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Menstrual Related Psychological Distress Among Public Health Students of Affiliated Colleges of Purbanchal University in Kathmandu Valley

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Abstract

Introduction: menstrual related symptoms can pose a significant impact on women's health. Many women may experience menstrual related psychological distress. The aim of this study was to assess the menstrual related psychological distress among public health students of affiliated colleges of Purbanchal University in Kathmandu valley.

Methods: A descriptive cross-sectional study was conducted among the public health students of Kathmandu valley. A total of 215 students were selected from five randomly selected public health colleges of Kathmandu valley. Semi-structured questionnaire and Kessler's psychological distress scale i.e., Kessler-6 were used for interview. Data were entered into Microsoft Excel 2016 and analyzed using Statistical Package for Social Sciences Version 23. Descriptive analysis was done using frequency, percentage, mean, and standard.

Results: More than half of the participants experienced cramps (53%), backache (56.3%) and fatigue (53.5%). Almost half of the participants sometimes missed the classes due to problems related to menstruation. Near to one-third (29.8%) had menstrual related psychological distress indicating a high risk of mood and anxiety disorder.

Conclusions: Based on result conclusion of the study, menstrual related psychological distress is highly prevalent among the public health students.

Keywords: Kessler's, Menstrual, Psychological Distress

Declaration: There is no conflict of interest.



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Introduction

Menstruation is a naturally occurring phenomenon occurring monthly in women starting from 11 to 14 years of age until menopause.¹⁻³ Menstrual distress is used to refer to symptoms of distress related with menstruation which are experienced during the menstruation period i.e., immediately before, during, or immediately after the menstrual process.^{4,5} Menstrual distress symptoms include dysmenorrhea, headaches, backaches, pain, anxiety, behavior change etc.^{6,7} Psychological distress among college students represents a serious health concern.⁸ The menstruation related psychological problem can have negative impact on the wide range of outcomes including college students. Psychological distress is common in low and middle income countries.⁹ The factors like lack of adequate social support factors, cultural practices, socio-economic characteristics are likely to be related with distress during menstruation among adolescents and women.⁷ The aim of the study is to assess the menstrual related psychological distress among public health students of affiliated colleges of Purbanchal University in Kathmandu valley.

Methodology

This was a descriptive cross-sectional study was carried out among the female students of Bachelor of Public Health in Kathmandu valley from July 2019 to December 2019. The randomly selected Purbanchal University affiliated Public Health colleges of Kathmandu and Lalitpur were chosen for data collection. [Ethical approval was taken from Nepal Health and Research Council \(reference number 448\).](#) [Written informed consent was taken from the respondent before starting data collection process.](#) Confidentiality was assured by using code number and restricting the access to the filled questionnaire to researcher only. The sample size was calculated using the formula,

$$\text{Sample Size (n)} = [z^2 \cdot p(1-p)]/d^2$$

Where,

z = Standardized Normal deviate (Z value), 1.96

p = Proportion or Prevalence of menstrual distress, 47%¹⁰



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$d =$ allowable error, 7%

The calculated sample size was 195. Hence, taking non-response rate of 10%, the final sample size for the study was 215.

For collection of data, five colleges were randomly selected from the list of Purbanchal affiliated public health colleges of Kathmandu valley. From each college, equal number of students i.e., forty-three female students were selected purposively to fulfill the required sample size.

The inclusion criteria of the study were female students of public health faculty of Purbanchal affiliated colleges of Kathmandu valley. Data was collected through interview schedule by using semi-structured pre-tested questionnaire. For measuring menstrual related psychological distress among the female students, Kessler 6 (K-6) scale was used. According to the K6 scale respondents are questioned regarding six signs of mental distress: How often did you feel (a) excessively depressed over the past 30 days that nothing could make you feel better? (b) Uneasy? (b) Fidgety or restless? (d) Hopelessness? (e) Everything required effort? and (f) Irrelevant?" There were five alternative answers: "Always," "Most of the time," "Some of the time," "A little of the time," and "Never." ¹¹ The score ranged from 0 to 4, giving a final score on a 0 to 24 scale. A score of 9 or higher indicated a high risk of anxiety and mood disorders. ¹²

On the day that the data was collected, the questionnaires' consistency and completeness were ensured. The collected data was carefully reviewed for accuracy and completeness before being placed into the Epi data system. The IBM Statistical Package for Social Science (SPSS) was used to analyze the data. Using frequency, percentage, mean, and standard deviation in a descriptive study.



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Results

Table 2 shows the socio-demographic characteristics of the participants in which the mean age was 21.4 years where most of the participants were equal to or more than 20 years of age (85.1%). Most (79.1%) of the participants followed Hindu religion and almost three-fifth (59.1%) of the participants were Brahmin or Chhetri. More than two-third (71.6%) resided in single family and almost 94.4% of the participants were unmarried. The mean age at menarche of the participants was 13 years.

Table 2 represents the menstrual related characteristics of the study participants. Regarding pain during menstruation, almost one-quarter (24.6%) felt muscle stiffness, one-quarter (25.6%) had headache, more than half experienced cramps (53%), backache (56.3%) and fatigue (53.5%). More than half (54%) of the participants had difficulty in daily activities, almost one third (30.7%) of the participants felt unusual pain during menstrual period, slightly more than half (52.6%) of the participants had felt different behavior during menstruation from family members, half (50.7%) of the participants had restriction to participate in any cultural and household practice and almost half (45.1%) of the participants sometimes missed classes during menstrual cycle.

Table 3 shows Kessler-6 scale on reported condition asked about six manifestations of psychological distress in the past 30 days during menstruation. Regarding statement "so sad that nothing could cheer you up", majority of the participants answered "a little of the time" (68.8%) and "some of the time" (32.1%) respectively. More than three-fifth (60.5%) of the participants were nervous a little of the time and one-quarter were nervous some of the time during menstruation. Regarding manifestation "restless and fidgety", three-fifth (60.5%) of the participants stated a little of the time and one-quarter (25.6%) stated some of the time. More than two-fifth (42.3%) of the participants were hopeless a little of the time and more than one-third (30.7%) were hopeless. Regarding the statement, "that everything was an effort", more than one-third (37.2%) experienced a little of the time and more than two-fifth (45.6%) experienced it as a some of the time. Regarding the manifestation "worthless", almost half (46%) of the participants felt it a little of the time and more than two-fifth (40.9%) felt it a little of time.



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Figure 1 shows the prevalence of menstrual related psychological distress among the students. Out of the total participants, almost one-third (29.8%) had menstrual related psychological distress indicating a high risk of mood and anxiety disorder. The average K-6 score was 7.68 with standard deviation 1.67.

Discussion

Menstruation is a natural process occurring in females despite this fact, menstruation related symptoms have impact on women's lives. These impacts may be physical as well as mental or psychological and behavioral.

In recent this study, more than half of the participants experienced cramps (53%), backache (56.3%) and fatigue (53.5%). Study conducted in North-east Iran on 300 female university students supported the findings in which cramps, fatigue, and backache were the three most frequent symptoms during the menstrual phase.¹³ Majority participants had restriction to participate in any cultural and household practice and felt different behavior from the family members in this study. Different studies have supported the findings in which cultural, social, family environment can influence women's beliefs towards menstruation.^{13,14} In recent this study, majority of the participants were sometimes or usually absent during menstruation. In this study finding shows consistent with the studies conducted in different parts of the world.¹⁵⁻¹⁸

In the study, majority of the participants experienced so sad, nervous, restless, hopeless, worthless and effort a very little of the time or some of the time and very few participants felt the manifestations most of the time or all of the time.¹⁹⁻²¹ A study conducted in US among women found that 5.7 % experienced so sad, 8.3% were nervous, 11.2% were restless 4.5% were hopeless, 4.5% felt hopeless and 9.3% felt everything was an effort most of the time or all of the time during menstruation and were higher than this study.¹¹ The study found that K-6 score >9 was found to be 29.8% and is much higher than a study conducted among female students of Tokyo.¹² The disagreement chances may be due to the socio-economic and cultural differences across the countries.¹⁹

There are some limitations of the study. Firstly, severity and frequency of menstrual-related problems was not assessed. Secondly, our data are cross-sectional so relationship among menstrual-related problems was not seen.



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Conclusion

The data from the findings suggest that menstrual-related physical and psychological distress are prevalent among students of Bachelor in Public Health indicating a high risk of mood and anxiety disorders. The study recommends further large scale researches in the field of menstrual related psychological distress in order to find out the real situation.

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Legends

Table 1: Socio-demographic characteristics of the participants

Characteristics	Frequency	Percentage
Age of the participants (Mean= 21.4 years, Standard Deviation= 1.9 years)		
< 20 years	32	14.9
≥ 20 years	183	85.1
Religion		
Hindu	170	79.1
Buddhist	45	20.9
Ethnicity		
Brahmin/Chhetri	127	59.1
Janajati	52	24.2
Dalit	17	7.9
Madhesi	19	8.8
Family Structure		
Single Family	154	71.6
Joint Family	61	28.4
Marital Status		
Married	12	5.6
Unmarried	203	94.4
Age at menarche	Mean= 13 years, SD=0.9 years	



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Table 2: Menstrual related characteristics

Characteristics	Frequency	Percentage
Muscle stiffness		
Yes	53	24.6
No	162	75.4
Headache		
Yes	55	25.6
No	160	74.4
Cramps		
Yes	114	53.0
No	101	47.0
Backache		
Yes	121	56.3
No	94	43.7
Fatigue		
Yes	115	53.5
No	100	46.5
Difficulty in daily activities		
Yes	116	54.0
No	99	46.0
Different behavior during menstruation from family		
Yes	102	47.4
No	113	52.6
Restriction to participate in any cultural and household practice		
Yes	109	50.7
No	106	49.3
Absenteeism during menstrual cycle from class		
No	106	49.3
Sometimes	97	45.1
Usually	12	5.6



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Table 3: Kessler 6—reported condition of all of the time or most of the time in the past 30 days

Characteristics	Frequency	Percentage
So sad that nothing could cheer you up		
None of the time	11	5.1
A little of the time	148	68.8
Some of the time	52	24.2
Most of the time	3	1.4
All of the time	1	0.5
Nervous		
None of the time	28	13.0
A little of the time	130	60.5
Some of the time	55	25.6
Most of the time	2	0.9
Restless or fidgety		
None of the time	28	13.0
A little of the time	130	60.5
Some of the time	55	25.6
Most of the time	2	0.9
Hopeless		
None of the time	34	15.8
A little of the time	91	42.3
Some of the time	83	38.6
Most of the time	7	3.3
That everything was an effort		
None of the time	34	15.8
A little of the time	80	37.2
Some of the time	98	45.6
Most of the time	2	0.2
All of the time	1	0.5
Worthless		
None of the time	23	10.7
A little of the time	99	46
Some of the time	88	40.9
Most of the time	5	2.3



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Figure

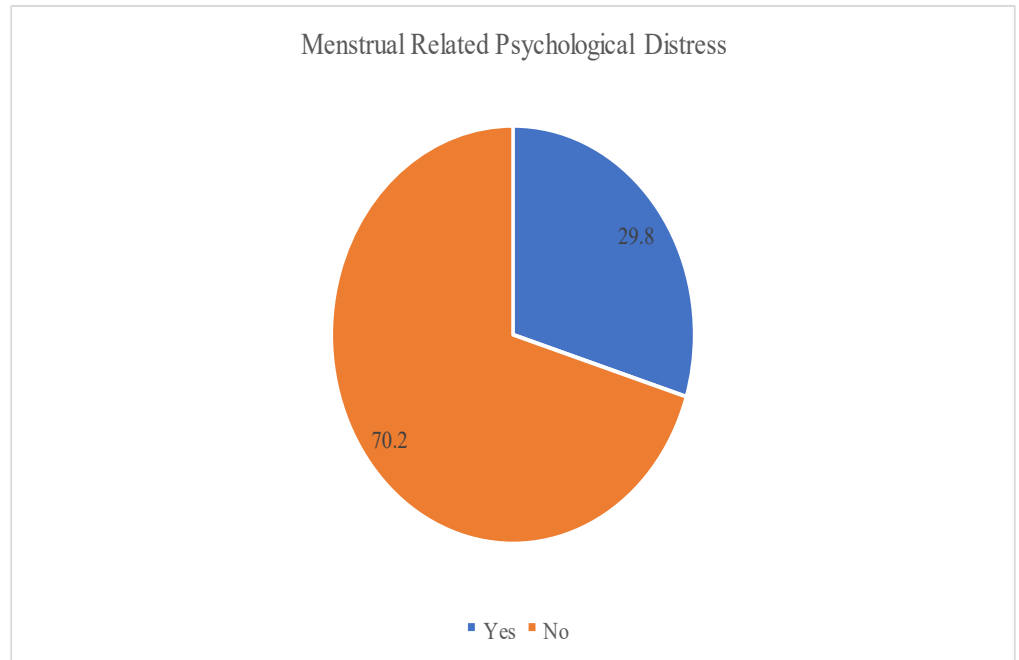


Figure 1: Prevalence of menstrual related psychological distress