

# Knowledge and Practice Regarding Menstruation among the Visually Challenged Female Students of Western Nepal

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## ABSTRACT

**Background:** Menstruation is part of the female reproductive cycle starts when girls become sexually mature at the time of puberty. A visually challenged female faces daily extra challenges for bearing their everyday skills including menstruation hygiene management. Hygienic practices during menstruation are very important as poor menstruation affects the health by increasing vulnerability to infections. This study aims to assess the knowledge and practices regarding menstruation among the visually challenged female students.

**Methods:** This cross sectional study was conducted among 121 visually challenged female students of Western Nepal who have attained the menarche. Census method was used. Descriptive and inferential statistics were used to interpret the data.

**Results:** The mean age was 17.65 years and their age of menarche was 12.7 years. 66% falls under blindness category and 34.0% had low vision. 52.9% knew about menstruation before menarche and mother was main source of information. Overall, 48.8% had good knowledge and 52.1% had satisfactory practice. Knowledge and practice were statistically significant among the visually challenged female students at  $p < 0.05$ .

**Conclusion:** In Western part of Nepal, Majority follow some forms of restriction poses in family in any forms like restriction to involve in holy activities; avoid sleeping in the bed, performing household activities. Hence, in order to break the silence of taboos, school going visually challenged students should be educated about the facts of menstruation and good hygienic practices.

**Keywords:** Menstruation, Knowledge, Practice, visually challenged

## INTRODUCTION

Menstruation is part of the female reproductive cycle that starts when girls become sexually mature at the time of puberty.<sup>1</sup> The profile of the woman's reproductive health is greatly influenced by the girl's reaction to menarche, her beliefs and attitude towards menstruation, and more important her behavior during it.<sup>1</sup> Most girls are not informed about menarche and how to manage menstrual bleeding, and adolescents also lack knowledge about reproductive health issues.<sup>3</sup> So, it is difficult for them to adopt with the changes. Further, Blind female adolescent students are obviously disadvantaged as it is hard for them to achieve normal levels of social, emotional and cognitive

development. Hygienic practices during menstruation are very important as poor menstruation affects the health by increasing vulnerability to infections of the urinary tract and perineum and the reproductive tract.<sup>4,5,6</sup> Effective menstrual hygiene management (MHM) includes access to clean absorbents, with facilities to change, clean or dispose of these as needed, and access to soap and water for cleaning the body and absorbents.<sup>6</sup>

The knowledge and practice regarding menstruation hygiene done in general adolescent girl in Nepal show the poor menstruation hygiene practice.<sup>1</sup> A lack of

adequate guidance, facilities, and materials for girls to manage their menstruation in school is a neglected public health, social, and educational issue.<sup>7</sup> The visually challenged female faces daily extra challenges for bearing their everyday skills including menstruation hygiene management. They need physical and emotional support and assurance that menstruation is normal physiological process. In order to break the silence of a taboo and successfully manage menstrual hygiene, adolescents female need to understand the biologic change they are experiencing and be equipped with the skills to cope with it. It was, therefore, felt as a need to assess the menstruation-related hygienic practices.<sup>8</sup> Also, there are very few literature available particularly on the issues related to menstruation among visually challenged female. So, the study aims to assess the knowledge and practices regarding menstruation among the visually challenged female students of Western Nepal.

## **METHODS**

A descriptive cross sectional study was done among visually challenged female students of Western Development Region. There were 20 schools for the visually challenged students in Western Nepal of which only two schools were for the primary students which was excluded. Census method was used for the data collection and the study duration was December, 2016 to May, 2017. Data was collected by interviewing the visually challenged students by using a pre-tested semi-structured questionnaire. The questionnaire was used to elicit information from each study participant for socio-demographic characteristics, menstrual pattern and knowledge and practices related menstruation hygiene. Content and face validity of the questionnaire was established by literature review and consultation with concerned experts and peer review. Approval for research was obtained from Institutional Review Committee of institute and permission BPKIHS. Individual school was contacted after getting permission from Western Regional Education Directorate. Anonymity and confidentiality was maintained.

Collected data was coded and entered in Microsoft Excel 2007 and analysis was done in Statistical Package for Social Science (SPSS v.11.5). Descriptive statistics and inferential statistics chi-square test was done to see the association of knowledge and practices at  $p < 0.05$ .

## **RESULTS**

Among 121 respondents, 66.0% fall under the blindness category and 34.0% had low vision. The Mean  $\pm$  SD age of respondent was  $17.65 \pm 3.99$  years. 86% were Brahmin/

Chhetri. The study population were mainly Hindu (86%), unmarried (94.2%), living in nuclear family (62%) and were studying in lower secondary level. 66.9% of the family's income status were below poverty line and only 33.1% had the income status above poverty line. Among 121 respondents 66.0% fall under the blindness category and 34.0% had low vision.

The mean age of menarche was  $12.7 \pm 1.33$  years. 72% had menarche on early adolescence and 27.3% on middle adolescence. It was evident that 52.9% knew about menstruation before their menarche and Mother (33.8%) was the prime source of information, followed by sisters, friends, teachers and media. 67.8% had regular cycle of menstruation, 75.2% has normal duration of blood flow (3 to 5 days). Among 121 students, 3.3% missed periods few times and 96.7% recognized periods at mean time till date. Identification of periods is one of the issues for visually challenged. 40.5% identify period by sensation of fluid overflow associated with physical symptoms, 22.3% by sensation of continuous fluid overflow, about 30.0% recognize blood during menstruation, 5% recognize by smell of bleeding during period and others include Calendar method/date wise and mother helps to identify. (Table 1)

The overall knowledge score was assessed by taking a mean score as a cutoff point and was categorized as poor knowledge and good knowledge. In total of 121 respondents, 48.8% of the respondents had good knowledge while 51.2% of the respondents had poor knowledge. There are 16 questions related to assess the practices level of Menstruation hygiene. 52.1% of the respondent had a satisfactory menstruation hygiene practices while 47.9% of the respondents had unsatisfactory practices.

Among 121 respondents, 83.5% of them follow restrictions during menstruation. The commonest restriction was to perform religious activities (95.0%) then restriction to enter kitchen (70.3%), restriction on house hold activities (49.5%), restrictions on touching flowers 42.6% and avoid sleeping in own bed (37.7%). During menstruation 51.2% are treated as untouchables (51.2%) and 48.8% are treated normally. For the actions taken by others if mistakenly touched by the respondents, 34.7% (42) sprinkles holy water, 6.6% take bath and 6.6% change sacred thread and rest 52.1% do nothing. (Table 2)

There was statistically significant association between knowledge and practice of menstruation among the visually challenged female students at  $p$ -value  $< 0.05$ . (Table 3)

**Table 1: Knowledge of the respondents regarding menstruation (N=121)**

Variables	Categories	Frequency(N)	Percent (%)
Menstruation	Physiological process	110	90.9
	Disease	7	5.8
	Curse	4	3.3
Age of Menarche	Early adolescence	53	43.8
	Middle Adolescence	59	48.8
	Age of Menarche	9	7.4
Content of Menstruation	Fresh blood	74	61.2
	Clot	5	4.1
	Content of Menstruation	39	32.2
	Watery Secretion	3	2.5
Source(Organ) of Bleeding	Uterus	66	54.5
	Vagina	19	15.7
	Source(Organ) of Bleeding	18	14.9
	Ovary	18	14.9
Blood Impure	Yes	113	93.4
	No	8	6.6
Absorbent necessary for Menstrual protection	Yes	121	100.0
Appropriate Interval for changing the absorbent	At least 4-6 hours despite the absorbent becomes wet	70	57.9
	Absorbent necessary for Menstrual protection	29	24.0
	Appropriate Interval for changing the absorbent	10	8.3
	Others	12	9.9
Good to share the absorbent	Yes	8	6.6
	No	113	93.4
Necessary to clean the external genital	Yes	114	94.2
	No	7	5.8
Hygienic to clean genitalia front to back	Yes	70	57.9
	No	51	42.1
Poor menstruation hygiene predispose to infection	Yes	115	95.0
	No	6	5.0
Uncared menstruation produces a foul odor	Yes	117	96.7
	No	4	3.3
Necessities of food and activity restriction during menstruation	Yes	33	27.3
	No	88	72.7

**Table 2: Practices during menstruation**

Characteristics	Categories	Frequency(N)	Percent (%)
Stay during menstruation	Own house	118	97.5
	Animal Shed	1	0.8
	Neighbor's house	2	1.7
Sleep during menstruation	Bed	94	77.7
	Floor	26	21.5
	Others	1	0.8
Bathing habits during menstruation	Daily	31	25.6
	Alternate day	84	69.4
	Every three days gap	6	5.0
Use limited clothes during menstruation.	Yes	77	64.0
	No	44	36.0
Use of absorbent	Yes	121	100.0
Material used as an absorbent	Clothes	31	25.6
	Sanitary pad	28	23.1
	Both(clothes and sanitary pad)	62	51.3
Frequency of changing absorbent	At least 4-6 hours despite the absorbent becomes wet	61	50.4
	When the absorbent is completely wet	30	24.8
	Once daily	11	9.1
	Others	19	15.7
Reuse absorbent	Yes	80	66.1
	No	41	33.9
Ever shared the absorbent	Yes	8	6.6
	No	113	93.4
Dry absorbents/ undergarments	Outside in the sunlight	61	50.4
	Outside without sunlight	43	35.5
	Inside bathroom	17	14.0
Process of disposal	Without wrapping	20	16.5
	Wrapped with paper/plastics	101	83.5
Ways of disposal of absorbent	Burn it	50	41.3
	Throw it in routine waste	44	36.4
	Throw it in separate dustbin	9	7.4
	Flush it in toilet	2	1.7
	Others	16	13.2
Frequency of cleaning external genitalia	Every time after Urination	55	45.5
	Every time while changing absorbent	66	54.5
Material use to clean external genitalia	Soap and water	90	74.4
	Plain water	30	24.8
	Antiseptic solution	1	0.8
Ways of cleaning external genitalia	Back to front	7	5.8
	Front to back	56	46.3
	Front only	4	3.3
	Random	54	44.6
Wash Hands after changing absorbent and cleaning genitalia	Yes	120	99.2
	No	1	0.8

**Table 3: Association between knowledge and practice of menstruation**

Knowledge Level	Practice Level		Pearson Chi-square	p-value *
	Unsatisfactory	Satisfactory		
Poor Knowledge	51.2%	40.3%	7.026	0.008
Good Knowledge	35.6%	64.4%		

\*Chi square test used

## DISCUSSION

In the present study, out of 121 visually challenged female students, 42.1% were of 15 to 19 years, 27.3% were 20-24 years, 26.4% were 10-14 years and rests 4.1% were above 25 years. The mean age of respondents being 17.65±3.991 and range of 11 to 30 years. The study population age group is wider than that in other few studies.<sup>1,9,10</sup> whereas many of the study has included adolescents only as a study population.<sup>11,12,13,3,14,15</sup> Since this study is unique of its own kind, limited studies have been conducted before. Hence discussion will be based on visually challenged menstruating female wherever available, if not other sighted menstruating female. 71.9% had menarche on early adolescence and mean age of menarche being 12.7 years. According to the study conducted in various disabilities, age of menarche was earlier in visually impaired than other disabilities. Blind people have menarche earlier than sighted girls suggesting some influence of light.<sup>16</sup> The age of menarche of girls ranged from 11 to 15 years.<sup>3</sup>, 14-17 years.<sup>17</sup> The widely dispersed range of 12-17 years as age of menarche is found in the study of India.<sup>18</sup> which is unlike to the present study.

It was observed that 50.0% of the respondents knew about menstruation before their menarche where similar findings was seen in study conducted in West Bengal, India<sup>18</sup> The findings is higher in the study done in Raichur, India<sup>3</sup> where 69.0% adolescent girls were aware about menstruation before they first experienced it. In a study conducted in Tamil Nadu<sup>20</sup>, West Bengal<sup>18</sup>, East Delhi, India<sup>19</sup> and mothers were the prime source of informant which is alike to the present study findings.

More than sixteen percent (16.3%) and 22.2% reported irregular cycle in a study of Raichur(3) and Uttar Pradesh, India.<sup>21</sup> respectively, which are lesser than this study. Normal duration of blood flow was 3 to 5 days which occurred in 75.2% respondents whereas it was found to be normal as 3-9 days in 80.56% girls as per Uttar Pradesh, India study.<sup>21</sup> In this study, since around 50.0% of them knew about menstruation before menarche, we found that experience

during first menstruation where most of the respondents did nothing (43.8%) followed by Cried (24.8%) and anxiety (20.6%). This findings was in contrast to the study of Udupi Taluk.<sup>22</sup> which revealed that principal emotions associated with menstruation fear 49.0%, followed by a feeling of embarrassment 30.25%, and anxiety in 14.5%. There wasn't any reaction from 22.0% of the adolescent girls respectively which is alike study conducted abroad.<sup>23,24</sup> 73.6% have physical symptoms during menstruation and the most common physical symptoms is abdominal pain (82.0%) which is similar to other studies.<sup>20,25,26,27,28</sup>

Assessment of the level of knowledge regarding menstruation among visually challenged female students discloses that 48.8% had good knowledge and 51.2% had poor knowledge. The finding is similar in the study done in Rural Nepal.<sup>1</sup>, Nigeria.<sup>29</sup> and Ethiopia.<sup>30</sup>, Western Ethiopia which were 40.6%, 54%, 51.3% and respectively. Contrary to the present study findings high knowledge about menstruation hygiene was obtained in a study done in Amhara, Northern Ethiopia<sup>31</sup>, which is 90.7% and 91.5% in Northwest Nigeria<sup>32</sup>, whereas 60.9% in Western Ethiopia.<sup>33</sup> This difference in knowledge level in Nepal and other countries might be due to the reason that mothers in Nepal were not interested to express their views and to educate their daughters about menstrual hygiene because of the taboo of discussing about menstruation.<sup>34</sup> Also menstruation related hygiene and practices are not included in the education course of Nepal in School. Similar study done in Shimla, India among adolescents reported lower knowledge than that of the present study (29.0%).<sup>35</sup>

In the present study, 52.1% have a satisfactory practice. The findings of this study was lower than the study conducted in Ethiopia.<sup>31</sup> and North Western Nigeria.<sup>32,32</sup> which were 90.9% and 88.7%. Comparatively, lower level of practice was recorded for the similar study conducted on Gujjar girls.<sup>36</sup> and Ethiopia among high school girls.<sup>33</sup>, Rural Nepal.<sup>1</sup> with 3.1%, 39.9% and 12.9% respectively. The lower practice of Nepalese girls than other countries could be related to poor knowledge of Nepal's girls about menstrual hygiene which affects their level of practice. Similarly, Different restrictions were practiced by most of the girls in the present study, possibly due to the different rituals in their communities; the same were practiced by their mothers or other elderly female in the family.

In the present study Significant associations were found between the level of knowledge and practice with p<0.05. This findings is similar to the another study of Nepal.<sup>35</sup> and Ghana.<sup>24</sup>, and Northwestern Nigeria.<sup>32</sup> The finding is contrary from the study done in Bangalore, India.<sup>37</sup> which showed that there was no association between knowledge and practice This difference could be due

to the cultural restriction and taboos in the Bangalore which affects their level of menstrual hygiene practices regardless of the level of knowledge.

## CONCLUSION

Almost half respondent (48.8%) had a good knowledge and 52.1% had a satisfactory practice regarding menstruation. Knowledge and practices is significantly associated in the study. Knowledge is a power tool and will influence good practices among females. So, emphasis should be given on educating females and making them aware about issues related to menstruation. School based intervention on comprehensive sexual education is strongly recommended for the betterment of practices and use of menstruation anatomy kit for teaching visually challenged students.

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