Prevalence and Risk Factors of Child Marriage Among Madhesi Women in Nepal's Terai Region

Rajesh Karki; MPH.[1], Mohini Gupta; BPH.[2], Maheshor Kaphle; MPH.[3]

1 Central Department of Public Health, Institute of Medicine, Tribhuvan University, Maharajgunj, Kathmandu, Nepal
2 Department of Public Health, Yeti Health Science Academy, Purbanchal University, Maharajgunj, Kathmandu, Nepal
3 Department of Public Health, People's Dental College and Hospital, Tribhuvan University, Kathmandu, Nepal

Abstract

Objective: Child marriage is a detrimental practice with negative consequences for girls' health and well-being. This study aims to identify the prevalence of child marriage and associated risk factors within the Madhesi community.

Materials and methods: A cross-sectional study was conducted in a sub-metropolitan city of Lumbini Province, Nepal, in 2023. A total of 352 married women were randomly selected using simple random sampling and interviewed using a structured questionnaire between March 28th and April 17th. Descriptive categorical variables were expressed as proportions. Risk factors associated with child marriage were measured using the Chi-square test and multivariate logistic regression analysis. All statistical analyses were performed using SPSS version 26.

Results: The majority of respondents (36.1%) were in the age group 21-25, with a mean age of 25.90 years ± 4.6 years. Most respondents (48.9%) received only basic-level education, with the majority (72.4%) reporting their parents as having no formal education. The primary family occupation was farming (40.1%). The prevalence of child marriage was high (77.0%), with a median marriage age of 18 years. Logistic regression analysis revealed significant risk factors including lower education levels of respondents and their parents, husband's occupation, lack of awareness about the legal marriage age, limited decision-making power regarding marriage, belief in the dowry system, discussions with friends about child marriage, and occurrence of child marriage among friends.

Conclusion: Despite legal prohibition, child marriage remains prevalent in the Madhesi community. Educational interventions targeting women and parents, empowering women with decision-making authority, and addressing the dowry system are crucial for reducing this harmful practice.

Keywords: Child Marriage; Dowry; Nepal; Prevalence; Risk Factors

Introduction

The global concern surrounding early marriage is evident (1), with occurrences of marriages involving children under the age of 18 documented worldwide, particularly prevalent in South Asia, Africa, and Latin America (2). Despite escalating global attention and commitments by countries to eliminate the detrimental practice of child marriage, an alarming

Correspondence:
Rajesh Karki
Email: karkirajesh2022 @gmail.com

15 million girls are still married before reaching the age of 18 each year (3). The persistence of child marriage is deeply rooted in numerous communities, where girls often enter matrimony immediately upon reaching puberty (4). This practice robs girls of their childhood, posing threats to their well-being. Those marrying before the age of 18 face increased risks of domestic violence, restricted educational opportunities, and diminished economic and health outcomes. These challenges persist across generations, placing a strain on a nation's capacity to provide quality health and education services. Adolescent pregnancies, with heightened complications, and social isolation further exacerbate the adverse impact on the mental health of girls (5).

Child marriage is illegal in Nepal since 1963. Both arranging and participating in child marriages are punishable by law (6). In Nepal, the Criminal (Code) Act (2017) officially establishes 20 years as the minimum age for marriage. Consequently, marriages where one or both spouses are under 18 (or 20 in the case of Nepal) are classified as early (child) marriages (7). Despite this legal framework, the high incidence rate of child marriage in Nepal, especially among South Asian countries, serves as a concerning signal for child protection. Notably, child marriage is prevalent in economically deprived and Dalit communities of Terai, such as the Madhesi (1, 8).

According to the Nepal Demographic and Health Survey 2022 (NDHS), women in Nepal tend to marry earlier than men. The median age at first marriage among women aged 25-49 is 18.3 years, with 25% of women in this age group marrying before the age of 15, and 47% marrying by the age of 18 (9). Similarly, the national population and housing Census 2021 report an overall median age at first marriage of 19 years. This data underscores the significant percentage of the population marrying before the age of 20, as indicated in the Census 2021 (10).

Despite the government of Nepal signing numerous international instruments and enacting laws to address child marriage, challenges persist due to weak law enforcement and low awareness level (11). This study aims to identify the prevalence of child marriage and associated risk factors within the Madhesi community of Nepal.

Materials and methods

A community-based cross-sectional study was conducted in Nepalgunj Sub-Metropolitan City, Lumbini Province, Nepal, in 2023. The study focused on married women who were members of the Madhesi ethnic group and permanent residents in the area. We obtained ethical approval from the Institutional Review Committee (Ref. No. 079-91). Formal permission was secured from the administrative office of the Nepalgunj Sub-Metropolitan City.

Participants were provided with comprehensive information regarding the nature and purpose of the study, and informed that their participation was anonymous and their responses would be kept confidential. For individuals below 18 years of age, assent was obtained from the participant along with written informed consent from the head of the family, as per IRC guidelines. Participants were assured of their right to refuse participation at any time during the data collection process.

The sample size for the study was calculated using the formula $n = z^2/pq/e^2$, where the past prevalence of child marriage among the Madhesi women (p) was 0.296 (12), q (1-p) was 0.704. A reliability level of 95%, corresponding to a significance level of 0.05 (z = 1.96), and an acceptable sampling error (e) of 0.05 were considered. After accounting for a 10% non-response rate, the final sample size was determined to be 352.

The list of married individuals was obtained from the municipal administrative office. Simple random sampling, facilitated by a lottery method, was employed to select the required sample size. Local Female Community Health Volunteers (FCHVs) played a crucial role in identifying and reaching out to the selected respondents. In instances where a selected respondent was unavailable during the initial data collection attempt, a second visit was conducted. If the respondent remained unavailable after the second attempt, they were excluded from the study. The next household on the list was then approached for inclusion.

A structured questionnaire, adapted from a prior study on a related topic and incorporating self-constructed questions based on previously published literature (13), served as the primary tool for data collection. The final questionnaire underwent validation by a subject expert. To ensure reliability, a pretest was conducted among 35 respondents (10% of the sample size) with similar characteristics. The pretest helped identify minor ambiguities in the wording of some questions, which were subsequently revised before the final data collection. Notably, these respondents were subsequently excluded from the final analysis. Face-to-face interviews were

conducted from March 28th to April 17th, 2023.

The questionnaire data underwent systematic coding and was entered into Epidata 3.1. After data entry, it was exported to IBM SPSS Ver. 26 for consistency checks, data cleaning, editing, and subsequent analysis. Descriptive statistics were used to represent categorical variables in proportions. The Chi-square test, with a significance level set below 5%, was employed to measure the association between variables and the prevalence of child marriage. Variables showing significant associations at the bivariate level were then included in a multivariate logistic regression to identify factors contributing to the risk of child marriage.

Results

In a sample of 352 married Madhesi women, the majority (36.1%) were aged 21-25 years, with a mean age of 25.90±4.6 years. Most belonged to joint families (65.9%) and practiced Hinduism (67.9%). Regarding education, nearly half (48.9%) had completed basic education, while the majority of their husbands (36.4%) were daily wage laborers. A significant portion of respondents' fathers (72.4%) and mothers (81.0%) were unable to read and write. Furthermore, many parents (40.1%) worked in farming (Table 1).

Child Marriage Prevalence: This study revealed a significant prevalence of child marriage, with over three-quarters (77.0%) of the women reporting marriage before the age of 20. The median age of marriage was 18 years (IQR: 16.0 to 19.0), indicating that many women married during their adolescence.

Awareness, Parental Authority, and Social Norms in Child Marriage: Among respondents who claimed awareness of the legal marriage age (74.4%), a vast majority (92.4%) providing correct responses showed good understanding among those who were aware. Interestingly, a significant proportion (80.4%) believed their parents held the authority to decide on their marriages, and a high percentage (92.3%) reported parental involvement in determining their marital unions.

Furthermore, a substantial number of respondents (65.1%) indicated that their parents endorsed the practice of child marriage. Additionally, a majority (68.2%) reported the inclusion of dowry during their marriage ceremonies. Social factors also appeared to play a role, with a notable percentage (63.4%) disclosing that their friends had married before the age of 20, and 55.4% acknowledging receiving suggestions from their friends to pursue early marriage. In contrast, the majority of respondents (70.7%) expressed disbelief in the notion that modern devices, such as mobile phones and the internet, encourage child marriage (Table 2).

Multivariate analysis: Bivariate analyses were first conducted to identify relevant variables, and only those with statistically significant associations (p < 0.05) were included in the final logistic regression models (Tables 3 and 4).

Table 1: Distribution of respondents based on socio-demographic characteristics

Variables	n	%
Age, mean ±SD, Years	25.9 ± 4.6	
Age category (y)		
16-20	56	15.9
21-25	127	36.1
26-30	110	31.3
31-35	59	16.8
Family type		
Nuclear	120	34.1
Joint	232	65.9
Religion		
Muslim	113	32.1
Hindu	239	67.9
Education level of respondents		
Cannot read and write	102	29.0
Can read and write (no formal education)	1	0.3
Basic level (grades 1-8)	172	48.9
Secondary level (grades 9-12)	66	18.8
Bachelor or above	11	3.1
Respondent's father's educational level		
Cannot read and write	255	72.4
Can read and write (no formal education)	15	4.3
Basic level (grades 1-8)	75	21.3
Secondary level (grades 9-12)	6	1.7
Bachelor or above	1	0.3
Respondent's mother's educational level		
Cannot read and write	285	81.0
Can read and write (no formal education)	20	5.7
Basic level (grades 1-8)	43	12.2
Secondary level (grades 9-12)	4	1.1
Respondent's parents' major occupation		
Professionals	14	4.0
Business	88	25.0
Daily wage worker	109	31.0
Farmer	141	40.1
Occupation of husband		
Professionals	36	10.2
Business	89	25.3
Farmer	99	28.1
Daily wage worker	128	36.4
Currently Involved in Job		
Yes	25	7.1
No	327	92.9

Table 2: Awareness, decision-making, and social norms in child marriage

Variables	n	%
Awareness of legal age at marriage		
Yes	262	74.4
No	90	25.6
If yes, legal age of marriage (y) (n=262)		
≥20	242	92.4
< 20	20	7.6
Authority to decide whom and when to marry		
Parents	283	80.4
Self	67	19.0
Relatives	2	0.6
Decision-maker for respondents' marriage		
Parents	325	92.3
Self	27	7.7
Belief in the dowry system within the family		
Yes	229	65.1
No	123	34.9
Practice of dowry in respondents' marriage		
Yes	240	68.2
No	112	31.8
Occurrence of child marriage among friends		
Yes	223	63.4
No	55	15.6
Don't know	74	21.0
Receiving suggestions from friends for child marriage		
Yes	195	55.4
No	157	44.6
Belief in the influence of modern devices on child marriage		
Yes	103	29.3
No	249	70.7

Both models demonstrated good fit ($\chi^2 < 0.001$, Hosmer-Lemeshow test non-significant), indicating their reliability for examining these factors.

Family structure and education played a significant role. Women from nuclear families were more than twice as likely to experience child marriage compared to those from joint families (Adjusted Odds Ratio [AOR] = 2.3, 95% Confidence Interval [CI] 1.4-4.1). Additionally, lower education levels significantly increased the risk of child marriage for the women themselves (AOR = 5.4, 95% CI 2.5-11.8) and their parents (fathers: AOR = 3.6, 95% CI 2.1-6.2; mothers: AOR = 4.0, 95% CI 2.2-7.1). Socioeconomic factors also played a part. The husband's occupation as a farmer (AOR = 6.7, 95% CI 2.8-16.5) or daily wage laborer (AOR = 5.8, 95% CI 2.5-13.3) significantly increased the likelihood of child marriage for the respondents compared to those married to men in professional occupations (Table 3).

Social influences and practices were another important aspect. Unawareness of the legal marriage age was a strong predictor of child marriage (AOR = 7.6, 95% CI: 2.9-19.6). Furthermore, parental arrangement of marriages (AOR = 6.8, 95% CI: 2.9-15.7), family belief in the dowry system (AOR = 1.9, 95% CI: 1.2-3.2), discussions about child marriage with friends (AOR = 2.0, 95% CI: 1.2-3.4), suggestions from friends to marry young (AOR = 2.5, 95% CI: 1.5-4.1), and having friends who had experienced child marriage (AOR = 5.1, 95% CI: 2.7-9.6) were all significantly associated with a higher likelihood of child marriage (Table 4).

Table 3: Socio-demographic factors associated with child marriage

Variables	Adjusted Odds Ratio	95% Confidence interval	P-value
Family type			
Joint (Ref.)	1.00	-	-
Nuclear	2.3	1.4 - 4.1	0.006
Education level of respondents			
Can read and write (Ref.)	1.00	-	-
Cannot read and write	5.4	2.5 - 11.8	<0.001
Respondent's father's educational level			
Can read and write (Ref.)	1.00	-	-
Cannot read and write	3.6	2.1- 6.2	<0.001
Respondent's mother's educational level			
Can read and write (Ref.)	1.00	-	-
Cannot read and write	4.0	2.2 -7.1	<0.001
Occupation of husband			
Professional (Ref.)	1.00	-	-
Farmer	6.7	2.8 - 16.5	<0.001
Business	1.7	0.8 - 3.7	0.196
Daily wage worker	5.8	2.5 - 13.3	<0.001

Table 4: Logistic regression analysis of respondents' awareness and child marriage

Variables	Adjusted Odds Ratio	95% Confidence interval	P-value
Awareness of legal age at marriage			
Yes (Ref.)	1.00	-	-
No	7.6	2.9 - 19.6	<0.001
Authority to decide whom and when to marry			
Self (Ref.)	1.00	-	-
Parents/relatives	4.9	2.7 - 8.8	<0.001
Decision-maker for respondents' marriage			
Self (Ref.)	1.00	-	-
Parents	6.8	2.9 - 15.7	<0.001
Belief in the dowry system within the family			
No (Ref.)	1.00	-	-
Yes	1.9	1.2 - 3.2	0.013
Discussion on topic of child marriage with friends			
No (Ref.)	1.00	-	-
Yes	2.0	1.2 - 3.4	0.005
Receiving suggestions from friends for child marriage			
No (Ref.)	1.00	-	-
Yes	2.5	1.5 - 4.1	0.001
Occurrence of child marriage among friends			
No (Ref.)	1.00	-	-
Yes	5.1	2.7 - 9.6	<0.001

Discussion

Our study revealed a high prevalence of child marriage among Madhesi women in Nepalgunj, Lumbini Province. This finding aligns with previous research (14). However, it is slightly higher than the prevalence reported in a broader study encompassing seven districts (1). This difference might be due to variations in sample size, geographic location, or specific populations targeted within the Madhesi community. The median age of marriage in our study (18 years) is consistent with national data (9).

Our study highlights the importance of awareness about the legal marriage age. A significant proportion of respondents demonstrated knowledge, with an even higher percentage providing correct responses. This suggests a potential protective effect, aligning with Thapa and Macer (15), who emphasized the role of legal awareness in deterring child marriage practices. However, a comparison with Shahi et al. (16), reveals a substantial gap between awareness and accurate knowledge. This discrepancy might be due to differences in educational levels or legal awareness programs between regions. Further research could explore the effectiveness of such programs in diverse contexts.

Education emerged as a significant factor influencing child marriage. Women with no formal education were 5.4 times more likely to experience child marriage compared to their educated counterparts. This aligns with previous research by Manandhar and Joshi (17), Yogi (18), and Paul (19), suggesting a link between education and delayed marriage. This association likely stems from a combination of factors like increased knowledge, empowerment, and economic opportunities that education provides.

Parental beliefs and practices also played a substantial role. Our study found that parental illiteracy and adherence to the dowry system increased the likelihood of child marriage. This corresponds with previous research highlighting the influence of parental attitudes and cultural norms (7, 20).

The husband's occupation as a farmer significantly increased the odds of child marriage, echoing findings from Morang district, Nepal (21). Limited educational opportunities and economic pressures in farming communities might contribute to this association.

Our study also underscores the influence of social networks. Decisions made by parents and discussions with friends about child marriage were significantly associated with a higher likelihood of the practice. This aligns with previous research by Gautam (22), Sagita (23), and Shivan et al. (24), highlighting the role of peer pressure and social norms in perpetuating

child marriage.

Our study design has limitations. Employing a cross-sectional approach, we were able to identify associations between variables, but cannot establish cause-and-effect relationships between factors influencing child marriage. Additionally, the study was conducted in Nepalgunj Sub-Metropolitan City with a focus on the Madhesi community. The limited sample size may restrict the generalizability of our findings to the entire Madhesi population within Nepalgunj, or to other Madhesi communities across Nepal.

Conclusion

Our study revealed a concerning prevalence of child marriage among Madhesi women in Nepalgunj, despite national legislation and international commitments to eradicate it. The analysis identified low education levels among both respondents and their parents as a significant contributing factor. Furthermore, social norms surrounding the dowry system and parental influence on marriage decisions emerged as key drivers of the practice. A substantial number of marriages were conducted without the respondents' consent, highlighting potential power imbalances within families.

To address these issues, we recommend a multifaceted approach. Concerned authorities should prioritize increasing access to education for girls and women in this community. Awareness campaigns targeting the Madhesi population, particularly parents and community leaders, can challenge traditional norms around child marriage and the dowry system. Stricter enforcement of existing legal measures against child marriage is also crucial for deterrence.

Conflict of Interests

Authors declare no conflict of interests.

Acknowledgments

References

1. Bhattarai PC, Paudel DR, Poudel T, Gautam S, Paudel PK, Shrestha M, et al. Prevalence of early marriage and its underlying causes in Nepal: a mixed methods study. Social Sciences. 2022;11(4):177.
2. Nour NM. Child marriage: a silent health and human rights issue. Rev Obstet Gynecol. 2009;2(1):51.
3. Petroni S, Steinhaus M, Fenn NS, Stoebenau K, Gregowski AJAogh. New findings on child marriage in sub-Saharan Africa. Annals of global health. 2017;83(5-6):781-90.
4. Wodon Q, Male C, Nayihouba A, Onagoruwa A, Savadogo A, Yedan A, et al. Economic impacts of child marriage: global synthesis report. 2017.
5. UNICEF. Child marriage. https://www.unicef.org/protection/child-marriage.
6. Adhikari R. Child marriage and physical violence: Results from a nationally representative study in Nepal. Journal of Health Promotion. 2018;6:49-59.
7. Bhandari NR. Early marriage in Nepal: Prospects for schoolgirls. Journal of International Women's Studies. 2019;20(3):88-97.
8. Mahato SK. Causes and consequences of child marriage: A perspective. International Journal of Scientific and Engineering Research. 2016;7(7):698-702.
9. Minstry of Health and Population [Nepal], New ERA, and ICF. Nepal demographic and health survey 2022. Kathmandu, Nepal; 2023.
10. National Statistics Office. 12th National Population and Housing Census 2021. Kathmandu;2023. Available at: https://nepal.unfpa.org/en/publications/12th-national-population-and-housing-census-2021. Accessed 05-06-2024.
11. Maharjan RK, Karki KB, Shakya TM, Aryal B. Child marriage in Nepal: Research report. Kathmandu: Plan Nepal, Save the Children and World Visioin International. 2012.
12. Shakya DV. Prevalence and some correlates of child marriage in Kapilbastu District, Nepal. Asian Journal of Population Sciences. 2022;1(15):11-22.
13. Thapa AR. Child Marriage on Madeshi Dalits community: A Case Study of Santapurvillagewards, 8 Chandrapurmuniciplity of Rautahat District: Central Department of Rural Development; 2018.
14. Pandey S. Persistent nature of child marriage among women even when it is illegal: The case of Nepal. Children and youth services review. 2017;73:242-7.
15. Thapa B, Macer D. Bases of Early Marriage & Consequences on the Well-being of Mother and Child in Jhirubas, Palpa, Nepal. Eubios Journal of Asian and International Bioethics. 2018;28:72-86.
16. Shahi P, Tamang P, Simkhada P, Rawat K. Child marraige: Knowledge, practive and its attributed consequences among early married women in Jumla, Nepal. Asian Pac J Health Sci. 2019;6:140-8.
17. Manandhar N, Joshi SK. Health co-morbidities and early marriage in women of a rural area of Nepal: A descriptive cross-sectional study. Journal of the Nepal Medical Association. 2020;58(230):780.

18. Yogi BN. Factors Associated with Early Marriage in Rural Mid-Western Nepal. Journal of Health Promotion. 2020;8:63-72.

19. Paul P. Effects of education and poverty on the prevalence of girl child marriage in India: A district-level analysis. Children and Youth Services Review. 2019;100:16-21.

20. Acharya P, Welsh B. Early and Forced Child Marriages in Rural Western Nepal. Journal of Underrepresented and Minority Progress 2017;1(1):95-110.

21. Sah RB, Subedi L, Shah U, Jha N. Factors affecting Early Age Marriage in Morang District of Nepal. Sch J App Med Sci. 2014;2:1320-4.

22. Gautam K. Child marriage in Nepal: Stakeholders' perspective. Journal of Health Promotion. 2019;7:1-6.

23. Sagita R, editor The Effect of Peer Group and Religiosity on Early Marriage Motivation. 5th ASEAN Conference on Psychology, Counselling, and Humanities (ACPCH 2019); 2020: Atlantis Press.

24. Shivan A, Kalikula J, Moses N. Peer Pressure and Early Marriages among School Going Children in Uganda: A Case Study of Kakumiro District Local Government. International Journal of Academic Multidisciplinary Research. 2023;7(2).