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Socio-demographic, economic characteristics and safe motherhood among the reproductive age of women in Danuwar community of Lalitpur, Nepal

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Abstract

This study is the combinations of socio-demographic and economic determinants that lead to certain fertility behaviors and safe motherhood practices among women of reproductive age in the Danuwar community, Lalitpur, Nepal. Even though there have been national improvements regarding reduction in birth rates and maternal health, the disadvantaged groups still suffer from the same problems through no fault of their own because of limited education, economic instability, and cultural impositions. The methodological approach adopted by the study was a cross-sectional descriptive study which involved structured interviews with 289 married women aged 15-49 years. Descriptive statistics were the tools for analyzing the data, with the latter being employed to find out the associations between socio-demographic variables, fertility behavior, and safe motherhood indicators. The results indicated that a large number of the respondents were in the age group of 25-34 years, which constituted 47.2 percent of the total, and the rest, that is, 52.8 percent, had given birth to two to six children. Awareness of and reliance on contraceptives were quite high (57.1% & 78.3%), and nearly all the women (97.5%) recognized that education would help in fertility reduction. But the liking for a male child (57.8%) and the influence of religion on family size (36%) were still significant factors. The majority (79.5%) were informed about the government's family planning programs, while migration, disaster, and employment factors were found to be significantly related to fertility ($p < 0.001$). As for safe motherhood, 61.4 percent of births were attended by skilled health professionals, and more than 70 percent of the women had access to antenatal and postnatal care. Moreover, the percentage of availability of maternal and general health services was also high, with 84.3 percent and 98 percent respectively.

Fertility patterns and health of mothers among Danuwar women are determined by the intermingling of social, demographic, economic, and cultural aspects. Economic empowerment, women's education, and culturally sensitive health interventions should be the primary interventions in Nepal's marginalized groups to attain equitable reproductive health and safe motherhood.

Keywords: Danuwar community, fertility behavior, safe motherhood, socio-demographic factors, reproductive-age women, Nepal.

1. Introduction

Nepal has made substantial progress in its 30-year fertility decline and gain in maternal health. The TFR fell by a vast percentage to an amazing rate of 2.1 children per woman in 2022 against 4.6 in 1996, and the MMR also fell by the same enormous percentage from 539 deaths per 100,000 live births in 1996 to some 151 in 2022 (Central Bureau of Statistics [CBS], 2023; Ministry of Health, New ERA, & ICF, 2022). But these national figures fail to illustrate the variation between the urban and rural inhabitants and, more significantly, between ethnic groups in the nation. The Danuwar community an indigenous group that is socio-economically marginalized and mainly inhabiting the central region of Nepal has been the least studied and is the most neglected in terms of health involvements.

Nepal's constitution and health policies acknowledge the reproductive health right as a basic human right, but the prevailing barriers related to poverty, gender, culture, and geography continue to limit access (Sharma & Tamang, 2021; UNFPA, 2022). Fertility norms and safe motherhood practices are regarded as the main markers of women's empowerment, social development, and the quality of health service delivery. The marginalized ethnic communities like the Danuwar, such results are generated by the interaction between socio-demographic determinants (parity, age, education, and marriage) and economic circumstances (household possessions, employment, and income) (Bista et al., 2021; Paudel et al., 2023).

One of the known indigenous nationalities (Adivasi Janajati) in Nepal is the Danuwar which is mainly found in the central and eastern districts, including Sindhuli, Kavrepalanchok, and some regions of Lalitpur (Government of Nepal, 2021). Many Danuwar households have precarious livelihoods and have poor educational achievements, traditionally subsistence farmers and wage workers. The level of literacy of Danuwar women is below the national average, and the employment of women outside of the agricultural sector is low (CBS, 2023).

Danuwar are culturally diverse but marginalized within society, having little political representation and access to the governmental services (Shrestha & Rana, 2022). Early marriage trends, low birth control rates, and norms of gender decision-making are still present and demonstrate the general socio-cultural obstacles of most indigenous populations (Tamang, 2020). This studying the effects of socio-economic and cultural backgrounds on reproductive health and safe mothering practices.

There are proximate and distal determinants of fertility (Bongaarts, 2015). Proximate factors are influenced by distal factors such as education, employment and income, which include marriage, contraceptive use and breast feeding. In Nepal, researches indicate that the education of women is the most potent predictor of fertility reduction (Gurung & Subedi, 2021). Learned women are less inclined to marry, bear children, and use modern contraceptives more often (KC et al., 2020).

Reproductive exposure is also dependent on age and birth order: women aged 25-34 bring the largest contribution to overall fertility, whereas women aged 35-49 tend to have a reduced fecundity, but cumulative births are high (Adhikari & Paudel, 2020). The use and awareness of family planning is uneven in Nepal within the ethnic and geographical boundaries. NDHS (2022) shows that 71 percent of all married women currently heard about at least one of the modern contraceptive methods, yet only 43 percent of women were using one (Ministry of Health et al., 2022). The problems are the errors, spouse resistance, and side-effects (Acharya and Khatri, 2021). Family-size ideals are still being affected by cultural preferences especially son preference. The sons of the Nepali communities are considered economic and spiritual resources that defy lineage continuation and old-age insurance in most of the Nepali societies (Karki & Shrestha, 2019). These

tastes tend to extend the bearing of a child until a male child is born. Fertility choices also overlap with religious beliefs because bigger families are seen as a blessing or a will of God (Subedi, 2020).

Reproductive decisions are directly influenced by economic factors. The household economic theory by Becker (1981) explains that fertility will decrease because of an increase in the cost of raising children and the involvement of women in wage labor. Household wealth is negatively associated with fertility in Nepal: women in the poorest quintile have an average of 3.6 children in the richest quintile (CBS, 2023). Nevertheless, the prediction of fertility with subjective income sufficiency is usually more precise than with absolute income (Bista et al., 2021).

The internal and external migration have rebuke the household structures. Coming to the role of male out-migration to foreign work, temporary fertility inhibition can occur as a result of spouses separating but indirectly raise family size aspirations through remittances and economic security (Thapa and Aryal, 2021). Marginalized groups can also be impacted by migration to lose access to maternal health services and continuity of care (KC & Bhandari, 2022).

Safe motherhood refers to the quality of prenatal care (ANC), skilled birth attendance, and postnatal care (PNC). These services are the foundation of the maternal-health policy in Nepal, particularly through the program such as Aama Surakshya (Safe Motherhood) program. NDHS (2022), 84 percent of women were visited at least once by ANC, 79 percent gave birth with skilled attendance, and 57 percent engaged in postnatal care at 48 hours (Ministry of Health et al., 2022). Nevertheless, coverage of the disadvantaged ethnic groups, such as Janajati populations, is much lower (Khatri et al., 2018; Kandel et al., 2021). It has been documented that maternal-service use is predicted by the education of women, exposure to media, spouse's communication as well as closeness to health facilities (Paudel et al., 2023). On the other hand, the encounter is discouraged by low income, high parity, and cultural restrictions (Bhandari and Karki, 2020) as the Danuwar, caste, ethnic and poverty disadvantages can intersect to limit access to skilled care.

Even though Nepal possesses a solid literature regarding maternal health and fertility, the majority of the analyses focus on interethnic groups and hide the disparities between intra-national levels. Very little research is specific to the Danuwar people, and even the existing studies are mostly dedicated to the study of cultural traditions or livelihood changes instead of focusing on reproductive health (Sharma, 2025; Gurung & Shrestha, 2022). The empirical data on the influence of socio-demographic and economic factors on fertility behavior and safe motherhood in this indigenous group are not well known.

The individual factors (age, education, parity, employment) at the micro-level affect the fertility and health-service use. These are mediated at the meso-level by household and community factors (spousal support, migration, income sufficiency, cultural norms). On the macro-level, the availability of safety in childbirth (ANC, PNC, skilled attendants, and government programs) is enabled or impaired by institutional and policy environment (Bronfenbrenner, 1979; Bongaarts, 2015).

This multi-level strategy acknowledges that it is not only that reproductive behavior and maternal-health utilization are individual decisions but have socio-economic and culture-specific backgrounds. It also conforms to the national obligation of Nepal to the Sustainable Development Goals (SDG 3: Good Health and Well-Being and SDG 5: Gender Equality). The primary goal of the research is to look at the socio-demographic and economic attributes of reproductive-age women and how these factors affect fertility behavior and safe motherhood practices. Namely, it is going to determine the awareness and use of contraception by women, son preference, and childbearing intention among women; to measure the main safe motherhood indicators including

antenatal care, postnatal care, attended birth by skilled birth attendants, and the availability of health services; as well as to determine the relationship between socio-economic and demographic factors and fertility patterns and maternal-health results.

This study provides a contribution to the demographic and public-health evidence base in Nepal in three significant aspects. To begin with, it offers one of the limited quantitative evaluations of fertility and maternal-health behavior among the Danuwar community. Second, it integrates population and health understanding since it explores the combined effect of cultural and socio-economic determinants on safe motherhood and fertility. Third, it produces community-level outputs for informing targeted interventions among marginalized ethnic minorities. Moreover, it is in line with the inclusive-development agenda of Nepal and promotes evidence-based policy to attain fair reproductive-health results, by coming off light on intra-ethnic disparities.

2. Methods

This study employed the descriptive quantitative research design as the method of studying the determinants of the contraceptives use among the women of Danuwar community in Nepal. It was grounded on the field survey in the Godawari Municipality-8, Lalitpur District of the year 2025, as an ethnic group that is underrepresented in the reproductive health status and which has a unique socio-cultural profile. The sample was 289 women of 15-49 age group. It conducted the survey through the use of the closed and open-ended structured questionnaires in a household survey. These ethical principles were also considered and included informed consent, voluntary participation, and confidentiality to ensure that the data were collected through face-to-face interviews. The questionnaire was able to obtain information on demographic, socio-economic and ideational topics. The summary of the characteristics of the respondents was done in terms of the descriptive statistics. The statistical significance was taken into consideration through chi-square test at 95 percent interval (p= 0.05). This analytical model allowed the study to capture the magnitude of the relations, not to mention the direction of the relations, in the demographic and socio-economic factors.

3. Results

The availability of skilled birth attendants, ANC services, and PNC services enhances the health of women and increases the use of informed family planning. Husbands and wives' provisions and accessibility of health aspects further promote safe motherhood and responsible child bearing.

Characteristics of reproductive age of women: It should be said that there are a number of demographic, socio-economic, and cultural factors that affect fertility behaviour and family size. Reproductive exposure is dependent on age and birth group whereas the actual control of childbearing is directly dependent on awareness. Education, particularly in women tends to decrease fertility; this is because it enhances knowledge and freedom. Family size ideals can be influenced by son preference and religions and possibly smaller families can be promoted by government family planning policies. Household composition and reproductive decisions are also influenced by external forces including the natural disasters, migration (both internal and external), and the employment opportunities. Economic factors, such as financial status, family income, and income sufficiency, are crucial in determining the families on whether to plan more or have fewer children.

Table 1: Distribution of characteristics of respondent

Categories	Number	Percent	df	χ^2 value	P value	Significance

Age group						
15-24	31	10.6	2	66.5	<0.001	***
25-34	136	47.2				
35-49	122	42.2				
Birth group						
0-1 birth	136	47.2	1	1.02	0.31	
2-6 birth	153	52.8				
Family planning awareness						
No	124	42.9	1	6.07	0.014	*
Yes	165	57.1				
Used contraception						
No	63	21.7	1	90.5	<0.001	***
Yes	226	78.3				
Education reduces fertility						
No	7	2.5	1	259.7	<0.001	***
Yes	282	97.5				
Preference for son						
No	122	42.2	1	7.37	0.007	**
Yes	167	57.8				
Religion belief family size						
No	185	64.0	1	22.4	<0.001	***
Yes	104	36.0				
Government policy family planning						
No	59	20.5	1	115.4	<0.001	***
Yes	230	79.5				
Natural disaster impact family size						
No	183	63.4	1	21.1	<0.001	***
Yes	106	36.7				
Migration impact family size						
Don't know	9	3.1	2	155.3	<0.001	***
No	203	70.2				
Yes	77	26.7				
External migration common						
No	260	90.1	1	181.2	<0.001	***
Yes	29	9.9				
Employment						
No	266	91.9	1	199.7	<0.001	***
Yes	23	8.1				
Financial affect family size						
No	149	51.6	1	0.14	0.71	
Yes	140	48.5				
Family income						

Less than 15001	149	51.6	1	0.14	0.71	
More than 15001	140	48.5				
Income sufficient						
No	255	88.2	1	165.6	<0.001	***
Yes	34	11.8				
Plan child						
No	228	78.9	1	112.1	<0.001	***
Yes	61	21.1				
Total	**289**	**100.0**				

*** = p < 0.001 (highly significant), ** = p < 0.01 (significant) and * = p < 0.05 (marginally significant)

Table 1 shows that allocation of socio-demographic, economic, and reproductive characters of the respondents and their correlation with fertility behavior. The age range of the majority of the respondents was between 25-34 years (47.2%), and over half (52.8%) bore two to six children. Family planning awareness and use were fairly high (57.1% & 78.3%), and all but the few (97.5%) believed that education lowers fertility. Quite a sizeable percentage (57.8%) still favored sons and 36 percent of them thought that religion has an impact on the size of family. Awareness of government family planning policy was good (79.5%) and migration, disaster and employment factors had a lot of associations (p < 0.001). The majority of the respondents (88.2%) indicated a lack of enough income, and 78.9 indicated that they had no intention to have more children. A number of variables, such as age group, contraception use, education, son preference and economic status, had statistically significant relationships with fertility indicators at different levels of significance.

Safe motherhood: Additionally, maternal and reproductive health services are significant in ascertaining the fertility and family planning. Attended delivery by trained birth attendants provides the birth with a safer experience and brings awareness of the use of modern contraceptives. Husbands and wives consent and contraceptives are significant in determining the number of children. Access to and use of antenatal care (ANC) and postnatal care (PNC) services enhance the health of women and their exposure to family planning messages. In the same attitude, maternal and general health services that are provided at health facilities enable the reproductive health and responsible child bearing behaviors.

Table 2: Distribution of safe motherhood status of women

Category	**Number**	**Percent**	**df**	**χ^2 value**	**P value**	**Significance**
Skilled birth attendant						
No	104	38.6	1	14.40	<0.001	***
Yes	164	61.4				
Total	**268**	**100.0**				
Spouse agree contraception						
No	11	4.0	1	226.8	<0.001	***
Yes	254	96.0				
Total	**265**	**100.0**				
Received ANC						

No	76	28.1	1	45.98	<0.001	***
Yes	194	71.9				
Received PNC						
No	72	26.7	1	56.89	<0.001	***
Yes	198	73.3				
Maternal HC available						
No	43	15.8	1	114.9	<0.001	***
Yes	227	84.3				
General HC available						
No	5.5	2.1	1	251.2	<0.001	***
Yes	264.5	98.0				
Total	**270.0**	**100.0**				

*** = $p < 0.001$ (highly significant), ** = $p < 0.01$ (significant) and * = $p < 0.05$ (marginally significant)

Table 2 shows that safe motherhood indicators and the use of corresponding health services among the respondents. These findings show that the majority of the women (61.4%) were delivered by skilled birth attendants, while almost all the respondents (96.0%) reported spousal agreement for the use of contraception both having high statistical significance ($p < 0.001$). Similarly, high proportions of women received antenatal care (71.9%) and postnatal care (73.3%), which shows positive utilization of maternal health services. Equally, maternal health components (84.3%) and general health services (98.0%) in the study sites were also statistically significant ($p < 0.001$) and were rated high. Generally, the results reflect strong access and utilization of safe motherhood services among the respondents as an indicator of favorable conditions for improving maternal and reproductive health results.

4. Discussion

This study examined the demographic, socio-economic, cultural, and maternal-health determinants of fertility behavior and safe motherhood practices among women of reproductive age. The findings indicate that fertility behavior in urban poor settings is a function of a combination of structural constraint, cultural values, and health-service accessibilities. The discussion integrates the reported statistical associations with current empirical evidence from Nepal and other low- and middle-income countries.

Demographic and socio-economic correlates of fertility: Age composition of the respondents revealed fertility to be concentrated in women aged 25–34 years, as per national trends for this age group having the maximum age-specific fertility rate (Ministry of Health, Nepal, New ERA, & ICF, 2022). It reflects both biological readiness and persistence of early marriage and childbearing practices in urban poor communities. The finding of more than half of the women having two to six births is consistent with the country's total fertility rate (TFR) of about 2.1 children per woman, indicating near-replacement fertility but with higher heterogeneity among lower urban populations (CBS, 2023). Socio-economic conditions showed strong influence on fertility patterns. Women who were more highly educated and more family-planning aware had significantly reduced fertility, in support of established theoretical models like Caldwell's (1980) education-fertility transition theory. Education enhances women's agency, delays early marriage, and promotes awareness of contraceptive use, which successively all lead to reduced fertility (Bongaarts, 2015;

Upadhyay et al., 2021). The study found that almost all of the respondents (97.5%) believed that education reduces fertility and proved the argument that female literacy is a significant determinant of control over reproduction.

Work and economic sufficiency were major fertility preference correlates: Only a small percentage of women were employed (8.1%), and the majority gave poor household income as their reason (88.2%). This corresponds with Becker's (1981) economic theory of fertility, which posits that as income constraints rise, families reduce fertility due to the expense of childrearing. Conversely, more economically secure families will have fewer but better-educated offspring, which suggests a desire for quality rather than quantity (Easterlin, 1975). Inability to find any high-level correlation between nominal family income and fertility, however, suggests that perceived rather than absolute levels of income determine reproductive decision.

Cultural norms and fertility desires: Cultural values such as religion and son preference continue to shape fertility behavior. Over half of the respondents (57.8%) expressed a son preference, a finding aligned with several studies that provide evidence of enduring gender bias in South Asia (Karki & Shrestha, 2019; KC et al., 2020). Son preference not only has higher fertility but may also delay adoption of family planning until a boy is born. Religious ideology also played an important part in the ideal family size, particularly among conservative societies where the larger family is considered to be a social or religious asset. Such cultural resilience emphasizes the need for culturally responsive reproductive-health interventions undermining patriarchal norms but enabling gender equality. Government family-planning policies were also well-known (79.5%), which attested to effective national reproductive-health goal communication. However, awareness won't necessarily convert to regular use, especially when constrained by socio-economic hardship or conflict spousal. Thus, male participation and behavioral change communication interventions are still required in order to convert awareness to sustained contraceptive usage (Thapa & Aryal, 2021).

Environmental and migration factors: Environmental and migration factors were also shown to be important in determining family size. Over one-third of the respondents felt that natural disasters influence family size, likely due to displacement, loss of livelihood. Similar findings from post-earthquake Nepal showed increased vulnerability and altered reproductive behavior among displaced populations (Acharya et al., 2020). Both internal and external migration has a complex relationship with fertility trends. Though 9.9 percent of the participants reported external migration, the correlation with fertility was highly significant. Separation between spouses resulting from labor migration will reduce fertility in the short run, but remittances and improved living standards can eventually enable families to invest in children's education and health, thus indirectly influencing fertility intentions (Subedi & Regmi, 2022).

Maternal health and safe motherhood practices: The majority of the respondents (61.4%) were cared for by skilled birth attendants, and over 70 percent were given ANC and PNC services. The findings closely mirror nationwide trends showing notable improvement in institutional delivery and skilled attendance after the implementation of Nepal's Safe Motherhood Program (MoHP, 2022; WHO, 2023). Couples' agreement about using contraception was extremely high (96.0%), indicative of good male participation a determinant that has been shown to increase contraceptive use and improve maternal results (Shrestha et al., 2021). Maternity-level coverage with maternal and general health components provided in the facilities (84.3% & 98%) indicates service coverage improvement, but quality of care and fairness of access remain important. Evidence from other settings indicates that women in urban informal settlements often face obstacles of out-of-pocket payments, privacy concerns, and provider prejudice despite nominal service availability (Karkee

& Lee, 2016; UNFPA, 2022). The statistical significance of the relationship between access to health services and fertility results ensures the concurrent role of maternal health and reproductive agency. ANC and PNC visits provide ideal opportunities for birth spacing and postpartum family planning counseling (Adhikari, 2010). Hence, the development of integrated reproductive health services would likely accelerate fertility reduction and improve maternal well-being, particularly among urban marginalized populations.

Implications for policy and practice: The findings have several policy implications for Nepalese reproductive-health policy. One is that education of women remains the best record for long-term fertility reduction. Two, financial empowerment through employment and microfinance interventions can enable women's autonomy and decision-making roles within family planning. Three, attempts to challenge cultural norms such as son preference and religious taboo must encompass community-based platforms with men, elderly men, and religious leaders on board. Strengthening the health system must address equal access to skilled maternal care, which is a priority in the urban slums where informal housing and poverty serve as a barrier. FCHV and outreach ANC/PNC service promotion can fill gaps in access.

5. Conclusion

This study recognizes that the reproductive behavior of reproductively aged women among the socio-demographic and economic characteristics of reproductive age of women and safe motherhood among the Danuwar community. This study reconfirms that education, family planning knowledge, spousal approval, and access to reproductive health services are significant determinants of low fertility and improved mother results. In spite of high awareness and utilization levels, son preference and religiosity remain as factors affecting reproductive intention. Economic exposure, low labor force participation among women, and migration pressures also characterize reproductive choice. The accommodating safe motherhood operations and family planning by informed choice was also positively affected by access to skilled birth attendants and high-level ANC and PNC service. All in all, the fertility transition of Nepalese cities is ongoing, yet attempts must continue to enhance equity, change behavior, and empower women in poor settings.

Recommendations:

Grounding on the study, it is recommended that interventions to reduce fertility and enhance safe motherhood in urban poor settings are to focus on enhancing women's education, economic independence, and gender equitable access to quality reproductive health care. Community-based interventions are to reverse entrenched cultural behaviors such as son preference and religious factors in determining family size and to support male engagement in decision-making around planning the family. Health policy must ensure the equitable access to skilled birth attendants, antenatal and postnatal care, and family planning counseling among marginalized groups, particularly. Rollout of migration-sensitive and disaster-resilient strategies in reproductive health planning, supported by effective inter-sectoral coordination and monitoring, will also remain central to fertility decline as well as improved maternal and child health results for Nepal.

Author contributions:

Bijaya Mani Devkota and Pradeep Kumar Bohara contributed to the study's conception, data extraction, data analysis, and drafted the manuscript. The manuscript was critically revised by Bijaya Mani Devkota to ensure its quality and accuracy. Both authors agreed to submit the article in its current form.

Research approval:

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Data availability statement:

The data used in this study was duly authorized by the University Grants Commission (UGC). The dataset will be made available upon reasonable request through the UGC after the publication of this report.

Conflict of interest:

The authors declare no conflict of interest related to this study.

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References

Acharya, D., & Khatri, R. (2021). Barriers to family-planning utilization in urban Nepal: A cross-sectional study. *Journal of Reproductive Health*, *28*(2), 101–110.

Acharya, P., Adhikari, T. B., & Pokharel, P. K. (2020). Reproductive health and family planning after disasters: Lessons from Nepal. *International Journal of Disaster Risk Reduction, 47*, 101541.

Adhikari, R. (2010). Demographic, socio-economic, and cultural factors affecting fertility differentials in Nepal. *BMC Pregnancy and Childbirth, 10*(19), 1–11.

Adhikari, R., & Paudel, P. (2020). Socio-economic determinants of fertility among Nepali women. *Asian Population Studies, 16*(3), 241–259.

Becker, G. S. (1981). *A treatise on the family*. Harvard University Press. Bongaarts, J. (2015). Modeling the fertility impact of the proximate determinants: Time for a tune-up. *Demographic Research, 33*(19), 535–560.

Becker, G. S. (1981). *A treatise on the family.* Harvard University Press.

Bhandari, A., & Karki, Y. B. (2020). Economic inequality and maternal-health service use in Nepal. *Global Health Action, 13*(1), 175–189.

Bista, B., Shrestha, S., & Chaulagain, N. (2021). Economic status and reproductive decision-making among women in Nepal. *Health Prospect, 20*(1), 27–35.

Bongaarts, J. (2015). Modeling the fertility impact of the proximate determinants: Time for a tune-up. *Demographic Research, 33*(19), 535–560.

Bronfenbrenner, U. (1979). *The ecology of human development.* Harvard University Press. Central Bureau of Statistics (CBS). (2023). *National population and housing census 2021: Summary report.* Government of Nepal.

Caldwell, J. C. (1980). Mass education as a determinant of the timing of fertility decline. *Population and Development Review, 6*(2), 225–255.

Central Bureau of Statistics (CBS). (2023). *National population and housing census 2021: Summary report.* Government of Nepal.

Devkota, B. M., & K. C., A. (2025, January–March). Socio-demographic factors affecting skilled birth attendance utilization in Koshi Province, Nepal. Contemporary Social Sciences, 34(1), 97–113. https://doi.org/10.62047/CSS.2025.03.31.97

Easterlin, R. A. (1975). An economic framework for fertility analysis. *Studies in Family Planning, 6*(3), 54–63.

Government of Nepal. (2021). *National Foundation for Development of Indigenous Nationalities (NFDIN) annual report 2021*.

Gurung, J., & Shrestha, K. (2022). Indigenous women's health and social inclusion in Nepal: A review. *Asian Journal of Social Science, 50*(4), 543–561.

Gurung, S., & Subedi, M. (2021). Education, empowerment, and fertility transition in Nepal. *Nepal Population Journal, 27*(1), 17–32.

Kandel, P., Sharma, S., & Dhakal, A. (2021). Utilization of maternal health services among disadvantaged groups in Nepal. *BMC Public Health, 21*(1), 1–11.

Karkee, R., & Lee, A. H. (2016). Maternal health service utilization by mothers of Nepal: Analysis of Nepal Demographic and Health Survey 2011. *Public Health, 133*, 93–101.

Karki, Y. B., & Shrestha, D. R. (2019). Gender preference and fertility behavior in Nepal. *Nepal Population Journal, 26*(1), 33–46.

KC, N. P., & Bhandari, G. (2022). Migration, remittances, and fertility decisions in rural Nepal. *Migration Studies Review, 4*(2), 89–104.

KC, N. P., Subedi, N., & Gurung, L. (2020). Determinants of fertility behavior among women in Nepal. *Asian Social Science, 16*(8), 45–58.

Khatri, R. B., Poudel, S., & Ghimire, S. (2018). Social determinants of health affecting utilization of routine maternal-health care in South Asia. *BMC Health Services Research, 18*(1), 1–10.

Ministry of Health, Nepal, New ERA, & ICF. (2022). *Nepal Demographic and Health Survey 2022*. Kathmandu: MoHP.

Paudel, D., Bhattarai, S., & Basnet, S. (2023). Inequalities in maternal-health-service use across Nepal's ecological zones. *International Journal of Public Health, 68*, 1605457.

Sharma, S. K., & Tamang, R. (2021). Indigenous peoples' access to health services in Nepal: Policy perspectives. *Asia Pacific Journal of Public Administration, 43*(3), 235–249.

Shrestha, D. R., Onta, S., & Thapa, P. (2021). Male participation in family planning and its association with women's reproductive autonomy in Nepal. *Reproductive Health, 18*(1), 122.

Shrestha, R., & Rana, K. (2022). Socio-economic marginalization of Danuwar women: An ethnographic insight. *Journal of Indigenous Studies, 5*(2), 77–94.

Subedi, P. (2020). Religious values and fertility preference among Nepalese women. *South Asian Studies, 35*(2), 121–139.

Subedi, P., & Regmi, K. (2022). Migration and fertility transition in Nepal: A review. *Asian Population Studies, 18*(2), 176–191.

Tamang, A. (2020). Gender, patriarchy, and reproductive decision-making in Nepal. *Gender & Development, 28*(2), 257–272.

Thapa, S., & Aryal, T. (2021). Migration and fertility transition in Nepal. *Asian Population Studies, 17*(2), 167–185.

United Nations Population Fund (UNFPA). (2022). *Nepal population situation analysis 2022*. UNFPA Nepal.

Upadhyay, U. D., Gipson, J. D., Withers, M., Lewis, S., Ciaraldi, E. J., Fraser, A., ... & Prata, N. (2021). Women's empowerment and fertility: A review of the literature. *Social Science & Medicine, 285*, 114258.

World Health Organization (WHO). (2023). *Trends in maternal mortality: 2000–2023 estimates.* WHO.