Insomnia and Its Associated Factor among Young Adults in Selected College of Kathmandu Valley Province-3

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ABSTRACT

Introduction: Insomnia has found to have many effects and risks on young adult and also has reduced economic productivity of the individuals as well as country. The prevalence of insomnia in Nepalese college students might be high as there is ineffectiveness of education system in addition to the further practical courses. Thus, the main aim of this study was to find out the prevalence of insomnia and its associated factors among young adult in selected college of Kathmandu.

Methods: A cross-sectional descriptive study was conducted among 421 young adult in selected college of Kathmandu Valley. Students were selected conveniently. Data were collected after obtaining ethical approval. Semi-structured questionnaire and Insomnia Severity Index was used to assess the level of insomnia. Data were entered and analyzed using SPSS V 20. Univariate analysis was done and presented using frequency and percentage. Bivariate study was done by using the chi-sq. test in which p≤ 0.05 was considered for association between dependent and independent variable.

Results: Out of 421 young adults, 379 were found to have insomnia. Insomnia was significantly associated with the use social media (0.013), the living condition (0.027) and economic status of the respondent (0.024).

Conclusions: The study had shown high prevalence of insomnia among students in selected colleges of Kathmandu valley. Thus, the concerned authorities should be aware about insomnia and its health impact in young adults and should plan and implement various program for the prevention and control of the insomnia and its long term impact.

Keywords: insomnia; young adults; Kathmandu.

INTRODUCTION

Insomnia is a sleep disorder in which there is an inability to fall asleep or to stay asleep as long as desired. Insomnia refers to the difficulty in initiation, maintenance, duration or quality of sleep; people may experience poor concentration, bad work quality as a result of insomnia.¹ It is also a consistently predictive of the different health problems like depression, anxiety disorders, psychological disorders, alcohol abuse or substance abuse(drugs), suicides.²

Insomnia disorder and behaviorally induced insufficient sleep syndrome have relationship with depression in college students.³ The prevalence of insomnia in Nepalese college students may be high as there is ineffectiveness of education system in addition to the further practical courses. Insomnia has so many effects and risk factors which has hamper students and has reduce economic productivity of the individuals as well as country. The main objective of this study was to find out the prevalence of insomnia in college students and find out its associated factors.
METHODS

A cross-sectional descriptive study was conducted among 421 young adult. Data were collected from two selected colleges located at Kathmandu in June 2019. Ethical approval was taken from Nepal Health Research Council (Reg. no. 3366/2019). Approval for data collection was taken from the respective colleges. The study population was young adults of selected college of Kathmandu valley. Students of 2nd and 3rd year were taken as a participant.

Signed informed consent was obtained from all participants before participation. Confidentiality of respondent was maintained and ensured. Students studying in 2nd and 3rd year were selected conveniently.

The sample size is calculated using formula

\[ n = \frac{Z^2pq}{d^2} \]

Where, \( Z \) = normal variate i.e. 1.96
\( p \) = prevalence of insomnia i.e. 50%
\( d \) = Allowable error i.e. 0.05
\( n \) = sample size
\( n = 384.16 \) (approximately 385)

Assuming non-response rate of 10%, the sample size was 421.

Inclusion Criteria included all the young adults of the selected colleges who were available. Exclusion Criteria included participants with chronic medical illness and mental problems.

The tool used for data collection was semi-structured questionnaire along with Insomnia Severity Index (ISI). Semi-structured questionnaire included sociodemographic profile. Insomnia severity index was used to assess the level of insomnia among high school students. Insomnia Severity Index (ISI) consists of 7 questions concerning sleep onset, sleep maintenance, early awakening, level of satisfaction with sleep pattern, extent of interference with daily functioning, conspicuousness of impairment caused by sleep problem, and level of concern about current sleep problem. Every item is marked on a 5-point Likert scale (0 to 4). Total scores after evaluation range from 0 to 28; higher score shows more severe the insomnia. The scores 0 to 7 indicate no clinically significant insomnia, 8 to 14 sub-threshold insomnia, 15 to 21 clinically significant insomnia (moderate), and 22 to 28 clinically significant insomnia (severe). The questionnaires were self-administered by the students in the class.

All the data were entered and analyzed using SPSS version 20.0. The data analysis was done by Univariate and bivariate. Univariate analysis was done and presented using frequency and percentage. Bivariate study was done by using the chi-sq. test in which \( p \leq 0.05 \) was considered for association between dependent and independent variable.

RESULTS

Out of 421 young adults, 379 were found to have insomnia.

Table 1: Prevalence of Insomnia (n=421)

| Scoring | Frequency (n) | Percentage (%) |
|---------|---------------|----------------|
| Yes     | 379           | 90             |
| No      | 42            | 10             |

LEVEL OF INSOMNIA

Table 2 shows the different level of insomnia among studied population. 10.7 % of the total population did not have insomnia, 37.3% had sub threshold insomnia. 32% of the total population had clinically significant moderate insomnia and 20% had clinically significant severe insomnia.
Table 2: Level of insomnia i.e.; Insomnia Severity index scoring (n=421)

| Scoring                              | Frequency | Percentage (%) |
|--------------------------------------|-----------|----------------|
| No clinically significant insomnia (0-7) | 45        | 10.7           |
| Sub- threshold insomnia (8-14)       | 157       | 37.3           |
| Clinical insomnia (moderate severity) (15-21) | 135       | 32             |
| Clinical insomnia (22-28)            | 84        | 20             |

Table 3 shows the association of insomnia with different sociodemographic variables. The result did not show any significant association of insomnia with age (0.189), gender (0.157), marital status (0.454), and ethnicity (0.827). Insomnia was significantly associated with the use social media (0.013), the living condition (0.027) and economic status of the respondent (0.024).

Table 3: Association between social-demographic characteristics and prevalence of insomnia with the insomnia severity index among young adults (n=421)

| Characteristics | n(%) | Yes n(%) | No n(%) | P-value |
|-----------------|------|----------|---------|---------|
| Ethnicity       |      |          |         |         |
| Brahmin/chhetri | 318  | 285      | 33      | 0.827   |
| Janjati         | 78   | 70       | 8       |         |
| Terai/madhesi   | 20   | 19       | 1       |         |
| Others          | 5    | 5        | 0       |         |
| Use of social media |    |          |         | 0.013*  |
| Sometime        | 6    | 6        | 0       |         |
| More than 1 hours | 15  | 14       | 1       |         |
| More than 2 hours | 400 | 359      | 41      |         |
| Living condition |      |          |         | 0.027*  |
| Alone           | 55   | 48       | 7       |         |
| With family     | 283  | 259      | 24      |         |
| With friends    | 45   | 39       | 6       |         |
| Hostel          | 38   | 33       | 5       |         |
| Economic status |      |          |         | 0.024*  |
| Independent     | 12   | 8        | 4       |         |
| Dependent       | 409  | 371      | 38      |         |
| Physical exercise |    |          |         | 0.077   |
| Inactive        | 75   | 63       | 12      |         |
| Active          | 189  | 176      | 13      |         |
| Minimally active | 157 | 140      | 17      |         |
| *P-value less than 0.05 significant

DISCUSSION

The primary purpose of this research was to assess the prevalence of insomnia and factors associated with insomnia among students in selected colleges in Kathmandu district. The
prevalence of the insomnia by using insomnia severity index was 90%.

In the previous study conducted by Chung K-F, Yeung W-F on assessing insomnia in adolescents: comparison of insomnia severity index in china on 2014, demonstrated that the prevalence of insomnia was common among female students which is similar to our study.⁴

In a study, conducted by the university students of New Zealand in 2013, found that the age, health problem, living condition, economic status was causing the increase in risk of insomnia.⁵ Similarly, our study showed that insomnia was associated with living condition and economic condition, where most of the dependent students living with their family were found to have insomnia.

In another Nepalese study seeing the correlations between internet addiction, depressive symptoms and sleep quality, 35.4%, 35.4% and 21.2% of students scored above validated cutoff scores for poor sleep quality, internet addiction and depression respectively.⁶

In the study of 2010, of Spain in adolescents found that 80% of the age between 14-24 years were found to suffer from insomnia.⁷ In our study, insomnia didn’t show significant association with the age group. However, most of the students of 21-25 years old were found to have insomnia.

Previous study suggested that the Insomnia was slightly associated with gender, family occupation, ethnicity in the community survey in Belarus 2014.⁸ In our study, there was no association seen between these variables. In a previous study with 400 Iranian students, 14 (4.1%) had no insomnia, 172 (50.6%) had below the threshold insomnia, 130 (38.2%) had moderate clinical insomnia and 24 (7.1%) had severe insomnia.⁹ In one another study, 50% of the subjects had no clinically significant insomnia, 42% had sub threshold, 8% had moderate clinical insomnia and there was a moderate negative correlation between physical activity and insomnia.¹⁰ In our study, out of 421 students, 379 were found to have insomnia. Hence, the prevalence of insomnia among young adults was found 90%. 10% of the total population did not have insomnia, 37.3% had sub threshold insomnia. 32% of the total population had clinically significant moderate insomnia where 20% had clinically significant severe insomnia.

Our study has some limitations. Convenient sampling technique was done to select the sample population. Also, two of the colleges were selected as our setting for data collection so, findings cannot be generalized concerning whole country settings.

**CONCLUSIONS**

The study showed high the prevalence of insomnia among students in selected colleges of Kathmandu Valley. The study also showed the status of sub threshold insomnia was higher than clinically significant moderate insomnia among the students. Insomnia was strongly associated with use of social media, living condition, economic status. Colleges should be aware about insomnia and prevention of the insomnia among high school students. Most importantly government should be aware about the increase in risk of insomnia in young adults and doing different promotion on controlling the prevalence of insomnia of the countries.

**CONFLICT OF INTEREST:** None

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