



Gender Discrimination, Cultural Norms And Demographic Imbalance: A Comprehensive Study Of The Declining Sex Ratio In Jammu And Doda Districts

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ABSTRACT

The sex ratio is a significant demographic indicator of gender relations, social development, and the relative status of women within a population. A persistent imbalance between males and females may reflect a combination of demographic, socioeconomic, cultural, and institutional factors. This paper examines gender discrimination, cultural norms, son preference, differential access to resources, and other social determinants associated with sex-ratio patterns in Jammu and Doda districts of Jammu and Kashmir. The study primarily uses secondary data from the Census of India 2011, District Census Handbooks, National Family Health Survey (NFHS-5), and official Government of India and Jammu and Kashmir sources. Census 2011 recorded an overall sex ratio of 880 females per 1,000 males in Jammu district, compared with 919 in Doda. However, the child sex ratio presents a substantially different picture: Jammu recorded only 795 girls per 1,000 boys aged 0–6, while Doda recorded 933. Jammu's child sex ratio remained substantially below the corresponding overall sex ratio, suggesting the importance of examining gender selection and differential treatment of children alongside migration, mortality, fertility, and other demographic processes. Between 2001 and 2011, Jammu's overall sex ratio increased from 865 to 880, while its child sex ratio declined, illustrating why the overall sex ratio alone cannot adequately capture gender disadvantage. Doda, by contrast, had a relatively favourable overall and child sex ratio, although its rural-urban differences and gender gaps in literacy indicate continuing inequalities. The paper argues that demographic imbalance should be understood as the outcome of interacting cultural norms, economic expectations, reproductive behaviour, access to technology, women's education, and institutional conditions rather than as a single-cause phenomenon. The study concludes with recommendations concerning gender-sensitive education, monitoring of sex-selection practices, improvement of women's economic opportunities, strengthening of birth registration and health systems, and district-specific interventions.

Keywords: Gender discrimination, sex ratio, child sex ratio, son preference, cultural norms, demographic imbalance, Jammu, Doda, Jammu and Kashmir, gender equality.

INTRODUCTION

Gender equality is a fundamental dimension of social development. The distribution of males and females within a population provides important evidence concerning demographic processes as well as the social position of women and girls. In demographic studies, the **sex ratio** is commonly expressed as the number of females per 1,000 males. A related indicator, the **child sex ratio**, measures the number of girls per 1,000 boys in the

0–6 age group. The latter is particularly important because deviations from biologically expected sex ratios can reveal patterns associated with prenatal sex selection, differential survival, discrimination, and other social processes.

India has historically experienced gender inequalities in education, nutrition, healthcare, property ownership, employment, and decision-making. These inequalities have interacted with cultural expectations concerning family continuity,



inheritance, marriage, and old-age security. The preference for sons in some communities can influence reproductive decisions, fertility behaviour, investment in children, and the use of reproductive technologies. Consequently, an unfavourable sex ratio cannot be interpreted merely as a numerical demographic phenomenon; it may also be an indicator of broader gender relations.

Jammu and Doda provide an important basis for comparative analysis because the two districts display substantially different demographic profiles. Census 2011 recorded a population of 1,529,958 for Jammu district and 409,936 for Doda district. Jammu's overall sex ratio was 880 females per 1,000 males, whereas Doda's was 919. Jammu District

The contrast becomes particularly significant when the child population is considered. Jammu recorded a child sex ratio of 795 girls per 1,000 boys aged 0–6, whereas Doda recorded 933. Official Census material confirms that Doda's overall sex ratio rose from 913 in 2001 to 919 in 2011, while its rural sex ratio was 930 and urban sex ratio 795. Census India Jammu's overall sex ratio increased from 865 in 2001 to 880 in 2011, but the district continued to exhibit a markedly low child sex ratio. Jammu District

These differences raise important research questions. Why does Jammu have a substantially lower child sex ratio than Doda? To what extent can gender discrimination, son preference, cultural expectations, socioeconomic conditions, urbanisation, migration, and access to reproductive technologies explain the observed differences? Does a relatively favourable overall sex ratio necessarily imply gender equality? What policy measures can address demographic imbalance while simultaneously improving the social and economic status of women?

The present study addresses these questions through a comparative examination of Jammu and Doda.

REVIEW OF LITERATURE

Research on India's sex ratio has increasingly moved from a purely demographic interpretation toward a gender-sensitive framework. Scholars

have associated adverse sex ratios with son preference, differential investment in daughters and sons, fertility decline, prenatal sex selection, female mortality, migration, and broader patriarchal structures.

The Government of India has recognised the child sex ratio as an important indicator of gender disadvantage. The Ministry of Women and Child Development notes that an adverse child sex ratio can reflect both pre-birth discrimination, including gender-biased sex selection, and post-birth discrimination involving children's health, nutrition, and education. It also identifies son preference and wider socio-cultural biases as important contextual factors. Jammu District

Census evidence demonstrates that the problem is not uniform across India or even within Jammu and Kashmir. According to Government of India data, the child sex ratio in Jammu and Kashmir declined from 941 in 2001 to 862 in 2011. At the national level, the corresponding decline was from 927 to 919. Press Information Bureau

A district-level empirical analysis of Jammu and Kashmir found substantial variation between districts. The study reported that Doda's child sex ratio declined from 966 in 2001 to 933 in 2011, while Jammu's declined from 816 to 795. The same analysis observed that most districts experienced a decline in child sex ratio during the decade. ResearchGate

Another study examining the determinants and consequences of the declining sex ratio in Jammu and Kashmir emphasised the district-level variation in both overall and child sex ratios and argued that demographic processes should be analysed in conjunction with social and economic factors. Academic Journals

Women's education is another relevant dimension. NFHS-5 provides evidence of persistent gender differences in educational attainment in Jammu and Kashmir. The survey reported that 77.3% of women aged 15–49 were literate compared with 91.5% of men; 51.3% of women had ten or more years of schooling compared with 68.2% of men. Ministry of Health and Family Welfare

NFHS-5 also demonstrates that demographic conditions have changed substantially in Jammu



and Kashmir. The survey reported a total fertility rate of 1.4 children per woman and a sex ratio at birth of 922 females per 1,000 males for children born in the five years preceding the survey. Ministry of Health and Family Welfare These indicators suggest that the demographic environment has changed considerably since the 2011 Census, although district-level variation remains important.

The literature therefore indicates that sex-ratio imbalance is multidimensional. It cannot be attributed to a single cultural practice or demographic variable. Rather, it reflects interactions among reproductive preferences, socioeconomic structures, gender norms, health conditions, migration, education, and institutional enforcement.

METHODOLOGY

Research Design

The study follows a **descriptive and comparative research design** based primarily on secondary data. Jammu and Doda districts were selected because they exhibit a marked difference in their overall and child sex ratios.

Sources of Data

The principal sources include:

- Census of India 2001 and 2011;
- District Census Handbooks of Jammu and Doda;
- Primary Census Abstracts;
- National Family Health Survey-5;
- Ministry of Women and Child Development;
- Ministry of Health and Family Welfare;
- Government of Jammu and Kashmir publications;
- Relevant academic literature on gender and demographic change.

The Census District Census Handbooks provide village- and town-level demographic and socioeconomic information and are official publications of the Directorate of Census Operations. Census India

NFHS-5 is also useful for contextual analysis because it provides district-level estimates for numerous population, health, and family-welfare indicators. Its Jammu and Kashmir fieldwork was

conducted during 2019–20 and covered 18,086 households, 23,037 women, and 3,087 men. Ministry of Health and Family Welfare.

Analytical Approach

The study uses:

- percentage and ratio analysis;
- comparative district analysis;
- temporal comparison;
- interpretation of demographic indicators;
- thematic analysis of cultural and socioeconomic factors.

Because the most comprehensive district-level Census data remain from 2011, the study does not treat 2011 figures as current population estimates. More recent survey evidence is used separately to provide contextual information.

DEMOGRAPHIC PROFILE OF JAMMU AND DODA

Jammu District

According to Census 2011, Jammu district had a population of 1,529,958, comprising 813,821 males and 716,137 females. The district's overall sex ratio was 880 females per 1,000 males, compared with 865 in 2001. Its literacy rate increased from 77.56% in 2001 to 83.45% in 2011. Female literacy rose from 69.26% to 77.13% during the same period. Jammu District

These figures indicate socioeconomic progress, particularly in literacy, but they also illustrate the complexity of gender inequality. Improvements in female education did not automatically eliminate the demographic imbalance among children.

The district's 0–6 population was 167,363 in 2011, including 93,242 boys and 74,121 girls. The resulting child sex ratio was only 795 girls per 1,000 boys. Jammu District

Thus, while the overall sex ratio improved between 2001 and 2011, the child sex ratio remained highly adverse. This divergence is analytically important because the overall population ratio is influenced by migration, mortality, age structure, and other factors, whereas the child ratio focuses on a younger cohort.

Doda District



Doda had a population of 409,936 in Census 2011, including 213,641 males and 196,295 females. Its overall sex ratio was 919 females per 1,000 males, compared with 913 in 2001. Census India

The Doda District Census Handbook reports that the rural sex ratio was 930, while the urban sex ratio was 795. Among its tehsils, Bhalessa recorded 956 females per 1,000 males, Bhaderwah 930, Doda 909, and Thathri 896. Census India

Doda's child sex ratio was 933 girls per 1,000 boys in 2011, substantially higher than Jammu's 795. However, the district experienced a decline from 966 in 2001 to 933 in 2011. ResearchGate

This means that Doda's comparatively favourable demographic position should not be interpreted as an absence of gender discrimination. Instead, it indicates that the processes producing gender imbalance have operated differently in the two districts.

COMPARATIVE DEMOGRAPHIC ANALYSIS

Indicator	Jammu	Doda
Population, 2011	1,529,958	409,936
Overall sex ratio, 2001	865	913
Overall sex ratio, 2011	880	919
Change, 2001–2011	+15	+6
Child sex ratio, 2011	795	933
Rural sex ratio, 2011	905	930
Urban sex ratio, 2011	856	795
Female literacy, 2011	77.13%	approximately 50% in Census-based sources

Sources: Census of India 2011 and District Census Handbook data. Jammu District

The table demonstrates an important paradox. Jammu had substantially higher female literacy than Doda, yet its child sex ratio was much lower. Therefore, education alone cannot be assumed to explain district-level variation in sex ratio.

Similarly, Doda's favourable child sex ratio coexists with considerable gender gaps in literacy and socioeconomic conditions. This demonstrates that sex-ratio outcomes are produced by multiple interacting mechanisms.

GENDER DISCRIMINATION AND SON PREFERENCE

One of the central explanations for adverse sex ratios in parts of South Asia is **son preference**. Son preference refers to the prioritisation of male children within family and social systems. It may be associated with perceptions that sons provide economic support, inherit family property, carry forward the family name, perform particular religious or cultural responsibilities, or provide support to parents in old age.

In societies where daughters are expected to marry and become members of another household, investment in sons may be perceived by families as producing greater long-term returns. Daughters may additionally be associated with marriage expenses or dowry-related expectations. Such perceptions can influence reproductive decisions. However, son preference should not be treated as a uniform characteristic of all households or communities in Jammu and Doda. Cultural practices vary by locality, socioeconomic group, religion, education, household structure, and generation. Therefore, explanations must remain sensitive to local variation.

The Ministry of Women and Child Development explicitly identifies son preference, social and religious biases, and discrimination against daughters as important factors associated with adverse child sex ratios. Jammu District

PRENATAL SEX SELECTION AND TECHNOLOGICAL ACCESS

Technological development in reproductive healthcare has created significant benefits, but diagnostic technologies can also be misused for sex selection. When strong son preference exists alongside access to prenatal diagnostic services, families may acquire information that can influence reproductive decisions.



The relationship between technology and sex ratio is therefore not simply technological; it is institutional and cultural. Technology becomes relevant when combined with demand generated by gender preferences and inadequate compliance with legal and ethical standards.

The **Pre-Conception and Pre-Natal Diagnostic Techniques (Prohibition of Sex Selection) Act, 1994**, and subsequent regulatory mechanisms prohibit sex selection and the communication of foetal sex for prohibited purposes. Effective implementation requires registration and monitoring of diagnostic facilities, record maintenance, inspections, community awareness, and appropriate action against violations.

The unusually low child sex ratio in Jammu compared with Doda warrants careful consideration of this interaction, but the available aggregate data do not permit the conclusion that prenatal sex selection alone caused the district difference. Migration, mortality, reporting, fertility patterns, and population structure must also be considered.

EDUCATION AND GENDER EQUALITY

Education is widely regarded as a major pathway toward gender empowerment. Female education can increase awareness of legal rights, improve access to health information, strengthen participation in decision-making, and expand employment opportunities.

Census data show that female literacy in Jammu rose substantially between 2001 and 2011. The district's female literacy rate reached 77.13% in 2011. Jammu District

At the broader Jammu and Kashmir level, NFHS-5 found that 77.3% of women aged 15–49 were literate compared with 91.5% of men. The gender gap was also visible in ten-or-more-years schooling: 51.3% of women compared with 68.2% of men. Ministry of Health and Family Welfare

These figures demonstrate progress but also persistent inequality.

Doda presents a different challenge. Its relatively favourable child sex ratio does not mean that gender equality is fully established. Census-based evidence indicates substantial gender differences in literacy. Consequently, interventions in Doda

should not focus exclusively on maintaining the sex ratio; they should also strengthen girls' educational attainment, economic opportunities, healthcare access, and participation in public decision-making.

RURAL-URBAN DIFFERENCES

The rural-urban dimension is especially significant in comparing Jammu and Doda.

Jammu had an overall rural sex ratio of 905 and an urban sex ratio of 856 in 2011. Doda showed a much sharper contrast: 930 in rural areas compared with 795 in urban areas. Census India

This pattern cautions against assuming that urbanisation automatically produces gender equality. Urban populations may have greater access to education, healthcare, employment, and technology, but they may also experience more intense socioeconomic competition and easier access to reproductive technologies.

The urban-rural difference also suggests that district averages can conceal substantial internal variation. Policy programmes should therefore identify high-risk blocks, towns, villages, and population groups rather than treating the entire district as homogeneous.

CULTURAL NORMS AND WOMEN'S STATUS

Gender norms influence demographic behaviour through everyday expectations concerning family responsibilities.

Several cultural mechanisms may affect gender outcomes:

1. **Preference for male heirs:** Sons may be considered necessary for family continuity.
2. **Old-age security:** Parents may expect sons to provide financial support.
3. **Inheritance practices:** Property transmission may favour males in practice even where legal provisions recognise women's rights.
4. **Marriage-related expenditure:** Daughters may be perceived as economically costly.
5. **Domestic gender roles:** Girls may be socialised into caregiving and household responsibilities.



6. **Restrictions on mobility:** Gendered restrictions may limit girls' educational and employment opportunities.
7. **Unequal nutrition and healthcare:** Household resources may not always be distributed equally.
8. **Early marriage:** Early marriage can reduce women's educational and economic opportunities.

These factors do not operate independently. For example, limited employment opportunities for women can reinforce dependence on male household members, which in turn may strengthen the perceived economic value of sons.

DEMOGRAPHIC IMBALANCE AND ITS CONSEQUENCES

An adverse sex ratio can produce consequences extending beyond individual households.

First, a shortage of women can affect marriage patterns. Over time, demographic imbalances may produce difficulties in finding marriage partners within particular communities or age cohorts.

Second, a persistent deficit of women can affect household structures and care arrangements. Since women traditionally perform substantial unpaid care work, their relative scarcity may redistribute caregiving responsibilities.

Third, gender imbalance may reinforce trafficking, forced marriage, or other exploitative practices in some contexts. Such outcomes should not be assumed automatically but represent potential risks identified in demographic and gender research.

Fourth, demographic imbalance may influence social attitudes toward women. If girls remain numerically disadvantaged, the imbalance itself can become normalised.

For these reasons, sex-ratio analysis should be integrated with gender-equity planning rather than treated only as a demographic accounting exercise.

WHY THE CHILD SEX RATIO MATTERS MORE THAN THE OVERALL SEX RATIO FOR THIS STUDY

The contrast between Jammu's overall sex ratio and child sex ratio illustrates the importance of age-specific demographic analysis.

Jammu's overall sex ratio improved from 865 in 2001 to 880 in 2011. However, its child sex ratio was only 795 in 2011. Jammu District

Doda's overall sex ratio was 919, while its child sex ratio was 933. Census India

The overall sex ratio is affected by:

- age structure;
- mortality;
- migration;
- employment-related mobility;
- differential survival;
- fertility;
- historical demographic trends.

The child sex ratio is more directly associated with the demographic experience of recent births and early childhood. It can therefore provide a more sensitive warning signal regarding gender discrimination.

Nevertheless, the child sex ratio should also not be interpreted as a direct measurement of prenatal sex selection. A complete analysis requires information about sex ratio at birth, infant mortality, birth registration, migration, fertility, and health-service utilisation.

CONTEMPORARY CONTEXT

The demographic situation has continued to evolve after the 2011 Census. NFHS-5, conducted in Jammu and Kashmir during 2019–20, reported a sex ratio at birth of 922 females per 1,000 males for births in the preceding five years. Ministry of Health and Family Welfare

The Ministry of Women and Child Development's current Beti Bachao Beti Padhao dashboard reports a Jammu and Kashmir sex ratio at birth of 955 and district figures including 915 for Jammu and 943 for Doda. These figures belong to the administrative monitoring framework underlying the dashboard and should not be directly treated as equivalent to the Census 2011 child sex ratio because the indicators, period, data-generating processes, and denominators differ. Ministry of Women and Child Development

This distinction is methodologically important. A researcher should avoid combining Census child sex ratio, NFHS sex ratio at birth, and



administrative sex-ratio-at-birth statistics as though they were identical indicators.

LIMITATIONS OF THE STUDY

The study has several limitations. First, Census 2011 remains the principal source for detailed district-level demographic comparison, and therefore the Jammu-Doda comparison should not be interpreted as a direct description of the population in 2026.

Second, sex ratio is an aggregate indicator. It cannot by itself establish the specific cause of gender imbalance. A low ratio may result from migration, mortality, fertility, sex selection, or combinations of these factors.

Third, cultural practices vary within districts. Therefore, conclusions drawn at district level may conceal differences among villages, communities, socioeconomic groups, and urban neighbourhoods. Fourth, NFHS and administrative indicators may use different reference periods and methodologies. Consequently, comparisons between Census child sex ratio and more recent sex-ratio-at-birth indicators must be made cautiously.

Finally, the study is based on secondary data and does not include household interviews or qualitative fieldwork. Future research should combine quantitative demographic analysis with primary surveys and interviews.

CONCLUSION

The declining or adverse sex ratio is not merely a demographic problem; it is closely connected with the social valuation of women and girls. The comparative evidence from Jammu and Doda demonstrates that demographic imbalance is geographically uneven and multidimensional.

Census 2011 recorded an overall sex ratio of 880 in Jammu and 919 in Doda. More importantly, the child sex ratio was 795 in Jammu compared with 933 in Doda. Jammu District The difference indicates that the demographic experience of girls varies considerably even within the same broader region.

Jammu's case is particularly significant because its overall sex ratio improved during 2001–2011 while the child sex ratio remained substantially adverse. This illustrates why demographic policy cannot rely exclusively on the overall population sex ratio.

Child sex ratio, sex ratio at birth, infant mortality, education, healthcare, migration, and women's socioeconomic participation must be examined together.

Doda provides a contrasting example. Its relatively favourable child sex ratio indicates a less adverse demographic balance among children, yet its gender gaps in education and rural-urban inequalities demonstrate that a favourable sex ratio should not automatically be equated with comprehensive gender equality.

The evidence supports a multidimensional approach in which gender discrimination is understood through cultural norms, economic incentives, reproductive behaviour, educational opportunities, healthcare, technology, and institutional enforcement. Son preference may contribute to discriminatory reproductive decisions, but it should be studied alongside the broader social environment in which families make choices.

Ultimately, improving the demographic balance requires more than numerical targets. Girls must be valued equally in education, nutrition, healthcare, inheritance, employment, family decision-making, and social life. The long-term solution therefore lies in combining effective legal enforcement with social transformation and women's empowerment. District-specific interventions, reliable demographic monitoring, gender-sensitive education, economic opportunities for women, and sustained community engagement can contribute to a more balanced and equitable demographic future for Jammu and Doda.

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