# Knowledge and Practice Regarding Menstrual Health among Physically Disabled Women in Kathmandu, Nepal

Bishal Pokhrel<sup>1</sup>, Sunita Mahat<sup>2</sup>, Kriti Parajuli<sup>3</sup>, Nishant Lama<sup>1</sup>

Corresponding Author: Dr. Bishal Pokhrel; Email: dr.bishalpokhrel@gmail.com

#### **ABSTRACT**

**Background:** Disability is the condition of difficulty in carrying out daily activities normally and in taking part in social life due to problems in parts of the body and the physical system as well as obstacles created by physical, social, cultural environment and by communication. Disability also carries stigma, so disabled people may face layers of discrimination when they are menstruating. The objective of the research is to assess the knowledge and practice regarding menstrual health of disabled women.

**Method:** Descriptive, cross sectional study was conducted among 151 participations. Self-structured questionnaire and face-to-face interview were used as data collection tool and technique respectively. Data entry and analysis were done using SPSS version 20. Descriptive analysis like frequency and percentages were computed and presented in a table.

**Results:** Most of participants knew 26-30 days were the normal menstrual cycle duration (80.13%). Only 31% of participants bath daily during menstruation. About 83% of participants used sanitary pad, 69.54% of participants changed pad twice a day. Maximum number (91.39%) disposed sanitary pad in dustbin. 76.82% of participants learned about menstrual hygiene from parents and friends. Majority of the participants (61.59%), cleaned the genitalia haphazardly 88.08% cleaned with soap and water Most of the respondent 90.06% had taken rest during menstruation.

**Conclusions:** Disabled women were aware about normal duration of menstrual cycle and blood loss. However, improper practices related to menstrual health and hygiene were prevalent among disabled women, it should be timely and rightly approached to prevent and control adverse health conditions that may arise of it. Mother and peer groups could be the best choices of source of information to improve menstrual health and hygiene of differently able women.

Keyword: Knowledge, practice, menstrual hygiene and physically disabled

Access this article Online		Article Info.	
Quick Response Code	Website:	How to cite this article in Vancouver Style?	
	DOI: https://doi.org/10.3126/jkahs.v3i1.28836  The DOI will be functional after the issue is fully published online as well as in printed version	Pokhrel B, Mahat S, Parajuli K, Lama N. Knowledge and Practice Regarding Menstrual Health among Physically Disabled Women in Kathmandu, Nepal. Karnali Academy of Health Sciences 2020;3(1):1-18. Received: 4 January, 2020 Accepted: 10 April, 2020 Published Online: 12 April. 2020  Conflict of Interest: None Source of Support: None	

<sup>&</sup>lt;sup>1</sup>Assistant Professor, Department of Community Medicine and Public Health, Karnali Academy of Health Sciences, Jumla, Nepal.

<sup>&</sup>lt;sup>2</sup>Public Health Graduate, National Academy for Medical Sciences, Purbanchal University, Kathmandu,

<sup>&</sup>lt;sup>3</sup>Nutritionist, Padma Kanya Multiple Campus, Kathmandu, Nepal

## INTRODUCTION

"Disability is the condition of difficulty in carrying out daily activities normally and in taking part in social life due to problems in parts of the body and the physical system as well as obstacles created by physical, social, cultural environment and by communication". Prevailing illiteracy, ignorance, and negative perception on the disability in the society is considered as the punishment of the god for some sin committed in the past life but it is not so. It is a human reality that occurs in all the ages from birth to old age.<sup>2</sup>

The onset of menstruation is the vital physiological change that occurred in girls during adolescence which is associated with the excessive intake of Junk/Fast Food.<sup>3</sup> The prevailing taboos and socio-cultural prohibitions during menstruation are the determinants of adolescent girls being ignorant scientific knowledge and practices regarding health and hygiene that are causing them to be the victim of adverse health outcomes.<sup>4,5</sup> Unhygienic menstrual practices affect women's health may causing vulnerability to RTI, PIDs and other complications.<sup>6</sup> So, hygiene related practices of women during menstruation are crucial to health<sup>7</sup>.

According to population census 2011, nearly 2 % of total population of Nepal are disabled and among them 44% of them are female. Among these disabled female, 36 % are physically

disabled.<sup>5</sup> Obstetrician-gynecologists encounter adolescents with disabilities in their practice. Teenagers with disabilities and their families my face complications in reproductive health issues like puberty, sexuality, and menstruation because of the concerns related to menstrual hygiene, risk of abuse and vulnerability to altered mood.<sup>5</sup>

In this condition menstruation and disability both are affected by socio-cultural factors. Thus our study will help to find out how disable women are vulnerable to menstrual health problems because of their knowledge and practices.

### MATERIALS AND METHODS

The descriptive, cross sectional study was conducted to assess the knowledge and practice regarding menstruation health among physically disables women in Disable Rehabilitation Center, **Jorpati** area Kathmandu. Sample size was calculated by using the formula (n) =  $\frac{Z^2P(1-P)}{d^2}$ . Where, n= sample size, P= expected prevalence or proportion, d= allowable error, Z= Z statistic for a level of confidence. Putting p= 0.89 (Prevalence of knowledge regarding menstruation)<sup>7</sup>, d=5% = 0.05, Z=1.96 for 95% confidence interval,1-p= 0.11 in formula the required sample size was 151. Purposive sampling technique was used to select the required sample. The study was conducted from 15 Feb to 15 March 2018. Semistructured questionnaire was the tool and face to face interview was the technique to collect the data. The collected data was entered and analyzed in Statistical Package for Social Science (SPSS) version 20. Descriptive analysis like frequency and percentages were computed and presented in a table.

Ethical principles were followed taking written consent from each participant and maintaining confidentiality by using an appropriate code for the identity of each participant.

## **RESULTS**

It was found that more than half of the participants (56.29%) were of age group 15-24 years. Majority of the participants i.e. 94.03% were found to be unmarried. Nearly 74% participants followed Hindu religion. Majority of the participants were Brahmin (31.12%) followed Janajati(23.18%). Regarding educational status, 13.24% of the participants had achieved secondary, 37.09% primary, 5.30% Higher Secondary while 27.81 % were literate and 16.56% were illiterate. More than one third of participants (38.41%) had disability related to lower limb, 30.46% had upper and lower limb related disability, and 22.52% had Upper limb disability. (Table: 1.)

Table 1: Socio-demographic Characteristics of the Participants n=151

Age (In Years)   15-24	Socio-demographic characteristics	Frequency(n=151)	Percentage (%)
25-34			
Sample	15-24	85	56.29
Marital status         Unmarried         142         94.03           Married         9         5.97           Religion         Hindu         112         74.17           Buddhist         25         16.56           Christain         14         9.27           Ethnicity           Bhramin         47         31.12           Janajati         35         23.18           Chettri         43         28.48           Dalit         22         14.58           Other         4         2.64           Educational status         Illiterate         25         16.56           Literate         42         27.81           Primary         56         37.09           Secondary         20         13.24           Higher Secondary         8         5.30           Type of disability           Lower limb         58         38.41           Head neck spinal         13         8.61           Upper and lower         46         30.46	25-34	43	28.48
Unmarried       142       94.03         Married       9       5.97         Religion       112       74.17         Buddhist       25       16.56         Christain       14       9.27         Ethnicity         Bhramin       47       31.12         Janajati       35       23.18         Chettri       43       28.48         Dalit       22       14.58         Other       4       2.64         Educational status         Illiterate       25       16.56         Literate       42       27.81         Primary       56       37.09         Secondary       20       13.24         Higher Secondary       8       5.30         Type of disability         Lower limb       58       38.41         Head neck spinal       13       8.61         Upper and lower       46       30.46	>34	23	15.23
Married       9       5.97         Religion       Hindu       112       74.17         Buddhist       25       16.56         Christain       14       9.27         Ethnicity         Bhramin       47       31.12         Janajati       35       23.18         Chettri       43       28.48         Dalit       22       14.58         Other       4       2.64         Educational status         Illiterate       25       16.56         Literate       42       27.81         Primary       56       37.09         Secondary       20       13.24         Higher Secondary       8       5.30         Type of disability         Lower limb       58       38.41         Head neck spinal       13       8.61         Upper and lower       46       30.46	Marital status		
Religion         Hindu       112       74.17         Buddhist       25       16.56         Christain       14       9.27         Ethnicity         Bhramin       47       31.12         Janajati       35       23.18         Chettri       43       28.48         Dalit       22       14.58         Other       4       2.64         Educational status       Illiterate       25       16.56         Literate       42       27.81         Primary       56       37.09         Secondary       20       13.24         Higher Secondary       8       5.30         Type of disability         Lower limb       58       38.41         Head neck spinal       13       8.61         Upper and lower       46       30.46	Unmarried	142	94.03
Hindu       112       74.17         Buddhist       25       16.56         Christain       14       9.27         Ethnicity         Bhramin       47       31.12         Janajati       35       23.18         Chettri       43       28.48         Dalit       22       14.58         Other       4       2.64         Educational status       Illiterate       25       16.56         Literate       42       27.81         Primary       56       37.09         Secondary       20       13.24         Higher Secondary       8       5.30         Type of disability         Lower limb       58       38.41         Head neck spinal       13       8.61         Upper and lower       46       30.46	Married	9	5.97
Buddhist       25       16.56         Christain       14       9.27         Ethnicity         Bhramin       47       31.12         Janajati       35       23.18         Chettri       43       28.48         Dalit       22       14.58         Other       4       2.64         Educational status       Illiterate       25       16.56         Literate       42       27.81         Primary       56       37.09         Secondary       20       13.24         Higher Secondary       8       5.30         Type of disability         Lower limb       58       38.41         Head neck spinal       13       8.61         Upper and lower       46       30.46	Religion		
Christain       14       9.27         Ethnicity       31.12         Bhramin       47       31.12         Janajati       35       23.18         Chettri       43       28.48         Dalit       22       14.58         Other       4       2.64         Educational status       Illiterate       25         Literate       42       27.81         Primary       56       37.09         Secondary       20       13.24         Higher Secondary       8       5.30         Type of disability         Lower limb       58       38.41         Head neck spinal       13       8.61         Upper and lower       46       30.46	Hindu	112	74.17
Ethnicity         Bhramin       47       31.12         Janajati       35       23.18         Chettri       43       28.48         Dalit       22       14.58         Other       4       2.64         Educational status       Illiterate       25         Literate       42       27.81         Primary       56       37.09         Secondary       20       13.24         Higher Secondary       8       5.30         Type of disability         Lower limb       58       38.41         Head neck spinal       13       8.61         Upper and lower       46       30.46	Buddhist	25	16.56
Bhramin       47       31.12         Janajati       35       23.18         Chettri       43       28.48         Dalit       22       14.58         Other       4       2.64         Educational status       Illiterate       25         Literate       42       27.81         Primary       56       37.09         Secondary       20       13.24         Higher Secondary       8       5.30         Type of disability         Lower limb       58       38.41         Head neck spinal       13       8.61         Upper and lower       46       30.46	Christain	14	9.27
Bhramin       47       31.12         Janajati       35       23.18         Chettri       43       28.48         Dalit       22       14.58         Other       4       2.64         Educational status       Illiterate       25         Literate       42       27.81         Primary       56       37.09         Secondary       20       13.24         Higher Secondary       8       5.30         Type of disability         Lower limb       58       38.41         Head neck spinal       13       8.61         Upper and lower       46       30.46			
Janajati       35       23.18         Chettri       43       28.48         Dalit       22       14.58         Other       4       2.64         Educational status         Illiterate       25       16.56         Literate       42       27.81         Primary       56       37.09         Secondary       20       13.24         Higher Secondary       8       5.30         Type of disability         Lower limb       58       38.41         Head neck spinal       13       8.61         Upper and lower       46       30.46	Ethnicity		
Chettri 43 28.48  Dalit 22 14.58  Other 4 2.64  Educational status  Illiterate 25 16.56  Literate 42 27.81  Primary 56 37.09  Secondary 20 13.24  Higher Secondary 8 5.30  Type of disability  Lower limb 58 38.41  Head neck spinal 13 8.61  Upper and lower 46 30.46	Bhramin	47	31.12
Dalit       22       14.58         Other       4       2.64         Educational status         Illiterate       25       16.56         Literate       42       27.81         Primary       56       37.09         Secondary       20       13.24         Higher Secondary       8       5.30         Type of disability         Lower limb       58       38.41         Head neck spinal       13       8.61         Upper and lower       46       30.46	Janajati	35	23.18
Other         4         2.64           Educational status         Illiterate         25         16.56           Literate         42         27.81           Primary         56         37.09           Secondary         20         13.24           Higher Secondary         8         5.30           Type of disability           Lower limb         58         38.41           Head neck spinal         13         8.61           Upper and lower         46         30.46	Chettri	43	28.48
Educational status           Illiterate         25         16.56           Literate         42         27.81           Primary         56         37.09           Secondary         20         13.24           Higher Secondary         8         5.30           Type of disability           Lower limb         58         38.41           Head neck spinal         13         8.61           Upper and lower         46         30.46	Dalit	22	14.58
Illiterate       25       16.56         Literate       42       27.81         Primary       56       37.09         Secondary       20       13.24         Higher Secondary       8       5.30         Type of disability         Lower limb       58       38.41         Head neck spinal       13       8.61         Upper and lower       46       30.46	Other	4	2.64
Literate       42       27.81         Primary       56       37.09         Secondary       20       13.24         Higher Secondary       8       5.30         Type of disability         Lower limb       58       38.41         Head neck spinal       13       8.61         Upper and lower       46       30.46	<b>Educational status</b>		
Primary       56       37.09         Secondary       20       13.24         Higher Secondary       8       5.30         Type of disability         Lower limb       58       38.41         Head neck spinal       13       8.61         Upper and lower       46       30.46	Illiterate	25	16.56
Secondary         20         13.24           Higher Secondary         8         5.30           Type of disability           Lower limb         58         38.41           Head neck spinal         13         8.61           Upper and lower         46         30.46	Literate	42	27.81
Higher Secondary         8         5.30           Type of disability           Lower limb         58         38.41           Head neck spinal         13         8.61           Upper and lower         46         30.46	Primary	56	37.09
Type of disability           Lower limb         58         38.41           Head neck spinal         13         8.61           Upper and lower         46         30.46	Secondary	20	13.24
Lower limb         58         38.41           Head neck spinal         13         8.61           Upper and lower         46         30.46	Higher Secondary	8	5.30
Lower limb         58         38.41           Head neck spinal         13         8.61           Upper and lower         46         30.46	Type of disability		
Upper and lower 46 30.46		58	38.41
Upper and lower 46 30.46	Head neck spinal	13	8.61
	•	46	30.46
		34	22.52

The 91.39 % of participants reported the right age of menarche. About 80% of participants reported 26-30 days as normal menstrual cycle duration. Only 3.31% of participants had taken health education class or training related to menstrual hygiene. It was found that 76.82% of participants were informed about menstruation by their parents, 10.61% by

friends whereas other sources of information were by teachers and course book. (Table: 2.)

Table 2: Knowledge Regarding Menstruation (n=151)

Knowledge Menstruation	Regarding	Frequency (n=151)	Percentage (%)	
Normal age of menarche				
11-15 years		138	91.39	
Others		13	8.61	
Normal flow of	bleeding			
3-5 ml		102	67.55	
5-7 ml		49	32.45	
Normal menstrual cycle duration				
26-30 days		121	80.13	
30-35		26	17.22	
Others		4	2.65	
Taken training/health education class				
No		146	96.69	
Yes		5	3.31	
Source of knowledge about menstruation				
Parents (mother)		116	76.82	
Friends		16	10.61	
Teachers		13	8.60	
Course book		6	3.97	

Maximum number of participants (96.69%) reported that they stayed at same place during menstruation. Also, 17% of participants reported that they bath daily during menstrual period. Maximum number of participants (98.01%) reported that they are food at same place. It was found that, 83.44% of participants used sanitary pad and 69.54 % of participants changed pad twice a day. Among the participants, 99.34% did not share common pads and 96.69% did not reuse pad at all. Regarding disposal of pads, 91.39 % of participants disposed pad in dustbin, 5.30% in separate place and 3.31% buried in mud. Among the participants, 61.59% clean genitilia haphazardly while 35.10% anterior to posterior and 3.31% posterior to anterior. Most of the participants (88.08%) used soap and water to

clean genitilia. Maximum number of participants reported that they take rest during menstruation (Table: 3.)

Table 3: Practice Regarding Menstrual Health n=151

	Percentage					
(n=151)	(%)					
146	96.69					
5	3.31					
Time of bath						
26	17.22					
65	43.05					
48	31.79					
12	7.94					
148	98.01					
3	1.99					
25	16.56					
126	83.44					
I						
16	10.60					
105	69.54					
30	19.86					
I						
150	99.34					
1	0.66					
146	96.69					
5	3.31					
5	3.31					
138	91.39					
8	5.30					
Separate place 8 5.30 <b>Technique to clean genitilia</b>						
53	35.10					
5	3.31					
93	61.59					
Haphazardly 93 61.59  Cleaning genitilia with						
133	88.08					
18	11.92					
Take rest during menstruation						
15	9.93					
136	90.06					
	5  26  65  48  12  148  3  25  126  16  105  30  150  1  146  5  5  138  8  illia  53  5  93  133  18  uation  15					

About 82% of disable women faced common problems during menstruation. Among them 44.80% faced dysmenorrhea, abnormal blood flow (22.40%) and premenstrual symptom (32.80%). To cope with common problems reported above, 44.80% took rest, 17.60% used hot water bag, 22.40% ate food, and 15.20% of them took medicine. (Table: 4.)

**Table 4: Common Problems and Coping Strategies during Menstruation (n=151)** 

Health related	Frequency(n=151)	Percentage			
information		(%)			
Faced Common Problem During Period					
No	26	17.21			
Yes	125	82.79			
Common problems (n=125)					
Dysmenorrhea	56	44.80			
Abnormal blood	28	22.40			
flow					
Premenstrual	41	32.80			
symptom					
Coping strategy (n=125)					
Medicine	19	15.20			
Food	28	22.40			
Hot water bag	22	17.60			
Rest	56	45.80			

## **DISCUSSION**

The study showed that 56.29% of participants were of age group 15-24 while 28.48% of 25-34 and 15.23% were above 34 years. Majority of the participants i.e. 94.03 % were found to be unmarried. Majority of the participants were Brahmin (31.12%) followed by Chrettri (28.48%). Regarding educational status, 13.24% of the participants had achieved secondary, 37.09% primary, 5.30% Higher Secondary while 27.81% were literate and 16.56 % were illiterate. The study conducted

in Chitwan district of Nepal and North India also shows similar age group of menstrual cycle as well as education level.<sup>6,12</sup> Maximum number of participants (38.41%) had disability related to lower limb. The study done in rural Nepal also revealed that limb disability was the most common one.<sup>13</sup>

In the present study the most common source of information to disabled women about menstruation health and hygiene were their mothers. This is supported by the study done in West Bengal.<sup>3</sup> However, the study done in rural Nepal (only 2.6% from parents) contrast to the result of our study. 11-13 Dysmenorrhea was the commonest problem faced during menstruation (44.80%) followed by premenstrual symptom and abnormal blood flow. Maximum number of participants (83.44%) used sanitary pads and frequency of changing pads twice a day was highest. Similar studies conducted in India and Nepal also shows same results.<sup>7,9,14</sup>

In this study, maximum number of participants (45.80%) reported that they take rest during menstruation to cope with menstrual problem. The study done in Thailand also showed that taking rest was the most common coping measures during menstrual problems.<sup>15</sup>

The sanitary pads were used by 83.44% of disabled women and 69.54% used to change pad twice a day which was similar to other studies.<sup>7,12</sup> Only 3.31% of participants had

taken health education class or training related to menstrual hygiene which resembled with the study done in rural community in Northern India.<sup>6</sup>

Among the participants, 61.59% clean genitilia haphazardly while 35.10% anterior to posterior and 3.31% Posterior to anterior. In our study, most of the participants (88.08%) used soap and water to clean genitilia. Out of 160 participants of Uttarkhand, India, for cleaning purpose, 97.5% girls used both soap and water.<sup>6</sup> However, Unicef guidance Menstrual Health and Hygiene revealed that cleaning genitilia anterior to posterior is the correct technique and cleaning genitilia with clean water is the correct practice.12 About 43% of disabled women take bath at 4<sup>th</sup> day of menstruation followed by 31.79% daily. However, Egyptian women take shower regularly during menstruation.<sup>16</sup>

Limitations: The study was conducted in Disable Rehabilitation Center, Jorpati area of Kathmandu with 151 physically disabled women; therefore, result of the study cannot be generalized for all women. The result revealed was for the study period only because it was a cross sectional study.

#### CONCLUSION

Large proportion of disabled women were aware about the duration of normal. menstrual cycle and amount of normal blood loss. Majority of them have improper menstrual health and hygiene practices such as bathing only in fourth day of menstruation, cleaning genitilia with soap and. water, and using wrong cleaning technique. Since, mothers and friends were the best sources of information about menstrual health and hygiene to disabled women, government and concerned organizations should provide health education through educating mothers as well as peer groups.

Acknowledgements: Authors express heartfelt thanks to rehabilitation centers (Disability New life Center, National Disability Women Association, National Disabled Association, Disable Rehabilitation center, Khagendra Disable School, Jorpati, Kathmandu). We also extend gratitude and appreciation to all participants of this study.

## REFERENCES

- Definition and classification of disability in Nepal. Government of Nepal; 2006. <u>Full Text</u>
- 2. Sharma J. A Study on the Social Status of Women with Disabilities.2007. PubMed
- 3. Amgain K, Neupane S. Effects of Food Habits on Menstrual Cycle among Adolescent Girls . Europasian J. of Med. Sci. [Internet]. 2020Mar.12 [cited 2020May13];1(1):53-1. Google Scholar | Full Text
- Dasgupta S. Menstrual Hygiene: How Hygienic is the Adolescent Girl? Indian J Community Med. 2008;33(2):77-80.
   Google Scholar | PubMed | Crossref
- 5. People with Disability: Central Bureau of Statistics; 2011. PubMed

- Arbor A. Menstrual and reproductive issues in adolescents with physical and developmental disabilities.
   2014;124(2):367-75.
   Google Scholar | PubMed | Crossref
- 7. Misra P UR, Sharma V, Anand K, Gupta V. A community-based study of menstrual hygiene practices and willingness to pay for sanitary napkins among women of a rural community in northern India. The National Medical Journal of India. 2013;26(6):335-7.

  Google Scholar | Full Text
- 8. Thakur H, AA. et al. Knowledge,
  Practices, and Restrictions Related to
  Menstruation among Young Women from
  Low Socioeconomic Community in
  Mumbai, India., 2014. Google Scholar |
  Full Text
- 9. Sapkota D, SD, Budhathoki SS, Khanal VK, Pokharel HP. Knowledge and practices regarding menstruation among school going adolescents of rural Nepal. 2013;2(5):117-21.

  Google Scholar | CrossRef
- Rupa Vani K, Bupathy A. Menstrual Abnormalities in School Going Girls – Are They Related to Dietary and Exercise Pattern?. Journal of Clinical and Diagnostic Research. 2013; November:7(11).
   Google Scholar | Full Text
- Kamath R GD, Lena A, Chandrasekaran V. A study on knowledge and practices regarding menstrual hygiene among rural and urban adolescent girls in Udupi Taluk, Manipal, India. Global Journal of Medicine and Public Health. 2013;2(4). Google Scholar | Full Text
- 12. Unicef. Guidance on Menstrual Health and Hygiene. 2019: 1st Eds: 1-92. Full Text
- Adhikari KB, Dhungel SI, Mandal A. Knowledge and practice regarding menstrual hygiene in rural adolescent girls of Nepal. Kathmandu University Medical Journal. 2007;5(3):382-6. Full Text

- Sauvey S, Osrin D, Manandhar DS, Costello AM, Wirz S. Prevalence of Childhood and Adolescent Disabilities in Rural Nepal. Indian Pediatr. 2005;I:0–5. Link
- 15. Yoshimitsu A, Sriareporn P, Upalabut S, Khiaokham P, Matsuo H (2015) Current State of College Women's Coping Behaviors against Peri-menstrual Symptoms and Educational Challenges in Thailand . J Women's Health Care 4: 218. <a href="Mailto:CrossRef">CrossRef</a> | Full Text</a>
- Abdel-Hady El-Gilany, Karima Badawi SE-F.
   Menstrual Hygiene among Adolescent
   Schoolgirls in Mansoura, Egypt. Reprod Heath
   Matters. 2005;8080(5):2 6191-8. Full Text