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RESEARCH ARTICLE

Prevalence of Self-Medication Practice among the Residents of Slum Area in Pokhara

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Abstract

Self-medication (SM) is a growing global phenomenon especially prevalent in low-income communities where access to formal healthcare is limited. Unauthorized use of medication poses serious risks, including drug resistance, harmful side effects, and delayed access to professional medical care. This study explored the prevalence, causes, and consequences of SM among low-income households in Pokhara Valley. The researchers surveyed 150 households across seven randomly selected slums using structured questionnaires and analyzed the data using multiple regression with heteroscedasticity error correction model. The investigation revealed an 82.3% SM prevalence rate primarily driven by cost and time savings, with 24% of households reporting side effects such as allergies. The findings indicate that the frequency of SM is significantly associated with education levels, household size, and the perceived ease of treatment. These results underscore the urgent need for targeted public awareness s campaigns and improved access to formal medical facilities for marginalized populations.

Keywords: ease of treatment, low-income household, prevalence, self-medication, symptoms

Introduction

Self-medication (SM) is a growing global phenomenon particularly prevalent in low-income communities where access to healthcare services is limited. SM can be defined as the selection and use of non-prescription drugs by individuals for the treatment of self-recognized symptoms. This also includes obtaining and consuming medication without supervision by medical professionals (Gutema et al., 2011). The issues with SM are generally related to indication, dosage, and duration of treatment. In developing countries like Nepal, individuals in economically disadvantaged communities often resort to SM due to financial constraints, limited

health infrastructure, and cultural practices (Rajput et al., 2010). Self-medication practice is prevalent worldwide and with higher degrees in developing countries. The reasons for SM practice vary over space and time (Novignon et al, 2011). People practicing SM are not confined to over the counter (OTC) drugs only rather it is widely practiced globally. Moreover, people often use them improperly (Omolase, et. al 2007). The fact that people apply prescription only drugs such as antibiotics or anti-malarial drugs for SM is quite alarming. This may lead to drug resistance in the long run (Arikpo, 2009 & Eja, 2009). Pokhara valley, with its diverse population and varying levels of socioeconomic development, provides an important context to explore this issue in-depth.

Inadequate knowledge of medication may directly lead to non-compliance with a drug regimen by communities and/ or patients, which in return can lower the quality of treatment (Atsbeha and Suleyman, 2008). Previous studies indicate that people have poor knowledge about the costs and benefits of SM, thereby encouraging its use for treating perceived illness (Suleman et al., 2009). Studies have documented high prevalence rates of SM across developing countries, driven by factors such as poor access to formal healthcare, low literacy, affordability of OTC medicines, and easy availability of drugs at local pharmacies. The main concerns around SM practices are the use of medication for unintended indications, incorrect self-diagnosis, and drug interaction (Zafar et al., 2008). In developing world, many common symptoms and diseases are treated through SM (Shankar et al., 2002), and the extent to which low-income households resort to SM underscores the need for context-specific prevalence studies. Even though the negative effects of SM are well documented, health science students continue to practice and recommend SM as reported in several studies (e.g., Pan et al., 2012; Bekele et al., 2016).

The practice of SM has reached a crisis level, as people often use substances they believe have medical value without knowledge of the implications associated with their use. The lack of knowledge and awareness of the implications of SM is contributing significantly to the practice. Consequently, people may experience severe effects and delay seeking professional care thereby complicating their conditions (Afolabi, 2012). The World Health Organization (WHO,2008) emphasizes on the need to use OTC drugs responsibly as inappropriate use predisposes one to deleterious implications. This is a challenge in most developing countries particularly in regions with high illiteracy rate, and limited access to accurate health information (Novignon et al., 2011). Knowledge of SM and its implications is therefore necessary as it will guide and regulate people on how to use medicines cautiously regardless of other factors that facilitate the practice of SM such as distance to the hospital, availability and easy access of medicines in pharmacies or other shops, poverty, nature or emergency of their illness amongst several factors. In this context, this study aims to analyze the prevalence and reasons behind SM practices among low-income communities with the goal of identifying key drivers of such practice and suggesting strategies to address this public health challenge.

Inappropriate use of OTC drugs coupled with lack of adequate information regarding their side effects and interactions poses severe health risks although these OTC drugs used offer some degree of efficiency and ease of use. The severity of impacts of SMis more serious among the old and people with physiological conditions like pregnancy and lactation. Moreover, dependence on SM delays hospital intervention for real treatment of the symptoms, which can complicate symptoms further (WHO, 2008). SM is being practiced worldwide, and it is an important public health concern, due to its prevalence which is quite high in poor communities around the globe. For

instance, prevalence of SM was 77.9%, in Greece 98% in Palestine, 71% in India and 76% in Pakistan (Zafar, et. al, 2008).

It is believed that SM practice has reached a critical level in most African nations. In those areas, poor households generally try to treat themselves with available medicines without considering toxic or harmful effects. For example, in Tanzania, the SM prevalence for eye patients was found to be 58.9% (Kagashe and Msela, 2012), and in Malawi, the estimate of SM prevalence was at 56% (Novignon et. al. 2011). The estimate of prevalence of SM was at 53% in Kenya (Misati, 2012). The overall SM prevalence was found to be 99.4%, and 72.4% among pregnant women in Nigeria (Abasiubong et. al. 2012). These findings point to the seriousness of SM issues in the poor developing nations.

The low literacy rate and less availability of medical information to the poor households in developing nations are some of the major factors causing the higher SM prevalence (Afolabi, 2012). It is therefore important to raise people's awareness and access to accurate information relating to SM and its impacts for decreasing the SM prevalence. Furthermore, information regarding harmful effects of SM like ADR, drug resistance and attitude and behaviors toward seeking health care are crucial factors to consider in this regard. This will further guide in developing strategies, policies, plans and programs in addressing the problem of high SM prevalence especially in developing nations. The objective of this study is to explore the extent of prevalence of, reasons for and consequences of SM among low-income communities in Pokhara valley.

The practice of SM in low-income communities poses serious risks, including incorrect diagnosis, drug misuse, delayed medical intervention, and antibiotic resistance. There is limited research focusing on the underlying reasons that drive SM practices in the low-income population. Understanding these reasons is crucial for designing effective interventions to mitigate the potential risks. In this context, the general objective of this study is to explore the extent of prevalence of, reasons for and consequences of SM among low-income communities in Pokhara valley. The specific objectives are to estimate the extent of prevalence of SM practices, to assess the socio-economic factors influencing SM practices, to identify common health conditions for which SM is practiced, and to explore the sources of information used for self-treatment.

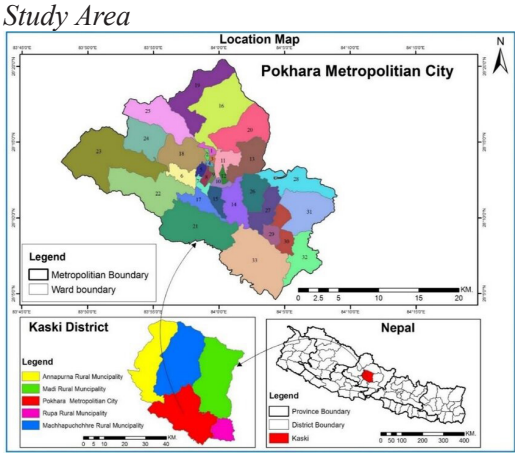
Research Methodology

Description of Study Area

The samples for this study were taken from different slum areas (Sukumbasi toles) scattered around Pokhara Metropolitan City (Fig. 1). The total land area of Pokhara is 464.24 sq.km., and the population, as per 2078 B.S. census is 5, 13,504. The metropolitan area is divided into 33 administrative wards and is the largest in terms of land area in Nepal (Pokhara Metropolitan City, 2025).

Figure 1

Map of Pokhara Metropolitan City, the Study Area



Population, Sample and Sampling Method

The study population consisted of low-income households (HHs) selected conveniently from different slum areas of the metropolitan city. Data on the distribution

of low-income HHs in the metropolitan area were not available from the secondary sources, therefore, randomization at the HH level was not possible. However, the researchers identified the tentative distribution of major slum areas in the city and the samples were taken based on this information. Slum settlements (Sukumbasi toles) in Nepal are widely characterized by informal land tenure, poor housing conditions, and limited access to basic services, all of which are established indicators of low socioeconomic status. This is further confirmed by the government of Nepal's poverty criteria: the below-poverty-line threshold is an annual per capita income of less than NPR 72,908 (National Statistics Office, 2024), and the average per capita income of our sampled households (NPR 70,950) falls below this threshold, validating the characterization of the study population as low-income (NSO, 2024).

A total of 21 slums scattered around the metropolitan were identified, and seven slums were randomly selected for sampling. These slums are Kaseri (ward 1), Adherikuna (ward 18), Rittepani (ward 27), Bhandardhik (ward 29), Nadipur (ward 2), Mahendrapool (ward 8), Kaukhola (ward 13). After selecting the slum areas for the field survey, 22 sample HHs from each slum area were surveyed conveniently. A total of 154 HHs were selected conveniently for this study after randomly selecting the slums (details are as below). Out of 154 samples, four questionnaires were found n unsuitable for analysis as most of the entries were left blank. Therefore, the final analysis of the study is based on 150 samples (NSO, 2024).

According to the recent government of Nepal's statistics, the below poverty line person is defined as the person having annual income less than NPR 72, 908 (National Statistics Office, 2024). Our HH sample identification strategy was based on this indicator, and the results also suggest on average the per capita income in our sample was estimated at NPR 70, 950 (see Table 2).

Data were collected through a pretested structured self-administered questionnaire adapted from similar previous studies based on the objectives of this study. The field survey was undertaken during May 02-May 22, 2025. The questionnaires were prepared in Nepali language as the respondents were mostly low-income, less educated HH heads. Regarding data collection process, there were five data collectors/enumerators and one supervisor. The recruited enumerators had some knowledge of health professions and were trained for survey procedures. The training focused on informing the study objectives and importance of keeping confidentiality and privacy while conducting field survey. The enumerators visited the selected slums and filled in the questionnaire by conversing with the HH heads. The HH heads provided the detailed information to best of their memories, regarding SM practices the HH had experienced to date.

Data Processing and Analytical Tools

Data were checked for completeness, coded, and entered into a computer using SPSS version 26 for analysis. First, descriptive statistics were presented for an exploratory analysis. Finally, multiple regression analysis was conducted to draw inferences on relationships in prevalence with respect to socio-economic and other factors (see the model below). The results of the study have been presented in text, tables, figures, and charts. A p-value <0.05 was considered statistical significance.

The regression models used as analytical tools to estimate the factors affecting the prevalence of SM is as follows:

$$NoSM_i=\beta_0 + \beta_1 HHHAge_i + \beta_2 G_i + \beta_3 Ed_i + \beta_4 LT_i + \beta_5 Ht_i + \beta_6 HI_i + \beta_7 NM_i + \beta_8 DJ_i + + \beta_9 CSR_i + \beta_{10} ETR_i + \beta_{11} HTR_i + \varepsilon_{it}$$

where NoSM=Number of SMs within the period of last six months by the households, HHHAge=HH Age, G=Gender of the HHH, Ed=Education level of HHH, LT=Homestead land type, HT=House type, HI=HH income, NM=Number of

HH members, DJ=Dhami/Jhakri used for SM (Dummy No=0), R=Religion (Dummy Hindu=0), CSR=Cost Saving Reason, ETR=Ease of treatment reason, HTR=Hassle in treatment reason and ε_{it}= error term of the regression model.

Before interpreting the regression output, some of the assumptions of OLS were tested. First, to test the assumption of linear relationship, scatter diagrams of residual versus fitted values were plotted and no systematic non-linear relationship was observed. For the assumption of normally distributed error terms, the Kolmogorov-Smirnov test was used in conjunction with residual histogram analysis, and approximate normality was observed in the distribution of error terms. Testing of homoscedasticity assumption was carried out using the Breusch-Pagan test; violation of this assumption at the 0.05 significance level ($p<0.05$) was detected and therefore heteroscedasticity existed. As a correction measure, the model was rerun using the heteroscedasticity-robust standard errors (White's correction).

This approach corrects for non-constant error variance without affecting coefficient estimates. Lastly, Variance Inflation Factor (VIF) statistics were calculated, and values of VIF were less than five all VIF values were below five for all variables.

The content validity of the instrument was ensured by consultation with colleagues, research advisers, faculties, and topic specialists. The researchers pre-tested the questionnaire at Kaseri (ward 1) slum area in Pokhara to confirm its dependability. Following pre-testing, the instruments were modified as needed to ensure it was relevant, consistent, and thorough. All the data collected were kept in absolute confidence and was only used for research purpose.

On the issue of quantifying the prevalence of SM, previous studies have focused only on the respondents' use of SM practice during the short study period. Moreover, those studies have not accounted for the prevalence of SM at the HH level holistically. This study developed two types of prevalence estimates, which are distinct from the existing literature to our knowledge. These two measures are: i) the number of SM instances practiced with in the household during previous six months, as reported by the household head; and ; ii) overall SM practices by symptom type, based on the household head's memories at the household level. The study acknowledges the potential for recall bias, particularly in the second type of estimate which relies on long-term memory of the HH head. To minimize this bias, the questionnaire was structured to prompt recall through specific symptom categories (eight groups), allowing respondents to systematically recall their SM experiences by condition rather than in abstract terms. Enumerators were also trained to assist respondents in recalling events systematically without leading them. The six-month recall window for the first estimate was chosen deliberately to balance adequate recall period with memory reliability, consistent with similar survey-based studies on SM practices.

Results and Discussion

First, the socio-demographic summary followed by the details of prevalence of SM in the study area is presented. This is followed by the discussion of the reasons for SM practice and its side-effects along with follow-up treatments after the side-effects. Finally, the regression results explaining the number of SMs reported in the recent six months by the HHs with respect to various correlates are discussed

Socio-demographic Descriptions

Tables 1 and 2 summarize the socio-demographic information of the study area. Among the sampled HHs, the majority of the HH heads were male (76%) compared to female (24%). This is common as the social structure of low-income HHs in Nepal in general and Pokhara in particular is male dominated (National Statistics Office,

2024), and hence our sample shows the same pattern.

Table 1
Summary of HH and HH Head's Characteristics of the Study Area

Variables	Categories	Frequency	Percentage
Gender	Male	114	76.00
	Female	36	24.00
Marital status	Married	134	89.30
	Unmarried	1	0.70
	Divorced	4	2.70
	Widow	11	7.30
- Religion	Hindu	136	90.70
	Buddhist	8	5.30
	Islam	3	2.00
	Christian	2	1.30
	Atheist	1	0.70
Homestead land type	Lalpurja	24	16.00
	Nissa	126	84.00
House type	Kachi	87	58.00
	Pakki	63	42.00
Income level	Low income	40	26.70
	Middle income	101	67.30
	High income	9	6.00
Occupation	Unemployed	16	10.70
	Service	22	14.70
	Small business	46	30.70
	Foreign employment	5	3.30
	Labour/Skilled worker	23	15.30
	Farmer	19	12.70
	Housewife	19	12.70

Before conducting the survey in the selected slum areas, the researchers assumed most of the HH were landless (Sukumbasi) and probably belong to the low-income family. On average the per capita income (NPR 70,950) of the study area falls below the poverty line as per the National Statistics Office (2024) criteria. Therefore, the sample largely represents low-income households. However, middle-income households dominate the sample (67.30%), which suggests that not all slum settlers are necessarily low-income. The reasons is that many HH nowsend at least one adult for foreign employment, and this contributes to the HH's income significantly. This finding highlights a limitation of using slum residence as a proxy for low income, and future studies should adopt income-verified sampling strategies to more precisely target low-income populations. Further study is needed to investigate in detail the impact of foreign employment on HH's health related conditions.

Table 2

HH Characteristics of the Study area with Continuous Variables

Variables	N	Mean	Std. Deviation
HH head age	150	53.11	13.41
HH head education level*	150	7.63	4.72
HH income (in NRs '000)	150	27.02	7.47
Number of HH members	150	4.57	1.61
Number of SM in the last six months	150	2.69	2.19

*Education level is measured by number of years attained in the school *Source:* Field survey (2025)

Symptoms and Drugs Used for SM and its Prevalence

The main theme of the study was to analyse the prevalence of SM in the low-income HHs in Pokhara valley, To do this, it was necessary to group and classify the large number of symptoms and their corresponding medicines both allopathic and herbal/ayurvedic counterparts commonly used in the study area. This was challenging, however, efforts were made to include the most commonly reported symptoms and drugs used for SM. Table 3 gives the summary of symptoms classification and drugs being used for each category.

Table 3

Symptoms Classification and Commonly Used Drugs in the Study Area

Symptom/ disease Groups	Symptoms/ diseases	Allopathic drugs (Brand Names)	Ayurvedic drugs
Headache and other Pain	Headache, Fever, Muscular pain, Chest pain, Back pain	Cetamol, Codomol, Burfen, Febrex Plus, Dolopar, Codomol, Myospaz, Zoxafen, Forte, Bionap, Acen, Neprosyn, Codopar, Mysopaz, Dolopar, Parazox, Bruset, Adipot- 100 SR	Herbal medicine, Turmeric and ginger water
Digestive system related	Abdominal pain, Diarrhea, Cconstipation	Meftal, Dotau, Hysopan Forte, Buskopan, Hostyl, Metdil, Diarloc forte, Prtozol DF, Metro, Laxil syrup Laxit Tablet	Herbal medicines (Gujar gano, Dhairo, Neem), Bire noon, Lax power, Isolax powder
Skin related	Various skin problems	Onit, Fintop, Lycor, Candid B, Lulima. Clobin-G	Herbal medcide
ENT related	Eye problem, Ear discharge, Throat problem	EID Relub, Dudrop, Optive, Flur, Wirolap, EID Zoxan D, Oxa P-D, Evamox Iventi, Flexon, Feza, Allercet-C, Alfast	Herbal medicine, Turmeric and ginger water
Respiratory system related	Common cold, Cough, Asthma	D-Cold, Sinex, Rhynex, Febrex plus, TusQ+, Nokof, Papitus, Birc BM, Unicontine	Herbal medicine, Turmeric-ginger water
Allergy	Various types of allergies	Xelar, CTZ, Allegra, Vozin, Iver DT	Herbal medicine
Menstrual problem	Menstrual problem	Deviry, Femitone	Regumins, Lugoherb
Glucose/BP	High/Low blood pressure, Sugar	Amlod, Telmi, Temla, Arbitel, Repace	Herbal medicine

The pharmaceuticals molecules and brands listed in table 3 are commonly available and widely used for treatment. These are generally known as. Over The Counter (OTC) Drugs.

After classifying the symptoms and drugs, the study presents the summary results of prevalence of symptoms treated by allopathic and herbal/ayurvedic methods in Table 4.

Table 4

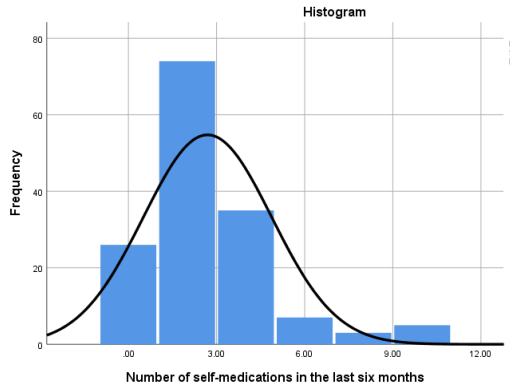
*Summary of Prevalence of Symptoms with Respect to Drug Types**

Symptoms/ diseases	Allopathic drugs	Ayurvedic drugs
Headache and other Pain	145 (96.67)	44 (29.30)
Digestive system related	135 (90.00)	28 (18.70)
Skin related	35(23.30)	2(1.30)
ENT related	87(58)	5(3.3)
Respiratory system related	141(94)	12(8)
Allergy	49(32.70)	1(0.70)
Menstrual problem	14(9.30)	0
Glucose/BP	61(40.70)	7(4.70)

*Figures in the parentheses are percentage of total sample size and based on multiple choices

Figure 1

Distribution of Number of SMs in the Recent Six-month Period



Further, the study found that 59 HHs (39.3%) believed in and used shamanic practices (Dhami/Jhakri) for the treatment of symptoms in the study area. Figure 1 depicts the distribution of number of self-medication in the last six months by the sampled households.

The study showed that 26 HHs (17.3%) did not practice SM of any sort in the last six months, resulting the average prevalence rate of 82.7% at the HH level in the study area. This finding differs from other similar studies (Parajuli et. al., 2019 & Ahmad et al. 2015) which were based on shorter study periods when computing prevalence rates. The prevalence rates are high all over the world; reaching up to 68% in European countries and 57% in USA, while much higher in the developing countries with rates as high as 92% among adolescents in Kuwait. The prevalence rates of self-medication and self-care are 31% in India, 59% in Nepal and 51% in Pakistan (Rajput et al., 2010). A comprehensive estimate of SM prevalence requires incorporating all relevant information reported by the household head to capture a holistic picture. Table 4 presents the overall prevalence of SM for the entire HHs, expressed as counts for each symptom group and whether the HH used allopathic or ayurvedic drugs for the treatment; multiple responses were allowed to capture comprehensive information. Based on this overall narration, all households reported practicing SM for at least one symptom at some point, which posed challenges in computing prevalence rates using conventional methods.. To address this, a key question was included: "How many SM instances did you undergo during the last six months?" This measure was crucial both for estimating prevalence and for constructing the dependent variable in the regression analysis. Fig. 2 shows the histogram with normal curve of the number of SM instances reported in the recent six-month period at the HH level, which is the crucial variable for quantifying the prevalence of SM in this study.

Reasons for and Side Effects of Self-Medication

Table 5 summarizes the findings on the reasons for SM. Most of the HHs cited low cost as the main reason for SM, followed time saving as the access to doctors and hospitals is relatively far for the low-income communities. Third rank of the reason, quick relief is also an important reason.

As outlined by WHO (2000), responsible SM might contribute positively to getting rid of symptoms in the rural and low-income HHs. The study found that 36 HHs (24%) experienced side-effects after practicing SM. Table 6 summarizes the side-effects of different types occurred in these 36 HHs. These estimates are based on household-level responses and the recall of household heads.. Previous studies showed less than 10% of respondents experiencing side-effects of SM (Parajuli et. al., 2019; Ahmad et al. 2015). These findings are important to assess the severity of SM related outcomes and to inform policy formulation aimed at reducing adverse effects.

Table 5

Reasons for SM Practice

Reasons	Frequency	Percentage*
Low cost	142	94.70
No doctors nearby	23	15.30
Long queue in the hospital	12	8.00
Long hospital process	8	5.30
High doctor fees	27	18.40
Save time	123	82.00
Familiarity with treatments	24	16.00
Getting information from social media	9	6.00
Concerned with confidentiality	14	9.30
Treating a pharmacist as a doctor	19	12.70
Quick relief	115	76.70
Blief on traditional medicines	22	14.70
Lack of awareness	27	18.00
To avoid OPD crowd	7	4.70

*Percentage figures based on multiple choices

Table 6

Side-effect of SM Practice

Side-effects	Frequency	Percentage
Allergy	27	18.00
Diarhea	5	3.30
Headache	8	5.30
Dry mouth	1	0.70
Weakness	9	6.00
Constipation	2	1.40
Face swelling	1	0.70

After experiencing side effects of SM, households adopted different responses: 20 HHs (13.3%) consulted nearby pharmacists, 5 HHs (5.3%) discontinued the medication, 8 HHs (5.3%) switched to another medicine, another 8 HHs (5.3%) sought alternative measures, and 10 HHs (6.7%) visited the emergency ward for further treatment or advice.

Table 7 presents the major sources of information for SM practice. The results show that main source of information for SM was local pharmacy (95.30%) followed by friends/relatives (84.00%). Percentage figures donot sum to 100,as respondents could select multiple sources.

Table 7

Sources of Information for SM (n=150)

Source of information	Frequency	Percentage*
Local pharmacy	143	95.30
Friends/relatives	126	84.00
Past prescriptions	34	12.70
Internet/SM	18	12.00
Others	1	7.30

**Based on multiple responses*

Determinants of SM Prevalence: Effect Analysis of Self-medication and Independent Variables

To measure the SM prevalence as dependent variable, the number of SM instances reported withing the last six months by each of the HH. Based on responses on 14 different reasons for SM practice (See table 5), we grouped them into three reason categories, namely, cost and time saving, ease of treatment and hassle in treatment (see the last three variables in table 8). These categories were constructed by aggregating responses within each group of each household. The adjusted R^2 was 0.38 with F-value 8.65, indicating the model is statistically significant at the 1% level.

Table 8

Regression Results of Prevalence of SM

Coefficients	t-value	P-Value	95% Confidence Interval		
(Constant)	-0.18	-.154	0.88	-2.527	2.161
HH head age	-0.01	-.633	0.53	-.036	.018
HH head gender*	-0.14	-.368	0.71	-.863	.592
HH head education	*-0.10*	*-2.430*	*0.02*	*-.180*	*-.018*
Homestead land type*	-0.15	-.326	0.75	-1.034	.741
House type*	0.50	1.505	0.14	-.158	1.167
HH income	0.01	.178	0.86	-.038	.045
Number of HH Members	*0.78*	*7.637*	*0.00*	*.580*	*.985*
Dhami/Jhakri*	-0.06	-.199	0.84	-.702	.574
Religion*	0.01	.018	0.99	-1.034	1.054
Cost Saving Reason	-0.03	-.130	0.90	-.438	.384
Ease of Treatment	*0.35*	*1.678*	*0.01*	*-.062*	*.751*
Hassle in Treatment	0.02	.073	0.94	-.554	.597

*These variables for dummies with 0 as the base cases (Male=0, land type = Nissa, .House type=Pakki Dhami/Jhakri=No, Relgion=Hindu).

Table 8 presents the results of a multiple regression analysis using Heteroscedasticity Error Correction (HEC) model to examine the cause-and-effect relationships between socio-economic factors and the frequency of self-medication (SM). The dependent variable is the number of SM practices within the last six months at the household level. The model is statistically significant (F-value = 8.65, $p < 0.01$), explaining approximately 38% of the variance in SM frequency. Table 8 highlights three primary significant determinants of self-medication:

Education Level (Negative Relationship): There is a statistically significant negative effect between the household head's education and SM frequency ($p = 0.02$). This indicates that higher education is associated with reduced SM practices, likely because more educated individuals have a better understanding of health risks and the importance of

professional medical care.

Household Size (Positive Relationship): The number of household members has a strong positive effect on the frequency of SM ($p = 0.00$). Larger household tend to experience higher SM incidence, possibly due to increased exposure to illness among members.

Ease of Treatment (Positive Relationship): The perception that SM is an "easy" treatment method is significantly associated with its use ($p = 0.01$). This suggests that the perceived convenience and accessibility encourages households to rely on self-treatment rather than seeking formal medical care..

Notably, other factors, including household income, age, gender, religion, and even cost-saving reasons, did not show a statistically significant relationship ($p > 0.05$) with the number of self-medication practices in this specific study population. These findings suggest that interventions should prioritize education and perceptions of healthcare accessibility, rather than focusing only on economic factors.

Conclusion

The study concludes that self-medication (SM) is a dominant health-seeking behavior among low-income residents in Pokhara, with a prevalence rate of 82.3%. Nearly every surveyed household practiced SM for at least one symptom category, illustrating that it is a deeply embedded practice within these communities.

The primary drivers of this behavior are socio-economic constraints, specifically the need to save money and time, alongside the perceived ease of treatment compared to the long processes often found in formal health care facilities. Local pharmacies and social networks (friends and relatives) serve as the chief sources of information, with 95.3% of households relying on pharmacists for guidance.

A critical finding is that educational attainment is significantly associated with reduced SM frequency; households with higher education levels are less likely to resort to self-treatment. In contrast, larger household sizes and the convenience of obtaining medication without prescription increase the frequency of the practice.

While SM offers immediate relief for common ailments like headaches and respiratory issues, it carries substantial risks. The study found that 24% of households experienced side effects, most notably allergies, highlighting the dangers of unsupervised drug use. Furthermore, reliance on SM can lead to drug resistance, misdiagnosis, and delayed professional medical care, which may worsen underlying health conditions.

To address this public health challenge, the study recommends targeted public awareness campaigns and stricter government regulations on the sale of non-prescription drugs. Most importantly, facilitating better access to formal medical facilities for low-income populations is essential to reduce their reliance on risky self-treatment practices.

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Availability of Data and Materials

Data are safely stored. They will be made available in special request.

Conflict of Interest

The authors declare that there is no conflict of interest in relation to this manuscript.

Ethical Compliance

This study involved human participants; however, no human biological data or tissue was used. We declare that the study was

conducted in accordance with accepted ethical standards.

Consent for Publication

"Not applicable"

Plagiarism and AI Use

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