INTERNET ADDICTION AND ITS ASSOCIATED FACTORS AMONG SECONDARY LEVEL STUDENTS OF URLABARI MUNICIPALITY, NEPAL

A research report submitted to

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Report Submitted By

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APPROVAL SHEET

This is to certify that **Mr. Dhiraj Dhungana** has prepared the thesis entitled **Internet Addiction and its Associated Factors Among Secondary Level Students of Urlabari Municipality, Nepal** under our guidance and supervision.

This thesis is prepared for the partial fulfillment of the requirement for the degree of Masters of Public Health (MPH). The thesis has been accepted and recommended for final examination.

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DECLARATION

To the best of my knowledge and belief I declare that this thesis entitled **"Internet Addiction and its Associated Factors Among Secondary Level Students of Urlabari Municipality, Nepal"** is the result of my own research and contains no material previously published by any other person except where due acknowledgement has been made. This thesis contains no material, which has been accepted for the award of any other degree or diploma in any university.

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ABBREVIATIONS

- AOR – Adjusted Odds Ratio
- COR – Crude Odds Ratio
- DASS-21 – Depression, Anxiety and Stress Scale – 21
- DSM-V – Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition
- IAT – Internet Addiction Test
- ICD-11 – International Classification of Diseases, 11th Revision
- IOM – Institute of Medicine
- IRC – Institutional Review Committee
- MPH – Master of Public Health
- PSQI – Pittsburgh Sleep Quality Index
- SEAR – South-East Asian Region
- SPSS – Statistical Package for the Social Sciences
- TU – Tribhuvan University
- UNICEF – United Nations Children's Fund
- WHO – World Health Organization

SUMMARY

Introduction: The internet is currently a part of daily life, especially among teenagers who are at particular risk for problem internet use due to the undergoing development. Internet addiction has been linked with a number of adverse health effects including absence of physical exercise, sleep disturbances, musculoskeletal pain, eye strain and psychological disturbances like depression, anxiety, and stress. Generating local evidence is therefore crucial to inform interventions, awareness, and policy for safe internet use among young people. Thus, the study aims to assess the prevalence of internet addiction among school level students and also identify factors associated with it.

Methodology: A cross-sectional study was conducted among 564 students from grades 11 and 12 selected through two-stage cluster sampling from six randomly chosen schools from 2025/12/21 to 2026/01/01. Data was collected using validated self-administered questionnaires, including Young's Internet Addiction Test (IAT), Pittsburgh Sleep Quality Index (PSQI), and Depression Anxiety Stress Scale (DASS-21) for measuring internet addiction, sleep quality and depression, anxiety and stress respectively. Descriptive and Multivariable Logistic Regression analysis was used to assess prevalence and associations between internet addiction and key variables. P-value <0.05 was considered statistically significant.

Results: The mean age of respondents was 17.15 (SD 0.92) years. Around 57.2% of respondents were female. About 42.7% of respondents were addicted to internet. Also, 45.2% reported expressing depressive symptoms, 50.4% had anxiety and 30.3% reported stress symptoms at different severity. Around 30.5% of respondents had poor sleep quality. Multivariable logistic regression showed that being in private school (AOR 1.765 CI: 1.040-2.994), using internet for entertainment (AOR 1.941, CI: 1.201-3.135) and online gaming (AOR 2.547, CI: 1.181-5.493), poor sleep quality (AOR 2.692, CI: 1.727-4.197), anxiety (AOR 1.987, CI: 1.240-3.184) and stress (AOR 1.895, CI: 1.117-3.216) were significantly associated with internet addiction.

Conclusions: The study identified several factors that were significantly associated with internet addiction, including school type, main purpose of internet use, poor sleep quality, anxiety and stress. The findings suggest that targeted education and digital awareness programs for parents, school authorities, and students, along with interventions addressing sleep quality, anxiety, stress, and excessive recreational internet use, are essential for address internet addiction.

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CHAPTER I: INTRODUCTION

1.1 Background

In the past few decades, the world has evolved with the revolution of internet and its usage. It has become one of the most popular means of exchanging information, communication, for economic activity and entertainment purposes. This has changed the way people live in their daily life as their reliance on internet for day-to-day activities has increased. The internet has developed into a limitless platform for social networking and knowledge sharing. (1,2).

The term 'Internet Addiction' was first defined by Ivan Goldberg in 1995 as "pathology, a disorder, excessive use of technology, various behavior and impulse control" (3). People with behavioral issues are unable to control their internet use because of their excessive reliance on it. This can be characterized by urges which are poorly controlled and may lead to significant distress through the use of internet (4). This phenomenon is often is defined by various terms such as "net addiction", "online addiction", "internet addiction disorder", "pathologic internet use" and "problematic internet use" (5,6).

Secondary level students are usually going through critical phase of their life, i.e. the time interval between childhood and adulthood generally known as adolescence. It is a critical period when they are more indulged and prone to risky behaviors like internet addiction(7). The reliance on the internet for learning and information seeking has grown since COVID-19. Students used to receive their education through online courses, which increased their access to the internet(8). A high level of impulsivity and an engagement reward circuit, which may be the outcome of the brain's neurobiological maturation, are linked to internet addiction, according to some research. Studies even contend that teenagers may inherit some of the neurobiological risk factors for internet addiction from their parents (9).

Internet addiction is a problem of concern among adolescents due to its impact on their health and wellbeing. According to some research, those who already struggle with psychological issues like anxiety or depression are more prone to develop internet addiction, and there is a negative correlation between sleep duration and internet

addiction as well. However, other research has also demonstrated that internet addiction has negative effects on teenagers, including poor sleep and a higher risk of psychological problems like depression, anxiety, loneliness, etc. This shows that the relation can be bidirectional with sleep quality and psychological conditions influencing internet addiction and vice versa. Additionally, prolonged use of the internet can cause physical issues such as shoulder, back, and neck pain, physical exhaustion, carpal tunnel syndrome, effects in the eyes such as double vision, blurred vision, and eye pain, as well as problems with hearing and consumption of quick (processed) meals more regularly, as well as inconsistent eating patterns and lack of physical activity. Numerous studies have shown that children and adolescents in particular are more likely to become addicted to online activities, which is comparable to how adults are addicted to alcohol or gambling (10,11). The effects of internet addiction extend beyond personal problems and can affect family interactions and academic performances as well which further may trigger psychological problems (3).

The presence of internet addiction as mental disorder has not yet been adequately recognized. Despite not being formally listed in the World Health Organization's (WHO) International Classification of Diseases (ICD-11), this has been considered a possible candidate for category 6C5Y, "other specified disorders." Similar is true for the Diagnostic and Statistical Manual of Mental Disorders (DSM-V), where despite efforts by several psychiatrists, internet addiction has not been recognized as a mental condition. Six distinct forms of internet addiction have been identified by the American Center for Online Addiction, and Internet gaming disorder has been recognized as a syndrome that calls for additional study and the creation of evidence (12,13).

1.2 Statement of Problem

Global Scenario

Globally, there are 5.81 billion mobile users equivalent to 70.7% of world’s population in April 2025. The number of internet users have reached 5.64 billion and social media users stand at around 5.31 billion (i.e. 64.7% of world population.) Some of the reasons to the use internet were to seek information, communication with friends and family and entertainment purposes. Younger people, especially adolescents, tend to use internet more

than other age group for watching short videos (mostly Tiktok, reels) and playing games(14).

Due to the widespread availability of the internet, around 21.8% of internet users in 2025 showed symptoms of moderate to severe internet addiction. Around 32% of US teenagers reported they felt anxious if not connected to internet. Looking at the age group, the teens (13-19) face highest risk of internet addiction(15). WHO Europe reports that in 2022, 11% of teenagers struggled to control their use of social media and displayed problematic behavior, up from 7% in 2018. This was higher among girls than boys(16). A study done in Taiwan reported around 20% of female adolescents with moderate to severe internet addiction with significant effect in their sleep quality(17). Another research of adolescents in Turkey found that 19% had problematic internet addiction and 8% had pathological internet addiction, with chances of poor sleep quality of 1.83 and 1.99, respectively (7). Similarly, the internet addiction is seen significantly associated with depressive symptoms. It has been suggested that those who experience symptoms of depression, anxiety, and loneliness are more likely to develop Internet-use disorders because it is considered as a dysfunctional coping mechanism for difficult and/or stressful everyday life events(18). A study from Taiwan reports that depression predicts the internet addiction(19). Further, a longitudinal study done in Japan has shown that chances of internet addiction leading to poor mental health is 2.39 times more likely than those without internet addiction showing bidirectional nature of association(20).

South-East Asian Region (SEAR) Scenario

The SEAR also shows the serious condition of internet addiction. A meta-analysis showed pooled prevalence of internet addiction in southeast Asian region is 20% (including adolescents and adults). If adolescents only are considered, the internet addiction ranged from 2.4% to 92.4% (longitudinal study)(21). The fact that there is a high rate of internet addiction despite the population's lesser internet penetration is concerning. A systematic review among Iranian adolescents revealed the internet addiction to be 31%(22). Studies from India have shown internet addiction among adolescents to be 14.6% to 80%. Also, significant relationship was seen among depression, anxiety and stress (OR: 14, 3.33 and 12 respectively) among those with internet addiction (23,24).

National Scenario

Nepal have also made substantial leap in the telecommunication sector. Just a decade ago, in 2072, the internet penetration rate was 33.89% marking a total of around 1.2 crores users of internet. Today, in 2082, the penetration rate is 139.54% marking around 4 crores subscribers. The rapid increase in digital users may have some negative effects, particularly on children and young people (25,26).

Multiple studies conducted in Nepal have also revealed a concerning prevalence of adolescent internet addiction. A study done in Dakshinkali showed internet addiction prevalence among adolescents was 49.4%. This study also found a significant relation between internet addiction and sleep quality with 5.6 odds of internet addiction among those with bad subjective sleep quality (27). Another study also revealed that around 34% of higher secondary students had moderate to severe internet addiction(28). Other study from Kathmandu showed that prevalence of internet addiction was 51.1%. The results also showed significant relationship between internet addiction and depression (OR 2.99) and insomnia (OR 21.09) (29).

According to UNICEF report of 2024, internet addiction along with gaming addiction, cyber bullying, sextortion are some of online risks faced by children and young people in Nepal. It has stated that the internet and digital devices are now easily accessible but people lack knowledge on the safer ways to use them and are unaware of its potential harm that can even lead to self-harms. The report has also stated that there is link between internet use and trafficking, gender-based violence, emotional disturbances which needs to be addressed with great priority(30).

1.3 Rationale of the Study

Secondary school adolescents are particularly vulnerable since they are more likely to engage in addictive behaviors as the youngsters are still developing physically and mentally. Internet addiction is an addictive behavior that have a great impact on day-to-day life and health of such adolescents. School students, especially after completing grade 10, usually have unsupervised access to digital devices with internet access that puts them at higher risk of internet addiction and can be vulnerable to influence of online contents easily.

Many studies have identified the effects of internet addiction but it is yet to be formally acknowledged as a distinct disorder in DSM-V or ICD-11, though both these acknowledge related condition like internet gaming disorder. This underlines the requirement of additional evidences and researches to establish it as a distinct disorder as suggested by literatures.

The internet addiction and its effect are higher in south Asian region as compared to global average and similar pattern can be observed in different population groups in Nepal as well. This needs to be explored and further studied to understand the prevalence of internet addiction and possible negative impacts caused due to this especially among young population as this phase of life can shape their future.

While there are numerous studies on internet addiction in Nepal, most of them focus on undergraduates, leaving a gap in the research on internet addiction among secondary school students. This study can help fill the knowledge gap about internet addiction among secondary level adolescents. Studies done among adolescents' group has shown higher prevalence of internet addiction and have also linked internet addiction with problems with mental health like depression, stress and anxiety as well as insomnia and sleep problems. In addition to being immediate, the consequences may also be an indicator of long-term problems. Especially, aftermath of COVID pandemic and use of digital learning platforms, this study is essential. Furthermore, most of the studies are from urban or peri-urban centers marking need for study outside these cohort. There is need to understand the interactions that shape real life and emotional wellbeing.

Thus, understanding this problem will help sketch the picture about current status of internet addiction and develop age-appropriate interventions through early identification of internet addiction and its related factors. An informed school-based education and sensitization programs can be developed to detect and prevent the problematic internet use. Also, the data generated from this study can be used as a baseline data for monitoring digital wellness and literacy programs. Thus, this study aims to understand interplay of variables impacting the internet addiction.

1.4 Research Questions

- What is the prevalence of internet addiction among secondary level students of Urlabari Municipality?
- What are the socio-demographic and internet related factors associated with internet addiction among secondary level students of Urlabari Municipality?
- What is the relationship between sleep quality and internet addiction among secondary level students of Urlabari Municipality?
- What is the relationship between depression, anxiety and stress and internet addiction among secondary level students of Urlabari Municipality?

1.5 Objectives of the Study

General Objective

- To assess the internet addiction and its associated factors among secondary level students of Urlabari, Nepal.

Specific Objectives

- To assess the prevalence of internet addiction among secondary level students of Urlabari Municipality.
- To examine the association between sleep quality and internet addiction among secondary level students of Urlabari Municipality.
- To examine the association of depression, anxiety, and stress with internet addiction among secondary-level students of Urlabari Municipality.
- To examine the association of socio-demographic and internet related factors with internet addiction among secondary level students of Urlabari Municipality.

1.6 Study Variables

Dependent Variable

- Internet Addiction (YIAT)

Independent Variables

*** Socio-Demographic Characteristics**

- Age
- Sex
- Grade
- Stream of Education
- School Type (Public/Private)
- Study Shift (Morning/Afternoon)
- Living Condition (Hostel/Parents/Room)
- Parent's Education
- Parent's Occupation
- Family Income
- Current Drinking
- Current Smoking

*** Internet Use Characteristics**

- Access to devices
- Mode of Internet access (Data/Wi-Fi)
- Purpose of internet Use
- Average no of hours in internet

*** Sleep Quality (PSQI)**

*** Depression, Anxiety & Stress (DASS-21)**

1.7 Conceptual Framework

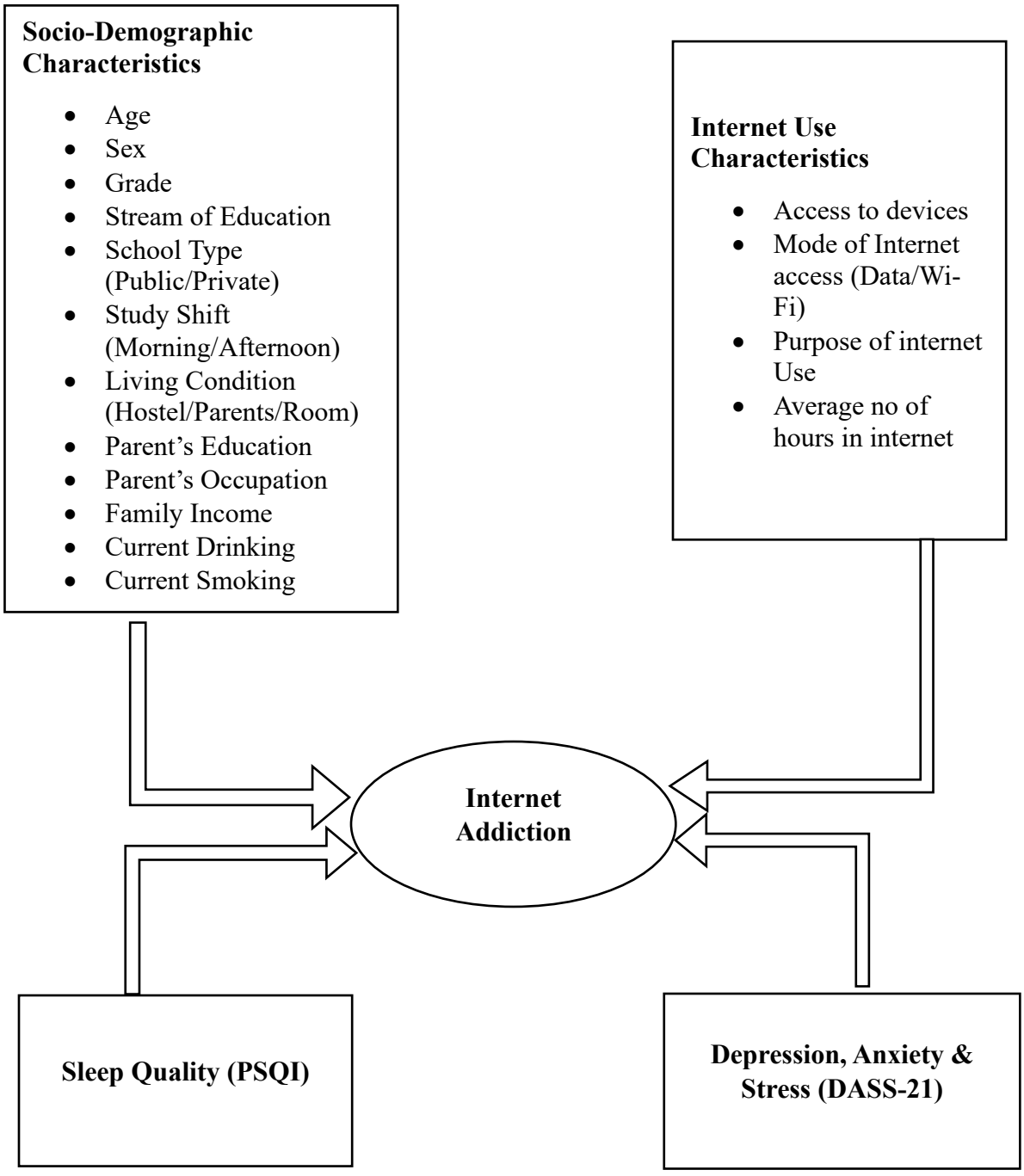

Figure 1: Conceptual Framework

1.8 Operational Definition

Internet Addiction: Internet addiction is a compulsive behavior pattern involving excessive internet use that can significantly impairs a person's everyday functioning, health, relationships, and general well-being. It is characterized by a failure to minimize use and a disregard for personal relationships and responsibilities (31). Internet Addiction Test (IAT) was used to access internet addiction (29).

Secondary Level School Adolescents: It comprises of adolescents of grade 11 and 12 enrolled in the respective school.

Education: It comprises of categories where primary means class 1-8 and secondary means class 8-12.

Living Condition: It refers either of living in rent, in hostel or at own house.

Stream of Education: It refers any of Science, Management or Humanities students are enrolled to.

School Type: It is characterized as either public or private establishment.

Purpose of Use: It refers to most common activity in which respondents engage like social networking, online gaming, entertainment, educational purposes.

Current Smokers: One who had used any type of smoking products or smokeless products at least once during previous month.

Current drinkers: One who had consumed any type of alcohol at least once during previous month.

Sleep Quality: It is individual's self-satisfaction with different aspects of sleep. This was measured by using Pittsburg Sleep Quality Index (PSQI) that is a 19 items self-reported tool that assess sleep quality and disturbances over the past month(32).

Mental Health: Depression, Anxiety and Stress were assessed as components of mental health using DASS-21 scale(33)

CHAPTER II: LITERATURE REVIEW

2.1 Objective of literature review

The major objective of literature review is to explore the existing studies for various factors that would act as determinants for internet addiction.

2.2 Method of literature review

Literature search was done primarily through the use of electronic resources, especially Pub Med and Google Scholar. The search term used for literature review were “internet addiction”, “internet”, “addiction”, “digital addiction”, “internet and adolescents”, etc. Also, researchers related to published articles were contacted and necessary suggestions and support was obtained. This study has been prepared with the help of some of literatures mentioned below in summarized manner.

2.3 Literature Review

Global Context

A study conducted among 420 school adolescents in Malaysia revealed that about 45.5% of the respondents to be internet addict. Age, smartphone usage, frequency and duration of device usage and presence of depression, anxiety and stress were significantly associated with internet addiction. Multivariable logistic regression further showed that age (aOR=3.52), mild to moderate depression (aOR=2.43), severe or extremely severe stress (aOR=6.41) were significantly related to internet addiction (8)

Research conducted in Iran among 417 high school students found 27.6% of students had mild addiction to internet while 2.9% were severely addicted to internet. Similarly, the mean scores of depressions, anxiety and stress were significantly higher among internet addict students than normal internet users ($p<0.05$) (34).

A study done among Hungarian high school students (2021) revealed around 20% of students were addicted to internet with significant association of internet addiction with age, living arrangement (living without parents), alcohol use, drug intake and musculoskeletal disorders (35).

A study conducted in Peru (2023) has found that among 505 high school students, 25.4% of them presented mild to moderate internet addiction. Simple regression analysis showed

that internet addiction and depressive symptoms were significantly related. Multivariable analysis later revealed 2.96 odds of higher anxiety in students with severe internet addiction (36).

A study conducted among 1487 students in high schools of Turkey found that about 61% of the students had poor sleep quality with significant relationship between poor sleep quality and higher internet addiction scores ($p<0.01$). There was significant correlation between internet addiction score and all components of sleep quality as well as PSQI total score (3).

A meta-analytic review (2025) using 33 studies and involving 303,243 participants found that internet addiction is positively correlated with aggressiveness ($r_+=0.391$), depression ($r_+=0.318$) and suicidal behavior ($r_+=0.264$) while also showing negative association of internet addiction with self-esteem and psychological well-being (37)

A study done in China (2024) among 1188 senior high and junior high schools revealed that social anxiety significantly relates to internet addiction (beta=0.267) highlighting that adolescents with social anxiety may prefer being online to avoid real world (38).

South Asian Context

A study conducted among 1342 school students in Colombo, Sri Lanka (2023) reported a 17.2% prevalence of internet addiction. Being male, excessive use of social media, unemployed mother, excessive internet gaming, excessive usage per day for non-academic activities were some of the factors that were significantly associated with internet addiction (39).

South Asian nations have the highest mean prevalence of internet addiction, according to a study that compared 150 articles from those nations. The study further suggests combination of psychotherapy and pharmacological interventions to manage student behavior before the problem escalates (40).

A mixed method study done in Bhutan (2019) reported 34.44% prevalence of internet addiction among secondary level students. The study found an association between internet addiction and anxiety and depression. Qualitative analysis revealed that boredom,

stress/anxiety, and peer pressure were triggers linked to internet addiction. Further, internet addiction affected academic performance, sleep and social interactions (41).

An investigation in India among 540 high school students (2021) recorded 23.88% of students were internet addict. Non-academic purposes of surfing like movies/TV, online gaming, social networking, chat rooms, etc. were significantly associated with internet addiction. The study also found a significant negative correlation (r=-0.22) between internet addiction and marks obtained in board examinations (42).

An 80.7% prevalence of internet addiction was found in a school-based cross-sectional study of 440 students enrolled in higher secondary schools in Assam, India. The study further revealed a significant association between internet addiction and stress, depression and anxiety concluding on emphasis on early intervention (43).

Local Context

A study conducted in secondary level school students in Budhanilkantha (2024) among 376 students showed prevalence of internet addiction to be 51.1%. Multivariable analysis showed living situation, average hours of online per day, severe depression and insomnia was significantly associated with internet addiction (29).

A study done to assess internet addiction prevalence among secondary level students in Syanjha (2022) reported prevalence of internet addiction to be 46.1%. Among students, internet addiction was significantly associated with living with family (AOR 5.183), using the internet for more than two hours (AOR 2.91), and being male (AOR 1.833) (44).

An early study among higher secondary students in Kathmandu district (2018) reported that 34.35% of students were possible addicts. The internet addiction was statistically significant with sex, loneliness at home and relationship with classmates of the students (28).

About 80% of students in a cross-sectional study of 169 secondary school students in Bharatpur were internet addicts, with the majority having moderate to low levels of addiction. Sex, Grade, Faculty/Stream, purpose of use of internet, family relationship, average internet use per day were seen significantly associated with internet addiction (45).

CHAPTER III: METHODOLOGY

3.1 Research method

Quantitative method was applied in this study.

3.2 Research design:

Cross-sectional study design was used.

3.3 Study site:

The study was conducted in secondary level students of Urlabari Municipality, Morang. The municipality represents mix of peri-urban and semi-urban areas as well as has sufficient number of schools (with catchment to neighboring municipalities) that helps with better representation for the study.

3.4 Study population:

Students of grade 11 and 12 were included in the study.

3.5 Sampling method/ technique

Two-stage cluster sampling technique was used. According to Urlabari municipality office, there were 18 secondary schools in Urlabari Municipality. At first, 6 schools among them were selected randomly using lottery method. For each selected schools, sample size was decided through proportional allocation. Then, information regarding students was obtained from school authority. The classes and sections were listed and were selected randomly from each schools regardless of faculty until the required sample size for respective school was obtained. Everyone from the selected classes were included in the study.

Table 1: Distribution of Samples taken from different schools

S.N.	Name of School	No. of students selected
1	Shree Sunpakuwa Secondary School	47
2	Shree Radhika Secondary School	173
3	Urlabari Campus	56
4	Pashupati Awasiya Ma Vi	124
5	Morang Model Residential Secondary School	65
6	Sungabha Awasiya Ma Vi	99

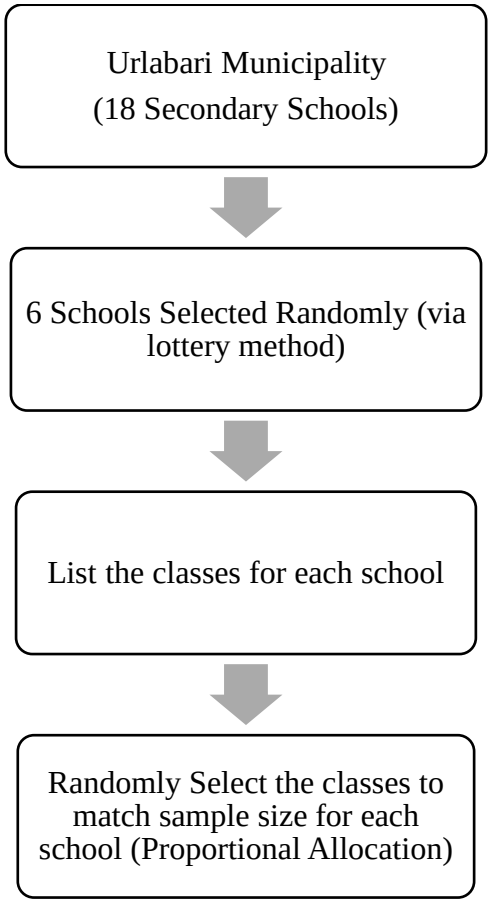

Figure 2: Sampling Process

3.6 Sample size:

The sample size for the study was calculated using Cochran's formula (1993)(46).

$$n = \frac{z^2 pq}{d^2}$$

And for the calculation we took 95% confidence interval with 5% allowable error.

Where, z= Standard normal deviation

i.e. 1.96 for 95% confidence interval

According to a study "Internet addiction prevalence and associated factors among secondary- level private school students in urban Nepal: a cross- sectional study", internet addiction prevalence was found to be 51.1% (29).

So, Using the formula,

$n_o = \frac{1.96^2 * 0.51 * 0.49}{0.05^2} \approx 384$

For finite population, N = 2570,

$n = \frac{n_o}{1 + \frac{n_o}{N}} \approx 335$

Adding design effect 1.5,

n = 335*1.5 ≈ 503

Adding 10% non-response rate,

n ≈ 554

Thus, total sample size required was 554.

3.7 Study period:

Study period was for around 1 year. Data collection period was of around two weeks from 2025/12/21 to 2026/01/01.

3.8 Sampling unit

Classes were the sampling units and individual students were unit of analysis for this study.

3.9 Criteria for sample selection

Inclusion criteria

- Students of grade 11 and 12 up to 19 years of age.

Exclusion criteria

- Students who didn't return consent form from their parents.
- Students absent on the day of data collection.

3.10 Data collection technique

The data was collected using the self-administered questionnaire, after taking the informed consent from parents and assent from the participants. Selected schools were visited two days prior and informed consent form was distributed to participants for their parent's consent. They were asked to return the consent form. Among the students present at the time of consent form distribution, all students submitted the signed consent forms on the subsequent day. Upon returning the form, they were oriented about ways of filling questionnaire. The data was collected from them on the same day. The questionnaire was presented in both English and Nepali for easy understanding. All distributed questionnaires were returned and checked for completeness at the time of data collection. However, responses from participants of age 20 years and above were excluded in data entry as they did not meet inclusion criteria.

3.11 Data collection Tool

Youngs Internet Addiction Test (IAT), Pittsburg Sleep Quality Index (PSQI) and Depression, Anxiety and Stress Scale (DASS-21) tools was used for measuring internet addiction, sleep quality and mental health respectively. Data on other variables were gathered using a semi-structured questionnaire.

Young's Internet Addiction Test (IAT)

The Internet Addiction Test (IAT) by Dr. Kimberly Young (1998), is a 20-item self-reported tool designed to access the problematic internet use/internet addiction A five-point Likert scale is used to rate each item. The cutoff points are established and categorizes into Normal (≤30), Mild (31-49), Moderate (50-79) and Severe (80-100). Further categorization

was done. Normal was categorized as absent and other was categorized as present for internet addiction (44).

Pittsburg Sleep Quality Index (PSQI)

Pittsburg Sleep Quality Index (PSQI), developed by Buysse (1989), is a 19 items self-reported tool that assess sleep quality and disturbances over the past month. Data is produced in seven component scores-

- Subjective sleep quality
- Sleep latency
- Sleep duration
- Habitual sleep efficiency
- Sleep disturbances
- Use of sleep medication
- Daytime dysfunction

These components are summed to yield total score from 0 to 21. Score ≤ 5 is considered good sleep quality while score >5 indicates poor sleep quality(32).

DASS-21 Scale

The Depression, Anxiety and Stress Scale – 21 (DASS-21) is a self-reported questionnaire (developed by Lovibond and Lovibond 1995) designed to measure the emotional states of depression, anxiety and stress. It is a 21 items structure, divided equally into 3 subscales (7 for each). Each item is rated on a 4-point Likert scale which ranges from 0 i.e. “did not apply to me at all” to 3 i.e. “applied to me very much”. Scores for DAS was calculated by summing the scores for each item and was multiplied by 2. For this study,

Depression had score categorized as Normal (0-9), Mild (10-13), Moderate (14-20), Severe (21-27) and Extremely Severe (≥28). Further, it was categorized as Absent for normal and Present for others. Anxiety had score categorized as Normal (0-7), Mild (8-9), Moderate (10-14), Severe (15-19) and Extremely Severe (≥20). Further, it was categorized as Absent for normal and Present for others. Stress had score categorized as Normal (0-14), Mild (15-

18), Moderate (19-25), Severe (26-33) and Extremely Severe (≥34). Further, it was categorized as Absent for normal and Present for others (33).

3.12 Data processing and analysis

Data was entered and analyzed in SPSS v23 software.

Descriptive statistics (frequency, percentage, mean, standard deviation) was used to summarize the data. Categorization of variables like sleep quality, depression, anxiety, stress and internet addiction was done based on standard cutoff value.

Bivariate analysis (chi-square test) was conducted to explore associations between internet addiction and independent variables. A p-value<0.05 was considered significant. However, variables with p-value < 0.25 were entered into multivariable regression analysis(47).

Multivariable Logistic regression was used to examine factors associated with presence of internet addiction. P-value < 0.05 was considered statistically significant in multivariable regression analysis. Adjusted Odds Ratio (AOR) was calculated with 95% confidence interval to determine the strength of association.

Multicollinearity among the independent variables was assessed using Variance Inflation Factor (VIF) and tolerance values. Variables with VIF<5 and tolerance > 0.2 were considered for further analysis. Model fitness was tested using Hosmer-Lemeshow goodness-of-fit and Omnibus test of model coefficients.

3.13 Validity and Reliability

Validated standard tools was used to access sleep quality, internet addiction and depression, anxiety and stress. Young's internet addiction test exhibited good internal consistency (α=0.9), DASS-21 had good internal consistency (α = 0.81, 0.89, 0.78) and Pittsburg Sleep Quality Index (PSQI) also had good internal consistency (α=0.76) in the previous studies(29,32). Further, validity of tool was ensured by literature review and consultation with subject expert.

Pilot testing was done in a secondary school of Pathari Municipality among 10% of the samples. Cronbach alpha values was calculated for DASS-21 which was 0.87, 0.84 and

0.85 for depression, anxiety and stress respectively. Internet addiction test (IAT) also had good internal consistency (α=0.85).

3.14 Ethical consideration:

Ethical approval was obtained from Institutional Review Committee (IRC) of Institute of Medicine (IOM) on September 21, 2025 (ref:183/082/083). Approval was obtained from municipality office. Necessary permission was taken from respective schools. Informed consent and assent were taken from parents and students prior to study. The purpose and process of the study was clearly explained to the participants before data collection. Personal identifiers were not collected and privacy and confidentiality of participants was assured and maintained. Participants were informed of their right to deny participation or withdraw from study at any stage of data collection.

CHAPTER IV: FINDINGS

The main objective of the study was to assess the internet addiction and its associated factors among secondary level students of Urlabari, Nepal for which 564 samples were collected and analyzed. The research findings have been presented in this chapter in five parts:

- Socio-Demographic Characteristics
- Internet Related Characteristics
- Sleep Quality
- Depression, Anxiety and Stress (DASS)
- Internet Addiction
- Bivariate Analysis
- Multivariable Analysis

4.1 Descriptive Statistics

4.1.1 Socio-Demographic Variables

Table no. 1 below represents the general overview of socio-demographic characteristics of the students. The mean age of the students was 17.17 years. More than half of students were female. Most of the students were enrolled in either science or management stream (91.3%). Most of the students (91.5%) attended morning shift classes. Parents of majority of the students had secondary level of education. Furthermore, more than half of the students belonged to family with monthly income greater than 50000.

Table 2: Distribution of Socio-Demographic Characteristics among secondary level students (n=564)

Characteristics	Frequency	Percentage (%)
Age (Years)		
≤16	141	25
>16	423	75
Mean ± SD = 17.15 ± 0.926	***Min/Max= 14/19***	
Sex		
Male	238	42.2
Female	326	57.8
Grade		
Garde 11	261	46.3
Grade 12	303	53.7
Stream		
Science	265	47
Management	250	44.3
Education	49	8.7
School Type		
Public	276	48.9
Private	288	51.1
Study Shift		
Morning	516	91.5
Afternoon	48	8.5
Current Living Arrangement		
Home/With Parents	492	87.2
With Relatives	36	6.4
Rent/Room	34	6
Hostel	2	0.4
Father's Education (n=562)		
Illiterate	16	2.8
Can read and write Nepali	118	21
Primary	128	22.8
Secondary	238	42.3
Bachelor and above	62	11.0

Characteristics	Frequency	Percentage (%)
Mother's Education (n=563)		
Illiterate	31	5.5
Can read and write Nepali	166	29.5
Primary	145	25.8
Secondary	188	33.4
Bachelor and above	33	5.9
Father's Occupation (n=562)		
Foreign Employment	191	34
Agriculture	165	29.4
Business	127	22.6
Service	52	9.3
Unemployed	2	0.3
Others	25	4.4
Mother's Occupation (n=563)		
Homemaker	293	52
Agriculture	130	23.1
Business	60	10.7
Foreign Employment	36	6.4
Service	31	5.5
Others	13	2.3
Monthly Family Income		
<50000	224	39.7
≥50000	340	60.3
Median (IQR) =50000 (42000)	***Min/Max=10000/250000***	
Smoked in Last 30 Days		
Yes	57	10.1
No	507	89.9
Drunk Alcohol in Last 30 Days		
Yes	55	9.8
No	509	90.2

4.1.2 Internet Related Characteristics

Table no. 2 represents the internet related characteristics of secondary level students of Urlabari, Nepal. All of the students had access to internet services. Majority (90.2%) of students used two or less than two devices to access internet. About 43% of students had entertainment as main purpose for internet use followed by education (29.8%). Almost all of the students (94.3%) had average screen time of 2 hours or more per day.

Table 3: Distribution of Internet Related Characteristics among secondary level students (n=564)

Characteristics	Frequency	Percentage
Number of Personal Device		
≤2	523	92.7
>2	41	7.3
Mode of Access to Internet		
Mobile Data	11	2
Wi-Fi	326	57.8
Both	227	40.2
Main Purpose of Internet Use		
Entertainment	243	43.1
Education	168	29.8
Social Networking	102	18.1
Online Gaming	51	9.0
Average Screen Time		
<2	32	5.7
≥2	532	94.3

4.1.3 Sleep Quality

Table no. 3 represents the sleep quality and its components of secondary level students of Urlabari, Nepal. About one third (30.5%) of students had poor quality of sleep.

Table 4: Distribution of Sleep Quality among secondary level students (n=564)

Characteristics	Frequency	Percentage
Good Sleep Quality	392	69.5
Poor Sleep Quality	172	30.5

Global PSQI Score: Median (IQR)= 4 (3) ***Min/Max= 0/16***

4.1.4 Depression, Anxiety and Stress (DASS-21)

Table no. 4 represents the levels of depression, anxiety and stress among secondary level students of Urlabari, Nepal. About half of students fell in normal category for depression (54.8%) and anxiety (49.6%) while other half reported some sorts of depressive or anxiety, ranging from mild to extremely severe. Meanwhile, about one-third of the students (30.3%) reported experiencing stress symptoms, ranging from mild to extremely severe.

Table 5: Distribution of Depression, Anxiety and Stress related characteristics among secondary level students (n=564)

Characteristics	Frequency	Percentage
Depression		
Normal	309	54.8
Mild	87	15.4
Moderate	88	15.6
Severe	35	6.2
Extremely Severe	45	8.0
Median (IQR) = 8 (12)	***Min/Max = 0/42***	
Anxiety		
Normal	280	49.6
Mild	44	7.8
Moderate	115	20.4
Severe	41	7.3
Extremely Severe	84	14.9
Median (IQR) = 9 (12)	***Min/Max = 0/42***	
Stress		
Normal	393	69.7
Mild	61	10.8
Moderate	60	10.6
Severe	39	6.9
Extremely Severe	11	2.0
Median (IQR) = 10 (13)	***Min/Max = 0/42***	

4.1.5 Internet Addiction

Table no. 5 represents the level of internet addiction among secondary level students of Urlabari, Nepal. More than half (57.3%) of students had normal level for internet addiction. Other students reported experiencing different levels of addiction.

Table 6: Distribution of Internet Addiction Related Characteristics among secondary level students (n=564)

Characteristics	Frequency	Percentage
Internet Addiction		
Normal	323	57.3
Mild	161	28.5
Moderate	78	13.8
Severe	2	0.4
Median (IQR) = 27 (23)	***Min/Max = 0/82***	

4.2 Bivariate Analysis

4.2.1 Association between internet addiction and socio-demographic variables

Table no. 6 represents the association between internet addiction and socio-demographic variables. Significant association was seen between faculty/stream, school type and drinking alcohol with internet addiction.

Table 7: Association between internet addiction and socio-demographic variables

Variables	Internet Addiction		χ^2 Value	p-value
	Normal (%)	Addicted (%)		
Age				
≤16	84 (59.6)	57 (40.4)	0.408	0.553
>16	239 (56.5)	184 (43.5)		
Sex				
Male	127 (53.4)	111 (46.6)	2.570	0.109
Female	196 (60.1)	130 (39.9)		
Grade				
Grade 11	151 (57.9)	110 (42.1)	0.068	0.794
Grade 12	172 (56.8)	131 (43.2)		
Stream				
Science	140 (52.8)	125 (47.2)	4.026	**0.045***
Management/Education	183 (61.2)	116 (38.8)		
School Type				
Public	180 (65.2)	96 (34.8)	13.952	**<0.001***
Private	143 (49.7)	145 (50.3)		
Study Shift				
Afternoon	32 (66.7)	16 (33.3)	1.893	0.169
Morning	291 (56.4)	225 (43.6)		
Living Arrangement				
Home	286 (58.1)	206 (41.9)	1.166	0.280
With Friends/Relatives	37 (51.4)	35 (48.6)		

** Significant association (by applying Pearson Chi Square Test at 5% level of significance)*

Variables	Internet Addiction		χ^2 Value	p-value
	Normal (%)	Addicted (%)		
Father's Education				
Illiterate	10 (62.5%)	6 (37.5)	0.581	0.965
Can read and write	69 (58.5)	49 (41.5)		
Primary	75 (58.6)	53 (41.4)		
Secondary	134 (56.3)	104 (43.7)		
Bachelor and above	34 (54.8)	28 (45.2)		
Mother's Education				
Illiterate	21 (67.7)	10 (32.3)	3.324	0.505
Can read and write	89 (53.6)	77 (46.4)		
Primary	80 (55.2)	65 (44.8)		
Secondary	113 (60.1)	75 (39.9)		
Bachelor and above	20 (60.6)	13 (39.4)		
Parent's Occupation				
Only one of Parents Employed	159 (53.9)	136 (46.1)	2.872	0.090
Both Parents are Employed	164 (61)	105 (39)		
Monthly Family Income				
<50000	137 (61.2)	87 (38.8)	2.299	0.140
≥50000	186 (54.7)	154 (45.3)		
Smoking				
Yes	26 (45.6)	31 (54.4)	3.520	0.061
No	297 (58.6)	210 (41.4)		
Drinking				
Yes	24 (43.6)	31 (56.4)	4.629	**0.031***
No	299 (58.7)	210 (41.3)		

** Significant association (by applying Pearson Chi Square Test at 5% level of significance)*

4.2.2 Association between internet addiction and internet related characteristics

Table no. 7 below shows the association between internet addiction and internet related variables. Mode of internet access, main purpose of internet use and average screen time per day (in hours) showed significant association with internet addiction.

Table 8: Association between internet addiction and internet related characteristics

Variables	Internet Addiction		χ^2 Value	p-value
	Normal (%)	Addicted (%)		
Number of Personal Devices				
<=2	303 (57.9)	220 (42.1)	1.302	0.254
>2	20 (48.8)	21 (51.2)		
Mode of Internet Access				
Either Mobile Data or Wi-Fi only	209 (62)	128 (38)	7.714	**0.005***
Both Mobile Data and Wi-Fi	114 (50.2)	113 (49.8)		
Main Purpose of Internet Use				
Education	114 (67.9)	54 (32.1)	12.036	**0.007***
Social Networking	58 (56.9)	44 (43.1)		
Entertainment	126 (51.9)	117 (48.1)		
Online Gaming	25 (49)	26 (51)		
Average Screen Time/Day (Hours)				
<2	25 (78.1)	7 (21.9)	6.030	**0.016***
≥2	298 (56.0)	234 (44.0)		

** Significant association (by applying Pearson Chi Square Test at 5% level of significance)*

4.2.3 Association between internet addiction and Sleep Quality

Table no. 8 shows the association between internet addiction and sleep quality. Sleep quality was seen significantly associated with internet addiction.

Table 9: Association between internet addiction and Sleep Quality

Variables	Internet Addiction		χ^2 Value	p-value
	Normal (%)	Addicted (%)		
Sleep Quality				
Good Sleep Quality	263 (67.1)	129 (32.9)	50.676	**<0.001***
Poor Sleep Quality	60 (34.9)	112 (65.1)		

** Significant association (by applying Pearson Chi Square Test at 5% level of significance)*

4.2.4 Association between internet addiction and Depression, Anxiety and Stress

Table no 9 shows the association between internet addiction and depression, anxiety and stress. Depression, anxiety and stress were seen significantly associated with internet addiction.

Table 10: Association between internet addiction and Depression, Anxiety and Stress

Variables		Internet Addiction		χ^2 Value	p-value
		Normal (%)	Addicted (%)		
Depression					
	Absent	215 (69.6)	94 (30.4)	42.319	**<0.001***
	Present	108 (42.4)	147 (57.6)		
Anxiety					
	Absent	199 (71.1)	81 (28.9)	43.285	**<0.001***
	Present	124 (43.7)	160 (56.3)		
Stress					
	Absent	262 (66.7)	131 (33.3)	46.774	**<0.001***
	Present	61 (35.7)	110 (64.3)		

** Significant association (by applying Pearson Chi Square Test at 5% level of significance)*

4.3 Multivariable Logistic Regression

The variables which were significant at 5% level of significance ($p<0.05$) in bivariate analysis along with variables at 20% level of significance were further analyzed using multivariable binary logistic regression. Variables with p value less than 0.25 ($p<0.25$) in the bivariable analysis were entered into the multivariable logistic regression to avoid exclusion of potentially important variables which may not have shown significant association in bivariable analysis(47). Multicollinearity of the variables were tested before entering into the multivariable analysis. The multicollinearity test revealed that there is no multicollinearity between independent variables.

Table 11: Multicollinearity Test of Independent Variables

Independent Variables	Tolerance	VIF
Sex	0.829	1.206
Faculty/Stream	0.557	1.794
School Type	0.541	1.847
Study Shift	0.652	1.534
Mother's Education	0.862	1.159
Parent's Occupation	0.946	1.057
Monthly Family Income	0.891	1.123
Smoking	0.642	1.557
Drinking Alcohol	0.620	1.612
Mode of Access to Internet	0.914	1.094
Main Purpose of Internet Use	0.888	1.126
Average Screen Time	0.920	1.087
Sleep Quality	0.805	1.242
Depression	0.550	1.818
Anxiety	0.628	1.592
Stress	0.565	1.771

The final model had Nagelkerke R^2 value of 0.292 showing that about 29.2% of the variation in internet addiction can be explained by the independent variables included in

the study. Also, the Hosmer-Lemeshow test ($p=0.094$) and Omnibus test ($p<0.001$) indicated a good model fit for further analysis.

The multivariable analysis revealed that students reading in private schools were 1.76 times more likely to be addicted to internet (AOR 1.765; 95% CI 1.040 to2.994) as compared to students reading in public schools. Likewise, students who majorly used internet for entertainment were about twice more likely to be addicted to internet (AOR 1.941; 95% CI 1.201 to 3.135) and those who used for online gaming were 2.5 times more likely to be addicted to internet (AOR 2.547; 95% CI 1.181-5.493) as compared to those who use internet for education.

Similarly, students with poor sleep quality were 2.6 times more likely to be internet addict (AOR 2.692; 95% CI 1.727-4.197) as compared to those who have good sleep quality. Students with anxiety (AOR 1.987; 95% CI 1.240-3.184) and stress (AOR 1.895; 95% CI 1.117-3.216) were almost twice as much addicted to internet than those who did not have any level of anxiety and stress.

Table 12: Multivariable Logistic Regression analysis of variables

	Internet addiction			
Variables	**COR (95% CI)**	**p-value**	**AOR (95% CI)**	**p-value***
Sex				
Female	Ref		Ref	
Male	1.318 (0.940-1.847)	0.109	1.517 (0.979-2.350)	0.062
Faculty/Stream				
Management/Education	Ref		Ref	
Science	1.409 (1.008-1.969)	**0.045***	1.517 (0.911-2.526)	0.062
School Type				
Public	Ref		Ref	
Private	1.901 (1.355-2.668)	**<0.001***	1.765 (1.040-2.994)	**0.035***
Study Shift				
Afternoon	Ref		Ref	
Morning	1.546 (0.828-2.889)	0.171	1.310 (0.549-3.126)	0.543
Mother's Education				
Illiterate	Ref		Ref	
Can read and write	1.817 (0.806-4.094)	0.150	1.520 (0.601-3.842)	0.337
Primary	1.706 (0.751-3.878)	0.202	1.181 (0.454-3.071)	0.733
Secondary	1.394 (0.622-3.126)	0.420	0.876 (0.337-2.276)	0.785
Bachelor and above	1.365 (0.489-3.812)	0.553	0.603 (0.180-2.022)	0.412

** Significant association at 5% level of significance*
 # Logistic regression model adjusted for all variables in the table.
AOR = Adjusted Odd's Ratio; COR= Crude Odd's Ratio; Ref= Reference Value

	Internet addiction			
Variables	**COR (95% CI)**	**p-value**	**AOR (95% CI)**	**p-value***
Parent's Occupation				
Only one of Parents Employed	Ref		Ref	
Both Parents Employed	0.749 (0.535-1.047)	0.090	0.850 (0.570-1.267)	0.424
Monthly Family Income				
<50000	Ref		Ref	
≥50000	1.304 (0.925-1.838)	0.130	1.108 (0.728-1.684)	0.633
Smoking				
No	Ref		Ref	
Yes	1.686 (0.973-2.924)	0.063	0.971 (0.450-2.097)	0.941
Drinking				
No	Ref		Ref	
Yes	1.839 (1.049-3.224)	**0.033***	0.756 (0.344-1.662)	0.487
Main Purpose of Internet Use				
Education	Ref		Ref	
Social Networking	1.602 (0.963-2.662)	0.069	1.525 (0.835-2.786)	0.170
Entertainment	1.960 (1.301-2.954)	**0.011***	1.941 (1.201-3.135)	**0.007***
Online Gaming	2.196 (1.161-4.153)	**0.016***	2.547 (1.181-5.493)	**0.017***
Average Screen Time(hours/day)				
<2	Ref		Ref	
≥2	2.804 (1.192-6.597)	**0.018***	2.499 (0.894-6.984)	0.081

** Significant association at 5% level of significance*

 # Logistic regression model adjusted for all variables in the table.

AOR = Adjusted Odd's Ratio; COR= Crude Odd's Ratio; Ref= Reference Value

	Internet addiction			
Variables	**COR (95% CI)**	**p-value**	**AOR (95% CI)**	**p-value***
Sleep Quality				
Good Sleep Quality	Ref		Ref	
Poor Sleep Quality	3.806 (2.608-5.553)	**<0.001***	2.692 (1.727-4.197)	**<0.001***
Depression				
Absent	Ref		Ref	
Present	3.113 (2.200-4.405)	**<0.001***	1.615 (0.979-2.664)	0.060
Anxiety				
Absent	Ref		Ref	
Present	3.176 (2.236-4.493)	**<0.001***	1.987 (1.240-3.184)	**0.004***
Stress				
Absent	Ref		Ref	
Present	3.607 (2.475-5.256)	**<0.001***	1.895 (1.117-3.216)	**0.018***

***** *Statistically significant at p<0.05.*

 # Logistic regression model adjusted for all variables in the table.

AOR = Adjusted Odd's Ratio; COR= Crude Odd's Ratio; Ref= Reference Value

Based on multivariable analysis, the regression model obtained for predictors of internet addiction was based upon the given equation;

Log[y/x] = b0 + b1x1 + b2x2 + ……. + bnxn, and expressed as;

Log [odds of predictors of internet addiction] = -3.402 + 0.570(School Type) + 0.662(Main Purpose Entertainment) + 0.937 (Main Purpose Online Gaming) + 0.993(Sleep Quality) + 0.686(Anxiety) + 0.639 (Stress)

CHAPTER V: DISCUSSION

This study investigated the prevalence of internet addiction and its associated factor among secondary level students of Urlabari, Morang. The internet addiction prevalence was found to be 42.7%. Further multivariable analysis showed school type, main purpose of internet use, poor sleep quality, anxiety and stress to be significantly associated with internet addiction. The findings have been discussed below in comparison to different related literatures.

Prevalence of Internet Addiction

The study found out the prevalence of internet addiction among secondary level students to be 42.7%. This indicates that out of five students nearly two were affected. This finding is consistent with the findings from other study from Nepal like Syanjha (56.1%) and Budhanilkantha (51.1%) (29,44). The prevalence may be result of increasing penetration of and access to internet services at much affordable rates over the past few years. Bhutan too has comparable results (34.4%) (41). These results indicate that there is increased access to Internet in South Asian region as well.

However, lower prevalence rate has been reported in studies from Iran and Peru (34,36). These discrepancies in the prevalence of internet addiction could be explained by variations in the study period, internet accessibility, parental supervision, or the cutoff value used to characterize internet addiction.

Depression, Anxiety and Stress and Internet Addiction

This study showed higher rates of Depression (45.2%), Anxiety (50.4%) and Stress (30.3%). In the multivariable analysis, anxiety and stress were significantly associated with internet addiction while depression lost its statistical significance after adjusting for other variables. Similar kind of associations can be observed in studies done in Nepal and other South Asian countries. Study done in Budhanilakantha has shown severe depression to increase risk of internet addiction by almost thrice (29). Similarly, loneliness was also seen associated with internet addiction in a study done in Kathmandu (28). The findings are consistent with findings from South Asian regions like Bhutan and India which showed Depression, anxiety and stress to be associated with internet addiction (41,43).

Similar association between psychological distress and internet addiction can be seen reported by study done in Malasia and Peru. The overall prevalence of Depression, Anxiety and Stress were 38.4%, 45% and 35.2% respectively in Malasia with significant association between depression and stress levels with internet addiction in the multivariable model. Similarly, study from Peru has shown significant relationship of depression and anxiety with internet addiction (8,36). Another meta-analysis also reported positive correlation between depression and internet addiction (48)

The loss of significance of depression in multivariable model is may be due to overlapping of psychological constructs. Since, depression, anxiety and stress are interrelated, entering all of them simultaneously into a regression model may have caused the change in significance level. The findings however emphasize further research into relationship between psychological constructs and internet addiction.

Sleep Quality and Internet Addiction

Sleep quality was found to be significantly associated to internet addiction among students. Students with poor sleep quality were more likely to be addicted to the internet than those with good sleep quality.

This finding is consistent with study done in Nepal where insomnia was seen significantly associated with internet addiction (29). Similarly, study done in Turkey has also established a significant relationship between global sleep score and internet addiction. Furthermore, all the components of PSQI were statistically significantly related to internet addiction (3). The association may be present because poor sleep may lead to more hours of time spent in high-stimulation activity like being online to mask the feeling of boredom.

Socio-Demographic Variables and Internet Addiction

There was significant association found between school type and purpose of internet use (for entertainment and online gaming) and internet addiction in this study. Similar findings can be found in study done in Nepal, India and Sri Lanka where use of internet for non-academic purposes, especially internet gaming, was associated with internet addiction (39,42,45). Entertainment oriented use of internet may increase risk of habitual and excessive use. Similarly, higher proportion of internet addiction among students of private

school may be due to higher accessibility of internet and devices to use the internet which may correlate to socio-economic conditions.

In contrast, Study from Nepal have also suggested average hours of use per day, living arrangements, sex, grade, stream as significantly associated with internet addiction but multivariable analysis done in this study doesn't establish such relationships with these socio-demographic variables (28,29,44,45). Also, the study from Sri Lanka has identified sex, unemployment status of mother to be associated to internet addiction while this study doesn't show such relation (39). These inconsistencies may be due to difference in patterns of internet use, urban-rural context or timings of schools in which they operate.

CHAPTER VI: CONCLUSION AND RECOMMENDATION

6.1 Conclusion

This study found a higher level of internet addiction among secondary level students of Urlabari municipality, Nepal. The majority of students spent more than two hours a day on screens on average. Around a third of students experienced poor sleep quality. Additionally, students showed to have higher levels of stress, anxiety, and depression.

The study found that a number of factors, such as the type of school, the primary reason for using the internet, poor sleep quality, anxiety, and stress, were significantly associated with internet addiction in multivariable analysis. Other variables did not exhibit a significant association during multivariable analysis, although having a significant relationship in bivariate analysis.

Since internet addiction is linked factors including sleep quality and psychological distress, particularly anxiety and distress, it indicates that the issue should not be overlooked. The findings underscored that psychological distress, poor sleep quality can be key targets for intervention along with promoting balanced internet-use for internet addiction.

6.2 Limitations of study

- The study relies on self-reported data, which may be subject to response bias or temporary emotional states.
- The cross-sectional nature of the study limits the ability to infer cause-and-effect relationships.

6.3 Recommendations

- Developing an educational program to increase awareness about appropriate use of internet and its possible negative consequences as well as its association with psychological risks and sleep quality.
- The educational programs should target adolescents as well as parents and teachers focusing on internet use, supervision and balanced device use and should target private schools too.

- Another issue highlighted in this study was sleep quality and mental health. Regular screening and counselling programs on sleep hygiene, stress and anxiety management can help address the problems.
- Since this is only a cross-sectional study, further longitudinal study is required to access the causal factors of internet addiction and develop mechanism of relation with psychological risks and sleep quality.

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ANNEXES

Annex I: Budget Framework

S.N.	Budget Head	Justification	Unit	Rate	Total (NRs)	Fund Source
1	Stationaries	Questionnaire printing and Informed Consent form	570	20	11400	Self
2	Report Preparation	Dissemination of Findings	5	1000	5000	Self
3	Miscellaneous				4000	Self
Total					**NRs. 20400**	

Annex II: Action Plan

Major Activities	2082										2083	
	Ashad	Shrawan	Bhadra	Ashoj	Kartik	Mangsir	Poush	Magh	Falgun	Chaitra	Baishak	Jestha
Problem Identification	■											
Literature Review	■	■	■	■	■	■	■	■	■	■	■	■
Proposal Development/Finalization		■	■									
Ethical Clearence from IRC				■								
Pretesting of Tools					■							
Data Collection							■					
Data Entry and Analysis							■	■	■			
Draft Preparation of report									■			
Final Preparation of Report									■	■	■	■
Report Submission												■

Annex III: Participants Information Sheet

PARTICIPANT INFORMATION SHEET

Title of the Study:

Internet Addiction and its Associated Factors among Secondary Level Students of Urlabari Municipality, Nepal

About the Study

The internet is widely used today, but too much use may affect health, sleep, studies, and mental wellbeing. This study aims to find out how common internet addiction is among secondary-level students in Urlabari Municipality and what factors are linked with it. You have been invited because you are a student in Grade 11 or 12, and your participation will provide valuable information.

Your participation is completely voluntary. You may choose not to take part, or to stop at any time. If you agree, your parents/guardians will provide written consent and you will be asked for your agreement (assent). You will then be given a self-administered questionnaire to complete during school hours.

There are no physical risks in this study. Some questions may make you reflect on your internet use or feelings. While there may be no direct personal benefit, your participation will help generate important information that can guide awareness programs and support for students.

All information will be kept strictly confidential. The findings will be presented at the Central Department of Public Health, shared with schools and local authorities, and may be published in journals. Individual participants will not be identified in any report.

This research is conducted by a Master of Public Health student at the Central Department of Public Health, IOM. The study is self-funded and has been approved by the Institutional Review Committee (IRC) of IOM.

For further information, you may contact:

Researcher: Dhiraj Dhungana

Central Department of Public Health, IOM, TU,

Phone: 9862185695

अनुसन्धान सहभागी जानकारी पत्र

अध्ययनको शीर्षक:

Internet Addiction and its Associated Factors among Secondary Level Students of Urlabari Municipality, Nepal

अध्ययनको बारेमा:

इन्टरनेट आजकाल व्यापक रूपमा प्रयोग हुन्छ, तर यसको अत्यधिक प्रयोगले स्वास्थ्य, निद्रा, अध्ययन र मानसिक स्वास्थ्यमा असर गर्न सक्छ। यस अध्ययनले उर्लाबारी नगरपालिकाका माध्यमिक तहका विद्यार्थीहरूमा इन्टरनेट प्रयोग कति सामान्य छ वा छैन र यससँग के–के कुरा सम्बन्धित छन् भनेर पत्ता लगाउन खोजिएको छ। तपाईं ११ वा १२ कक्षाका विद्यार्थी भएको कारण यस अध्ययनमा सहभागी हुन आमन्त्रण गरिएको हो। तपाईंको सहभागिताले महत्वपूर्ण जानकारी उपलब्ध गराउनेछ।

तपाईंको सहभागिता पूर्ण रूपमा स्वेच्छिक हुनेछ। तपाईं चाहनु भएमा सहभागी नहुन वा कुनै पनि समयमा सहभागिता रोकिन सक्नुहुन्छ। यदि तपाईं सहभागी हुन सहमत हुनुहुन्छ भने, तपाईंका अभिभावक/अभिभाविकाबाट लिखित सहमति लिइनेछ र तपाईंको सहमति (assent) पनि मागिनेछ। त्यसपछि तपाईंलाई विद्यालयमा नै आफैंले भरिने प्रश्नावली दिइनेछ।

यस अध्ययनमा कुनै शारीरिक जोखिम छैन। तर, केही प्रश्नहरूले तपाईंलाई आफ्नो इन्टरनेट प्रयोग वा भावनाहरूलाई पुनर्विचार गर्न बाध्य बनाउन सक्छ। यस अध्ययनबाट तपाईंलाई प्रत्यक्ष व्यक्तिगत फाइदा नहुन सक्छ, तर तपाईंको सहभागिताले विद्यार्थीहरूका लागि सचेतना कार्यक्रम र सहयोग विकास गर्न महत्वपूर्ण जानकारी उपलब्ध गराउनेछ।

तपाईंले दिएका सबै जानकारी गोप्य राखिनेछ। अध्ययनका निष्कर्षहरू केन्द्रीय जनस्वास्थ्य विभागमा प्रस्तुत गरिनेछ, विद्यालय र स्थानीय निकायसँग साझेदारी गरिनेछ, र आवश्यक परेमा जर्नलहरूमा प्रकाशित गरिनेछ। कुनै पनि रिपोर्टमा व्यक्तिगत सहभागीलाई चिनिने छैन।

यो अनुसन्धान त्रिभुवन विश्वविद्यालय, आयुर्विज्ञान अध्ययन संस्थान (IOM), केन्द्रीय जनस्वास्थ्य विभागका स्नातकोत्तर (MPH) विद्यार्थीद्धारा सञ्चालन गरिएको हो। यो अध्ययन IOM को the Institutional Review Committee (IRC) बाट स्वीकृत गरिएको छ।

थप जानकारीका लागि सम्पर्क गर्न सकिने:

अनुसन्धानकर्ता: धिरज ढुंगाना

केन्द्रीय जनस्वास्थ्य विभाग, चिकित्सा बिज्ञान अध्ययन संस्थान, त्रिवि

फोन: ९८६२१८५६९५

Annex IV: Informed Consent Form

Internet Addiction and its associated factors among Secondary Level Students of Urlabari Municipality, Nepal

Central Department of Public Health, Tribhuvan University Teaching Hospital, Institute of Medicine, Maharajgunj, Kathmandu, Nepal

I, ……., legal guardian of …….. , hereby confirm that I have read and understood the information sheet and consent form for this research being conducted by Dhiraj Dhungana (MPH II Year) and have had the opportunity to ask questions about it.

I hereby declare that,

1. I understand that my child participation in the study is voluntary and that is free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected.
2. I understand that the researchers, the IRC and other regulatory authorities will not need my permission to look at my health records both in respect of the current study and any further research that may be conducted in relation to it, even if I withdraw from the trial. I agree to this access. However, I understand that my identity will not be revealed in any information that will be published or released to the third parties.
3. I agree not to restrict the use of any data or results that arise from this study provided that such use is only for scientific purpose(s).
4. I agree for my child to take part in this study.

Signature (or Thumb impression) of the Legal Guardian	**Signature (or Thumb impression) of Witness**
Signature : ……	Signature : ……
Name : ……	Name : ……
Date: ……	Date: ……

Investigator's

Signature: ……

Name: Dhiraj Dhungana

Date: ……

INFORMED CONSENT FORM IN NEPALI

सुसूचित मन्जुरीनामा

Internet Addiction and its associated factors among Secondary Level Students of Urlabari Municipality, Nepal

जनस्वास्थ्य केन्द्रीय बिभाग, त्रि.वि. शिक्षण अस्पताल, चिकित्सा शास्त्र अध्ययन संस्थान
महाराजगंज, काठमाडौं , नेपाल

म ……., ... को अबिभाबक धिरज ढुंगाना

(MPH II Year) ले गर्न लाग्नु भएको यस अनुसन्धान सम्बन्धि संलग्न 'जानकारी पत्र/पुस्तिका' पढेर, सुनेर र प्रश्नोत्तर समेत गरेर यो अध्ययन-अनुसन्धान सम्बन्धमा जानकारी प्राप्त भयो।

- यो अनुसन्धान कार्यमा मेरो सहभागिता मेरो व्यक्तिगत इच्छामा भर पर्ने र मैले चाहेको खण्डमा कुनै पनि बेला यो अनुसन्धान प्रक्रियाबाट बाहिरिन पाउने भन्ने कुरा मैले बुझेको छु। यसको लागि मैले कुनै कारण दिनु नपर्ने र त्यसबाट मैले पाउने सेवा र मेरो कानुनी अधिकारमा असर नपर्ने समेत मलाई बुझाईएकोछ।
- यस अनुसन्धानको प्रतिवेदन वा सम्बन्धित प्रकाशित कृतिहरुमा मेरो कुनै व्यक्तिगत परिचय खुल्ने जानकारी प्रकाशित हुने छैन भन्ने कुरा मैले बुझेकोछु।
- यी सबै कुराहरु जानी-बुझी, म यस अध्ययन-अनुसन्धानमा सहभागी हुन स्वेच्छाले राजी भई यो सुसूचित मन्जुरीनामामा सहिछाप गरेको छु।

<u>सहभागी/सहभागीको अभिभावकको</u>

सही : .....

नाम-थर : .....

मिति : २०८...../...../.....

सहभागीको बुढी औंलाको ल्याप्चे छाप

दाँया	बाँया

<u>साक्षीको</u>

सही : .....

नाम-थर : .....

मिति : २०८...../...../.....

<u>अनुसन्धानकर्ताको</u>

सही : .....

नाम-थर : धिरज ढुंगाना

मिति : २०८...../...../.....

Annex V: Assent Form

Internet Addiction and its associated factors among Secondary Level Students of Urlabari Municipality, Nepal

Central Department of Public Health, Tribhuvan University Teaching Hospital, Institute of Medicine, Maharajgunj, Kathmandu, Nepal

I, ……, male/female of …… years age, hereby confirm that I have read and understood the information sheet and consent form for this research being conducted by Dhiraj Dhungana (MPH II Year) and have had the opportunity to ask questions about it.

I hereby declare that,

1. I understand that my participation in the study is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected.
2. I understand that the researchers, the IRC and other regulatory authorities will not need my permission to look at my health records both in respect of the current study and any further research that may be conducted in relation to it, even if I withdraw from the trial. I agree to this access. However, I understand that my identity will not be revealed in any information that will be published or released to the third parties.
3. I agree not to restrict the use of any data or results that arise from this study provided that such use is only for scientific purpose(s).
4. I agree to take part in this study.

Signature of the Participant	**Signature (or Thumb impression) of Witness**
Signature : ……	Signature : ……
Name : ……	Name : ……
Date: ……	Date: ……

Investigator's

Signature : ……

Name : Dhiraj Dhungana

Date:……

ASSENT FORM IN NEPALI

सहमति पत्र

Internet Addiction and its associated factors among Secondary Level Students of Urlabari Municipality, Nepal

जनस्वास्थ्य केन्द्रीय बिभाग, त्रि.वि. शिक्षण अस्पताल, चिकित्सा शास्त्र अध्ययन संस्थान
महाराजगंज, काठमाडौं , नेपाल

म ..... उमेर ..... वर्षको पुरुष/महिलाले धिरज ढुंगाना (MPH II Year) ले गर्न लाग्नु भएको यस अनुसन्धान सम्बन्धि संलग्न 'जानकारी पत्र/पुस्तिका' पढेर, सुनेर र प्रश्नोत्तर समेत गरेर यो अध्ययन-अनुसन्धान सम्बन्धमा जानकारी प्राप्त भयो।

- यो अनुसन्धान कार्यमा मेरो सहभागिता मेरो व्यक्तिगत इच्छामा भर पर्ने र मैले चाहेको खण्डमा कुनै पनि बेला यो अनुसन्धान प्रक्रियाबाट बाहिरिन पाउने भन्ने कुरा मैले बुझेको छु। यसको लागि मैले कुनै कारण दिनु नपर्ने र त्यसबाट मैले पाउने सेवा र मेरो कानुनी अधिकारमा असर नपर्ने समेत मलाई बुझाईएकोछ।
- यस अनुसन्धानको प्रतिवेदन वा सम्बन्धित प्रकाशित कृतिहरुमा मेरो कुनै व्यक्तिगत परिचय खुल्ने जानकारी प्रकाशित हुने छैन भन्ने कुरा मैले बुझेकोछु।
- यी सबै कुराहरु जानी-बुझी, म यस अध्ययन-अनुसन्धानमा सहभागी हुन स्वेच्छाले राजी भई यो सुसूचित मन्जुरीनामामा सहिछाप गरेको छु।

सहभागी

सही : .....

नाम-थर : .....

मिति : २०८...../...../.....

सहभागीको बुढी औंलाको ल्याप्चे छाप

दाँया	बाँया

साक्षीको

सही : .....

नाम-थर : .....

मिति : २०८...../...../.....

अनुसन्धानकर्ताको

सही : .....

नाम-थर : धिरज ढुंगाना

मिति : २०८...../...../.....

Annex VI: Data Collection Tool

Part 1: Socio-Demographic Information

SN	Question	Code Description	Answer
1	Age (उमेर)	In completed years ……	
2	Sex (लिङ्ग)	1=Male (पुरुष) 2=Female(महिला) 3= Others (अन्य)	
3	Grade (कक्षा)	1= Class 11 (कक्षा ११) 2= Class 12 (कक्षा १२)	
4.	Faculty (तपाई कुन विषय पढ्नुहुन्छ ?)	1= Science (विज्ञान) 2= Education(शिक्षा) 3= Management (व्यवस्थापन) 4= Humanities (मानविकी) 5= Agriculture Science (वालि विज्ञान) 6= Law (कानुन)	
5	School Type (विद्यालयको प्रकार)	1= Public (सामुदायिक) 2= Private (संस्थागत)	
6	Study Shift (तपाई कुन शत्रमा पढ्नुहुन्छ ?)	1= Morning (विहान) 2= Afternoon (दिवा)	
7	With whom do you currently live? (तपाई हाल कोसँग बस्नुहुन्छ ?)	1= Hostel (होस्टल) 2= Rent/Room (कोठा भाडा) 3= Home/With parents (घर वा परिवारसंग) 4= With Relatives (आफन्तसँग)	
8	Father's Education (बुबाको शैक्षिक योग्यता)	1= Illiterate (निरक्षर) 2= Can read and write Nepali (नेपाली भाषामा लेख्न पढ्न मात्र आउन) 3= Primary education (प्राथमिक तह) 4= Secondary (माध्यमिक तह) 5= Bachelor and above (स्नातक तह वा माथि)	
9	Mother's Education (आमाको शैक्षिक योग्यता)	1= Illiterate (निरक्षर) 2= Can read and write Nepali (नेपाली भाषामा लेख्न पढ्न मात्र आउन) 3= Primary education (प्राथमिक तह) 4= Secondary (माध्यमिक तह)	

		5= Bachelor and above (स्नातक तह वा माथि)	
10	Father's Occupation (बुबाको पेशा)	1= Agriculture (कृषि) 2= Business (व्यवसाय) 3= Service (सेवा) 4= Foreign Employment (वैदेशिक रोजगारी) 5= Unemployed (वेरोजगार) 6= Others (Specify) (अन्य खुलाउनुहोस्)	
11	Mother's Occupation (आमाको पेशा)	1= Agriculture (कृषि) 2= Business (व्यवसाय) 3= Service (सेवा) 4= Foreign Employment (वैदेशिक रोजगारी) 5= Homemaker (गृहिणी) 6= Others (Specify) (अन्य खुलाउनुहोस्)	
12	Monthly Family Income (तपाईको मासिक पारिवारिक आम्दानी कति छ ?)	Specify (खुलाउनुहोस्)…….	
13	Have you smoked in past 30 days? (तपाईले पछिल्लो ३० दिनमा चुरोट पिउनु भएको छ?)	1= Yes (छ) 2= No (छैन)	
14	Have you drunk alcohol in past 30 days? (तपाईले पछिल्लो ३० दिनमा मदिरा पिउनु भएको छ?)	1= Yes (छ) 2= No (छैन)	

Part II: Internet Use Characteristics

SN	Question	Code Description	Answer
1	Do you have access to internet services? (तपाईसंग ईन्टरनेटको छ?)	1= Yes (छ) 2= No (छैन)	
2	How many personal devices (laptop, mobile, tab, etc.) do you use to access internet? (तपाईसंग कतिवटा ईन्टरनेट चलाउने उपकरण छन्?)	Specify (खुलाउनुहोस्)…….	
3	What is your mode of access to internet? (तपाई ईन्टरनेट के बाट चलाउनु हुन्छ?)	1= Mobile Data 2= Wi-Fi 3= Both	

4	Among them, for which purpose do you use the most? (माथि मध्ये कुन मुख्यतय चलाउनु हुन्छ?)	1= Social networking (सामाजिक संजाल) 2= Entertainment (मनोरन्जन) 3= Education (पढाई) 4= Online gaming (गेम खेल्न) 5= Others Specify (खुलाउनुहोस्)	
5	On average, how much time do you spend in internet use per day/screen time for internet per day? (तपाई औसतमा दिनमा कति घण्टा ईन्टरनेट चलाउनु हुन्छ?)	Specify (in hours) (घण्टामा)	

Part III: Sleep Quality

SN	Question	Code Description	Answer
1	During the past month, what time have you usually gone to bed at night? विगत एक महिनाको समयमा, तपाई सामान्यतया कति बजे सुत्न जानुहुन्थ्यो?	Bed Time सुत्ने समय..... : .....(घण्टा : मिनेट)	
2	During the past month, how long (in minutes) has it usually taken you to fall asleep each night? विगत एक महिनाको समयमा, सामान्यतया हरेक राती तपाईलाई निदाउन कति समय लाग्थ्या	..... (मिनेट)	
3	During the past month, what time have you usually gotten up in the morning? विगत एक महिनाको समयमा, सामान्यतया तपाई विहानको कति बजे उठ्नुहुन्थ्यो?	Getting up time उठ्ने समय ..... : .....(घण्टा : मिनेट)	
4	During the past month, how many hours of actual sleep did you get at night? (This may be different than the number of hours you spent in bed.) विगत एक महिनाको समयमा, रातिको समयमा तपाई कति घण्टा साँच्चिकै निदाउनुहुन्थ्यो? (यो समय तपाईले ओछ्यानमा बिताएको समय भन्दा फरक हुन सक्नेछ)	Hours of sleep per night एक रातको निद्राको समय ..... घण्टा	

In the following questions, check the best response with following options:

0: Not during the past month (गएको महिना भित्र भएन)

1: Less than once a week (हप्ताको एकपटक भन्दा कम)

2: Once or twice a week (हप्ताको एक वा दुई पटक)

3: Three or more times a week (हप्ताको तिन वा सो भन्दा बढी पटक)

5	During the past month, how often have you had trouble sleeping because you विगत एक महिनामा तपाईलाई निम्न समस्याले निदाउन कत्तिको अप्ठ्यारो हुन्थ्यो ?				
a	Cannot get to sleep within 30 minutes तिस (३०) मिनेट भित्रमा निदाउन नसक्न	0	1	2	3
b	Wake up in the middle of the night or early morning मध्यरातमा वा विहान झिसमिसेमै बिउँझने	0	1	2	3
c	Have to get up to use the bathroom चर्पी (ट्वाइलेट) जानका लागि उठ्ने	0	1	2	3
d	Cannot breathe comfortably सास फेर्न गाह्रो महसुस हुने	0	1	2	3
e	Cough or snore loudly खोक्ने वा घुर्ने	0	1	2	3
f	Feel too cold जाडो महसुस गर्न	0	1	2	3
g	Feel too hot गर्मी महसुस गर्ने	0	1	2	3
h	Have bad dreams नराम्रो सपना देख्ने	0	1	2	3
i	Have pain पिडा महसुस गर्ने	0	1	2	3
j	Other reason (s), please describe, including how often you have had trouble sleeping because of this reason (s): माथि उल्लेखित बाहेक अरु कारणहरुले निदाउन अप्ठ्यारो भएको भए उल्लेख गर्नुहोस्				
	How often during the past month have you had trouble sleeping because of this? विगत एक महिनामा माथि उल्लेखित कारणले गर्दा तपाईलाई निदाउनलाई कत्तिको समस्या हुने गर्थ्यो?	0	1	2	3
6	During the past month, how would you rate your sleep quality overall? विगत एक महिनामा, तपाई आफनो निद्राको गुणस्तरलाई कसरी मुल्याङ्कन गर्नुहुन्छ?	0. Very Good धेरै राम्रो	1. Fairly Good धेरै राम्रो	2. Fairly bad नराम्रो	3. Very bad धेरै नराम्रो
7	During the past month, how often have you taken medicine (prescribed or "over the counter") to help you sleep? विगत एक महिनाको समयमा, तपाईले निद्रा लगाउने औषधी कति पटक लिनुभयो? (चिकित्सकको निर्देशन अनुसार वा चिकित्सकको निर्देशन बिना)	0	1	2	3
8	During the past month, how often have you had trouble staying awake while driving, eating meals, or engaging in social activity?	0	1	2	3

	विगत एक महिनाको समयमा, तपाईलाई गाडी चलाउँदा, खाँदा वा सामाजिक गतिविधिमा संलग्न रहँदा जागा रहन कत्तिको समस्या हुन्थ्यो?				
9	During the past month, how much of a problem has it been for you to keep up enthusiasm to get things done? विगत एक महिनाको समयमा, तपाईलाई काम गर्नका लागि भरपुर उत्साह बनाइराख्न कत्तिको समस्या परेको थियो?	0. No Problem at all कत्तिपनि समस्या भएन	1.Only a very slight problem निकै कम समस्या भयो	2. Somewhat a problem केही मात्रामा समस्या भयो	3. A very big problem निकै धेरै समस्या भयो

Part IV: Depression, Anxiety and Stress

कृपया हेरक विवरण ध्यानपूर्वक पढ्नुहोस् अनि ०,१,२ अथवा ३ मा गोलो धर्का खिच्नुहोस जसले विगतको एक हप्तामा यी विवरण तपाईमाथि कतिको लागु भयो भन्ने संकेत दिन्छ। कुनै प्रश्नको सहि वा गलत उत्तर छैन। यो तपाईको पछिलो अनुभव जान्नको लागि मात्र हो। कुनै पनि विवरणमा ज्यादा समय नफाल्नुहोस्।

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement, but please answer each question. The rating scale is as follows:

० . मलाई पटक्कै लागू भएन (Did not apply to me)

१ . कुनै कुनै समय मलाई लागू भयो (Applied to me to some degree, or some of the time)

२ . धेरै समयसम्म मलाई लागू भयो (Applied to me to a considerable degree or a good part of time)

३ . पूर्ण रुपमा वा प्राय जस्तो समय मलाई लागू भयो (Applied to me very much or most of the time)

१	मलाई तनावमुक्त हुन गहारो लाग्यो। I found it hard to wind down	०	१	२	३
२	मलाई मेरो मुखको सूखापनबारे थाहा थियो। I was aware of dryness of my mouth	०	१	२	३
३	मैले कुनै पनि सकारात्मक भावना अनुभव गर्न सकिन। I couldn't seem to experience any positive feeling at all	०	१	२	३

४	मैले सास फेर्न अप्ठ्यारो भएको महसूस गरे - (जस्तै सामान्यभन्दा तीव्र गतिले सास फेर्नु, शारिरिक परिश्रम बिना पनि सास रोकिनु) I experienced breathing difficulty (e.g.) excessive rapid breathing, breathlessness in absence of physical exertion.	०	१	२	३
५	मैले कुनै पनि नयाँ कुरो आफै शुरु गर्न गहारो परेको अनुभव गरे । I found it difficult to work up the initiative to do things.	०	१	२	३
६	मैले कतिपय परिस्थितिहरुमा चाहिनेभन्दा बढि प्रतिक्रिया व्यक्त गरे । I tended to over-react to situations.	०	१	२	३
७	मैले आफू काँपेको महसूस गरें (जस्तै हातमा) । I experienced trembling (e.g. in the hands)	०	१	२	३
८	म धेरै अत्तालिएको मलाई अनुभव भयो । I felt that I was using of nervous energy	०	१	२	३
९	म डराउने अनि आफैलाई मुर्ख ठान्ने स्थितिहरुको बारे चिन्तित थिए । I was worried about situations in which I might panic and make a fool of myself	०	१	२	३
१०	मैले आशावादि हुनुपर्ने केहि कारण देखिन । I felt that I had nothing to look forward to	०	१	२	३
११	मैले आफूलाई अशान्त भएको पाँए । I found myself getting agitated	०	१	२	३
१२	मलाई आराम गर्न अप्ठ्यारो भएको महसूस भयो । I found it difficult to relax	०	१	२	३
१३	म अतिनै दुःखी भएको महसूस गरे । I felt down hearted and blue	०	१	२	३
१४	मैले गर्दै गरेको कुरामा बाधा पर्दा मेरो लागि असहनीय भयो । I was intolerant of anything that kept me from getting on with what I was doing	०	१	२	३
१५	म डराउन लागेको थिए भनी मैले थाहा पाएँ । I felt I was close to panic	०	१	२	३

१६	म कुनै पनि कुरोको विषयमा उत्साहित हुन सकिन । I was unable to become enthusiastic about anything	०	१	२	३
१७	म एक अति अयोग्य व्यक्ति रहेछु जस्तो मलाई लाग्यो । I felt I wasn't worth much as a person	०	१	२	३
१८	म अतिनै कमजोर जस्तो मलाई लाग्यो । I felt that I was rather touchy	०	१	२	३
१९	शारिरिक परिश्रमको अभावमा पनि आफनो हृदयको धड्कन महसूस गरे (तीव्र गतिले मुटु धडकिनु वा कहिले रोकिनु) । I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)	०	१	२	३
२०	मलाई कुनै कारणबिनानै डर लागेको महसूस गरे । I felt scared without any good reason	०	१	२	३
२१	मैले आफनो जीवन अर्थहीन भएको महसूस गरे । I felt that life was meaningless	०	१	२	३

Part V: Internet Addiction

This questionnaire consists of 20 statements. After reading each statement carefully, based upon the 5-point Likert scale, please select the response (0, 1, 2, 3, 4 or 5) which best describes you. If two choices seem to apply equally well, circle the choice that best represents how you are most of the time during the past month. Be sure to read all the statements carefully before making your choice.

(यो प्रश्नावलीमा २० वटा कथनहरू समावेश गरिएको छ। प्रत्येक कथनलाई ध्यानपूर्वक पढ्नुहोस् । पढिसकेपछि, ५-बिन्दु सम्मको मापन स्केलको आधारमा (०, १, २, ३, ४ वा ५) प्रतिक्रिया चयन गर्नुहोस् । यदि दुई छनोटहरू समान रूपमा लागू हुने देखियो भने, तपाईंले गत महिनामा धेरैजसो समय कसरी बिताउनु भएको छ भन्ने राम्रोसँग प्रतिनिधित्व गर्ने छनोटलाई गोलो घेरा लगाउनुहोस् । मापन छनोट गर्नु अघि सबै कथनहरू ध्यानपूर्वक पढेर निश्चित हुनुहोस् ।)

		Response					
		Not Applicable (लागु हुँदैन)	Rarely (विरलै)	Occasionally (कहिले काहिँ)	Frequently (धेरै जसो)	Often (सधैँ जसो)	Always (सधैँ)
1	How often do you find that you stay online longer than you intended? (आफुले चाहेको भन्दा बढि अनलाइन बसेको पाउनु हुन्छ ?)	**0**	**1**	**2**	**3**	**4**	**5**
2	How often do you neglect household chores to spend more time online? (घरको काम बेवास्ता गर्दै तपाई कति पटक अनलाइनमा समय बिताउनु हुन्छ ?)	**0**	**1**	**2**	**3**	**4**	**5**
3	How often do you prefer the excitement of the Internet to intimacy with your partner? (तपाइँ साथीसँग भन्दा बढी अनलाइन बस्न रुचाउनु हुन्छ?)	**0**	**1**	**2**	**3**	**4**	**5**
4	How often do you form new relationships with fellow online users? (तपाइँले अनलाइनमा कत्तिको नयाँ साथी बनाउनु हुन्छ ?)	**0**	**1**	**2**	**3**	**4**	**5**
5	How often do others in your life complain to you about the amount of time you spend online? (तपाइँले अनलाइन धेरै बसेको भन्दै कत्तिको गुनासो आउने गर्दछ ?)	**0**	**1**	**2**	**3**	**4**	**5**
6	How often do your grades or school work suffer because of the amount of time you spend online? (तपाइँले अनलाइन बसेको कारणले गर्दा तपाइँको ग्रेड वा स्कुलको काममा कत्तिको असर पारिरहेको छ ?)	**0**	**1**	**2**	**3**	**4**	**5**
7	How often do you check your email before something else that you need to do? (तपाइँले अनलाइनमा अरु कुरा हेर्नुभन्दा पहिला कत्तिको इमेल खोल्नुहुन्छ ?)	**0**	**1**	**2**	**3**	**4**	**5**
8	How often does your job performance or productivity suffer because of the Internet?	**0**	**1**	**2**	**3**	**4**	**5**

	(तपाइँको अन्य काम गर्ने क्षमतामा इन्टरनेटको कारणले कत्तिको असर पारिरहेको छ ?)						
9	How often do you become defensive or secretive when anyone asks you what you do online? (कसैले तपाइँलाई अनलाइनमा के गर्नु हुन्छ भनेर सोध्दा कत्तिको गोपनीयता अपनाउनु हुन्छ ?)	**0**	**1**	**2**	**3**	**4**	**5**
10	How often do you block out disturbing thoughts about your life with soothing thoughts of the Internet? (तपाइँ कत्तिको नराम्रा विचारहरुलाई इन्टरनेटको रोमाञ्चक गतिविधिले भुल्नु हुन्छ ?)	**0**	**1**	**2**	**3**	**4**	**5**
11	How often do you find yourself anticipating when you will go online again? (तपाइँलाई कहिल फेरि अनलाइन बस्न पाए हुन्थ्यो भन्ने हुन्छ ?)	**0**	**1**	**2**	**3**	**4**	**5**
12	How often do you fear that life without the Internet would be boring, empty, and joyless? (इन्टरनेट बिनाको जीवन बोरिंग, रित्तो र आनन्दहीन हुनेछ भनेर तपाईलाई कत्तिको डर लाग्छ ?)	**0**	**1**	**2**	**3**	**4**	**5**
13	How often do you snap, yell, or act annoyed if someone bothers you while you are online? (तपाइँलाई इन्टरनेट चलाइरहेको बेलामा कसैले बोलायो वा काम अह्रायो भने रिस उठ्छ ?)	**0**	**1**	**2**	**3**	**4**	**5**
14	How often do you lose sleep due to being online? (तपाइँलाई अनलाइन बसेको कारणले निन्द्रा नपरेको वा निन्द्रा नपुगेको छ ?)	**0**	**1**	**2**	**3**	**4**	**5**
15	How often do you feel preoccupied with the Internet when off-line, or fantasize about being online? (तपाइँ इन्टरनेट चलाउदा कत्तिको व्यस्त भाको महसुस गर्नुहन्छ र अफलाइन हुँदा इन्टरनेट चलाउन पाए हुन्थ्यो भन्ने सोच आउँछ ?)	**0**	**1**	**2**	**3**	**4**	**5**

16	How often do you find yourself saying "just a few more minutes" when online? (तपाइँलाई अझ केही बेर अनलाइन बस्न पाए हुन्थ्यो भन्ने लाग्छ ?)	**0**	**1**	**2**	**3**	**4**	**5**
17	How often do you try to hide how long you've been online? (तपाइँ कति बेर अनलाइन बसेको छु भनेर लुकाउनु हुन्छ ?)	**0**	**1**	**2**	**3**	**4**	**5**
18	How often do you try to cut down the amount of time you spend online and fail? (तपाइँ कति पटक अनलाइन बिताउने समय कटैती गर्ने प्रयास गर्नुहुन्छ तर असफल हुनुहुन्छ ?)	**0**	**1**	**2**	**3**	**4**	**5**
19	How often do you choose to spend more time online over going out with others? (अरुसँग बाहिर जानुभन्दा तपाइँ अनलाइन बस्न रुचाउनु हुन्छ ?)	**0**	**1**	**2**	**3**	**4**	**5**
20	How often do you feel depressed, moody, or nervous when you are off-line, which goes away once you are back online? (तपाइँ कति पटक उदास, अत्ताल्लिएको महसुस गर्नुहुन्छ जुन तपाइँ अनलाइन भएपछि हटेर जान्छ ।)	**0**	**1**	**2**	**3**	**4**	**5**

Annex VII: Ethical Approval from IRC

त्रिभुवन विश्वविद्यालय
चिकित्सा शास्त्र अध्ययन संस्थान
डीनको कार्यालय, महाराजगंज
पो.ब.नं.: १५२४, काठमाडौं, नेपाल ।
फोन नं.: ४५१०९११, ४५१२०४०, ४५१७७९५, ४५१८१८७

Tribhuvan University
Institute of Medicine
Office of the Dean
Maharajgunj, P.O.Box: 1524
Kathmandu, Nepal
Ph.# 4510911, 4512040, 4517795, 4518187

पत्र संख्या / Ref. No.:- 183
082/083

मिति / Date:-
September 21, 2025

Institutional Review Committee
(IRC)
Institutional Review Committee
Institute of Medicine
1972

Mr. Dhiraj Dhungana
Student
CDPH
IOM

Subject: **Approval of Research Proposal**

Dear Mr. Dhungana ,

Thank you for the submission of your research proposal, entitled **"Internet addiction and its associated factors among secondary level students of Urlabari Municipality, Nepal".**

I am pleased to inform you that after careful evaluation, the above-mentioned research proposal has been approved by Institutional Review Committee (IRC) of Institute of Medicine (IOM), Tribhuvan University on September 18, 2025.

As per our rules and regulations, the investigator has to strictly follow the protocol stipulated in the proposal. If there will be need for any change in title, objectives, problem statement, research questions or hypothesis, methodology, implementation procedures, data management and budget, such changes can be made and implemented only after obtaining approval from IRC. Thus, it is compulsory to submit the details of such intended changes with justifications prior to making any changes in the protocol.

Please note that you can start recruiting the research participants only after getting approval letter from the IRC. You are also requested to follow the ethical guidelines of IRC of IOM.

After completion of your study, you must submit a copy of final draft of your research report to the Research Department.

If you have any further queries, please do not hesitate to contact us.

.....
Dr. Saraswati Dhungana
MBBS, MD
Member Secretary
Institutional Review Committee
Institute of Medicine

Fax No. 4518187, E-mail: iomdean@iom.edu.np / website: www.iom.edu.np

Annex VIII: Approval Letter from Municipality

उर्लाबारी नगरपालिका

Urlabari Municipality

नगर कार्यपालिकाको कार्यालय

Office of the Municipal Executive

Urlabari, Morang

(शिक्षा,युवा तथा खेलकूद शाखा)

कोशी प्रदेश, नेपाल
Koshi Province, Nepal

प.स: ०८२/०८३

च. नं. ६९३

मिति :२०८२/०५/३१

विषयः अनुमती प्रदान गरिएको सम्वन्धमा।

श्री धिरज ढुङ्गाना (रोल्नं ४७९)
चिकित्साशास्त्र अध्ययन संस्थान
महाराजगंज, काठमाण्डौं नेपाल

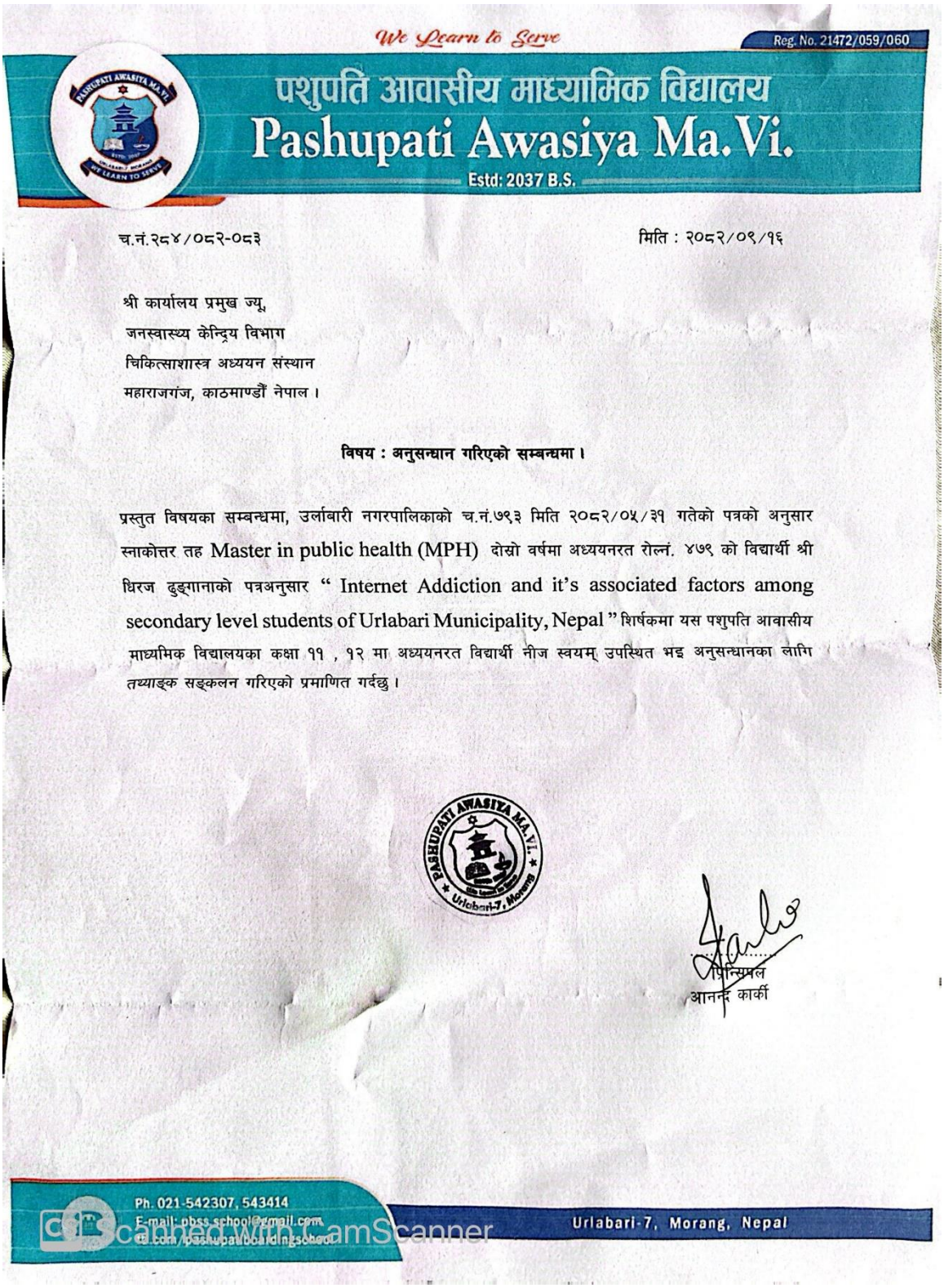
प्रस्तुत विषयको सम्वन्धमा, चिकित्सा शास्त्र अध्ययन संस्थान जनस्वास्थ्य केन्द्रीय विभाग महाराजगंज, काठमाण्डौं नेपालको च.न. १४९ मिति २०८२/०५/२९ गतेको पत्रको विवरण अनुसार तथा स्नाकोत्तर तह Master in public Health (MPH) दोश्रो वर्षमा अध्ययनरत रोल्नं ४७९ को विद्यार्थी श्री धिरज ढुंगानाको पत्रानुसार **"Internet Addiction and it's associated factors among secondary level students of** Urlabari Municipality, Nepal" शिर्षकमा यस उर्लाबारी नगरपालिका अन्तर्गतका विद्यालयहरुमा अनुसन्धान गर्न पाँउ भनी दिनुभएको माग निवेदन अनुसार निजलाई सो विषयमा अनुसन्धानका लागि अनुमती दिइएको व्यहोरा प्रमाणित गरिन्छ।

बोधार्थ

१. चिकित्साशास्त्र अध्ययन संस्थान महाराजगंज, काठमाण्डौं नेपाल
२. सामुदायिक तथा संस्थागत विद्यालय सबै

अभय कुमार गुप्ता
प्रमुख प्रशासकीय अधिकृत
प्रमुख प्रशासकीय अधिकृत

Annex IX: Data Collection Completion Letters from Schools



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Reg. No. 21472/059/060

पशुपति आवासीय माध्यामिक विद्यालय

Pashupati Awasiya Ma.Vi.

Estd: 2037 B.S.

च.नं.२८४/०८२-०८३ मिति : २०८२/०९/१६

श्री कार्यालय प्रमुख ज्यू,
जनस्वास्थ्य केन्द्रिय विभाग
चिकित्साशास्त्र अध्ययन संस्थान
महाराजगंज, काठमाण्डौं नेपाल ।

विषय : अनुसन्धान गरिएको सम्बन्धमा ।

प्रस्तुत विषयका सम्बन्धमा, उर्लाबारी नगरपालिकाको च.नं.७९३ मिति २०८२/०५/३१ गतेको पत्रको अनुसार स्नाकोत्तर तह Master in public health (MPH) दोस्रो वर्षमा अध्ययनरत रोल्नं. ४७९ को विद्यार्थी श्री धिरज ढुङ्गानाको पत्रअनुसार " Internet Addiction and it's associated factors among secondary level students of Urlabari Municipality, Nepal " शिर्षकमा यस पशुपति आवासीय माध्यमिक विद्यालयका कक्षा ११ , १२ मा अध्ययनरत विद्यार्थी नीज स्वयम् उपस्थित भइ अनुसन्धानका लागि तथ्याङ्क सङ्कलन गरिएको प्रमाणित गर्दछु ।

PASHUPATI AWASIYA MA.VI. Urlabari-7, Morang

प्रिन्सिपल
आनन्द कार्की

Ph. 021-542307, 543414
E-mail: pbss.school@gmail.com
fb.com/pashupatiboardingschool

Urlabari-7, Morang, Nepal

"To Reach The Pinnacle Of Wisdom"

MORANG MODEL RESIDENTIAL SECONDARY SCHOOL

URLABARI-6, MORANG, NEPAL

Estd.: 2037

☎ 021-542730
☎ 021-542568
E-mail: morangmodel2037@gmail.com

Ref. No.: २२/०८२/०८३

Date: २०८२/०९/१७

श्रीमान् कार्यालय प्रमुख ज्यू,
जनस्वास्थ्य केन्द्रिय विभाग,
चिकित्साशास्त्र अध्ययन संस्थान,
महाराजगंज, काठमाडौं, नेपाल ।

विषय : अनुसन्धान सम्पन्न गर्नुभएको सम्बन्धमा ।

उपर्युक्त सम्बन्धमा, चिकित्सा शास्त्र अध्ययन संस्थान जनस्वास्थ्य केन्द्रिय विभाग महाराजगंज, काठमाडौंमा स्नातकोत्तर तह Master in Public Health (MPH) दोस्रो वर्षमा अध्ययनरत रोल नं. ४७९ को विद्यार्थी श्री धिरज ढुंगानाले यस विद्यालयमा कक्षा ११ र १२ का विद्यार्थीहरुसँग आफ्नो अनुसन्धान "Internet Addiction and Its associated factors among secondary level students of Urlabari Muncipality, Nepal" विषयमा सम्पन्न गर्नुभएको व्यहोरा अनुरोध छ ।

हेमन्त गौतम
प्रिन्सिपल

PAN NO: 302299423

SUNGABHA
AWASIYA MA VI

Estd : 2050 B.S. (1994 A.D.)

Boarders,
Day Boarders
& Scholars

Ref No.: 069 Date: २०८२/०९/१३

ECA EXCELENCE AWARDED BY EXITO INTERNATIOAL AWARD-2024 (DUBAI)

श्री जनस्वास्थ्य केन्द्रिय विभाग
चिकित्साशास्त्र अध्ययन संस्थान
महाराजगंज, काठमाडौं

विषय : अनुसन्धान सम्पन्न गर्नुभएको सम्बन्धमा ।

उपरोक्त सम्बन्धमा चिकित्सा शास्त्र अध्ययन संस्थान जनस्वास्थ्य केन्द्रिय विभाग महाराजगंज, काठमाडौंमा MPH दोस्रो वर्षमा अध्ययनरत धिरज ढुंगाना (रोल न. ४७९) ले यस विद्यालयमा कक्षा ११ र १२ का विद्यार्थीहरुसंग आफ्नो अनुसन्धान "Internet Addiction and Its Associated Factors among Secondary Level Students of Urlabari Municipality, Nepal" विषयमा सम्पन्न गर्नुभएको व्यहोरा अनुरोध छ ।

.....
(भूवन श्रेष्ठ)
प्रिन्सिपल
PRINCIPAL

Urlabari-5, Morang
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sungabha.edu@gmail.com
SungabhaUrlabari

EMIS NO: 050640018

फोन नं. ०२१-५४००९७
मो. ९८४२०४७३२२

श्री राधिका माध्यमिक विद्यालय

SHREE RADHIKA SECONDARY SCHOOL

उर्लाबारी नगरपालिका वडा नं.- ६, मोरङ
URLABARI MUNICIPALITY WARD NO- 6
कोशी प्रदेश, मोरङ
KOSHI PROVINCE, MORANG
(स्थापित : २०२५ Estd: 2025)
(प्राविधिक धार संमलित विद्यालय)

Shree Radhika Secondary School * Estd: 2025 * Urlabari-6, Morang

मिति २०८२/०९/०९

श्रीमान कार्यालय प्रमुख ज्यू
जनस्वास्थ्य केन्द्रिय विभाग
चिकित्साशास्त्र अध्ययन संस्थान महाराजगंज, काठामाण्डौ

विषय: जानकारी गराइएको बारे।

उपरोक्त सम्बन्धमा जनस्वास्थ्य केन्द्रिय विभाग, चिकित्सा शास्त्र अध्ययन संस्थान महाराजगंज काठमान्डौमा स्नातकोत्तर तह Master in Public Health (MPH) दोस्रो वर्षमा अध्ययनरत रो नं 479 का विद्यार्थी श्री धिरज ढुंगानले यस राधिका माध्यमिक विद्यालयमा आइ कक्षा ११ र १२ का विद्यार्थीहरुसँग "Internet Addiction and Its Associated Factors Among Secondary level Students of Urlabari Municipality Nepal" शिर्षकमा मिति २०८२ पौष ९ गते का लागि विभिन्न तथ्याङ्क संकलन गरी अनुसन्धान कार्यका गर्नुभएको जानकारीका साथ अनुरोध छ।

कुमार पोखेल
प्रधानाध्यापक

PRINCIPAL
Shree Radhika Secondary School
Urlabari-6, Morang

inforadhika025@gmail.com www.radhikamabi.edu.np

त्रिभुवन विश्वविद्यालयबाट सम्बन्धन प्राप्त

उर्लाबारी बहुमुखी क्याम्पस

मानविकी तथा सामाजिकशास्त्र, व्यवस्थापन र शिक्षाशास्त्र संकाय

उर्लाबारी - ४, मोरङ

स्थापित : २०४७

पत्र संख्या :

चलानी नं: ४१३/०८२-०८३

फोन नं. ०२१-४४००६१

मिति :२०८२/०९/०६

उर्लाबारी बहुमुखी क्याम्पस उर्लाबारी-४, मोरङ २०४७

श्रीमान् कार्यालय प्रमुखज्यू,
जनस्वास्थ्य केन्द्रिय विभाग
चिकित्साशास्त्र अध्ययन संस्थान
महाराजगंज, काठमाडौं ।

विषय:- जानकारी गराइएको बारे ।

प्रस्तुत सम्बन्धमा जनस्वास्थ्य केन्द्रिय विभाग, चिकित्साशास्त्र अध्ययन संस्थान, महाराजगंज, काठमाडौं कार्यालयबाट स्नातकोत्तर तह Master in Public Health (MPH) दोस्रो वर्षमा अध्ययनरत रोल नं.४७९ का विद्यार्थी श्री धिरज ढुंगानाले यस उर्लाबारी बहुमुखी क्याम्पसमा आई कक्षा ११ र १२ का विद्यार्थीहरूसंग "Internet Addiction and it's associated factors among secondary level students of Urlabari Municipality, Nepal" शिर्षकमा मिति २०८२ पौष ०६ गते अनुसन्धान कार्यका लागि विभिन्न तथ्यतथ्याङ्क लिँदै आवश्यक सल्लाहसुझाव समेत दिनुभएको जानकारीका साथ अनुरोध छ।

बोधार्थ

१) श्री जनस्वास्थ्य केन्द्रिय विभाग, चिकित्साशास्त्र अध्ययन संस्थान, महाराजगंज, काठमाडौं ।

खेमराज कार्की
क्याम्पस प्रमुख
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विद्या धनम् सर्व धनम् प्रधानम् विद्यालय संकेतनं :-०५०६४००२०

श्री सुनपकुवा माध्यमिक विद्यालय

SHREE SUNPAKUWA SECONDARY SCHOOL

उर्लाबारी-२, मंगलबारे, मोरङ

Urlabari-2, Mangalbare, Morang

स्थापित वि.सं. २०७१ (Estd. A.D. 2014)

प.सं. :-०८२/८३ कोशी प्रदेश, नेपाल (Koshi Province, Nepal)

मिति २०८२/०९/०८

च.न.११३

श्री जनस्वास्थ्य केन्द्रिय विभाग

चिकित्साशास्त्र अध्ययन संस्थान

महाराजगंज ,काठमाण्डौ

विषय : अनुसन्धान सम्पन्न गर्नुभएको सम्बन्धमा ।

उपरोक्त सम्बन्धमा चिकित्सा शास्त्र अध्ययन संस्थान जनस्वास्थ्य केन्द्रिय विभाग महाराजगंज,काठमाण्डौमा MPH दोस्रो वर्षमा अध्ययनरत धिरज ढुंगाना (रोल नं. 479) ले यस विद्यालयमा कक्षा ११ र १२ का विद्यार्थीहरुसंग आफ्नो अनुसन्धान "Internet Addiction and Its Associated Factors among Secondary Level Students of Urlabari Municipality,Nepal" विषयमा सम्पन्न गर्नुभएको व्यहोरा अनुरोध छ ।

२०८२।०९।०८

(यादवप्रसाद भण्डारी)

प्रधानाध्यापक

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