RESEARCH REPORT

ON

FACTORS AFFECTING SELF-MEDICATION PRACTICE AMONG ADULT IN MORANG DISTRICT OF MITLAJUNG RURAL MUNICIPALITY

Submitted by:

Aassmi Poudyal

Date: 2019 march

Research Report Submitted for the Partial Fulfilment of the Requirement for Bachelor Degree in Public Health Programme from Om Health Campus, Kathmandu, Affiliated to Purbanchal University.

APPROVAL SHEET

The research report entitled "**Factors Affecting Self-medication Practice among Adult in Morang District of Mitlajung Rural Municipality**" Prepared by Aassmi Poudyal has been accepted by Research Committee of Om Health Campus for the partial fulfillment of the requirements of Bachelor of Public Health (BPH).

Name of the Research Supervisor . Mrs. Susmita Nepal

Position Associate Professor and coordinator

Department of Public Health

Om Health Campus

Chabahil, Kathmandu

Name of the Chairperson of Research Committee Dr.Prof. Sarala Pradhan Joshi

Chairperson of Research Committee

Om Health Campus

Chabahil, Kathmandu

ACKNOWLEDGEMENT

Researcher would like to express a true appreciation to those extremely special people who have given their kind assistance, encouragements and support for the completion of this research study. Without their cooperation and support, completion of this study would not be possible.

First and foremost, researcher would like to acknowledge Om Health Campus Pvt. Ltd. affiliated with Purbanchal University for providing this opportunity to carry out the research study as a partial fulfilment for the requirement of Bachelor of Public Health (BPH).

Researcher would like to express her sincere gratitude to Associate Professor and coordinator Ms. Susmita Nepal of Public Health faculty of Om Health Campus for her expert guidance, valuable suggestion, supervision, inspiration, support and encouragement as a research supervisor/advisor during the entire period of this research study.

Researcher equally beholden on thank to Assistant Professor Ms. Lisa Soti, Ms. Prajita Mali and Ms. Swecchya Baskota of BPH faculty of Om Health Campus for providing guidance and support. Researcher also thank to all Liberian madams of Om Health Campus for providing books and articles for references.

It gives researcher an immense pleasure to express heartily gratitude to Mr. Rohit Paudel for teaching us Biostatistics, an important part of research and Ms. Kusum Wagle for helping us in teaching citation through End Note, Data entry through Epi-Data and data analysis and interpretation through SPSS (Statistical Package for Social Sciences).

Researcher cordial appreciation goes to all the faculty members of Om Health Campus for their valuable suggestion and continuous guidance throughout the study period.

We cannot remain thanking all the college's administrations and principles for providing permission for the data collection. Last but not the least we would like to acknowledge all the well- wisher who had helped us directly or in directly during this research study.

Aassmi Poudyal

ABSTRACT

Self-medication is the selection and use of medicine to treat self-recognized illness. It is prevalent all over the world, knowing and unknowing every person at some point of life has done the self-medication. It can cause different type of health related issues. The prevalence of self-medication has been increasing. The main aim of this study is to identify the factor affecting self-medication for allopathic medicine in acute diseases among the adult of Morang district and to analyze the prevalence of self-medication. This cross-sectional study design will be done in Mitlajung Rural Municipality of Morang district. A total 408 household was selected from the 788 subjects by systematic random sampling. Semi-structured questionnaire will be used as a tool to collect the information regarding self-medication use in past three month associated with socio-demographic factor, health service related factor and the disease condition affecting the self-medication. Self-medication can cause different type of health issues so this study can help to identify the factor affecting self-medication.

ACRONYMS:

WHO : World Health Organization

SEAR: South East Asia Region

TABLE OF CONTENT

LIST OF FIGURE

LIST OF TABLE

Chapter I

INTRODUCTION

1.1BACKGROUND

According to WHO, self-medication is the selection and use of medicine by individuals to treat self-recognized illness or symptoms and medicine include herbal and tradition product.(1) According to the study done in Iran, self-medication is explained when drugs are taken without any prescription is known as the self-medication which also includes chemical drugs and herbal drugs.(2) A research done in Iran states the prevalence of self-medication has been increasing in the country like Nepal, Iran, Ethiopia etc.(3) Self-medication is also a health-related issue which has to be discussed and is prevalent in every place, knowing or unknowing at some point of life people has taken drugs themselves without any prescription likewise there are different kinds of self-medication just like to use the old prescribed medicine, medication refill, medicine prescribed by friends or family and using traditional medicine, home remedies etc.(4) Self-medication is good in one way works as safety measure in emergency and it has been using by those people who have sufficient knowledge about its dose, time of intake and effect of overdose but sometimes information is not sufficient so, different and serious effect can occur like skin problem, allergy etc.(5)

According to the WHO, the adult is defined as the person who is older than 19 years of age unless national law defines a person being an adult at an earlier age.(6)According to the labor act of Nepal (1992), the adult means a person who is older than the age of 18 years old. According to the national planning commission, the elderly persons are from the age of 60 years and over.(7)

In Nepal, the access to healthcare is hard and expensive, so the self-medication is more prevalent and it is an easy and cost-effective method.(8) Nepal being economically deprived country, most of the illness is treated by self-medication, mostly done by the adult population and the factors of self-medication are recent hospitalization, oral pain, restriction of activity or physical activity and it is also done due to the lack of satisfaction with the health services, lack of satisfaction with medicine, marital status.(3, 9) Illiteracy is another reason for the self-medication and the people

who are into self-medication they usually keep important drugs at home like a cold table, iron tablets, painkiller, antibiotics, and vitamins.(10) It is more prevalent in India and other South Asian countries due to the similar culture and economic.(3)Self-medication is more prevalent among women and lower socio-economic family.(11, 12) It can be a problem in the development of the health system which can change the behavior of the person to seek the healthcare treatment and affects the improvements in health care and it is all due to the lack of medical insurance, lack of time to visit a physician, low income etc.(13) Some self-medication is also due to the drugs which have become addicting to the people who have captivated their mind.(14)

So this study will attempt to look at the factor affecting self-medication practice among adult population.

1.2PROBLEM STATEMENT

Self-medication is being very common nowadays and it's being used in every corner of the world. The worldwide prevalence of self-medication is being estimated from 10.3% to 87.0% but it depends upon the population studied and method.(15) The prevalence of self-medication in the United States of America is 13% likewise Australia and Germany have 11% and Italy and Mexico has 8% only and it is very common among literate people.(5) but it is being challenged to the in developing countries because of the high illiteracy rate, information getting from the neighbors, friends, and family, using previous prescription drugs. It is being challenged due to inadequate information of drugs like how many doses should we take, lack of counseling of the medication due to which antimicrobial resistance is being a major concern and infectious disease is increasing and there is less choice of medication in mainly developing countries.(16) The prevalence of self-medication in developing countries is in the range of 12.7% to 95%.(17)

A research was done in WHO SEAR, which includes the countries like Bhutan, Bangladesh, India, Indonesia, South Korea, Nepal, Sri Lankan and Thailand of self-medication. According to the study, the highest prevalence of self-medication was found in Nepal and India and the lowest prevalence was found in Indonesia and Bangladesh. The overall prevalence of self-medication was 42.64% in South East Asia re Asia region.

Nepal is a developing country and it has many geographical boundaries due to which it has a poor social-economic condition, it is economically deprived, the cost of the medicine is high, doctors are not available in a rural area because of all the self-medication is increasing in Nepal.(3) Nepal has a different kind of land feature and the climate condition which make a Nepal rich in biodiversity, sufficient and variety of medicinal plant is found which has been playing a great role in self-medication.(3) Selling drugs without a doctor prescription is common is Nepal, drugs are easily available and there is a lack of government control over the drugs due all this self-medication is being the problem in Nepal.(18)Over the few decades, the patient number is increasing slowly due to the self-medication and the number of migrating population brings medicine to the home when they return back, it shows there is a knowledge about the medicine but those who consumed they don't have enough knowledge about it.(3) According to the study done in the western valley of Nepal which results shows the prevalence of self-medication was 59%.(3) The self-medication does have its adverse effect and due to the

illiteracy, unaware about the drugs and the careless of healthcare facilities which have led people of Nepal to participate in self-medication.(19)

1.3Rationale of the study

In the world, the most common behavior of the person is to self-medicate or to self-care. Self-medication plays a very important role in person health and it has been a factor to increase the public health problem worldwide. Self-medication practice some time can be good practice in an emergency but actually, it is a wrong practice to manage the health problem. It can bring a different serious problem to the health. In Nepal, people are participating more in self-medication although they don't have enough knowledge about the medicine and it is also due to the lack of awareness about effect about the medicine, expensive medical fee, poor access to the health facility and past experience with the medicine. Although there have been many studies done worldwide on self-medication but there are very few studies done on factor affecting self-medication practice by adult in Nepal and there has been no study done in Morang district yet. Majority of study is done in with medical student. If the study is done than the researcher can find the information from the left out population other than the medical student and also can find the real factor affecting the self-medication practice of rural people. This study can provide much information which can bring change in health service too.

1.4Objective of the study

1.4.1 General objective

- To identify the factor affecting Self-medication practice among adult of Morang district of Mitlajung Rural Municipality.

1.4.2 Specific objective

- To identify the prevalence of self-medication.
- To find out the health service related factor affecting self-medication.
- To analyze the disease condition affecting self-medication.

1.5 Research question

- What are the health services related factors affecting self-medication?
- In which kinds of disease condition self-medication is practiced?

1.6 Study variables

1.6.1 Dependent variable

* Self-medication practice.

1.6.2 Independent variable

* Socio-demographic variable
    - Age, sex, religion, marital status, education, occupation and socio-economic status.
* Health services related factor
    - Behavior of health worker
    - Test result
    - Cost of the health services
    - Distance of health services
* Personal factor
    - Time factor
    - Past experience
* Presence of health professional at home
* Presence of medicine at home
* Disease condition
    - Symptoms of illness for self-medication
    - Types of medicine for self-medication
    - Source of knowledge about medicine for self-medication.
    - Source of medicine.

1.7Conceptual framework

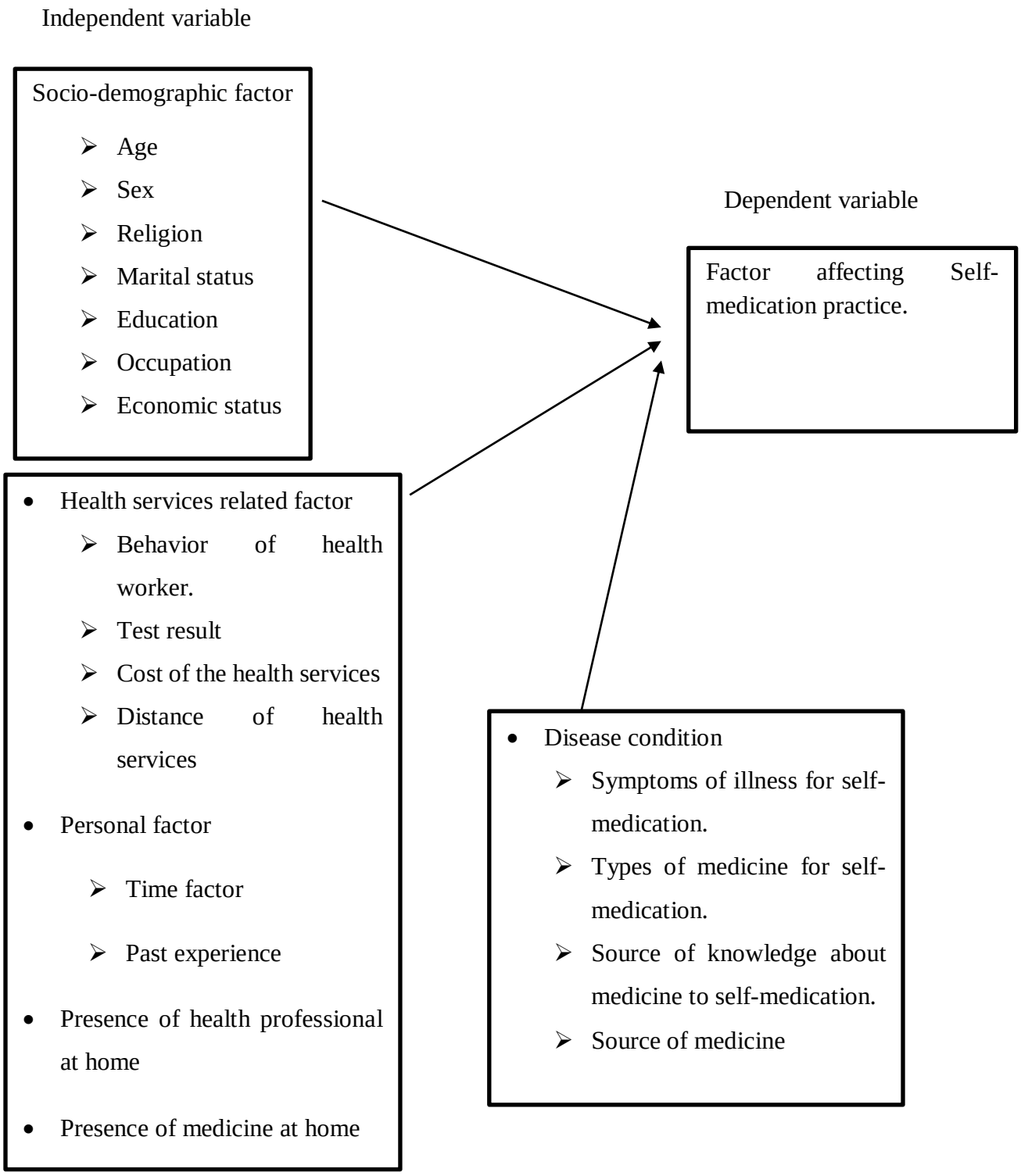


Figure 1: Conceptual Framework

1.8 Operational definition

Table 1: Operational definitions of the variables

Term used	Operational definition
Self-medication	This research define self-medication when the person selects and use allopathic medicines to treat self-recognized acute illnesses and symptoms without any written prescription of health care professionals such as physicians, nurses, health officers and other who have government license to prescribe drugs in the period of 3 months.
Adult	This research defines the people from age 19-59 years old.
Health service related factor	This research refers to the health service factor which influence for Self-medication which are like: • Behavior of health worker • Test result • Cost of the health services • Distance of health institution
Time factor	This research refers the time of respondent like when they are busy and do not have time to visit doctor and have no time to waiting for a doctor.
Past experience	It refers to when people have already used the same medicine for similar symptoms.
Presence of health professional	This research refers to the presence of person at home who have government license to prescribe drugs.
Presence of medicine at home	This research refers to the allopathic drugs which have been stored at home.
Knowledge	It refers to the source of knowledge about the allopathic medicine to

	respondant.
Symptoms of illness for self-medication	It refers the symptoms like Ache. Cough, fever, headache, diarrhea, gastric, allergy, fever etc.
Types of medicine	It refers to the normal medicine like medicine for a headache, cough, skin or the medicine like vitamins, painkiller, antibiotics and gastro intestinal tract medicine.
Source of medicine	It refers to the pharmacy or any place where respondent buys medicine.

Chapter II

Literature review

2.1Review of related literature

An article “Self-medication and non-doctor prescription practices in Pokhara valley, Western Nepal: a questionnaire-based study” was done Pokhara. This study has used semi-structured question to collect the data from 142 respondents. The study population was drawn from the three ward of Pokhara and their total population was 3876 and simple random sampling was done to choose the study population. The main aim of this study was to get the baseline data on self-medication and no doctor prescribing in Pokhara and to identify the factor influencing self-medication and non – doctor prescribing. The respondent to this study were aged between 20 to 39 years. According to the study most of the respondent used to live far from the health post and medical store so the prevalence of self-medication was 59% in 6 month period. Mild illness, previous experience of treating similar illness and non-availability of health provider was the reason for self-medication. Paracetamol and anti-microbial were the most common drug used and male respondent were higher in proportion to self-medicate.(3)

A study “A cross sectional study on the prevalence of self-medication in a Chennai based population” was done in Tamil Nadu, India. The main objective of study was find the prevalence of self-medication use among the common population in last 3 months and to identify the risk factor associated with the self-medication. It is an analytic cross-sectional study conducted on 180 participant and participant was selected by simple random sampling from the rural and urban area of A. C. S. Medical College in Thiruvallur district. Data was collected through a questionnaire. According to the study the prevalence of the self-medication use in three month was found to be 51.7% it was mostly used by the age above 35 years old and common reason for practicing self-medication financial constraints. The common aliment for the self-medication was common cold. This study reported there is high prevalence of self-medication.(20)

A study “Prevalence of self-medication practices and its associated factors” done in Urban Puducherry, India. The main purpose of the study was to find the prevalence of self-medication for allopathic drugs and associated factors among households of urban community. A study has used the systematic random sampling technique. It has 352 participants. Prevalence of self-medication was found to be 11.9% in 3month recall period. The most common illnesses where self-medication is being used are fever 31%, headache 19%, and abdominal pain 16.7% . the most common method adopted to procure drugs by the user is telling symptoms to pharmacist.(21)

A study “Prevalence and determinants of self-medication practice among selected households” don in Addis Ababa community of Ethiopia. The main objective of this study was to estimate the prevalence and identify the determinant of the self-medication practice in Addis Ababa. This study has used the cross-sectional study design conducted among the household of Ababa with recall period of two month before its conduction. Sampled participant were 604. This study has used multistage sampling technique. Sub cites were selected by the lottery method and woreda were selected from the sub cities using the sample random sampling and the household in the woreda was selected by the random computer method. As the study reported that the prevalence of self-medication practices was 75.5%. The three most frequent ailments were headache i.e. 25.7%, abdominal pain 12.9% and cough 11.8%. The main reasons for self-medication practice were mild illness i.e. 47.7% and previous knowledge about the drug 23.2%. The most consumed medicine was the paracetomole. This study has shown the significant difference among respondents who reported practicing self-medication based on income and knowledge about the self-medication.(22)

According to a study “Predictors of self-medication in Serbian adult population: cross-sectional study” conducted among Serbian population of 15 years of and above and it shows self-medication among Serbia population is due to unmet need for health care. This study has used cross-sectional study design data was drawn by the Serbian national health survey and predicator was determined among social demographic and health related and health services related factor. In this 14623 were participated and prevalence of self-medication was 27.1%. And high prevalence of RX medicine were tranquilizer and sleeping pills it was mostly used by the female of middle aged who are highly educated. The factor for the self-medication was dissatisfaction with publicly funded health care services.(23)

An article “Self-medication practice and associated factors among adult household members in Meket district, Northeast Ethiopia” was conducted in 2017 among the adult household member of Meket district of the northeast Ethiopia. The main aim of this study was to assess the prevalence of self-medication practice and its associated factor. The study was conducted among 722 participants and participant was selected by using systematic random sampling method. The overall prevalence of self-medication was of 35.9% in one month recall period. They were mostly unmarried people used to practice self-medication the main factor associated with self-medication were previous experience of self-medication, family and peer pressure and presence of medication at home. This study has recommended to strength community by giving education on drug side effect.(13)

A study “Knowledge, Attitude and Practice of Self-Medication among Basic Science Undergraduate Medical Students in a Medical School in Western Nepal” was done in western Nepal to see the Knowledge, Attitude and Practice of Self-Medication among Basic Science Undergraduate Medical Students. This study has shown the self-medication is highly practiced among medical student. It was cross sectional survey which was conducted by using questionnaire to identify their social-demographic factors and student’s knowledge. The attitude about self-medication was studied by noting their degree of agreement with set of 40 statements using likert-type scale. The average score and frequency of occurrence of particular behavior among different categories of participant were compared. This study shows that the students’ knowledge and attitude about self-medication is encouraging and there was a high prevalence of self-medication with antibiotics.(24)

A study “Self-medication among rural residents in Lagos, Nigeria” conducted in rural residents in Lagos, Nigeria to assess self-medication practice. The study has used multistage sampling method. First simple random sampling (balloting) has been used to select the ward and systematic method has been used to select the house in the ward and 337 participants were selected and data were asked through questionnaire. This study shows there no association between the respondents’ knowledge and practice of self-medication. It showed there was positive attitude against the use of self-medication and respondents had a good knowledge about the self-medication and the use of self-medication was higher among the participant who has higher level of education. This study recommend despite of having high level of education on drugs it should increase the awareness and importance to consultation to doctor before the self-medication.(12)

According to the study “Assessment of self-medication patterns in a rural area” was done in South India. Its main purpose is to determine the prevalence and patterns of self-medication in rural area. It is cross sectional study. This study has used systematic random sampling from which 458 people were selected. This study has reported that the prevalence of self-medication is 51.75%. the most common symptoms reported for self-medication are fever and headache.(25)

An article “Factors influencing the pattern of self-medication in an adult Nigerian population” was conducted in Nigeria. It has determined the major factors that influence the pattern of self-medication practice. In this study 205 market women were interviewed and women were selected by multistage stratified sampling technique. As a result of the study, the patent dealer was the commonest source of information on medication most of them were educated and medicine were obtained from the hospital and pharmacies. The reason for self-medication are it is minor illness and to save time and money.(26)

A study “Self-Medication among Adults in Urban Udupi Taluk, Southern India” was conducted in the urban area OF Udupi Taluk, Southern India shows that the prevalence of self-medication was comparable to other studies conducted in India and practice of self-medication is emerging as an important subject for public health. This study was cross-sectional study design and data were collected from 290 participant were adult and they were selected from single stage cluster sampling technique. As the study says the practice of self-medication due to health related factors like presence of the health professional in the family and knowledge of over the counter medicine. The practice of self-medication was high in age 18-30 years old mainly among unmarried individual with high level of education and more than 80 % participant stored the medicine at home for self-medication. As the study say the self-medication is associated with education and occupation. This study recommends providing more health education and to collaborate with pharmacists to empower individual; to make informed decisions.(17)

According the study “Self-medication among adult population in Selangor, Malaysia” was conducted in Malaysia which says public need to educate on self-medication to ensure safe, effective and rational use of medicine. In this study data were collected in two method which are web based and paper based questionnaires and participant were above 18 years old which was selected by the convenience sampling method. The participants who practice self-medication were Malay and went to college or university. According to the study self-medication is associated with age and race in Malaysia. The most common source of information about the medicine was modern health care profession and the internet. And more than 80% of respondents used to search information before practicing self-medication. The main reason to practice elf-medication was minor illness and more than 50 % respondent had positive attitude towards the self-medication practice.(27)

According to study “Self-medication with drugs and complementary and alternative medicines in Alexandria, Egypt: prevalence, patterns and determinants” it was done in Egypt. The main purpose of study was to describe the prevalence, pattern and reasons for self-medication among adults in Alexandria, Egypt. This study has used multistage cluster sampling technique to select the 1100 participant. According to the study self-medication is practice in 96.7% with both drugs and CAM. The most drugs were analgesics with 96.7%. the most frequently used CAM were herbs with 91.6%.(28)

A study “Prevalence and Associated Factors of Self-Medication with Prescription Drugs among Saudi Adults” was done in Saudi Arabia. As the study main aim is to assess the prevalence of self-medication with prescription-only-medicines (POMs) and identify reasons and attitudes behind this behavior in the Saudi adult. It is descriptive cross-sectional study of a random sample of 731 Saudi adult. The sample was stratified from the five regions of Riyadh. The prevalence of self-medication is 92.8%. Self-medicated is perceived by 56.6% of participants who have perceived antibiotics safe once. The main reason for the self-medication was sleep disturbance i.e. 50.4% 40.2% prefer to take the same medication if they had similar symptoms to someone they knew.(29)

A study “Prevalence of Self-Medication among Urban and Rural Population of Islamabad, Pakistan” was done in Pakistan. The main purpose of the study is to evaluate the prevalence and associated factors of self-medication among urban and rural population of Islamabad, Pakistan. It is a cross-sectional study where 500 participants were chosen by using stratified random sampling method. Questionnaire was used to collect the data and chi square and fisher’s exact test was used to compare the urban and rural area. Prevalence of the self-medication is 61.25%. The most of the participant has used allopathic system by 72.8% and it is mostly used in pain. Urban participant has practice more self-medication than rural participant.(30)

A study “Self-medication practice among preclinical university students in a medical school from the city of Pokhara, Nepal” conducted at Manipal College of medical science to identify pattern of self-medication practice among the preclinical medical students. It was cross-sectional study where 488 students were participated among then 81 % of student practice self-medication. Most common group drug like antibiotic, antipyretics were consumed by the student. Paracetomal was the most common drug used for self-medication. This study recommends the medical student should be educated about the pros and cons of self-medication.(31)

S.N	Author and study area	Published date	Study design	Study population	Sample size	Sample procedure	Objective of the study	Variable included	Result or finding
1	Shankar PR, Partha P, Shenoy N Pokhara, Nepal	2002 Sep 17	Cross sectional	Household survey	142	Simple random sampling	To study self-medication patterns and the prevalence of non-doctor prescribing in the Pokhara valley	• Frequency of drugs/drug groups used by the respondents for self-medication • Distance of the respondents houses from the nearest road head.	• The majority of the respondent stayed within 30 minutes walking distance of health post and medical store. • 59% of these respondents had taken some form of self-medication in the 6-month period preceding the study • The common reasons given for self-medication were mild illness, previous experience of treating a similar illness, and non-availability of health personnel. • Paracetamol and antimicrobials were the drugs most commonly prescribed.
2	Vinithra Varadarajan, Christina Mary P. Paul, Swapna S.,	2016	Cross-sectional study	House hold survey	180	Simple random sampling	To estimate the prevalence of self-medication and to	• Reason to practice self-medication • Aliment used for the self- medication	• prevalence of self-medication use in the last three months was found to be 51.7% • The common among subjects aged above 35 years of age. • The commonest reason quoted

	Preethi S., Keerthana Kumar, Divya Dharshini P. U. Tamil Nadu, India						identify factors that might be associated with the same.		for the practice of self–medication was financial constraints 40.80%. • The commonest ailment for which self- medication was practiced was quoted as common cold (73.02%)
3	Mensur Shafie ,Mebrahtu Eyasu , Kedija Muzeyin, Yoseph Worku, Sagrario Martín-Aragón Addis Ababa community,	2018	Cross-sectional study	Household survey	604	Multistage sampling • Lottery method • Simple random method • Computer random metho	To assess the prevalence and determinants of the self-medication practice (SMP) in Addis Ababa.	• Reason for not using the self-medication. • Health related factors. • Knowledge about the self-medication practice.	• The prevalence of SM in this study was 75.5%. • The most frequently reported an ailment was headache (25.7%). • The main reason for SM was mildness of illness (47.4%). • The two most frequently consumed medications were paracetamol (20.2%) and traditional remedies (16.0%).

	Ethiopia					d			
4	Kalaiselvi Selvaraj, S. Ganesh Kumar, and Archana Ramalingam India	2014	Cross-sectional study	Household survey	294	Systematic ramdom sampling	To find the prevalence of self-medication for allopathic drugs and associated factors among households of urban community.	• Symptoms treated by self-medication practice • Method of procurement for self-medication • Reason for self-medication	• Prevalence of self-medication was found to be 11.9%. • Fever (31%), headache (19%), and abdominal pain (16.7%) are most common illnesses where self-medication is being used. • Telling the symptoms to pharmacist (38.1%) was the commonest method adopted to procure drugs by the users.
5	Katica Tripkovi, Andjelija Nešković, Janko Janković, Marina Odalović	June 2018	cross-sectional study	Household survey	14623		To identify predictors of self-medication with over-the-counter and prescription (Rx) medicines without	• Health related factors (minor diseases stress, physical pain) • Health service factor(long wait, dissatisfaction with services)	• The prevalence of self-medication was 27.1%. • 18.4% participant self-medicate for pain relief. • The high prevalence of self-medication with Rx medicines, tranquilizers and sleeping pills, antibiotics and anti-hypertensive, was found, 4, 2.5 and 1.9%, respectively

	Serbia						doctor's prescription.		
6	Aster Desalew Kassie, Berhanu Boru Bifftu, and Habtamu Sewunet Mekonnen Meket district, Northeast Ethiopia	2018 Apr 10.	cross-sectional study	Household survey	722	Systematic random sampling	To assess the prevalence of self-medication practice and its associated factors among adult household members in Meket District, Northeast Ethiopia.	• Environmental and personal characteristics • Health related factors	• The prevalence of self-medication was found 35.9% • The 85.15% participant had to travel over one hour to reach health institutions. • 85.46% had medication at home • Headache/fever (30.06%) and analgesics/antipyretics (40.79%) were the common symptom and utilized self-medications
7	Sudesh Gyawali, P Ravi Shankar, Phanindra Prasad	2015 Dec 1	cross-sectional	second and fourth semester MBBS students	276		To study assessed knowledge, attitude, and practice of self-	• Frequency of self-medication for common health problem. • Mean attitude scores according to	• The mean (SD) knowledge, attitude, and total scores were 74.54 (6.92), 67.18 (5.68), and 141.73 (10.76) with maximum possible scores 100, 100 and 200, respectively.

	Poudel, and Archana Saha Western Nepal.						medication among second and fourth semesters' undergraduate medical students	demographic characteristics • Mean knowledge scores according to demographic characteristics	• 54% shared that previous experience with the medicine was one of the information sources for self-medication. • Painkillers (73.2%), antipyretics (68.8%), and antimicrobials (56.2%) were most commonly used for self-medication.
8	Modupe B Ayanwale, Ifeoma P Okafor, Oluwakemi O Odukoya Lagos, Nigeria	7-Jun-2017	cross-sectional study	Household survey	337	Multistage sampling method	To assess self-medication among rural residents in Lagos, Nigeria	• Knowledge of the meaning of self-medication and its effects. • Attitude of respondents towards self-medication. • Factors influencing overall knowledge and practice of self-medication	• 93.5% of the respondents had good knowledge about self-medication. • 94.1% had a positive attitude against the use of self-medication; and 311 92.3%practiced self-medication • There was no association between the respondents' overall knowledge and their practice of self-medication. • The practice of self-medication was significantly higher among respondents with the highest level of education.

9	AO Afolabi Nigeria	2008	cross-sectional study	Household survey	205	Multistage stratified sampling	To determine the major factors that influence the pattern of self-medication in a population of market women	• Education from where medication was obtained • Reconization medicine • Benefit from self-medication.	• Medicine dealers were the commonest source of information on medications 31.4% and where they were obtained 52.2%. • 62.5% respondents obtained education from hospitals. • Trade and generic names 61.1% were common means of drug recognition especially among the educated respondents.
10	Mishra Divya, Shetty Bharatesh, Guddattu Vasudeva, Chandrasekaran Varalakshmi Udupi Taluk, Southern	2016	cross-sectional study design	Household survey	290	Single stage cluster sampling technique	To find the prevalence of self-medication with both, OTC and prescription only medicines (POM) among adults in urban Udupi Taluk and to gain insight into associated	• Socio-demographic factors • Health-related characteristics	• Prevalence of self-medication in urban area of Udupi was found to be 35.9 % • The practice of self-medication was found to be high (42.7%) in age group 18-30 years. • 82% had storage of medicine at home. • Accessibility of medicines from the pharmacy without prescription, obtaining quick relief and avoiding crowds while visiting doctors were found to be statistically significant reasons for self-medication.

	India						factors		
11	Suhana Jawahir, Noorizan Abd Azi Selangor, Malaysia	2017	cross-sectional study design	Adult above 18years old	401	Convenience sampling method	To determine the percentage of self-medication practice, patterns of use, self-medication attitudes, and to explore the occurrence of side effects resulting from self-medication practice among the adult population in Selangor	• Socio-demographic factors. • Pattern of self-medication • Attitude towards self-medication	• The majorities of the participants were Malay 91.5% and went to college or university 89.3%. • 83.8% would search for information before practicing self-medication • Modern healthcare professionals 58.4% and the internet 47.1% were the most common source of information about drugs for self-medication • The main reason for self-medication was the illness perceived as minor 79.1%. • 66.6% had a satisfactory attitude towards self-medication practices.

12	M.A. Al-Tannir, A Al-harbi,N Al-Mutiri,M Al-Juwaie, Y.M Altannir	2015	Cross-sectional study	Household survey	731	Stratified Random sampling	To assess the prevalence of self-medication with prescription-only-medicines (POMs) and identify reasons and attitudes behind this behavior in the Saudi adult.	• Socio-demographic factor • Reasons behind self-medication • Evaluates the perception of drug safety regarding the use of POMs	• Prevalence of self-medication is 92.8% • Self-medicated is perceived by 56.6% of participants who have perceived antibiotics safe once. • The main reason for the self-medication was sleep disturbance i.e. 50.4%. • 40.2% prefer to take the same medication if they had similar symptoms to someone they knew.
13	T Aqeel, A Shabbir, H Basharat, M Bukhari, S Mobin, H Shahid and SA Waqar Pakistan	2014	Cross-sectional study	Population of rural and urban area	500	Stratified random sampling technique	To evaluate the prevalence and associated factors of self-medication among urban and rural population of Islamabad,	• Association between participants' characteristics and self-medication • Indications for self-medication. • Most trusted medication system	• Self-medication is practiced by 61.2% of participants. • Allopathic system the most trusted by 72.8% • Higher percentage of urban participants reported family/friends (27.9% versus 15.7%) as the commonest source in contrast to medical professionals (21.6% versus 5.2%) reported by rural

							Pakistan		respondents.
14	Indrajit Banerjee, Brijesh Sathian, Rajesh Kumar Gupta, Annavarapu Amarendra, Bedanta Roy, Pugazhandhi Bakthavatchalam, Archana Saha, and Indraneel Banerjee Pokhara, Nepal	2016	Cross-sectional study	Medical student of Manipal college of medical science	488		To find out the pattern of self-medication practice among the preclinical medical students at Manipal College of Medical Sciences.	• Socio demographic factors • Group of drugs	• The common group of drugs that were consumed was antipyretics 31%, antibiotics 26.2%, analgesics 18.89%, and antihistaminics 10.1% respectively. • Paracetamol was the most common drug used for self-medication 31%, followed by Azithromycin 17.6% and combination of Paracetamol and Ibuprofen 15.6%, Cetirizine 8.6%, Amoxicillin 6.5%, Omeprazole 6.3%, Albendazole 3.3%, Mefenemic acid 2.8%, Cefpodoxime2% respectively.

Chapter III

Research Methodology

3.1Study design

The study design was descriptive and cross-sectional as the data was collected at once there was no follow back. This study has described the factor affecting self-medication.

3.2Study types

This study has followed a quantitative study. The quantitative study was used to identify the prevalence of self-medication, health service related factor and disease factor affecting self-medication.

3.3Study area and Sample technique

This study area was Mitlajung Rural Municipality, Ward no. 9 of Morang district. The area is selected conveniently and ward number was chosen by simple random technique for the feasibility.

Following technique would be used for the research study:

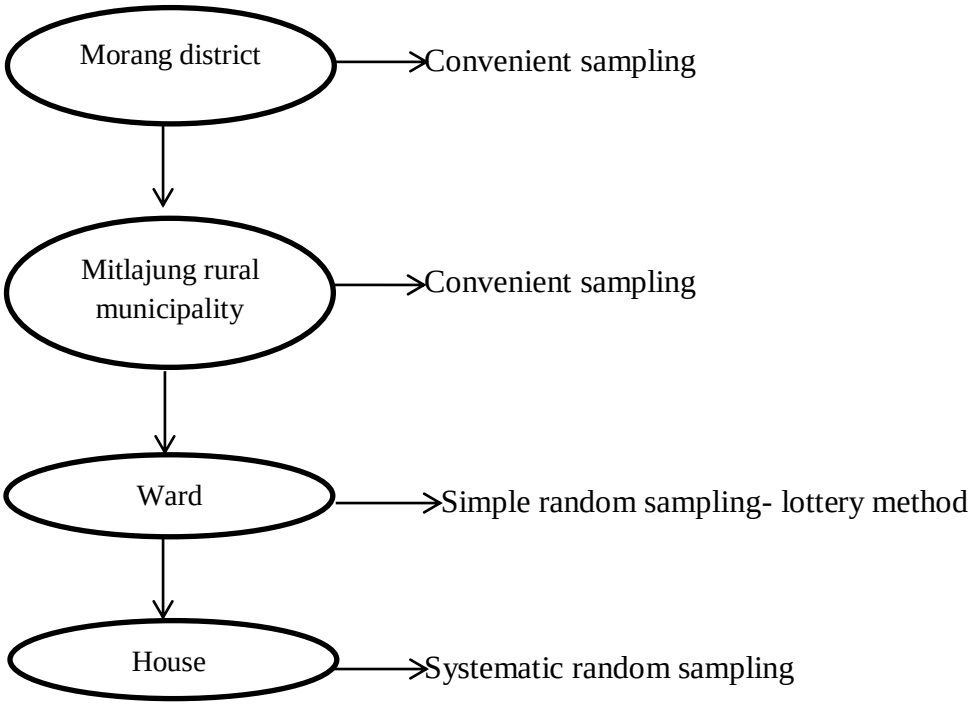


Diagram: Flowchart showing sampling technique

3.4Sampling population

Any one family member of age 19 to 59 years old from selected household.

3.5Sample size

It is calculated using the formula:

$$n = z2\ pq/d2$$

Here, Prevalence of self-medication practice is 59%,(3) marginal error (d) is 0.05, and confidence interval of 95% (1.96).

Substituting the values in above equation, the sample size is found to be 371.

Considering 10% non-response rate, the final sample size is determined to be 408.

3.6Inclusion criteria

Independent population among 19-59 years old who are was to participate in study

3.7Data collection tool

The data was collected by using a semi-structured questionnaire.

3.8Data collection technique

The technique used for data collection was a direct face to face interview with the respondent.

3.9Pre-testing of the tool

Pre-testing was conducted prior to the research in a sample population with similar characteristics. Necessary modifications to the faults and errors in the tool will be made after pretesting.

3.10 Ethical Considerations

First of all, a letter of approval has been taken from Om Health Campus for the study purpose. Ethical clearance approval was taken from the NHRC Ethical Clearance Board. Likewise, letter of approval has been taken from Mitlajung Rural Municipality, Ward no. 9 of Morang district for data collection. At the beginning of data collection, an informed verbal consent was taken from each and every respondent. Information collected for the research will not be used for any other purpose with proper maintenance of respondent's privacy and confidentiality. A respondent was not forced for data collection.

3.11 Validity

The validity was maintained by the proper guidance of the supervisor. If any modification is done then it is done under their suggestion. A literature review is done.

3.12 Reliability

Pre-testing was conducted for the reliability of the study and necessary modifications were done to increase the reliability of the data collection tool. Researcher themselves was involved in every step of the research.

3.13 Data collection procedure

The data collection was collected after the approval of a research proposal from the B.P.H faculty of Om Health Campus. An approval was taken from Mitlajung Rural Municipality for data collection. Verbal consent was taken from every respondent before the interview. Similarly, the semi-structured questionnaire was used to collect quantitative data. Systematic random sampling was applied for the selection of the sample population**.**

3.14 Data Analysis Technique

After the collection of data, it was checked thoroughly, edited and coded into different categories. Data was entered in SPSS version 16 for its analysis which would be transported to Microsoft Word for its interpretation. Descriptive statistics in terms of frequency counts and uni-variate and bi-variate analysis was carried out to identify factors associated with self-medication practice. Chi-square test is done and P-value <0.05 is considered as statistically significant.

Chapter IV

Finding of the study

This chapter deals with the analysis and interpretation of findings. All data were primary and obtained from 408 of respondents of Mitlajung Rural Municipality. After completion of the data collection, data were checked for their accuracy and completeness. Then, data entry was done in and analyzed was done by using SPSS version 16.0 according to the schedule and objectives of the study. Then, data were tabulated according to the socio-demographic characteristics, health service related factor, disease condition and personal factor which is also presented on tables.

Frequency, percentage and P-value were calculated. Chi-square test was used at 5% level of significance and P-value less than 0.05 to find out the strength of association between prevalence of self-medication and different variables.

The final findings of the study are presented as:

Data related to different variables like socio-demographic characteristics.

Data related to disease condition affecting self-medication.

Data related to prevalence of self-medication.

Data related to health services factor and personal factor affecting self-medication.

Data related to association between prevalence of self-medication and different variables.

4.1 Univariate findings

Table 1: Socio-demographic Characteristics (n= 408)

Socio-demographic	Frequency	Percent (%)
Age		
19-29	84	20.6
30-39	136	33.3
40-49	128	31.4
50-59	60	14.7
Gender		
Male	141	34.6
Female	267	65.4
Education status		
Illiterate	74	18.1
Primary level	91	22.3
Secondary level	193	47.3
Graduate and so above	50	12.3
Religion		
Hindu	320	78.4
Buddhist	42	10.3
Kirat	36	8.8
Christain	10	2.5
Marital status		
Unmarried	26	6.4
Married	357	87.5
Widow	16	3.9
Divorced	9	2.2
Ouccpation		
Agriculture	60	14.7
Business	167	40.9
Private job	26	6.4
Government job	18	4.4
Student	8	2.0
Others	129	31.6
Ethnicity		
Brahmin/Chhetri	127	31.1
Terai/Madhesi	40	9.8
Dalit	56	13.7
Newar	113	27.7

Janajati	72	17.6
Type of family		
Joint	190	46.6
Nuclear	218	53.4
Wealth quantile		
very poor	36	8.8
poor	201	49.3
moderate	139	34.1
rich	22	5.4
very rich	10	2.5

Out of 408 respondents, the population between the range of age 30 to 29 was found to be highest by 34.8% and More than half (64.8%) of respondent were female where male was 34.6%. Majority of respondent had studied up to secondary level i.e. (44.5%) and 80.6% were Hindus in religion. Majority of respondent was found to be married 83.6% and most of the population was found to be engaged into some business by 40%. Most of the people were Brahmin/chhetri by 33.6% , 54.3% were living in nuclear family and 49.3% were poor.

Table 2: Disease condition for self-medication (n=408)

Variables	Frequency	Percent (%)
Acute diseases*		
Common cold/ cough	282	70.5
Fever	61	15.2
Diarrhea/Vomiting	16	4.0
Aches and Pain	258	64.5
Gastritis	139	34.8
Skin related disease (wound and allergy)	29	7.2
Treatment for acute disease		
self-medication	247	60.5
no self-medication	161	39.5
Medicine for diseases* (n=247)		
Cough/cold remedies	122	49.4
Antibiotics	30	12.1
Gastro intestinal tract medicine (Antacid)	75	30.4
Medicine for skin (products like Agensia)	20	8.1
Painkiller like (ibuprofen, Paracetamol/ NIMS)	182	73.7
Any other medicine taken to relief the health issues	5	2.0
Source of knowledge for medicine*(n=247)		
Pharmacists	211	85.4
Health worker	107	43.3
Friends/ neighbor/ Family member	84	34.0

Media (TV, radio, internet, books)	16	6.5
Other source of information to use self-medication	9	3.6
Source of medicine*(n=247)		
medicine from pharmacy	245	99.2
from neighbor friends and relatives	60	24.3
from leftover medicines from previous prescription	32	13.0

(*It is multiple responses, so the total is more than 100%)

The above table shows the disease conditions for self-medication where 70.5% of respondents had suffered from the acute disease in three months i.e. common cold among them most of them treated it by doing self-medication 60.5%. Out of 408, 247 did self-medication without the any doctor prescription. Among them 73.7% of respondent had taken painkiller for the relief, most of them got knowledge of medicine by the pharmacists i.e. 85.4% and 99.2 % had bought the medicine from the pharmacy.

Table 3: Health Service Factor and Personal factor affecting Self-medication (n=408)

Variables	Frequency	Percent (%)
Reasons for self-medication*(n=247)		
Due to behavior of health workers.	16	6.5
Due to the test result.	20	8.1
Due to the distance of Health facilities.	50	20.2
Due to the cost of health care.	165	66.8
Perceived minor illness	229	92.7
Other reasons for self-medication.	71	28.7
Personal factors		
Had taken medicine from previous prescription.	229	56.1
Due to lack of time	155	38.0
Health professional present in house	22	5.4
Medicine store at home	135	33.1

(*It is multiple responses, so the total is more than 100%)

The above table shows the health service factor and personal factors affecting the self-medication. 92.7% of respondents practice self-medication because it was minor illness and respondents thought it was not necessary to visit the doctor and 66.8% practice self-medication due to the cost of the health care. 56.1% of respondents had taken the medicine from the previous prescription. Respondent used to practice the self-medication due to the lack of time i.e. 38%. 5.4% of respondents had the health professional in their house and 33.1 % of respondents used to store the medicine in their home.

Table 4: Prevalence of Self-medication (n=408)

Prevalence of Self-medication	Frequency	Percentage
self-medication	247	60.5
no self-medication	161	39.5

This table shows that the prevalence of self-medication. The 247 respondent has done self-medication in three month. They had taken the medicine without any prescription.

4.2 Bivariate findings

Table 5: Association variables with self-medication.

Variables	Prevalence of self-medication		P- value
	Yes (%)	No (%)	
Marital status			
Umarried	21 (8.5)	5 (3.1)	
Married	207 (83.8)	150 (93.2)	0.04*
Widow	12 (4.9)	4 (2.5)	
Divorced	7 (2.8)	2 (1.2)	
Occupation			
Agriculture	32 (13.0)	28 (17.4)	
Business	100 (40.5)	67 (41.6)	
Private job	24 (9.7)	2 (1.2)	0.01*
Government job	12 (4.9)	6 (3.7)	
Student	6 (2.4)	2 (1.2)	
Others	73 (29.6)	56 (34.8)	
Wealth quintile			
Very poor	30(12.1)	6(3.7)	
Poor	120(48.6)	81(50.3)	0.02*
Moderate	76(30.8)	63(39.1)	
Rich	16(6.5)	6(3.7)	
Very rich	5(2.0)	5(3.1)	

***p value is <0.05 in confidence interval 95% which mean it's associated with self-medication.**

The table shows the association variable with the self-medication. Marital status was found to be associated with self-medication where this association is statistically significant where P value is 0.04.Similarly, occupation is also associated with self-medication where this association is statistically significant where P value is 0.01 and wealth quintile is also associated with self-medication where this association is statistically significant where P value is 0.02.

Chapter V

Discussion, Conclusion, and Recommendation

5.1 Discussion

Self-medication is a common behavior. It has gained universal acceptance as it as for encourages to treat minor illness without any help of doctor but on another side, inappropriate self-medication user can get exposed to all risk associated with self-medication practice. When access to non-prescription medicine increase it hay motivate patient to believe that there is a drug for every disease. (30) The prevalence of self-medication in three last three month was found to be 60.5% in Morang district of Mitlajung Municipality. A similar study was conducted in the Tamil Nadu of India where the prevalence of self-medication was 51.7% in three month recall period.(20) Likewise, a study done in china, the prevalence of self-medication was 45.4% in the period of two weeks.(32) Another study conducted in the coastal region of urban Pondicherry shown the prevalence of self-medication to allopathic medication was 11.9% in the period of 3 months.(21) A study was done in Nepal, the prevalence of elf-medication in the 6 month period was 59%.(3) The more prevalence of self-medication could not be compared due to the different definition and recall period.

The main health issues for which self-medication are practice were common cold 70.5% and aches and pain by 60.5%. Similarly, the study done in China shows that the common cold was the main health issues for self-medication practice.(32) It is also comparable to the study done in Tamil Nadu, India where the health issue was like common cold 73.02%, ache and pain 52.97% and fever 32.2 %. The medicine taken to relief the illness was painkiller with 73.7%. Similarly, the study done in Nigeria shows the common medicine used for the self-medication was paracetamol by 89.3%. (12) The source of information for self-medication was pharmacists with 85.4%. A similar result has come in one of the studies done in India.(20) The main reason for the self-medication was due to the minor illness where the respondent perceived that the minor illness does not need to go to the hospital with 92% and another reason is cost by 66.8%. A similar result was found in the study done in China which shows the reason for self-medication were due to minor illness with 45% and cost 15%. (32) Another study done in India shows that it is due to the financial constraint by 58.6%. (20) Respondent had done the self-medication by using the pervious prescription also and due to lack of time, a study was done in china also have discussed it.(32) The findings of the study can be comparable with different country mainly with India and china maybe it’s due to being neighboring countries.

In this study, the association is seen in occupation, marital status and wealth quintile with self-medication. A similar, study done in South India has shown the association between the age group, marital status, education, occupation and social economic with self-medication.(17) The findings of the study can be comparable with different country mainly with India and china

maybe it’s due to being neighboring countries and having similar kind of population mainly in India.

5.2 Conclusion

The study found the 60.5% is the prevalence of self-medication in the three month period and the disease condition affecting the self-medication is due the ache and pain and common cold, and respondents tend to selects the self-medication and used painkiller for the medicine for which respondent got the information about the medicine by pharmacist and bought the medicine without any prescription from the pharmacy. The health services related factor affecting the self-medication was due to a minor disease which was not necessary to visit the doctor as the respondent and another factor affecting the self-medication is due to the cost. The self-medication is associated with occupation, marital status and wealth quintile. Self-medication is emerging as an important public health practice.

5.3 Recommendation

The research finding suggests that to reduce the practice of self-medication, there is a need to prioritize the acute illness. The authority needs to strength the law regarding the sale and use of the drug. There is a risk of harm by using self-medication irrationally to control that the government of Nepal should focus on the coverage of health insurance and controlling the increasing medical expenses. Conducting more awareness program on the harm by using self-medication and more research should be conducted on self-medication in Nepal.

Reference

1. WHO. Essential Medicines and Health Products Information Portal Geneva: World Health Organization; [updated december 6 2017; cited 1998]. Available from: http://apps.who.int/medicinedocs/en/d/Jwhozip32e/3.2.html.
2. Abdi A, Faraji A, Dehghan F, Khatony A. Prevalence of self-medication practice among health sciences students in Kermanshah, Iran. BMC pharmacology & toxicology. 2018;19(1):36.
3. Shankar PR, Partha P, Shenoy N. Self-medication and non-doctor prescription practices in Pokhara valley, Western Nepal: a questionnaire-based study. BMC family practice. 2002;3:17.
4. Mortazavi SS, Shati M, Khankeh HR, Ahmadi F, Mehravaran S, Malakouti SK. Self-medication among the elderly in Iran: a content analysis study. BMC geriatrics. 2017;17(1):198.
5. Bennadi D. Self-medication: A current challenge. Journal of basic and clinical pharmacy. 2013;5(1):19.
6. WHO. Definition of key term: World Health Organization,; 2013. Available from: http://www.who.int/hiv/pub/guidelines/arv2013/intro/keyterms/en/.
7. National Planning Commission. Population monograph of nepal. first ed. Ramshah Path,Kathmandu,Nepal: Central Bureau of Statistics; 2014.
8. Gyawali S, Shankar PR, Poudel PP, Saha A. Knowledge, attitude and practice of self-medication among basic science undergraduate medical students in a medical school in western Nepal. Journal of clinical and diagnostic research: JCDR. 2015;9(12):FC17.
9. Jerez-Roig J, Medeiros LF, Silva VA, Bezerra CL, Cavalcante LA, Piuvezam G, et al. Prevalence of self-medication and associated factors in an elderly population: a systematic review. Drugs & aging. 2014;31(12):883-96.
10. Motavali ZS, Abedi H, Davaridolatabadi E. Self-medication and its Effective Modifiable Factors among Elderly Referred Health Care Centers in Shahr-e-Kord in 2015. Electronic physician. 2016;8(11):3205-13.
11. Figueiras A, Caamano F, Gestal-Otero JJ. Sociodemographic factors related to self-medication in Spain. European journal of epidemiology. 2000;16(1):19-26.
12. Ayanwale MB, Okafor IP, Odukoya OO. Self-medication among rural residents in Lagos, Nigeria. Journal of Medicine in the Tropics. 2017;19(1):65.
13. Kassie AD, Bifftu BB, Mekonnen HS. Self-medication practice and associated factors among adult household members in Meket district, Northeast Ethiopia, 2017. BMC pharmacology & toxicology. 2018;19(1):15.
14. McKernan LC, Nash MR, Gottdiener WH, Anderson SE, Lambert WE, Carr ER. Further evidence of self-medication: personality factors influencing drug choice in substance use disorders. Psychodynamic psychiatry. 2015;43(2):243-75.
15. Albatti TH, Alawwad S, Aldueb R, Alhoqail R, Almutairi R. The self medication use among adolescents aged between 13–18 years old; Prevalence and behavior, Riyadh–Kingdom of Saudi Arabia, from 2014–2015. International Journal of Pediatrics and Adolescent Medicine. 2017;4(1):19-25.
16. Ocan M, Bwanga F, Bbosa GS, Bagenda D, Waako P, Ogwal-Okeng J, et al. Patterns and predictors of self-medication in northern Uganda. PloS one. 2014;9(3):e92323.
17. Divya M, Bharatesh S, Vasudeva G, Varalakshmi C. Self-Medication Among Adults in Urban Udupi Taluk, Southern India. International Journal of Medicine and Public Health. 2016;6(3).

18. Banerjee I, Sathian B, Gupta RK, Amarendra A, Roy B, Bakthavatchalam P, et al. Self-medication practice among preclinical university students in a medical school from the city of Pokhara, Nepal. Nepal journal of epidemiology. 2016;6(2):574-81.
19. Awad AI, Eltayeb IB. Self-medication practices with antibiotics and antimalarials among Sudanese undergraduate university students. Annals of Pharmacotherapy. 2007;41(7-8):1249-55.
20. Varadarajan V, Paul CMP, Swapna S, Preethi S, Kumar K, PU DD. A cross sectional study on the prevalence of self-medication in a Chennai based population, Tamil Nadu, India. International Journal Of Community Medicine And Public Health. 2017;4(2):418-23.
21. Selvaraj K, Kumar SG, Ramalingam A. Prevalence of self-medication practices and its associated factors in Urban Puducherry, India. Perspectives in clinical research. 2014;5(1):32.
22. Shafie M, Eyasu M, Muzeyin K, Worku Y, Martín-Aragón S. Prevalence and determinants of self-medication practice among selected households in Addis Ababa community. PloS one. 2018;13(3):e0194122.
23. Tripkovic K, Neskovic A, Jankovic J, Odalovic M. Predictors of self-medication in Serbian adult population: cross-sectional study. International journal of clinical pharmacy. 2018;40(3):627-34.
24. Gyawali S, Shankar PR, Poudel PP, Saha A. Knowledge, Attitude and Practice of Self-Medication Among Basic Science Undergraduate Medical Students in a Medical School in Western Nepal. Journal of clinical and diagnostic research : JCDR. 2015;9(12):FC17-22.
25. Kumar CA, Revannasiddaiah N. Assessment of self-medication patterns in a rural area of south India: a questionnaire based study. International Journal Of Community Medicine And Public Health. 2017;5(1):354-60.
26. Afolabi AO. Factors influencing the pattern of self-medication in an adult Nigerian population. Annals of African medicine. 2008;7(3):120-7.
27. SUHANA JAWAHIR NAA. SELF-MEDICATION AMONG ADULT POPULATION IN SELANGOR, MALAYSIA. International Journal of Pharmacy and Pharmaceutical Sciences. 2017;9(5).
28. El Nimr N, Wahdan I, Wahdan A, Kotb R. Self-medication with drugs and complementary and alternative medicines in Alexandria, Egypt: prevalence, patterns and determinants. EMHJ-Eastern Mediterranean Health Journal. 2015;21(4):256-65.
29. Al Tannir M. Prevalence and Associated Factors of Self Medication with Prescription Drugs among Saudi Adults. International Journal of Pharmaceutical & Biological Archive. 2015;6(5).
30. Aqeel T, Shabbir A, Basharat H, Bukhari M, Mobin S, Shahid H, et al. Prevalence of self-medication among urban and rural population of Islamabad, Pakistan. Tropical Journal of Pharmaceutical Research. 2014;13(4):627-33.
31. Banerjee I, Sathian B, Gupta RK, Amarendra A, Roy B, Bakthavatchalam P, et al. Self-medication practice among preclinical university students in a medical school from the city of Pokhara, Nepal. Nepal journal of epidemiology. 2016;6(2):574.
32. Lei X, Jiang H, Liu C, Ferrier A, Mugavin J. Self-medication practice and associated factors among residents in Wuhan, China. International journal of environmental research and public health. 2018;15(1):68.

APPENDIX A

INFORMED CONSENT FORM

Om health Campus

Purbanchal University

Chabahil, Kathmandu

INFORMED CONSENT

Welcome and thank you for giving time to participate in the research project conducted by Academic researcher, Aassmi Poudyal. I am a student of Bachelor of Public Health in Om Health Campus. This study is being conducted for the partial fulfillment of Bachelor Degree in Public Health.

The purpose of the study is to assess "Factors Affecting Self-medication Practice among Adult in Morang District of Mitlajung Rural Municipality." The information obtained will be kept confidential and will be used only for the purpose of this study.

Your sincere response will be highly appreciated. I would like to assure that your identity will not be disclosed.

If you are willing to participate, you need to sign the statement of informed consent below: It depends upon your wish to participate in this study and you may end at any time you want. During the data collection I will ask questionnaire regarding my study and it takes 15-20 minutes.

Would you participate in this study?

a. Yes

b. No

Signature of respondent

_____

ओम हेल्थ क्याम्पस

(पूर्वाञ्चल विश्वविद्यालय)

चावहिल, काठमाण्डौ

मञ्जुरीनामा

नमस्ते, मेरो नाम आस्मी पौड्याल हो । म ओम हेल्थ क्याम्पसको जनस्वास्थ्य संकाय, स्नातक तहमा अध्ययनरत विद्यार्थी हुँ । म एक अनुसन्धान गर्दैछु जसको उद्धेश्य, आफै औषधि खानलाई असर गर्ने कारकहरुको मूल्याङ्कन गर्ने हो । त्यसका लागि म केहि जानकारी लिन आएको छु । तपाईको नाम साथै व्यक्तिगत विवरणहरु गोप्य राखिने छ । जब अनुसन्धानको परिणाम प्रकासित गरिने छ तब तपाईको पहिचान समावेश गरिने छैन ।

तपाई यस अनुसन्धानमा सहभागी हुन इच्छुक हुनुहुन्छ भने म तपाईको अन्तरवार्ता लिने छु जसको लागि १०-१५ मिनेट समय लाग्ने छ । यदि तपाईं अनिच्छुक हुनुहुन्छ भने कुनै पनि प्रश्नहरुको उत्तर दिनु पर्ने छैन ।

सकरात्मक प्रतिकृयाको आशा गर्दछु ।

के तपाई सहभागी हुन इच्छुक हुनुहुन्छ ?

क) छ ☐ ख) छैन ☐

.....

सहभागीको हस्ताक्षर

औंठा छाप

Appendix B

English Questionnaire

Section A:

1. Introduction

Code number	
Ward number	
Rural municipality	
Locality name	
Name of interviewers	
Date of interview	

Section B

S.N	Question	Answers	Code	Remark
2.	**Socio-demographic factor**			
2.1	Age			
2.2	Sex	• Male • Female	1 2	
2.3	Educational status	• Illiterate • Primary level (Grade Nursery to five) • Secondary level (Grade six to twelve) • Graduate and above	1 2 3 4	
2.4	Religion	• Hindu. • Buddhist • Kirat • Muslim • Christian • Other	1 2 3 4 5 6	
2.5	Marital status	• Unmarried • Married • Widow • Divorced	1 2 3 4	

2.6	Occupation	• Agriculture • Business • Private job • Government job • Student • Others	1 2 3 4 5 6	
2.7	Ethnicity	• Bhramin/ chettri • Terai/Madhesi • Dalit • Newar • Janajati • Muslim • Others	1 2 3 4 5	
2.8	Type of family	• Nuclear family • Joint family	1 2	

Section C

S.N	Question	Answer	Code	Remark
		Disease condition factor		
3.	Have you suffered from any type of health issue in the past three month?	• Yes • No	1 2	If "Yes" go to question number 3.1
3.1	What type of illness was that?	• Acute diseases • Chronic diseases	1 2	If answer is 1 go to the question number 4
4.	What were the health symptoms of the illness?	• Common cold/cough • Fever • Diarrhea/ Vomiting • Aches and pain • Gastric • Skin related diseases (Wound and Allergy) • If other (specify)	1 2 3 4 5 6 7	Multiple choice
5.	How did you treat/care for the health issue?	• Didn't do anything • Visited health facilities • Self-medication	1 2 3	If answer is 3 than go to question number 6.

6.	What was the medicine that you took to relief your health issues?	• Cough/cold remedies • Vitamin • Antibiotics • Gastro intestinal tract medicine (Antacid) • Medicine for skin (products like Agensia) • Painkiller like (ibuprofen, Paracetamol/ NIMS) • Others (specify)	1 2 3 4 5 6 7	Multiple choice
7.	What was the source of information to use self-medication practice?	• Pharmacists • Health worker • Friends/ neighbor/ Family member • Media (TV, radio, internet, books) • Other (specify)	1 2 3 4 5	Multiple choice
8.	Where did you get the medicine from?	• Pharmacy • Friends/ neighbor/ Family members • Left over medication from the previous prescription • Others (specify)	1 2 3 4	
9.	Was medicine bought with written prescription by health professional with government license to prescribe the drugs?	• Yes • No	1 2	

Health services related factors				
10.	What were the reasons for self-medication?	• Due to behavior of health workers. 1. Yes 2. No • Due to the test result. 1. Yes 2. No • Due to distance of Health facilities. 1. Yes 2. No • Due to the cost of health care. 1. Yes 2. No • Perceived minor illness. 1. Yes 2. No • Others (specify)……	1 2 3 4 5 6	Multiple choice
Personal factor				
11.	Have you used or taken medicine from the past experience?	• Yes • No	1 2	
12.	Do your time factors lead towards the self-medication?	• Yes • No	1 2	
13.	Are any of the members in your house is a health professional?	• Yes • No	1 2	If answer is "No" skip to the question number 14.

13.1	If yes, do they have license to prescribe the drugs?	• Yes • No	1 2	
13.2	Has having a health professional in the house, has influenced your practice of self-medicating behavior?	• Yes • No	1 2	
14.	Is there any allopathic medicine store at home?	• Yes • No	1 2	
SOCIO- ECONOMIC INFORMATION				
15.	What are the main materials of the roof?	• Thatch/straw • Wood planks, cardboard • Slate/ Local tiles • Earth/ mud • Other……	1 2 3 4 5	Observe
16.	What are the main materials of the walls?	• Cement/Brick • planks/bamboo/cardboard • Plastic • Mud/earth • Others……	1 2 3 4 5	Observe
17.	Construction material of floor.	• Wooden planks • Mud/ dung • Chattai • Concrete/ cement • Others	1 2 3 4 5	Observe
18.	How many rooms are there in your house?	• 1-2 rooms • 2-3 rooms • 3-4 rooms • more than 4 rooms	1 2 3	
19.	Do you have your own cultivated land?	• Yes • No	1 2	If "NO" skip to the question 21.
20.	If yes, what is the total area of land owned?	• …… Katta • …….. Bighas • …….Ropani • . …….Aana	1 2 3 4	
21.	Do you have animals (domestic)?	• Yes • No	1 2	If "NO" skip to the question 23.

22.	If yes, how many?	Buffalo……. Cows, bulls……. Pigs…… Goats, sheep…… Chicken, ducks……...	1 2 3 4 5	
23.	Do you have a kitchen garden?	Yes No	1 2	If "NO" skip to the question 25.
24.	Which of the following vegetables do you grow in your kitchen garden?	• Tomatoes • Onions • Carrots/radish • Pepper • Corn • Cucumber • Other……	1 2 3 4 5 6 7	Multiple choice
25.	What of the following does your household have?	• Electricity • A radio • A television • A mobile phone • A land line phone • A refrigerator • A heater • A sawing machine • A computer • Nothing	1 2 3 4 5 6 7 8 9 10	Multiple choice
26.	What of the following transport facilities does your household have?	• Bicycle • Rickshaw • Motorcycle or motor scooter • Tempo • Magic • ladia • Car or jeep • Tractor • Nothing • Other……..	1 2 3 4 5 6 7 8 9 10	Multiple choice

Appendix : Nepali Questionnaire

भाग १

१ परिचय

कोड न	
गाउँपालीकाको नाम	
ठाउको नाम	
उत्तरदाताको नाम	
मिती	

भाग : २

क्र.सं.	प्रश्न	उत्तर	कोड नं.	निर्देशन
२	**सामाजिक जनसंखिय कारक**			
२.१	उमेर	• पुरुष	१	
२.२	लिंग	• महिला	२	
२.३	शैक्षीक स्थिती	• अशिक्षित • प्राथमिक शिक्षा • निम्न तथा माध्यामिक शिक्षा • उच्च तथा सो भन्दा माथि	१ २ ३ ४	
२.४	धर्म	• हिन्दु • बौद्द • मुस्लीम • किराती • इसाई • अन्य	१ २ ३ ४ ५ ६	
२.५	बैबाहिक स्थिती	• बिबाहित • अबिबाहित • बिधवा • अलग	१ २ ३ ४	
२.६	व्यबशाय	• कृषी • व्यापार • निजी जागीर • सरकारी जागीर • बिद्धार्थी • अन्य	१ २ ३ ४ ५ ६	
२.७	जातीय	• दलित • ब्रम्हण-क्षेत्री	१ २	

		• नेवार • जनजाती • अन्य	३ ४ ५	
२.८	परिवारको प्रकार	• एकल • संयुक्त	१ २	

भाग ३

रोग सम्बन्धि कारक तत्वहरु				
क्र.सं.	**प्रश्न**	**उत्तर**	**कोड नं.**	**निर्देशन**
३.	के तपाईलाई यो तीन महिनामा कुनै प्रकारको स्वास्थ्य सँग सम्बन्धित समस्या भयो ?	• भयो • भएन	१ २	यदि "भयो "भने प्रश्न नं. ३.१ म जानुहोस ।
३.१	कस्तो प्रकारको समस्या थियो ?	• भर्खर लागेको /नयाँ रोग • दिर्घ रोग	१ २	यदि उत्तर "१"हो भने प्रश्न नं. ४ म जानुहोस ।
४	रोगका लक्षणहरु के के थिए ?	• चिसो साधारण रुघा खोकि • ज्वरो • टाउको दुख्ने • झाडा पखाला • बान्ता • घाँटि दुख्ने • छालामा घाउ • पेट दुख्ने • ग्यासटिक • एलर्जी • अन्य	१ २ ३ ४ ५ ६ ७ ८ ९ १० ११	
५	तपाईले यी लक्षणहरुको कसरी उपचार गर्नुभयो ?	• केहि गरिन • स्वास्थ्य संस्था गए • आफैं औषधि खाए	१ २ ३	यदि उत्तर "३"हो भने प्रश्न नं. ६ मा जानुहोस
६	उपचारको लागी तपाईले कुन औषधि प्रयोग गर्नु भयो ?	• रुघाखोकिको उपचार • भिटामिन • एन्टिबायोटिक • ग्यास्टिकको औषधि (एन्टा	१ २ ३ ४	

		एसीड,एसिलक) ● छालाको औषधि (एगनेशिया) ● पेनकिलर (आइ ब्रुफिन, पारासीटामोल,निम्स) ● अन्य	 ५ ६ ७	
७	आफै औषधि प्रयोग गर्नलाई कहाँबाट जानकारी पाउनु भयो ?	● औषधि बच्ने व्यक्तिबाट ● स्वास्थ्यकर्मीबाट ● साथी/छिमेकीबाट/आफन्त ● किताब/मिडिया ● अन्य	१ २ ३ ४ ५	
८	औषधि कहाँबाट पाउनु भयो ?	● औषधि पसल ● साथी/छिमेकीबाट/आफन्त ● पहिलाको पर्चिबाट बाँकि रहेको औषधि ● अन्य	१ २ ३ ४	
९	के तपाईले औषधि स्वास्थ्यकर्मीले लेखेको पर्चिबाट लिनुभएको हो ?	● हो ● होईन	१ २	
स्वास्थ्य सेवा सम्बन्धित कारक तत्वहरु				
१०	आफैं उपचार गर्नुको कारण के हो ?	● स्वास्थ्यकर्मीको बानी व्यबहारको कारण ले गर्दा १. हो २. होइन ● स्वास्थ्य परिक्षण नतिजाको कारणले गर्दा १. हो २. होइन ● स्वास्थ्य संस्थाको दुरीको कारणले गर्दा १. हो २. होइन ● स्वास्थ्य सेवा को खर्च को कारणले गर्दा १. हो २. होइन ● अन्य	१ २ ३	

व्यक्तिगत कारक तत्वहरु				
११	के तपाईले पहिलाको अनुभबबाट औषधि प्रयोग गर्नुभएको छ ?	● छ ● छैन	१ २	

१२	के तपाईंले स्वास्थ्य परिक्षणको लागी समय दिन नसकेर आफैं औषधि प्रयोग गर्नु भएको छ ?	• छ • छैन		
१३	तपाईको घरमा कुनै सदस्य स्वास्थ्य कर्मी हुनुहुन्छ ?	• छ • छैन	१ २	यदि उत्तर "छैन" भने प्रश्न नं १२ मा जानुहोस
१३.१	यदि छ भने के वहाँले औषधि दिन मिल्छ ?	• मिल्छ • मिल्दैन	१ २	
१३.२	घरमा स्वास्थ्य कर्मी भएर तपाईको आफै औषधि लिने बानीमा फरक परेको छ ?	• छ • छैन	१ २	
१४	के तपाई घरमा कुनै प्रकारको औषधि राख्ने बानी गर्नुभएको छ ?	• छ • छैन	१ २	

सामाजिक आर्थिक स्थिति				
क्र.सं.	**प्रश्न**	**उत्तर**	**कोड नं.**	**निर्देशन**
१५	घरको छाना केले बनेको छ ?	• खर/ पराल • काठ/ बाँस • ढुंगा वा स्थानिय टाइल • माटो • अन्य	१ २ ३ ४ ५	अवलोकन गर्ने
१६.	घरको दिवाल वा भित्ता केले बनेको छ ?	• सिमेन्ट र इँटा • काठ/ बाँस • प्लाष्टिक • माटो • अन्य	१ २ ३ ४ ५	अवलोकन गर्ने
१७	घरको भुईं केले बनेको छ ?	• काठको फलेक • माटो/ गोबर • चट्टाई • सिमेन्ट कन्क्रिट • अन्य	१ २ ३ ४ ५	अवलोकन गर्ने
१८	कतिओटा कोठाहरु छन् ?	• १-२ कोठाहरु • २-३ कोठाहरु • ३-४ कोठाहरु • ४ भन्दा बढि कोठाहरु	१ २ ३ ४	
१९	तपाईको आफ्नो नाममा जग्गा छ?	• छ • छैन	१ २	यदि उत्तर "छैन" भने प्रश्न नं २१ मा जानुहोस
२०	यदि छ भने कति जग्गा जमिन छ?	• .....कट्ठा • .....विगाहा • .....रोपनी • .....आना	१ २ ३ ४	
२१	के तपाईको घरमा जनावरहरु छन् ? (घरेल)	• छ • छैन	१ २	
२२	यदि छ भने के के छन्?	• भैंसी • गाई • सुँगुर • भेडा बाख्रा	१ २ ३ ४	

		• हास कुखुरा	५	
२३	घरमा करेसाबारी छ ?	• छ • छैन	१ २	यदि उत्तर "छैन" भने प्रश्न नं २३ मा जानुहोस
२४	करेसाबारीमा के कस्ता तरकारीहरु उब्जाउनु भएको छ ?	• टमाटर • प्याज • गाँजर • मरिच • मकै • काँक्रो • अन्य	१ २ ३ ४ ५ ६ ७	
२५	घरमा के कस्तो सुविधाहरु छन्?	• विद्युत • रेडियो • टिभी • मोवाइल • फोन • फ्रिज • हिटर • सिउने मेसिन • कम्प्युटर • ट्याक्टर • छैन	१ २ ३ ४ ५ ६ ७ ८. ९. १० ११	
२६	तपाईको घरमा के कस्तो यातायातको सुबिधाहरु छन्?	• साइकल • रक्सा • मोटरसाइकल • टेम्पो • अटोरिक्सा • म्याजिक • लड़िया • जीप • ट्याक्टर • अन्य	१ २ ३ ४ ५ ६ ७ ८. ९. १०	

Appendix C

Budget Plan

S.N.	Expenditure	Total
1.	Internet Surfing	**1,000**
2.	Proposal typing and printing	**5,00**
3.	Questionnaire typing and printing	**5,000**
4.	Stationary	**5,00**
5.	Transportation	**5,000**
6.	Fooding	**5,000**
7.	Communication	**1,000**
8.	Report typing, printing and binding	**1,000**
9	Ethical approval	**1,000**
10.	Miscellaneous	**1,000**
	Total	**21,000**

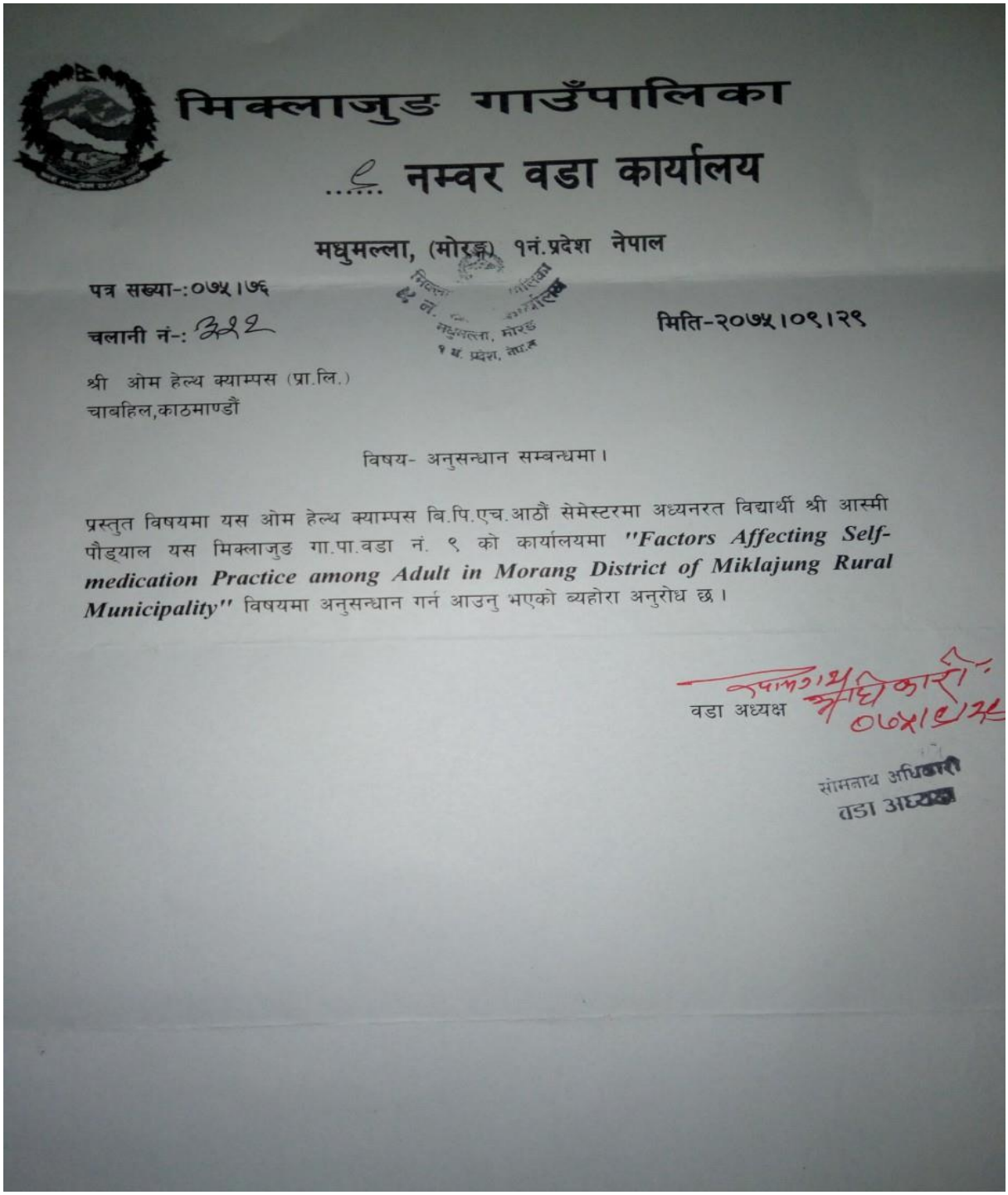
Appendix D

Work plan

S/N	Activities	Shrawan 2075	Bhadra 2075	Ashad 2075	Kartik 2075	Mangsir 2075	Poush 2075	Magh 2075	Falgun 2075
1	Literature review								
2	Topic selection, presentation and finalization								
3	Proposal preparation, presentation and submission								
4	Developing tools for the study								
5	Pretesting and tool finalization								
6	Data collection								
7	Analysis and interpretation of data								
8	Completion of report								
9	Report presentation								
10	Report submission								

APPENDIX E

Letter from Study Area



मिक्लाजुङ गाउँपालिका

...९... नम्वर वडा कार्यालय

मधुमल्ला, (मोरङ्ग) १नं.प्रदेश नेपाल

पत्र सङ्ख्या-:०७५।७६

चलानी नं-: ३२२

मिति-२०७५।०९।२९

श्री ओम हेल्थ क्याम्पस (प्रा.लि.)
चाबहिल,काठमाण्डौं

विषय- अनुसन्धान सम्बन्धमा।

प्रस्तुत विषयमा यस ओम हेल्थ क्याम्पस बि.पि.एच.आठौं सेमेस्टरमा अध्यनरत विद्यार्थी श्री आस्मी पौड्याल यस मिक्लाजुङ गा.पा.वडा नं. ९ को कार्यालयमा ***"Factors Affecting Self-medication Practice among Adult in Morang District of Miklajung Rural Municipality"*** विषयमा अनुसन्धान गर्न आउनु भएको व्यहोरा अनुरोध छ।

वडा अध्यक्ष

सोमनाथ अधिकारी
वडा अध्यक्ष

APPENDIX G

Photographs