly. However, there was significant reduction in number in the fiscal year 2077/78 as the country was hit hard by Coronavirus disease-19 pandemic [9]. This could explain the increased visits to faith healer. Despite the decrease in admission rate, vaccination coverage against Coronavirus disease-19 was 95.6% among the study participants where 63.7% had completed the booster dose and the remaining had yet to receive booster dose. Only 5% of the respondents had some kind of participation in community health programs which underlines the need for primary health care strengthening.

Due to limited time and non-random sampling our study findings might have limitations in generalizing to the whole of Nepal. However they could suitably represent Morang district of Nepal or similar geo-cultural settings in Nepal. A cause-effect relationship as well cannot be inferred due to the cross-sectional design of the study.

Knowledge regarding free health services provided by government of Nepal and awareness programs targeting the underprivileged ethnic groups and poor households are recommended to ensure increased utilization and accessibility of government health facilities. Strengthening of primary health care through community participation and provision of continuum of care needs to be sought.

## CONCLUSION

Our study was conducted post pandemic to assess utilization of health services and health seeking behavior which revealed half of the participants visited government health care facility. Despite the decrease in utilization of health services during the pandemic it is now seen that huge number of participants had visited the hospital for at least five times last year in this study. Greater preference towards government health facility during emergency was observed which can be considered as a good sign of improvement in health care services, accessibility and insurance coverage.

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