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Health Perception and Participation in Daily Activities during the Menstrual Period among Secondary School Girls in Nepal

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Abstract

This paper explored the menstruation experience, confidence, and hygiene behaviors, and activities of secondary schoolgirls in Nepal, using average scores and independent t-tests to compare girls attending public and private schools. Most of the psychosocial and behavioral measures evidenced clear differences between the two groups. Private-school students reported a bigger drop in confidence during their periods ($p = .018$) and felt more uneasy about joining social events ($p = .000$), which suggests stronger social or peer pressures. In contrast, public-school girls felt more uncomfortable with participating in school activities, which may reflect ongoing limitations in infrastructure and support at public schools ($p = .021$). Hygiene practices were reportedly quite good across both groups, as evidenced by frequent carrying of sanitary pads, frequent changes of sanitary pads, and washing with soap and water, though private-school students were more consistently carrying sanitary pads outside the home ($p = .033$). Most of the cultural practices, such as sleeping on temporary beds, did not differ meaningfully between school types. One final exception was nutrition: public-school students were much more likely to report eating a balanced diet during menstruation ($p = .000$), reflecting variations in dietary norms or family expectations. Overall, the findings indicate that while hygiene has improved across both settings, confidence, participation, and some of the cultural restrictions persist according to the socio-educational context. The paper highlights the need for school-tailored interventions addressing psychosocial barriers, the creation of more menstruation-friendly environments, and supportive norms within both the public and private education systems.

Keywords: menstrual hygiene, schoolgirls, Nepal, psychosocial barriers, public–private school comparison

1. Introduction

Menstruation in Nepal is still intertwined with taboos and everyday challenges that influence how girls feel about themselves, how healthy they think they are, and how much they can take part in school and social life (Karki & Khadka, 2019a). During secondary school, girls often report lower confidence, feelings of unwellness, and discomfort participating in class or social events while on their periods (Karki, 2018). Many also adhere to restricted hygiene practices, such as washing only with soap and water, not changing regularly, carrying pads only irregularly when outside the home, or adhering to sleeping restrictions based on cultural beliefs. These factors-psychosocial and hygiene-based narrow participation in school, social interaction outside the home, and overall well-being. Recent studies from Nepal and the broader South Asia region find sustained gaps in menstrual knowledge, less-than-ideal hygiene management, and continued exclusionary behaviors that are linked to increased absenteeism and reduced participation, and poorer self-rated health among adolescents. This suggests a need for comprehensive evidence-based inquiry (Amatya et al., 2018; Khanal et al., 2023; Sood et al., 2022).

Knowledge of menstruation and hygiene practices among Nepali adolescent girls ranges from region to region, with many studies observing information gaps, limited access to materials, and culturally embedded restrictions that shape daily management. Schools have conducted repeated surveys on inconsistent use of commercial sanitary products, irregular pad-changing and bathing routines, and ongoing reliance on informal sources—such as mothers and peers—over a comprehensive school curriculum. Practical constraints, like these, and the lingering exclusionary customs in certain rural areas, have created an environment in which safe, private, and dignified menstruation management is not assured for many girls in secondary school (Devkota et al., 2025; Khanal et al., 2023; Pokharel & Chaudhary, 2025).

Menstruation also influences girls' perceptions about themselves and their participation: both qualitative and quantitative studies from Nepal associate menstruation with reduced confidence, a feeling of ill health, and avoidance of school and social life. Other studies from outside Nepal also reveal that severe pain and heavy flow further contribute to missed days at school and reduced engagement in classrooms. Evidence from intervention and observational studies suggests these psychosocial and symptom-related factors-not just product access-contribute to absenteeism and withdrawal from extracurricular and community activities. This calls for a need for measurement of health perception and participation outcomes while assessing adolescent menstrual well-being (Ghimire et al., 2024; Shrestha et al., 2024).

Recent reviews of school-based menstrual health education and menstrual hygiene management programs in Nepal suggest that knowledge, attitudes, and some practices can improve through culturally appropriate, school-delivered initiatives; however, shifts in confidence, perceived health, and active participation are less consistently tracked or understood. Against the background of mixed evidence regarding which behavioral, social, and infrastructural factors most strongly influence daily participation during menstruation, the proposed study, which quantifies the relation between specific hygiene behaviors and cultural practices and health perception and activity participation among secondary-school girls, is expected to yield actionable insights for schools, health programs, and policymakers (Shrestha et al., 2025).

Despite increasing attention to menstrual hygiene in Nepal, we still lack a clear picture of how girls' perceptions of their own health during menstruation connect to their day-to-day activities. So far, studies tend to be piecemeal: some focus on what girls know and how they manage hygiene, others on cultural restrictions. Rarely do we see how concrete behaviors-like how often they change pads, how they bathe, or what sanitary supplies they carry-shape their sense of health and self-confidence, or how these feelings affect whether they stay engaged in school and social life.

While stubborn socio-cultural norms, psychological discomfort, and regional differences have been documented, few Nepal-based studies bring the psychosocial factors, cultural practices, and practical hygiene hurdles together into a coherent framework. Improvements from intervention efforts are indicated through improved knowledge and some practices, but most rarely measure whether these gains reduce discomfort, build confidence, or translate into more consistent participation in daily routines.

This gap is most pronounced in efforts to compare public and private schools, leaving educators and policymakers without the nuanced evidence they need to tailor menstrual health programs. What's needed is a focused study that teases out how health perceptions, menstrual practices, and participation in everyday activities interrelate among Nepali secondary-school girls, so we can base programs on solid, school-level evidence.

1.1 Research Objectives

The general objective of this study is to assess how menstrual hygiene practices and cultural restrictions affect confidence, perceived health, and participation in school and social activities among secondary-school girls in Nepal.

2. Methodology

2.1 Study design and setting

The study was based on the quantitative design (Shrestha et al., 2024), as well as it was a descriptive and explanatory research design. A cross-sectional analytic study among secondary-school girls (grades 8–10) in two purposively selected schools representing public and private schools(Karki, 2019). Cross-sectional surveys are commonly used in Nepali MHM research and allow estimation of prevalence and associations with psychosocial outcomes.

2.2 Sample size and sampling

The study used a Prevalence (p) estimate**:** 50% (0.50), used because it provides the maximum sample size when prior prevalence is uncertain, with 95% CI and 5% margin of error, the minimum sample is 384 (Karki, 2014); allowing 31% additional data collected to minimize the response error, so the total final sample was 504.

2.3 Data collection tools & analysis

Use a structured, self-administered questionnaire (translated to Nepali and piloted) with sections covering: socio-demographics; menstrual history and symptoms; hygiene practices (pad carriage, pad change frequency, bathing, sleeping arrangement, diet); psychosocial outcomes (confidence, perceived health); participation indicators (missed school days, non-participation in events); social factors (family/friends influence, teacher support); and school WASH availability. For psychosocial outcomes, use Likert-type statements (e.g., "During my period I feel less confident than when I am not" — 1=Never to 3=Always)(Karki & Khadka, 2019b). Similar item wording and Likert scales have been used and validated in Nepalese adolescent MHM studies. The statistical analysis was done to compare the prevalence and significance between the responses of public and private school girls.

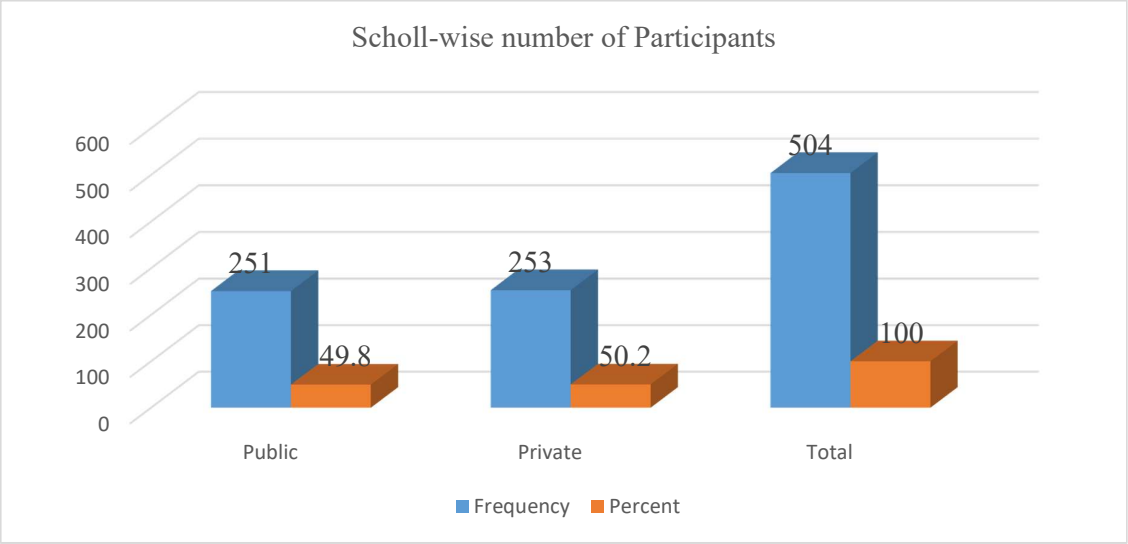
3. Results

3.1 School-wise number of participants

The survey targeted 504 girls from secondary schools, almost evenly distributed between public and private. 251 girls, or 49.8%, were attending public schools, whereas 253, or 50.2%, were from private schools. Such near equality automatically makes it easy to contrast

findings between the two types of schools to examine differences in how girls perceive menstrual health, their hygiene practices, and how these influence daily activities.

Figure 1: *School-wise number of participants*



This balance also enhances the reliability of any comparison of schools within the study. The survey reduces the sampling bias by having about an equal share of participants from both settings and hence helps to see more clearly how menstrual experiences might differ between public and private school environments in Nepal. Overall, the even representation strengthens the findings and also helps translate the results to similar school populations.

3.2 Descriptive Analysis of Student Perception

The findings presented in Table 1 reveal that a great majority of the girls feel psychological distress during menstruation. Over three-fourths (54%) feel less confident sometimes, while 12.7% feel less confident always, resulting in a higher average of 1.79. Again, the opinion about being unhealthy during menstruation seems to be slightly more: 39.9% feel unhealthy sometimes, while nearly one-third (32.9%) feel the same always, resulting in a higher average of 2.06. These results clearly reveal that the occurrence of menstruation not only brings physical discomfort but also leads to negative self-perception and vulnerability in a great majority of secondary School-going girls.

Table 1: *Descriptive Analysis of Student Perception*

Statement	Never	Sometimes	Always	Mean
I feel less confident than when I am not during my period	33.3	54.0	12.7	1.7937
I feel I am unhealthy during my period	27.1	39.9	32.9	2.0579
I feel uncomfortable participating in school activities during my period	21.4	43.7	34.9	2.1349
I feel uncomfortable participating in social functions/festivals during my period	12.0	46.5	41.5	2.2954
I carry a sanitary pad when I go out of my home	10.4	25.5	64.1	2.5369
I use only soap & water for bathing during my period	4.8	4.0	91.3	2.8651

I frequently change the sanitary pad in a day during my period	2.6	17.6	79.8	2.7725
I used to sleep in a temporary bed during my period	52.4	16.9	30.6	1.7823
I eat a balanced diet than on other days during my period,	22.4	41.5	36.1	2.1377

Source: *Field Survey, 2025*

The indicators related to participation show a definite effect of menstruation. A quite high number of 43.7% of the participants feel uncomfortable sometimes, while 34.9% feel uncomfortable always. This results in a higher mean of 2.13. There seems to be a more pronounced effect of menstruation on social participation since the number of students who feel uncomfortable sometimes reaches 46.5% and always 41.5%, resulting in a high mean of 2.29. The social events of the school may include more physical activities or restrictions. There seems to be more hesitation to attend these events when menstruation takes place.

The statistics show that there is a high menstrual hygiene preparedness. A considerably high proportion of 64.1% of the subjects always carry a sanitary pad when going out. A high mean of 2.54 was recorded. Practices regarding hygiene also appear to be more consistent. A high proportion of 79.8% of the subjects always change their sanitary pad frequently. A high proportion of 91.3% of the subjects always use soap and water for bathing. A high mean of 2.77 was recorded for changing sanitary pads. A high mean of 2.86 was recorded. These high frequencies show that despite the presence of psychological distress in the form of challenges in participation, the subjects show awareness of practices of menstrual hygiene.

Menstrual restrictions in the culture remain apparent but sporadic. Over half the participants (52.4%) never rest in a temporary bed during menstruation; however, a substantial number of participants (30.6%) continue to always rest in a temporary bed for menstruation, indicated by the significantly lower mean of 1.78. Dietary habits demonstrate a mix of both practices. Though 36.1% of participants always maintain a balanced diet during menstruation and 41.5% of participants sometimes maintain a balanced diet, a medium adoption level of a healthier eating habit during menstruation is revealed by the mean of 2.13. The table above indicates a combination of psychological difficulties, engagement barriers, hygiene practices, and prevailing social practices.

3.3 Comparative Analysis between Public and Private School Students

The findings presented in Table 2 show a visible variation in the level of confidence in the participants of both the public and private schools. The participants of the private schools have a higher mean score of 1.86 compared to the participants of the public schools, who have a mean score of 1.72. Their findings also show the results to be significant at the $p = 0.018$ level. But when the participants of both the schools were asked about their health during menstruation, the findings show the mean scores of both the groups to be almost equal at 2.07 for the private schools group and 2.04 for the public schools group. The findings also reveal the result to be insignificant at the $p = 0.674$ level.

Table 2: *Comparative Analysis between Public and Private School Students*

Statement	Mean Value (1=Never to 3=Always)		t-test: Sig. (2-tailed)
	Public school student	Private school student	
I feel less confident than when I am not during my period	1.7251	1.8617	.018
I feel I am unhealthy during my period	2.0726	2.0435	.674
I feel uncomfortable participating in school activities during my period	2.2112	2.0593	.021
I feel uncomfortable participating in social functions/festivals during my period	2.1290	2.4585	.000
I carry a sanitary pad when I go out of my home	2.4718	2.6008	.033
I use only soap & water for bathing during my period	2.8725	2.8577	.719
I frequently change the sanitary pad in a day during my period	2.7339	2.8103	.073
I used to sleep in a temporary bed during my period	1.8395	1.7273	.159
I eat a balanced diet than on other days during my period,	2.4839	1.7984	.000

Source: Field Survey, 2025

A major point of distinction comes in terms of participation in schools during the menstruation period. According to the statistics, the mean value of discomfort in participating in activities in public schools (2.21) is higher compared to the value in private schools (2.06) at a significance level of 0.021. This suggests that there may be a significant point of distinction between the two in terms of the challenges of participation that the girls may face in schools. These may range from less favorable conditions of the Water, Sanitation, and Hygiene (WASH) services in the public schools.

The biggest and most significant variation exists in social participation. The private school girl's mean (2.46) variation is considerably higher compared to the public school girl's mean (2.13) regarding the discomfort felt in social events. $p = 0.000$. This implies that private school girls feel more restrictions in terms of social participation while menstruating. The variation also shows that while public school girls feel constrained in their schools, the restrictions may exist in terms of family or social values for private school girls.

Private schools & public school girls both show strong compliance with the menstrual hygiene practices in a big way. There are some significant variations in some of the practices. Private-school-going girls have the tendency to carry sanitary napkins when going out more than public school girls (Mean: 2.60 vs. 2.47; p-value = 0.033). This may be due to their greater availability of sanitary napkins or more knowledge about hygiene. The number of changes of sanitary napkins per day is slightly more in the case of the private school group (2.81) compared to the public school girls (2.73); however, it is not significantly different (p-value = 0.073). There was no significant variation in bathing habits in the bathing process in terms of the use of soap & water. The mean of both groups was much higher, around 2.86. Hence, the hygiene habits in bathing also remain the same in both groups. The p-value was 0.719. Cultural restrictions seem to have a similar effect on both groups, as noticed in the habit of resting in a temporary bed during menstruation; both values have a low magnitude (1.83 vs. 1.72) and a statistically insignificant p-value ($p = 0.159$).

The above finding suggests that the community-adequate traditional restrictions remain practiced in some families, but without a significant distinction in terms of the type of schools attended. There seems to be a very interesting variation in the dietary habits of both groups since the public school-going girls have a remarkably higher value (2.48) than the private school-going girls (1.79) for the habit of having a balanced diet during menstruation. A highly significant p-value (.000) suggests a possible greater influence of home practices in guiding the dietary habits of public school-going girls in terms of menstrual nutrition or the possible lesser likelihood of change in dietary habits in the case of private school-going girls, probably due to the factors of lifestyle and preferences. The overall analysis suggests a complex mix of psychological, behaviorally driven, and traditional factors that shape the experiences of menstruation across different types of schools in the Nepalese context.

4. Discussion

Findings of the presented research reveal that the reduced confidence of private school girl participants was greater despite their equal perceptions of health in both private and government schools. Such findings reflect the reality of menstruation being driven by social-psychological factors to the same extent that somatic factors drive it. An MHM program evaluation in a Chitwan school revealed that MHM stigma, social influence, and body image may drive girls' embarrassment/shame/confidence levels down despite the ready availability of MHM products. Such psychosocial factors may therefore account for the comparatively higher loss of confidence experienced by private school girl participants (Khanal et al., 2023).

The trend of discomfort being higher in public schoolgirls to engage in activities at school is also supported by Nepalese studies that show the lack of WASH facility infrastructure in schools to be a factor in greater difficulties in participation in activities at schools. For instance, the results of some studies in the form of a cross-sectional survey in different districts have shown the lack of toilet privacy, lack of water/disposal services in schools, or lack of support from teachers to be factors in high absence rates from schools or avoidance of engagement in class activities when menstruating (Bhusal, 2020).

At the same time, the greater unwillingness of private school-going girls to attend social events, evident in your dataset, aligns with well-documented qualitative studies that have found socio-economic factors to influence menstrual practices differently. Studies have shown that social restrictions, secrecy, and family norms (often unrelated to material access to sanitary products) continue to influence the form of avoidance of social events in higher socio-economic settings in Nepal. These studies may therefore shed some insight into why the social event discomfort of private school-going girls may be higher compared to the discomfort experienced by their peers in public schools (Acharya & Khanal, 2025).

The overall hygiene standards being well practiced in this study (carrying the pad, changing the pad often, washing with soap and water) corroborate results of more recent studies aware of the intervention literature, which show the positive effect of improved access to health products and hygiene practices in the wake of health instruction. More recent intervention studies in Nepal have shown positive change in the adoption of the sanitary product and practices of self-care in the wake of health instruction in schools, while also confirming that good practices don’t necessarily overcome psychosocial barriers/cultural restrictions to uptake—a reflection of our mixed findings. Finally, the mixed evidence regarding culturally bound practices and eating habits in your research sample (use of temporary-bed sleeping arrangements; varying eating habits by type of school) also reflects the findings of the country-level analysis regarding uneven decline in restrictive practices and uneven attention to menstrual nutrition. Country- and district-level research has also shown that although many girls have adopted sanitary practices, traditional practices remain in many regions for both restrictions and eating habits (Morrison et al., 2018).

5. Conclusion & Recommendation

The findings of the research show that the practices of menstrual hygiene are strong in both public and private schools in Nepal, but there remain significant differences in the aspects of emotions, participation levels, and dietary practices of the adolescent girls during menstruation. Private school girl adolescents feel more emotionally disturbed, less confident, and have higher challenges in social participation, but the public school girl adolescents have limited barriers to participation in schools and follow favorable dietary practices. The socio-cultural restrictions remain operational in both types of adolescents, but in different forms. The results clearly reflect the complexity of the issue of menstrual health in the sense that interventions should target the adolescent girls' emotions, social norms, school environment, and their own practices. Improvement in menstrual education in both types of schools and modifications in the socio-cultural factors are also very important for the overall improved health of girl adolescents.

On the strength of the results derived from the foregoing discussions, specific recommendations can be made for schools, families, as well as policymakers. First, schools need to augment their MH education program by emphasizing emotions, building up their self-confidence, and participating in activities when menstruating. They need to give greater emphasis to their MH education program in private schools since girl students there have experienced more social discomfort and less self-confidence. Second, in public schools, there needs to be emphasis on providing better wash and sanitation facilities for reducing social discomfort experienced in school activities when menstruating. Third, MH awareness activities need to be organized at the community level about harmful social practices affecting the MH of adolescents in general and adolescents in particular. Finally, families in private schools need to change their approach to menstruation in general to become less restrictive.

Moreover, nutrition education needs to be conducted for both categories of students since dietary practices in both types of schools vary greatly. Schools may add MHM-friendly dietary practices to health education sessions in the curriculum or even to extra-curricular activities. Finally, policymakers need to ensure that MHM practices follow the same guidelines in all schools. There also needs to be monitoring mechanisms to determine the infrastructure support for MHM practices in schools, the supply of hygienic products for MHM practices in schools, as well as the psychosocial conditions of the girl students in schools when MHMs occur.

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