



ASSESSING TRENDS IN WOMEN'S REPRODUCTIVE HEALTH AND FAMILY PLANNING IN HARYANA: INSIGHTS FROM NFHS-4 AND NFHS-5

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Abstract: Women's reproductive health is a crucial aspect of public health that impacts overall societal well-being and economic stability. In Haryana, India, addressing this issue involves confronting deeply ingrained societal norms and enhancing women's autonomy in health-related decisions. Utilising data from the National Family Health Survey (NFHS) reports of NFHS-4 (2015–16) and NFHS-5 (2019–21), this study evaluates the reproductive health and family planning issues among women aged 15–49 in the region. The research specifically focuses on analysing key indicators, including the total fertility rate (TFR), the impact of educational attainment on TFR, fertility preferences, birth intervals, the desired number of children, child sex preferences, and the prevalence of contraceptive use. The findings reveal significant trends and variations in these indicators, offering a comprehensive understanding of women's reproductive health in Haryana. The study tracks progress by comparing data from the NFHS-4 and NFHS-5 reports and identifying persistent gaps and areas that require attention. The insights provided by this analysis are critical for policymakers, healthcare providers, and non-governmental organisations striving to enhance reproductive health services and promote women's rights in Haryana. The study emphasises the necessity for targeted interventions that address societal attitudes and provide educational opportunities to improve family planning and reproductive health outcomes.

Keywords: fertility rate, reproductive health, family planning, contraceptive prevalence, birth interval, sex preferences.

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Introduction

As the world collectively aspires towards a future defined by progressive values, the health and well-being of women become critical measures of societal advancement. Gender inequality in terms of health is a persistent issue that affects individuals around the world, particularly women and girls. This inequality manifests in various ways, including limited access to healthcare services, a lack of education about health issues, and an unequal distribution of resources for health research and treatment (Ballantyne, 1999; Vissandjee et al., 2004; WHO, 2009). Women's health is influenced by many factors, including social determinants such as cultural beliefs, social norms, and access to healthcare services, as well as economic determinants such as income, employment, and education. Lifestyle choices, genetics, and environmental factors can also impact women's health. Earlier studies highlighted the importance of considering the complex interplay of these determinants to promote optimal health outcomes for women (Cohen, 1998; Hankivsky, 2012; Baheiraei et al., 2015; Namzi et al., 2019).

Her health forms the foundation for her overall well-being throughout a woman's life. However, reproductive health takes centre stage, impacting not only her physical health but also her emotional and social well-being (Stanton et al., 2002). It influences everything from menstruation and fertility to sexual health and family planning. By prioritising and safeguarding reproductive health, women are empowered to make informed choices about their bodies, their families, and their futures. It includes decisions about starting a family, preventing unintended pregnancies, and managing menstrual cycles (Wang & Pillai, 2001; Stanton et al., 2002; Benyamini & Todorova, 2017).

As per the World Health Organisation's definition, reproductive health encompasses an individual's whole physical, mental, and social well-being about their reproductive system and its activities. It goes beyond the absence of disease or infirmity and includes the ability to independently decide if, when, and how often to have children. It also suggests the importance of having a safe and satisfying sexual life, which involves having the necessary information and resources to make educated decisions about one's sexual and reproductive health. In addition, it grants access to contraception, safe abortion services, and the prevention and treatment of sexually transmitted illnesses (Miller & Rosenfield, 1996; WHO, 2009; Purandare & Adanu, 2015). A recent alarming surge in statistics, both globally and within India, has thrust women's reproductive health into the spotlight for researchers and policymakers. From the 1960s to 2021, the global average fertility rate, measured by the total

fertility rate (TFR), has decreased by half to approximately 2.4 children per woman. These shocking figures highlight the need to prioritise this critical aspect of women's well-being within healthcare systems and national health improvement efforts.

The study of women's reproductive health is fundamental for understanding and improving women's overall well-being. This field encompasses a broad spectrum of considerations, including not only the physiological aspects of menstruation, fertility, and pregnancy but also a woman's susceptibility to sexually transmitted infections, chronic conditions impacting the reproductive system, and her access to safe and effective contraception (Bloom et al., 2001; Raman et al., 2016). Crucially, women's mental and emotional well-being are intrinsically linked to their reproductive health, and factors like body image, self-esteem, and experiences of violence all have a significant impact (Babu & Kar, 2009; Fanslow, 2017; Damra & Abujilban, 2021; Meier et al., 2021; Deosthali et al., 2022). Despite global recognition of these issues, considerable data collection and analysis disparities exist. This lack of robust statistical evidence hinders the development of targeted interventions that address the specific needs of diverse populations, obscures the true magnitude of women's reproductive health challenges on a global scale, and ultimately impedes progress towards ensuring equitable access to quality healthcare. A shortage of data in specific regions makes it challenging to design and implement effective programmes to address these critical issues (Graham, 1998; Wang & Pillai, 2001; Hazarika, 2010; Radzinskiy et al., 2014).

However, reproductive health often takes centre stage, particularly in India, where societal norms surrounding gender roles are deeply ingrained. This heightened concern stems from the unique challenges women face in managing their reproductive health within a social framework that can limit access to information, resources, and even decision-making power (Sudha & Morrison, 2011; Sanneving et al., 2013; Rao et al., 2014; Speizer et al., 2015). In many societies, there are conventional gender norms that order women to put the needs of their families before their own. This societal expectation often leads to women neglecting their health issues and taking care of their families' well-being. People attribute this to a lack of time, resources, and social support. As a result, women may delay seeking medical treatment, ignore their health concerns, or prioritise the health needs of their loved ones over their own. It manifests in malnutrition, as women may prioritise feeding their children over themselves. The prevailing cultural taboos surrounding menstruation and sexual health create a climate of silence and shame, hindering open

communication and informed decision-making. Additionally, limited access to quality healthcare services in rural areas further restricts women's ability to receive proper prenatal care, contraception, and screenings for reproductive cancers (Gulati et al., 2009; Rao et al., 2014; Ahmad et al., 2016).

Haryana, a state in northern India, has increasingly become a focal point in scholarly research and broader societal discussions, owing to its complex social dynamics and pressing societal issues that demand urgent attention from academics and policymakers. One of the most critical and discussed issues is the state's significantly skewed sex ratio, which not only reflects a deep-seated gender bias but also has profound implications for societal stability and gender relations within the community (Kaur, 2005; Nanda et al., 2015; Irshad, 2020). The NFHS-5 report for Haryana recently highlighted that the overall sex ratio has improved slightly to 926 females per 1,000 males. Shockingly, the child sex ratio, the sex ratio of the population under the age of six (0–6), remains low at 868 females per 1,000 males. This demographic challenge is indicative of broader gender disparities. A series of gender-based atrocities, including widespread gender-based violence that manifests in both domestic and public spheres, plague the region closely.

The gender disparities are worsened by cultural attitudes and behaviours that greatly limit women's rights and options (Rao et al., 2014). The state of Haryana in India is known to impose substantial societal pressure and limitations on women's autonomy regarding mate selection and reproductive rights (Kumari et al., 2019; Siwach, 2020). These restrictions are deeply ingrained in the patriarchal structure of society, which not only limits women's roles within the family and community but also curtails their participation in the economic and political spheres (Larsen & Kaur, 2013; Lawrence & Hensly, 2023). To estimate the influence of women's reproductive health and family planning, this article evaluated the report of the National Family Health Survey (NFHS), especially rounds 4 (2015–16) and 5 (2019–2021). While prior research has undoubtedly played a valuable role in advancing our understanding of women's health in India, these studies (Agrawal, 2015; Suri & Sarkar, 2022; Kumar et al., 2022; Singh et al., 2023) have often relied on broad analyses of various health indicators extracted from the NFHS data. The data contains information on India's population, healthcare, nutrition, and specifics about every state and union territory. The Ministry of Health and Family Welfare (MoHFW), a branch of the Indian Government, is responsible for overseeing the implementation of this survey. The MoHFW has appointed the International Institute for Population Sciences (IIPS) in Mumbai as the central agency

responsible for conducting the survey (IIPS & ICF, 2017; IIPS & ICF,2021). The study aimed to analyse the trends of total fertility rate (TFR), variation in TFR with schooling, fertility preference, birth interval, the ideal number of children desired by women in Haryana, sex preferences for children, and prevalence of contraceptive use. The study's findings shed light on the pressing issue of women's reproductive health and rights in Haryana, where societal norms and practices often curtail women's autonomy and decision-making power. Upon analysing the NFHS data, the researchers discovered significant differences in the TFR among women with differing levels of education. It highlights the importance of implementing educational programmes and increasing awareness to bridge these gaps.

The study emphasises the importance of addressing the socio-economic and cultural factors that limit the independence of women when it comes to making decisions about their reproductive health and rights. It can help empower women to make informed decisions and lead healthy and fulfilling lives by promoting education awareness and providing family planning and contraceptive services. The goal of this study is to equip women with knowledge to create interventions that effectively address the underlying causes of these issues, enabling them to take charge of their reproductive health and overall well-being.

Materials & Methods

This article analysed the data collected during two rounds of the National Family Health Survey (NFHS), NFHS-4 (2015-16) and NFHS-5 (2019-21), from Haryana, India. NFHS-4 was conducted between February and June 2015, and data was collected from 21,652 women aged 15-49 across all 21 districts of the state. The NFHS-5 was conducted in two parts due to the Covid-19 pandemic and lockdowns. The first part was conducted from January to March 2020, before the lockdowns, and the second part was conducted from December 2020 to April 2021, after the lockdowns. NFHS-5 collected data from 21,909 women aged 15-49 across all 22 state districts. In Haryana, the Society for the Promotion of Youth & Masses (SPYM) was responsible for surveying the National Family Health Survey (NFHS) (IIPS & ICF, 2017; IIPS & ICF,2021).

Result & Discussion

This study assessed fertility and family planning trends from the 4th and 5th cycles of NFHS-4 (2015–2016) and NFHS (2019–2021), especially from the state-wise report, focusing on Haryana. Early marriage significantly impacts the

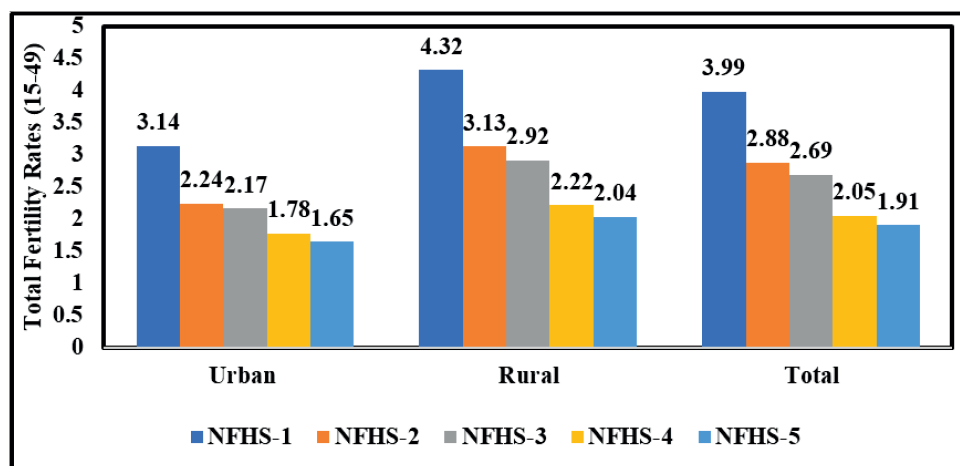
reproductive health of women, particularly in a social context like Haryana, where brides are often younger than their grooms (Das & Biswas, 2021). This age gap coincides with a crucial physical and emotional development period for young women. Marrying before their bodies are fully mature leads to complications during pregnancy and childbirth, putting both mother and child at risk (Santhya et al., 2010; Prakash et al., 2011). In addition, marrying at a young age frequently aligns with the restricted availability of educational and healthcare facilities, impeding women's capacity to make well-informed choices regarding their reproductive well-being (Sudha & Morrison, 2011; Sanneving et al., 2013).

Furthermore, young wives lack the social autonomy and decision-making power to negotiate safe sex practices or delay childbearing, increasing their vulnerability to unintended pregnancies and sexually transmitted infections. Recent surveys show a gradual increase in the median age at first marriage among women in Haryana. According to the latest survey NFHS-5, women aged 20-49 have a median age of 19.7 years at first marriage, slightly higher than the median age of 19.5 from the previous survey NFHS-4. It pointed out that younger women tend to get married later than in previous years. These findings indicate a steady shift towards older ages at first marriage among women. Even if slight, the increase in age at first marriage among women points to changes in societal norms, educational attainments, and possibly economic factors influencing marital decisions in Haryana (Nanda et al., 2022).

Beyond the immediate health concerns of early marriage, Haryana's TFR is another aspect intricately linked to women's reproductive health. Early marriage often translates into a longer childbearing gap for women in Haryana. However, the state has witnessed a decline in TFR in recent years. This positive trend is attributed to several factors, including enhanced access to education and family planning services. As women gain more knowledge and resources, they are empowered to make choices about childbearing, including the ideal spacing and total number of children they have. TFR in Haryana has demonstrated a significant and consistent decline across urban and rural areas over the five rounds of the NFHS, spanning nearly three decades. NFHS data reveals a sharp decrease from a TFR of 3.99 in the first round to 1.91 in the fifth round, indicating profound shifts towards more minor family norms. Urban regions consistently reported lower TFRs than their rural counterparts, reflecting differential access to education, healthcare, and family planning services, which are more abundant in urban settings (Tiwari & Mishra, 2021). The steepest reductions were observed between the initial surveys, with a gradual

plateauing yet persistent decline in more recent rounds. By the fourth and fifth rounds, the urban TFR approached and fell below the replacement level of 2.1, signalling a demographic shift that may lead to longer-term implications, including an ageing population and associated economic challenges (Figure 1).

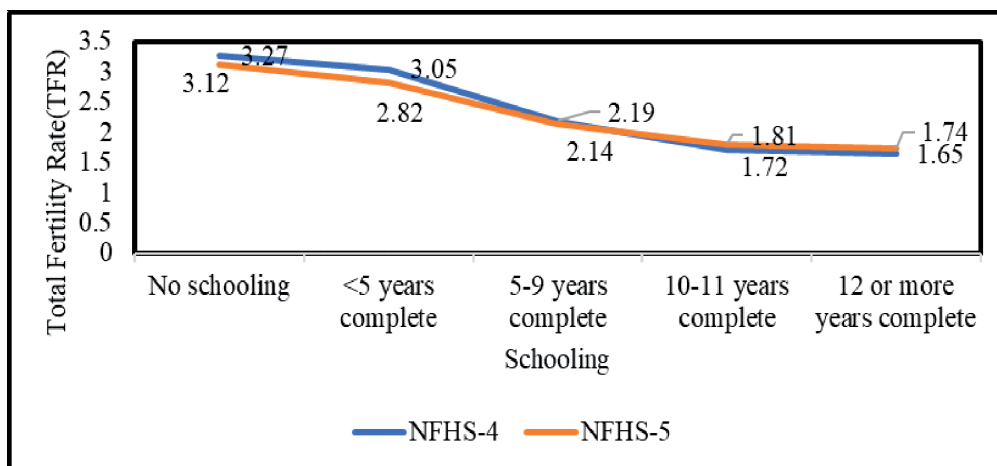
Figure 1: Trends of Total Fertility Rate (TFR) from past five rounds of NFHS



Notes: Figure 1 illustrates the total fertility rate trends estimated in the past five National Family Health Surveys (NFHS) in Haryana between 1992–93 and 2019–2021. Adapted from “National Family Health Survey (NFHS-5), India, 2019-21: Haryana” by the International Institute for Population Sciences (IIPS) and ICF, 2021, Mumbai: IIPS. Copyright 2021 by the International Institute for Population Sciences (IIPS) and ICF.*The total fertility rate (TFR) refers to the average number of children a woman is expected to have during her reproductive year.

Interestingly, TFR (children per woman) varied with women's schooling (15–49). Analysis reveals a clear inverse correlation: as educational attainment increases, TFR generally decreases. From NFHS-4 to NFHS-5, women with no schooling showed a modest reduction in TFR from 3.27 to 3.12, while those with less than five years of education exhibited a more substantial decrease from 3.05 to 2.82. This trend of declining fertility continues with education levels of 5–9 years, where TFR slightly dropped from 2.19 to 2.14. Remarkably, an anomaly appears in the categories of higher education (10–11 years and 12 or more years of schooling), where TFR slightly increased between the two survey rounds—from 1.72 to 1.81 and from 1.65 to 1.74, respectively. It shows fertility decisions differently at higher education levels, potentially reflecting a stabilising or slight rebound in fertility preferences among more educated women (see Figure 2).

Figure 2: Variation in Total Fertility Rate (TFR) with Schooling



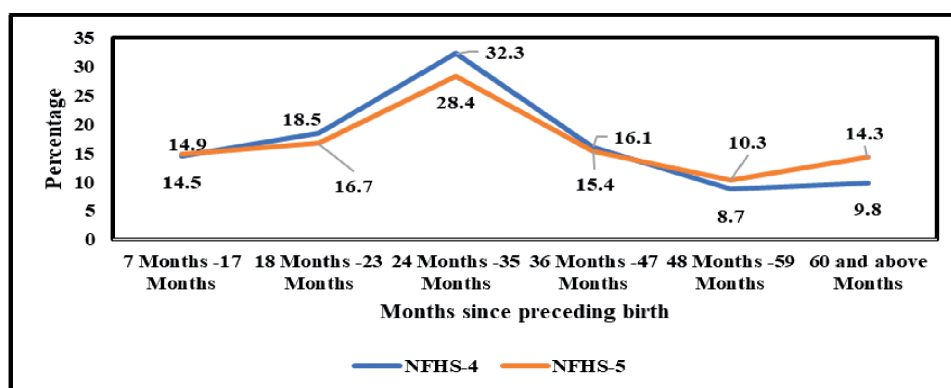
Notes: Figure 2 depicts the fluctuation in the Total Fertility Rate (TFR) based on schooling, as estimated by the National Family Health Survey (NFHS) in Haryana during rounds NFHS-4 (2015-16) and NFHS-5 (2019-2021). Adapted from “National Family Health Survey (NFHS-4), India, 2015-16: Haryana, and National Family Health Survey (NFHS-5), India, 2019-21: Haryana” by the International Institute for Population Sciences (IIPS) and ICF. Mumbai: IIPS. Copyright © 2017 and 2021 by the International Institute for Population Sciences (IIPS) and ICF.

The birth interval is another crucial aspect associated with women’s health. While data on birth spacing practices in Haryana is limited, analysis of national trends from the NFHS offers some insights. The median duration between consecutive births increased from 29.1 months in NFHS-4 to 31.5 months in NFHS-5. The NFHS-4 and NFHS-5 data demonstrate changing patterns in birth intervals among women aged 20 to 49 in Haryana. Specifically, the percentage of women experiencing birth intervals of 7 to 17 months increased from 14.5 percent to 14.9 percent, while there was a noticeable decrease in shorter intervals of 18 to 23 months, from 18.5 percent to 16.7 percent. Notably, the most common birth interval of 24 to 35 months decreased from 32.3 to 28.4 percent. The percentage of longer intervals from 36 to 47 months decreased slightly from 16.1 to 15.4 percent.

In contrast, the intervals of 48 to 59 months and over 60 months saw increases from 8.7 to 10.3 percent and from 9.8 to 14.3 percent, respectively (see Figure 3). Women in Haryana appear to be waiting longer between births, which indicates a trend towards longer birth spacing. This trend may be due to better access to family planning services, increased health awareness, and socio-economic changes that impact family size preferences. The longer

intervals between births are significant because they can improve maternal and child health outcomes. This is because mothers have more time to recover between births and stabilise their financial situation (Jatrana & Pasupuleti, 2015; Chowdhury et al., 2023).

Figure 3: Variation of Birth Interval (months since preceding birth) In NFHS-4 and NFHS-5

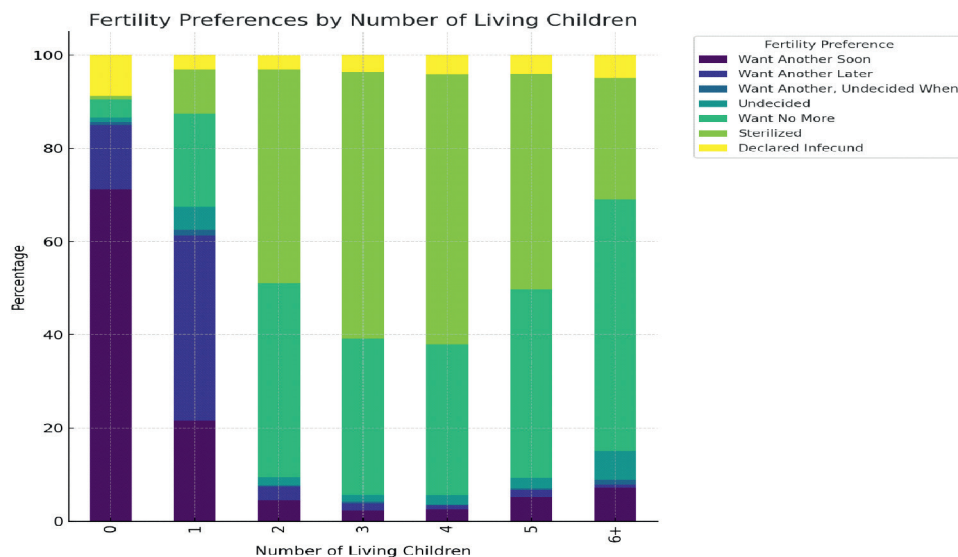


Notes. Figure 3 illustrates the variation in birth interval (months since previous birth) estimated from the National Family Health Survey (NFHS) in Haryana rounds NFHS-4 (2015-16) and NFHS-5 (2019-2021). Adapted from “National Family Health Survey (NFHS-4), India, 2015-16: Haryana, and National Family Health Survey (NFHS-5), India, 2019-21: Haryana” by the International Institute for Population Sciences (IIPS) and ICF. Mumbai: IIPS. Copyright © 2017 and 2021 by the International Institute for Population Sciences (IIPS) and ICF.

Fertility preference is a vital indicator of women's reproductive health. It reflects their desired family size, which is typically assessed in the NFHS based on the number of living children (Figure 4). This information provides valuable insights into women's reproductive goals and decision-making.

The comparative analysis of fertility preferences between NFHS-4 and NFHS-5 data illustrates a visible shift in reproductive intentions among married women aged 15–49, emphasising a trend towards smaller families and delayed childbearing. Specifically, there is a consistent decrease in the percentage of women wanting another child soon across nearly all categories of living children, reflecting broader societal changes toward extended birth intervals. In contrast, those who already have two or more children show a decrease in their inclination to have additional children in the future, indicating a clear intention to restrict their family size. Additionally, NFHS-5 reveals increased indecision among women, particularly those without children and those with six or more, indicating greater complexity or uncertainty in family planning

Figure 4: Fertility Preferences by Number of Living Children



Notes. Figure 4 illustrates the variation in fertility preferences based on the number of living children estimated from the National Family Health Survey (NFHS) in Haryana rounds NFHS-4 (2015-16) and NFHS-5 (2019-2021). Adapted from “National Family Health Survey (NFHS-4), India, 2015-16: Haryana, and National Family Health Survey (NFHS-5), India, 2019-21: Haryana” by the International Institute for Population Sciences (IIPS) and ICF. Mumbai: IIPS. Copyright © 2017 and 2021 by the International Institute for Population Sciences (IIPS) and ICF.

decisions. Notably, the desire for no further children rises significantly, especially among women with one to three children, reinforcing the trend towards smaller desired family sizes.

Furthermore, sterilisation preferences show a nuanced change, with a decrease among women with fewer than six children and a slight increase among those with six or more, possibly reflecting shifts in the accessibility or societal acceptance of this method. These findings suggest significant transformations in family planning behaviours, likely influenced by enhanced access to reproductive health services, changing socio-economic conditions, and evolving cultural norms. This trend towards smaller, more strategically planned families could have profound implications for the region’s population dynamics and policy planning (Jayaraman et al., 2009; Shekhar et al., 2018).

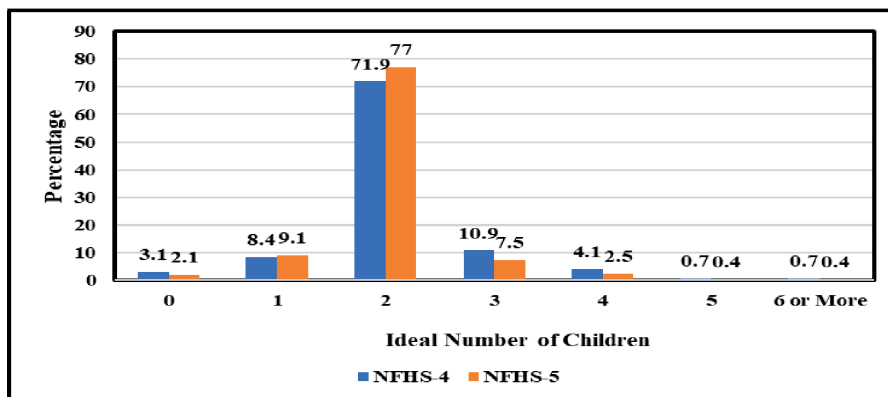
Examining data from NFHS on the ideal number of children desired by women in Haryana provides a window into their family planning aspirations

and reproductive health goals. Tracking trends in desired family size over time sheds light on potential shifts in women's preferences, likely influenced by increased educational attainment, improved access to family planning services, or evolving social norms. Understanding these desired family sizes is instrumental for policymakers in formulating effective reproductive health programmes tailored to the specific needs of women in Haryana. The data from NFHS-4 and NFHS-5 on the ideal number of children desired by respondents reveals a noteworthy trend towards smaller family sizes over time (see Figure 5). In NFHS-5, there is a significant increase in the proportion of respondents who consider two children ideal, rising from 71.9 percent in NFHS-4 to 77 percent in NFHS-5. This shift underscores a strengthening preference for smaller families, likely influenced by economic considerations, access to education, and family planning resources.

Conversely, the percentage of respondents favouring larger family sizes, with ideals of three or more children, shows an evident decline. The preference for three children decreased from 10.9 percent in NFHS-4 to 7.5 percent in NFHS-5, and the desire for four children also dropped from 4.1 percent to 2.5 percent. Furthermore, the proportion of respondents who consider having five or more children ideal remains low and has slightly decreased, reflecting a continued move away from more significant family norms. Interestingly, the number of respondents considering having no children as ideal reduced somewhat from 3.1 percent to 2.1 percent, indicating a persisting but slightly lessening disinterest in childbearing. The increasing preference for two children, coupled with a reduction in the proportion of respondents desiring larger families, is indicative of changing societal norms where smaller family sizes are becoming more desirable due to the perceived benefits such as better financial management, improved child welfare, and enhanced educational opportunities for children (Gupta et al. 2016, Jayaraman et al., 2009; Shekhar et al., 2018).

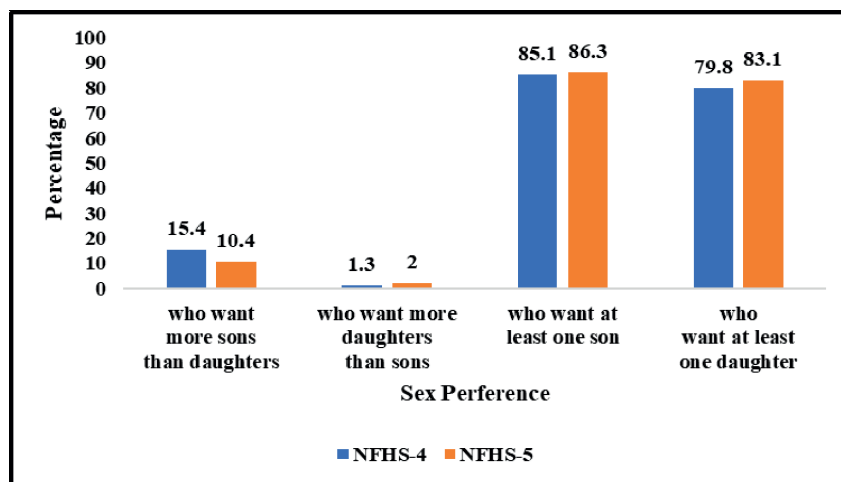
Apart from the ideal number of children they wish to have, women in Haryana exhibit a preference for the sex of their children, as evidenced by the NFHS data collected across rounds 4 and 5 (see Figure 6). The preference for male offspring is associated with women's reproductive health and decisions on family planning. When women have limited autonomy in making decisions about family planning, they feel compelled to have more children until they reach their preferred gender balance. It results in unwanted pregnancies and higher health risks due to having children too close together (Gupta & Visaria, 1996).

Figure 5: Preference Regarding Ideal Number of Children



Notes: Figure 5 illustrates the variation in preference regarding the ideal number of children estimated from the National Family Health Survey (NFHS) in Haryana rounds NFHS-4 (2015-16) and NFHS-5 (2019-21). Adapted from “National Family Health Survey (NFHS-4), India, 2015-16: Haryana, and National Family Health Survey (NFHS-5), India, 2019-21: Haryana” by the International Institute for Population Sciences (IIPS) and ICF. Mumbai: IIPS. Copyright © 2017 and 2021 by the International Institute for Population Sciences (IIPS) and ICF.

Figure 6: Preference for Children's Sex



Notes: Figure 6 illustrates the variation in the preference for children's sex estimated from the National Family Health Survey (NFHS) in Haryana rounds NFHS-4 (2015-16) and NFHS-5 (2019-21). Adapted from “National Family Health Survey (NFHS-4), India, 2015-16: Haryana, and National Family Health Survey (NFHS-5), India, 2019-21: Haryana” by the International Institute for Population Sciences (IIPS) and ICF. Mumbai: IIPS. Copyright © 2017 and 2021 by the International Institute for Population Sciences (IIPS) and ICF.

The analysis of data from NFHS-4 and NFHS-5 on children's sex preferences reveals significant shifts in societal attitudes towards gender. There is a notable decrease in the preference for more sons than daughters, with figures declining from 15.4 percent in NFHS-4 to 10.4 percent in NFHS-5, indicating a gradual reduction in traditional son preference. In contrast, the preference for more daughters than sons has seen a marginal increase, from 1.3 percent to 2 percent, suggesting a slow but perceptible shift towards a greater valuation of daughters. Additionally, the desire for at least one son remains strong, slightly increasing from 85.1 percent to 86.3 percent. There is also an increase in the desire for at least one daughter, from 79.8 percent to 83.1 percent, indicating that while the preference for at least one child of each sex remains prevalent, there is a growing emphasis on gender balance within families. These changes reflect broader societal transformations towards gender equity, influenced by enhanced awareness of gender issues, advocacy for equality, and the evolving economic roles of women.

Estimating the prevalence of contraceptive use is essential for understanding women's reproductive health and serves as an integral part of family planning initiatives. The data comparing the use of contraceptive methods between NFHS-4 and NFHS-5 reveals significant trends and shifts in contraceptive practices (see Table 1). Overall, the use of any contraceptive method has increased notably from 63.7 per cent in NFHS-4 to 73.1 per cent in NFHS-5, indicating a general rise in the adoption of family planning techniques.

A closer look at the specific methods used shows that the percentage of individuals using any modern contraceptive method has increased slightly from 59.4 percent to 60.5 percent. Notably, female sterilisation, while still the most commonly used method, has seen a decrease from 38.1 percent to 32.3 percent, suggesting a possible shift towards less permanent solutions or diversification in the types of contraceptives used. Male sterilisation remains relatively low but has slightly increased from 0.6 percent to 0.9 percent. The use of condoms has seen a substantial increase from 12 percent to 18.1 percent, which may reflect an increased emphasis on male participation in contraception or a growing awareness of sexually transmitted infections alongside pregnancy prevention. The use of pills remains stable at around 2.7 percent to 2.8 percent, while the use of intrauterine devices (IUD or PPIUD) has decreased slightly from 5.7 percent to 4.9 percent. Newer methods like injectables and emergency contraception have appeared or increased slightly, indicating an expanding range of options being utilised.

Table 1: Percent Distribution of Currently Married Women Aged 15-49 Years by Contraceptive Method

<i>Contraceptive Method Currently Used</i>	<i>Percent Distribution</i>	
	<i>NFHS-4</i>	<i>NFHS-5</i>
Any Method (a+b)	63.7	73.1
(a) Any Modern Method	59.4	60.5
Female Sterilisation	38.1	32.3
Male Sterilisation	0.6	0.9
Pill	2.7	2.8
IUD or PPIUD	5.7	4.9
Injectables	0.2	0.4
Condom/Nirodh	12	18.1
Emergency Contraception	NA	0.1
LAM	0.2	0.3
Other Modern Method	0	0.6
(b) Any Traditional Method	4.3	12.6
Rhythm	2.2	8.6
Withdrawal	2.2	4.1
Not Currently Using	36.3	26.9
Total	100	100

Notes: Table 1 illustrates the variation in per cent distribution of currently married women aged 15–49 years by contraceptive method currently used, estimated from the National Family Health Survey (NFHS) in Haryana rounds NFHS-4 (2015–16) and NFHS-5 (2019–2021). Adapted from “National Family Health Survey (NFHS-4), India, 2015–16: Haryana, and National Family Health Survey (NFHS-5), India, 2019–21: Haryana” by the International Institute for Population Sciences (IIPS) and ICF. Mumbai: IIPS. Copyright © 2017 and 2021 by the International Institute for Population Sciences (IIPS) and ICF.

Interestingly, there has been a significant rise in the use of any traditional method, from 4.3 percent to 12.6 percent. Within this category, the rhythm method has dramatically increased from 2.2 percent to 8.6 percent, and withdrawal has increased from 2.2 percent to 4.1 percent. This rise indicates either a cultural shift to traditional practices or barriers to accessing modern methods. The data also shows a decrease in the percentage of individuals not currently using any contraceptive method, from 36.3 percent in NFHS-4 to 26.9 percent in NFHS-5, suggesting that contraceptive use is becoming more normalised or accessible. These trends indicate a broadening in the contraceptive method mix and a shift towards more diverse and potentially less invasive forms of contraception, alongside an overall increase in contraceptive use. This shift reflects changes in education about and access to contraceptive methods, as well as evolving attitudes toward family planning and gender

roles in contraceptive responsibility (Gupta et al., 2016; Srivastava et al., 2020; Singh et al., 2023).

The study analysed diverse reproductive health variables in Haryana, India. These factors encompass the overall fertility rate, desired number of children, spacing between births, preferred gender of children, and use of contraception. They are connected to previous studies, emphasising important areas requiring further investigation into women's reproductive health and family planning within this particular cultural setting. Haryana's pronounced patriarchal norms significantly constrain women's reproductive autonomy, potentially leading to skewed reproductive choices. The paper emphasises that statistical data, while helpful, falls short of capturing the full complexity of the issues at hand. The patriarchal setting of Haryana, with its strict gender norms and limited female autonomy, requires a multidimensional research approach to unveil the underlying dynamics affecting reproductive health. To this end, the paper advocates integrating qualitative research methods with traditional quantitative approaches. Methods such as ethnographic research, in-depth interviews, and focus groups can provide more affluent, contextual insights into how cultural norms influence reproductive behaviour and health outcomes.

Further elaborating on the implications for policymaking, the study suggests that understanding these cultural and social nuances is crucial for designing effective health interventions. It calls for policies that not only aim to improve access to reproductive health services but also work towards changing the societal norms that limit women's decision-making power. Gender equality education campaigns, healthcare reforms that uphold women's rights, and community engagement programs involving both men and women can play a pivotal role in transforming entrenched gender roles and enhancing reproductive health outcomes.

Conclusion

This study underscores the need for a comprehensive approach integrating macro-level statistical analysis and micro-level qualitative insights. This hybrid approach can offer a more nuanced understanding of how patriarchal norms impact reproductive health in Haryana. Doing so contributes to more effective policymaking and the development of culturally sensitive interventions that address both the symptoms and root causes of the challenges faced by women in this region. Moreover, the prevalence of alarming societal issues has catalysed a robust academic interest in Haryana as a research field. A growing

body of research supports the scholarly interest in Haryana by documenting these issues and engaging with local communities to explore viable solutions. Social scientists are keenly studying the socio-economic and cultural factors that contribute to these patterns, aiming to understand the underlying causes of such disparities and inform effective policy interventions. It requires qualitative studies that capture the voices of women and marginalised groups and quantitative research that provides a broader overview of trends and patterns in gender-related issues. Policymakers, on their part, are increasingly recognising the need to address these critical issues through legislative and social reforms that aim to empower women and create a more balanced and equitable society. This growing academic and policy-focused discourse aims to spearhead changes that will alleviate these alarming societal concerns, paving the way for a more just and equitable distribution of rights and opportunities across genders in Haryana.

Finally, good reproductive health reduces the risk of complications during pregnancy and childbirth, promoting a healthy life for both mother and child. Ultimately, investing in women's reproductive health is an investment in the health and well-being of entire families and communities.

Declaration by Authors

Ethical Approval: This review article does not involve original research on human participants or animals; therefore, ethical approval was not required

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