Menstrual Exile and Domestic Violence in Far-Western Nepal.

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INTRODUCTION

Chhaupadi, also known as menstrual exile, is a cultural practice in Far-Western Nepal that isolates women and adolescent girls from their homes and daily activities during their menstrual periods. Driven by traditional beliefs about impurity, these women are sent to live in animal sheds or makeshift huts[1, 2].

Women subjected to menstrual exile face increased health risks and psychological stress. Understanding these exposures is important for the health system to develop effective interventions. However, the impact of menstrual exile on women's lives is often underrepresented in existing research or policy due to cultural and ethical challenges in establishing cause-and-effect relationships and limitations in current data[2, 3].

Figure: The Perils of Chhaupadi, Isolation and Vulnerability.

Source: Photo by Awasthi KR, 2021 Oct 28. [Left] A close-up of a typical Chhaupadi shelter in Mugu district. [Right] A woman preparing to shelter in a makeshift hut during her menstrual period.

This study aims to address these gaps by examining the impact of menstrual exile on the prevalence of domestic violence against women in Far-Western Nepal. By focusing on domestic violence, we seek to highlight how cultural practices can exaggerate women's vulnerability to violence within their families.

METHODS

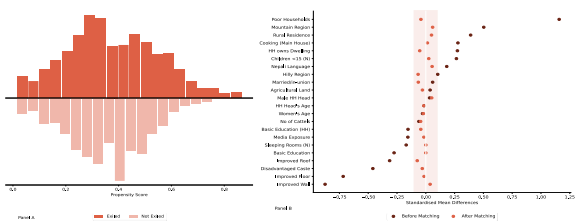
Data: We used data from the 2019 Nepal Multi-cluster Indicator Survey (NMICS). The survey included 14,805 women aged 15 to 49 from 12,800 households across seven provinces of Nepal[4]. We focused on 3,108 women from the Karnali and Sudurpaschim Provinces, where menstrual exile is prevalent.

Variables: The outcome variable is women's exposure to domestic violence, assessed through attitudes toward physical violence by husbands and mothers-in-law. Menstrual exile is the treatment variable which indicates whether women sought shelter in an animal shed or makeshift huts during their last menstruation. Covariates include women's sociodemographic and household characteristics.

Matching Method: We calculated propensity scores based on observed covariates to match 718 women exposed to menstrual exile with 718 unexposed counterparts. We then estimated the average marginal effect of menstrual exile on domestic violence, adjusting for matching weights and clustering of standard errors at the matched pair stratum[5].

Robustness Check: We conducted a falsification test with 1,000 iterations of a simulated experiment, randomly assigning unexposed women to placebo and control groups. Using 1:1 matching, we assessed if the placebo had any effect on domestic violence. We performed sensitivity analysis to validate the stability of our findings.

Figure: Quality of Matches.



Source: Authors' drawing from calculations based on the MICS 2019 dataset. Panel A: Distribution of estimated propensity scores among the treated and control groups. Panel B: Standardized mean difference by covariates before and after matching.

RESULTS

Domestic violence against women is widespread in the study population. Even in the absence of menstrual exile, the prevalence is 19.9% for violence perpetrated by husbands and 27.8% for violence perpetrated by mothers-in-law.

The baseline risks are alarming, but menstrual exile further exacerbates this vulnerability. Women who experience menstrual exile are significantly more likely to experience domestic violence by both their husbands and mothers-in-law.

Menstrual exile increased the likelihood of domestic violence by 14.3% from husbands and 12.2% from mothers-in-law, compared to similar women who did not experience exile.

The result is consistent across socio-demographic groups, with no significant variation in risk by age, marital status, ethnicity, or place of residence.

Table: Average Treatment Effects Due to Menstrual Exile on Domestic violence.

	Perpetrated by Husband	Perpetrated by Mothers-in-Law
Menstrual Exile	0.143***	0.122***
	(0.023)	(0.025)
Control's POM	0.199***	0.278***
	(0.017)	(0.018)
Treated Units	718	718
Observations	1436	1436

*Source: Authors calculations from the MICS-2019 data. Note: The reported coefficients are the average treatment effects of menstrual exile on the outcome variables. Control's Mean Potential Outcome (POM) is the baseline. Standard errors are clustered at the matched stratum. Coefficients are weighted for sample weights adjusted for matching weights. Robust standard errors in parentheses. *p<0.10 **p<0.05 ***p<0.01.*

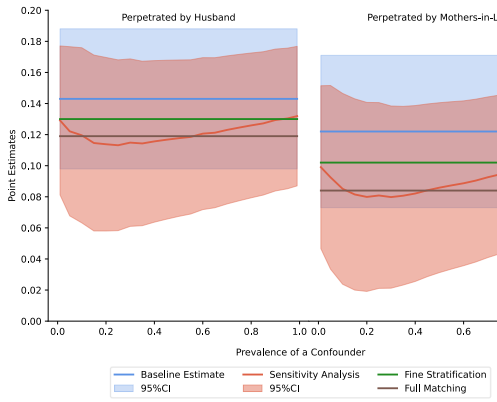
ROBUSTNESS CHECKS

The risk of domestic violence due to menstrual exile is consistently significant across various matching models. Alternative estimates show an increase of 11.9% to 13% in violence by husbands and 8.4% to 10.2% in violence by mothers-in-law.

Accounting for observed characteristics, any differences in domestic violence between women exposed and not exposed to menstrual exile are due to menstrual exile itself. In 92% of the 1000 simulated experiments, no statistically significant effect was observed for the placebo group.

Regardless of varying assumptions about unobserved confounders[6], menstrual exile consistently increases the risk of domestic violence by 11.3% to 13.2% for violence perpetrated by husbands and by 8% to 10.4% for violence by mothers-in-law.

Figure: Sensitivity Analysis of the Estimated Effects.



Source: Authors' drawing from calculations based on the MICS 2019 dataset. Sensitivity analysis was conducted using the Greenland approach[7], assuming that an unobserved binary confounder increases the odds of menstrual exile by 6.36 times and the odds of domestic violence by 1.28 times, and that the prevalence of this confounder in the control group varies between 1% and 99%.

CONCLUSION

Women in Far-Western Nepal are at risk of domestic violence, further exacerbated by the practice of menstrual exile. Socialization into subservient gender roles may have encouraged women in this region to accept harsh conditions, including exile and domestic violence[8].

The health system must prioritize interventions that address the risks associated with cultural practices like menstrual exile. Integrating community education, legal reforms, and mental health services into existing healthcare strategies can mitigate domestic violence and promote safer environments for women during menstruation[9].

Future research should investigate the health and safety impacts of similar cultural practices while adopting approaches that better address unobserved confounders and clarify causal pathways over time. Such research would inform the development of health policies and interventions to mitigate risks associated with cultural practices.

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