

Unbalancing The Ratio: Exploring Female Feticide Through A Socio-Demographic Lens in Nagaur District, Rajasthan

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Abstract:

Female feticide refers to the practice of determining the sex of an unborn child and terminating the pregnancy if the fetus is female. Even though this act is illegal in India, it is still carried out in many places. In addition to this, some communities engage in female infanticide, which involves killing a girl child after birth. This disturbing reality is reflected in the Census of India 2001, which reported that there were only 933 females for every 1000 males in the country. Further, Census 2011 data revealed a continuous decline in the Child Sex Ratio (CSR), defined as the number of girls per 1000 boys in the age group of 0–6 years. The CSR dropped to a historic low of 918 in 2011, compared to 976 in 1961. This declining trend indicates that girls are being denied not only their fundamental human rights but also their basic right to life. To address this issue, the Government of India enacted the Pre-Conception and Pre-Natal Diagnostic Techniques (PCPNDT) Act, 1994, which bans sex selection before and after conception. The Act aims to curb female feticide and regulate the use of prenatal diagnostic methods for detecting genetic and metabolic disorders and other medical conditions.

“Female feticide”, a critical concern in India, persists in Nagaur district, Rajasthan. This study investigates the prevalence, causes, and consequences of “Female feticide” in Nagaur, using mixed-methods research. Quantitative analysis of district-level data and qualitative insights from interviews with healthcare providers, community members, and stakeholders reveal a complex interplay of factors. The study highlights the need for targeted interventions, awareness campaigns, and community engagement to combat this issue.

Keywords: Female feticide, Sex Ratio, Nagaur District, PCPNDT Act, Gender Discrimination

Introduction:

The systematic elimination of female fetuses, known as “female feticide,” constitutes a severe violation of human rights, depriving millions of unborn girls of their right to life. Globally, the United Nations estimates over 100 million girls are missing due to sex-selective abortion. In India, this phenomenon has led to a skewed child sex ratio of 918 girls per 1,000 boys (0-6 years), with some states recording as low as 830 and in Nagaur district child sex ratio is 897 girls per 1000 boys compared to figure of 915 girls per 1000 boys of 2001 (Census of India, 2011)¹. “The alarming decline in India and as well as Nagaur district girl-to-boy ratio over the past decade is a stark reminder of the persistent issue of sex-selective abortion and infanticide. This disturbing trend, highlighted by the United Nations Population Fund (UNFPA) as early as the 20th century, underscores the deep-rooted gender bias in Indian society^{2 3}. The preference for sons over daughters has led to a skewed sex ratio, with devastating consequences for the demographic balance, social fabric, and human rights. It is imperative that we address and eliminate these harmful practices to ensure a more equitable future for all^{4 5 6}. Perpetuated by entrenched patriarchal norms, colonial legacies, and socio-economic factors, “Female feticide” has historical roots in India. Its consequences are far-reaching, disrupting demographic balance, social fabric, and human rights. A skewed sex ratio fuels bride trafficking, social instability, and undermines India's progress in human development, gender equality, and social justice. This research paper investigates the complex factors driving “Female feticide”, its impact on Indian society, and potential prevention strategies, emphasizing the urgent need for policymakers, researchers, and civil society to address this critical issue.

Study Area:

Nagaur district is in the heart of Rajasthan State (24°37' to 26°00' North latitudes and 63°05' to 75°22' Eastern longitudes) has an area of 17,718 sq. kms. with a population density of 157/km² (2011). Degana district is a part of the great Indian “Thar Desert.” Nagaur district lies in the semi-arid tract of Rajasthan State. This area is popularly known as ‘bangar’. The general landscape is one that is covered with a thick

mantle of sand-dunes locally known as dhoras and tibbas. The district is administratively divided into ten tahsils viz. Degana, Didwana, Jayal, Ladnun, Merta, Nawa, Nagaur, Khivnsar, Makarana and Parbatsar (Fig 1).

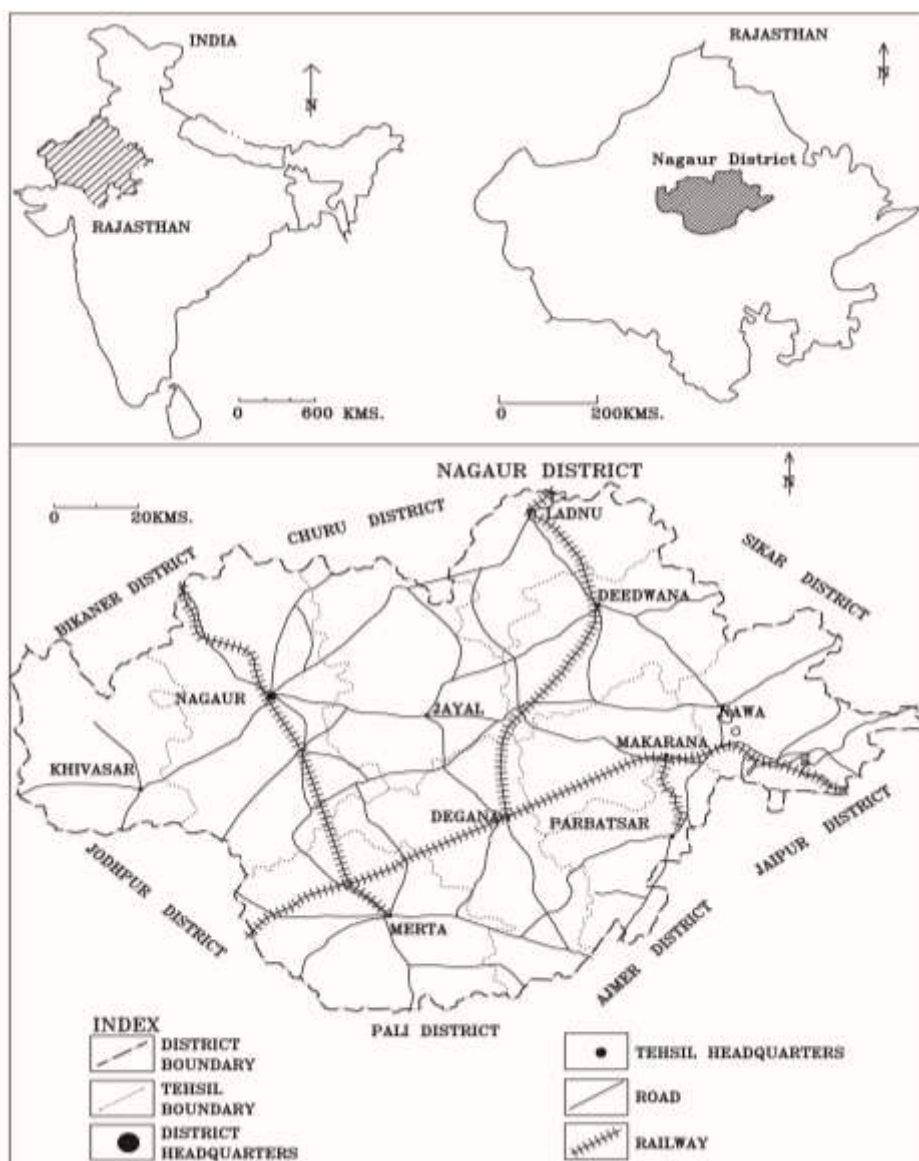


Figure-1 Literature review:

“Female children face vulnerability due to societal attitudes and economic conditions. This neglect perpetuates gender inequality and reinforces patriarchal norms. To address this, comprehensive approaches are necessary, encompassing education, economic empowerment, and policy reforms that prioritize gender equality,” Miller, B. D. (1981)⁷.

Selective Discrimination against Female Children in Rural Punjab, India," highlights the pervasive influence of patriarchal norms and son preference in perpetuating “Female feticide” , Das Gupta, M. (1987)⁸.

The economic aspects of dowry payments in India are scrutinized, exposing their impact on the social and economic valuation of females. Dowry reinforces the stereotype that females are financial drains, undermining their worth and dignity, Rosenberg (1987)⁹.

The economic growth has not necessarily led to improvements in women's well-being, and that social inequality remains a significant factor in perpetuating gender disparities, Sen, A. (1992)¹⁰.

“Female feticide” perpetuates gender inequality, demographic imbalance, and social instability. Addressing this issue requires a multi-faceted approach involving policy reforms, community engagement, and empowerment of women, UNFPA. (2003)¹¹.

Colonialism and economic changes reinforced patrilineal succession, leading to increased son preference and female disempowerment, Chakravarti, U. (2005)¹².

Bride trafficking in India underscores the complex interplay of poverty, gender inequality, and demographic imbalance, perpetuating exploitation, and violence against women, Dube, R. (2007)¹³.

India's demographic consequences of “Female feticide”, citing declining child sex ratios and demographic imbalance. Son preference, dowry, and sex-selective abortion technology are identified as primary drivers. The study emphasizes the need for policy interventions, Kulkarni, S. (2007)¹⁴.

“Female feticide” has devastating consequences for maternal health, exacerbating mortality and morbidity rates. Addressing this issue requires comprehensive approaches, including policy reforms, education, and community engagement, Khanna, R. (2012)¹⁵.

“Female feticide” is a complex issue requiring multi-faceted solutions. Addressing socio-cultural, economic, and educational factors is crucial to prevent “Female feticide”, Bhatia, J. (2017)¹⁶.

The district-level data of India, revealing significant declines in child sex ratios in several Indian states. India's child sex ratio dropped from 927 (2001) to 918 (2011), with Haryana, Punjab, and Delhi recording alarming declines. It highlights persistent sex-selective abortion, emphasizing the need for targeted interventions, Singh et al. (2018)¹⁷.

There is a significant correlation between low child sex ratios and increased bride trafficking. The study revealed 72% of trafficked brides were sourced from neighboring states, emphasizing the need to address sex-selective abortion, Dube, R., et al. (2019)¹⁸.

The effectiveness of awareness campaigns against “Female feticide” in India, highlighting significant improvements in attitudes and knowledge among targeted communities. The study found that campaigns led to a 23% increase in awareness and a 17% decrease in son preference. The findings underscore the importance of awareness campaigns in preventing “Female feticide”, Bhatia, J., et al. (2019)¹⁹.

The economic consequences of “Female feticide” in India, highlighting significant losses in human capital, reduced female workforce participation, and decreased economic growth. The study estimated a 20% decline in female labor force participation and a 15% decrease in GDP due to skewed sex ratios. These findings underscore the urgent need for policy interventions addressing sex-selective abortion. Sen, A., et al. (2020)²⁰.

The impact of ultrasound technology access on “Female feticide”, finding a significant link between ultrasound availability and skewed sex ratios in India. The study revealed a 12% decline in child sex ratios in districts with greater ultrasound accessibility, Jain et al. (2022)²¹.

The health consequences of “Female feticide”, revealing alarming maternal mortality rates. It emphasizes on the critical importance of addressing root causes of gender disparity to improve maternal health outcomes, Khanna et al. (2022)²².

Through incentivizing girl child schemes, revealing significant improvements in girl child survival rates and sex ratios through conditional cash transfers and education incentives. This study demonstrates the effectiveness of economic empowerment programs in reducing “Female feticide”, Rajiv Gandhi Scheme (2022)²³.

There is positive impact of a multi-sectoral intervention on adolescent girls' education, health, and nutrition. After it the significant improvements in girl child enrollment (27%), nutrition (32%), and delayed marriage rates (25%) achieved, Rajiv Gandhi Scheme (2022)²⁴.

Through district-level data of India, it revealing that persistent declines in child sex ratios across Indian states, with rural areas experiencing a 14.5% decline. This study emphasizes the urgency for localized interventions to combat “Female feticide”. Singh et al. (2023)²⁵.

The impact of social media on son preference and “Female feticide”, finding significant links between online gender bias and prenatal sex selection. Therefore, the need for social media regulations to mitigate gender-based violence, Jain et al. (2024)²⁶.

Objectives:

1. To comprehensively examine the prevalence and trends of female feticide in Nagaur district using both quantitative demographic data and qualitative community insights.
2. To identify and analyze the multi-dimensional factors contributing to female feticide, including socio-cultural norms, economic pressures, gender discrimination, dowry practices, and enforcement challenges related to the PCPNDT Act.
3. To evaluate the direct and indirect consequences of female feticide on demographic patterns, social structure, gender equity, human rights, and public health in Nagaur.
4. To develop and recommend holistic, multi-sectoral prevention strategies that incorporate legal enforcement, community engagement, education, economic empowerment, and gender sensitization

Methodology:

Data Collection Tools of Data Collection: The qualitative and quantitative data was collected through in-depth interviews and predesigned structured questionnaire.

Sample Size: From the district 1000 male and females were selected for the community survey. Concerning Doctors, ANM, ASHA and AWW were also interviewed.

The sample size worked out to be:

Table-1 Number of Respondents

S. No.	Interviewed Persons	Sample Size
1	Total number for community survey in district	1000
2	Number of Doctors (Government 30 & Private 30)	60
3	Number of Health Workers/ Para Medical Staff interviewed	120
	ANM 30	
	ASHA 30	
	AWW 30	
	LHV 30	

Discussion & Results:

Engaging in direct dialogues and discussions with the community is the most effective way to comprehend the current state of social issues. To gain a comprehensive understanding, it is essential to involve all stakeholders, including those affected by and responsible for the issue. The focal point of this study is “Female feticide”, a critical and complex problem plaguing societies, particularly in developing countries.

Maintaining a balanced sex ratio is crucial, as both males and females are equally vital to the social fabric. However, recent demographic studies reveal a disturbing trend in sex ratios, deviating from the ideal equilibrium. This disparity raises fundamental questions about the societal psychology driving these negative trends and the underlying factors contributing to this phenomenon. This study aims to explore these issues, seeking to understand the ground reality of “Female feticide” and its impact on the skewed sex ratio. In this study, author tries to include all the participants of the society from different backgrounds to know the actual conditions regarding the “Female feticide”. The basic profile of the participants is as follows:

1. Basic profile of the respondents of community survey:

We choose the 1000 responders who are having children or currently expecting from the research area. The male-to-female ratio is 50:50 out of 1000 respondents, because both males and females are accountable for “Female feticide” activities. This is not a gender-specific activity. However, respondents' backgrounds differ according to their age, education, caste, religion, and socioeconomic background (rural vs. urban).

a) Age & Educational Level of the Respondents:

About half of all males and females in both rural and urban areas are between the ages of 26 and 35. Of all the educational levels, the largest percentage of this age group completed secondary school. Males and females have the lowest percentage of graduates and above. The 18–25 age group is the second largest in terms of both males and females; a significant proportion of the females in this age group (36% in rural and 25% in urban) are illiterate (Table. No. 2).

Table-2 Distribution of Rural and Urban Respondents by Age & Education

Sex	Age Level			Education Level		
	Age of Respondents	Rural (%)	Urban (%)	Educational level of Respondents	Rural (%)	Urban (%)
Male	18 – 25 Years	36.86	32..7	Illiterate	16.01	9.14
	26 – 35 Years	50.86	44.6	Primary	25.14	17.30
	36 – 45 Years	10.86	20.0	Secondary	50.04	55.30
	45+ Years	11.42	2.7	Graduate & above	8.9	18.0
	Total	100	100	Total	100	100
	Number	350	150	Number	350	150
Female	18 – 25 Years	38.38	33.1	Illiterate	36.22	25.5
	26 – 35 Years	42.96	49.3	Primary	30.0	23.4
	36 – 45 Years	16.5	16.2	Secondary	27.0	34.8
	45+ Years	2.16	1.40	Graduate & above	6.78	16.3
	Total	100	100	Total	100	100
	Number	370	130	Number	370	130

Source: Computed by Author

b) Distribution of Respondents by Caste and Religion:

In the study area, the social status of the respondents shows that the Other Backward Class (OBC) is the dominating class in numbers. Around 45% of the total respondents comes from OBC class, followed by general and scheduled caste respectively. As per the analysis, majority of the respondents comes from Hindu religion (85%), followed by Muslims, Sikh, Christian and Jains (Table No. 3).

Table-3 Distribution of Rural & Urban Respondents by Caste & Religion

Sex	Caste			Religion		
	Caste of Respondents	Rural (%)	Urban (%)	Religion of Respondents	Rural (%)	Urban (%)
Male	General	31.14	34.00	Hindu	85.72	86.35
	OBC	46.56	48.00	Muslim	13.14	11.25
	SC	21.72	17.34	Sikh	0.56	0.3
	ST	0.25	0.66	Christian	0.29	0.7
	Others	0	0	Jain	0.29	1.4
	Total	100	100	Total	100	100
	Number	350	150	Number	350	150
Female	General	34.06	36.50	Hindu	87.00	84.6
	OBC	45.39	46.62	Muslim	12.00	14.50
	SC	19.73	16.93	Sikh	0.6	0.4
	ST	0.62	0.3	Christian	0.2	0.2
	Others	0	0	Jain	0.2	0.3
	Total	100	100	Total	100	100
	Number	370	130	Number	370	130

Source: Computed by Author

c) Annual Income of Respondents:

To know the economic conditions of the respondents in the study area, they are categorized into five categories. Around 50% of the rural and urban male respondents had an annual income of more than Rs. 20,000 per year. Unemployment among respondents is maximum (18%) in rural female because they are not earning a single penny (Table No. 4).

Table-4 Distribution of Rural and Urban Respondents by Annual Income

Sex	Annual Income of Respondents	Rural (%)	Urban (%)
Male	<5000	1.8	3.4
	5001 – 10000	17.0	12.1
	10001 – 20000	31.6	19.0
	20001 +	45	65.5
	Not Earning	4.6	0.0
	Total	100	100
	Number	350	150
Female	<5000	24.9	9.5
	5001 – 10000	13.9	17.5
	10001 – 20000	30.5	30.2
	20001 +	21.7	25
	Not Earning	9	17.8
	Total	100	100
	Number	370	130

Source: Computed by Author

d) Respondents having children below and above 6 years of Age along with Sex:

As per the data received from the respondents, the information regarding the children is not satisfactory. The sex ratio among the respondents is very low in both categories (in below 6 years 853 & above 6 years 898).

Table-5 Age and Sex wise distribution of children below and above 6 years of age

Sex		Age	
		Respondents having children below the age of 6 years	Respondents having children above the age of 6 years
		Male	546 53.95
Female	466 46.05	390 47.33	
Sex Ratio		853	898

Source: Computed by Author

e) Respondent's perception about sex preference:

Information was sought about currently pregnant woman in the study area to know about their individual preference for the sex of the future child. There are 175 pregnant women's, which is 35% of the total women of the study area. Out of them nearly 16% had an expectation for a girl child, 40% had an expectation for a male child and nearly 44% had no preference for sex of the child to be born.

Table-6 Distribution of respondents according to their sex preference

Pregnant Woman's			Rural	Urban	Total
	Number		144	31	175
%		38.91	23.85	35	
Preferred outcome of Pregnancy	Female	Number	17	11	28
		%	9.71	6.29	16
	Male	Number	40	30	70
		%	22.86	17.14	40
	Any of the above	Number	31	46	77
		%	17.71	26.29	44

Source: Computed by Author

f) Status of sonography during pregnancy:

Information was also sought from the currently pregnant women about how many of them had gone for sonography/ultrasound. It was noticed that approximately 46% of them have gone for it. Among the total pregnant women, approx. 54% were advised by the doctor for sonography/ultrasound. In other cases, 18% advised by friends/relatives, 10% by ANW/ASHA/AWW/LHV and 17% on them on to go for it (Table No. 7).

In a response to the query about the main reasons for going to ultrasound/sonography, approx. 50% replied as per the doctor direction, 17% due to suspicion of abnormal position of fetus and only 2.47% just because of congenital deformity. The main socking observation was, approx. 27% accepted that they had done the USG for the determination of their fetus. The preferred places for the USG were private institutions, as 54% pregnant women considered them. Only 37% preferred government institutions for it. Rest 8.64% women failed to identify the nature of institution. (Table No. 7).

Table-7 Classification (by whom it was advised, reason for it and place where go for ultrasound/sonography)

Pregnant Woman's			Rural	Urban	Total
	%		38.91	23.85	35
Number		144	31	175	
Undergone for USG during Pregnancy	%		32.57	13.71	46.29
	Number		57	24	81

Advised by	Doctor	52.7	58.4	54.32
	ANW/ASHA/AWW/LHV	14.1	0	9.88
	Friends/Relative	21.1	12.4	18.52
	Self	12.1	29.2	17.28
Reason for ultrasound/sonography	On doctor's advice	59.5	37.4	53.08
	Abnormal position of fetus	10.6	33.4	17.29
	Congenital deformity	0.0	8.4	2.47
	For sex determination	29.9	20.8	27.16
	More than 45 years age	0	0	0
	Other reasons	0	0	0
Place for ultrasound/sonography	Government	36.84	37.5	37.04
	Private	50.88	62.5	54.32
	Do not know whether it is private or government	12.28	0	8.64

Source: Computed by Author

g) Preference of gender in family and society:

The respondents were asked about the preference to a particular sex of the child, observations reveals that in respondents it was the male child (boy) who was preferred most (38%) followed by female child (girl) (25%). In more than one-fourth of the respondents (37%) equal importance was given to the both sex of child.

Table-8 Importance of Son in family and society

Sex	Preference	In family	In society	Total
Male	Male	45.3	39.2	38.0
	Female	31.9	37.2	25.7
	Both	23.8	36.2	36.3
	Total	100	100	100
	Number	280	230	500
Female	Male	45.3	43.1	38.5
	Female	26.6	26	24.6
	Both	28.1	30.9	36.8
	Total	100	100	100
	Number	305	195	500

Source: Computed by Author

h) Reasons for giving importance to son:

The respondents were asked about the reason why they give more preference to male child, as per their responses all the reasons categorized into four groups. Around 45% male and female reported that importance of son is because of procreation, 30% gives importance due to old age economic security and around 25% gives importance for religious rituals.

Table-9 Reasons for giving importance to son

Sex	Reasons	Rural	Urban	Total
Male	For Procreation	45.46	38.75	42.63
	For old age economic security	31.82	35.0	33.41
	For religious rituals	22.72	25.25	23.96
	Total	100	100	100
	Number	110	80	190
Female	Male	45.72	42.53	44.13
	Female	26.67	26.44	26.56
	Both	28.58	31.07	29.83
	Total	100	100	100
	Number	105	87	192

Source: Computed by Author

i) Pregnancy during last 5 years and its outcome:

Among all the females of the study area, there was a history of pregnancy in 82.6% females. Out of them 38% became pregnant only once, 39% got pregnant twice, 21% got pregnant thrice and only 1.8% got pregnant more than 3 times during the preceding five years. Thus, in last five years, the total count of live birth was 918, abortions were 23, MTPs was 5 and other cases like still birth, spontaneous abortions were 21. Out of total live birth 55.45 was Male and 44.55 was female live birth. As per the live birth, the sex ratio for the sample size in last 5 years was 773 only.

Table-10 Distribution of Pregnancy and outcome in last 5 years

Pregnancy and outcome in last 5 years		
Did any women get pregnant in last 5 years	Yes	82.6
	Number	413
	No	19.4
	Number	97
If yes, then how many times	One time	37.8
	Two times	39.4

	Three times	21
	More than 3 times	1.8
Outcome of pregnancy	Live birth	918
	Abortion	23
	MTPs	5
	Other	21
Sex	Male (in %)	55.45
	Male (in Number)	509
	Female (in %)	44.55
	Female (in number)	409
	Sex Ration	773

Source: Computed by Author

j) Contact made with service providers or any other person for boy:

Around 15% had desired for male child, among both male and female respondents. This desired is more in females as compare to males and same it is high in rural areas as compare to urban areas.

Table-11 Distribution of respondents who ever desired for boy and contact with Doctors/Health workers

Sex		Response	Respondents
Male	Rural	Yes (%)	16
		Number	56
	Urban	Yes (%)	7.34
		Number	11
Female	Rural	Yes (%)	18.38
		Number	68
	Urban	Yes (%)	9.24
		Number	12

Source: Computed by Author

k) Awareness and knowledge of PCPNDT Act:

The fact that pregnant woman who goes for sex determination is also liable for the punishment with others. Around 80% male and females from rural and urban area are aware about the PCPNDT act, which is a good percent. After awareness people are going for SG&US, which is a thought-provoking question.

Table-12 Awareness of penal provision for sex determination (for beneficiaries also)

Sex		Response	Penal Provision	Penal Provision (especially beneficiaries also)
Male	Rural	Yes (%)	82	79.15
		Number	287	277
	Urban	Yes (%)	90	88
		Number	135	132
Female	Rural	Yes (%)	78.38	75.14
		Number	290	278
	Urban	Yes (%)	92.31	91.54
		Number	120	119

Source: Computed by Author

l) Knowledge and opinion about sonography/sex determination:

As per respondents, 14% in rural and 12% in urban know about such families who went for sonography/ultrasound for getting boy after 2 or 3 girls. Almost 11% in rural and 8% in urban agree that for avoiding girl birth, they can used SG&US. As per 8% in rural and 4 % in urban considered sex determination right.

Table-13 Distribution of respondent's opinion about Sonography/Ultrasound/sex determination

Sex		Response	Information of families who went for USG for getting boy after two or three girls	Do you agree that for avoiding girl birth, USG is being conducted	Do you consider it (sex determination) right
Male	Rural	Yes (%)	12	12.29	7.72
		Number	42	43	27
	Urban	Yes (%)	11.34	10.67	3.34
		Number	17	16	5
Female	Rural	Yes (%)	16.22	9.19	8.11
		Number	60	34	30
	Urban	Yes (%)	12.31	5.39	4.62
		Number	16	7	6

Source: Computed by Author

m) Change in number of girls:

Around 37% of male and female respondents from both rural and urban agreed that due to these types of practices number of girl children has decreased. Almost 30% think that number of girl children has increase. As per 21% respondents, there is no change in number of girl children and 11% don't have any idea about this fact.

Table-14 Distribution of respondents according to opinion on change in number of girl children

Sex	Area	Response	% & Number of Respondents
Male	Rural	No. has increased	29.15 (102)
		No. has decreased	37.15 (130)
		No. Change	21.72 (76)
		Don't Know	12 (42)
		Total	100 (350)
	Urban	No. has increased	22.6 (34)
		No. has decreased	44 (66)
		No. Change	20 (30)
		Don't Know	13.33 (20)
		Total	(100) 150
Female	Rural	No. has increased	35.14 (130)
		No. has decreased	32.44 (120)
		No. Change	22.17 (82)
		Don't Know	10.25 (38)
		Total	100 (370)
	Urban	No. has increased	30 (39)
		No. has decreased	39.24 (51)
		No. Change	20.76 (27)
		Don't Know	10 (13)
		Total	100 30)

Source: Computed by Author

n) Consequences of the sex ratio imbalance:

Around 68% of all the respondents (male & female) from urban and rural thinks that sexual crimes increase just because number of women's decrease, especially in urban areas. Only 56% respondents thinks that dowry increase just because number of women's decrease.

Nearly 71% of all the respondents (male & female) from urban and rural perceived that with decreasing sex ratio, women's importance in society will increase, especially in urban areas.

Table-15 Consequences of distorted sex ration: Increase in sexual crimes, increase in dowry, increase in women status

Sex	Area	Response	Increase in sexual crimes	Increase in dowry	Increase in women status
Male	Rural	Yes (%)	68.6	44.06	72.17
		Number	246	163	267
	Urban	Yes (%)	70	61.34	63.34
		Number	105	92	95
Female	Rural	Yes (%)	66.08	59.19	77.03
		Number	237	219	285
	Urban	Yes (%)	72.31	71.54	53.08
		Number	94	93	69

Source: Computed by Author

o) Suggestions to stop female feticide:

Nearly 76% of total respondents (male & female) from urban and rural thinks that "female feticide is a legal offence", this message should be promoted properly in the society to stop "Female feticide". Around 91% of total respondents (male & female) from urban and rural thinks that by "Making people aware", we can stop "Female feticide". Another 87% of total respondents (male & female) from urban and rural thinks that "By increasing education level", we can stop "Female feticide".

Table-16 Suggestions to stop "Female feticide"

Sex	Area	Response	"Female feticide" is a legal offence. This message should be promoted properly in the society	Make people aware that there is no difference between girl and boy	Education level to be increased
Male	Rural	Yes (%)	85	90	83.43
		Number	298	315	292
	Urban	Yes (%)	81.34	95.34	92
		Number	122	143	138
Female	Rural	Yes (%)	60	89.19	85.14

		Number	222	330	315
	Urban	Yes (%)	93.08	96.16	93.08
		Number	121	125	121

Source: Computed by Author

p) Suggestions for actions to be taken against sex-determination activities:

As per the respondents the main thing which can control the “Female feticide” is awareness of people. Because until the society itself not aware about the negative impacts of this, changes will not occur. That’s why the maximum respondents suggest that counseling of that woman and family is the best way to stop “Female feticide”. Some other effective suggestions are: to tell the doctor/clinic not to do it, inform police, media and NGO.

Table-17 Actions against sex-determination activities

	Action	Male Respondents%	Female Respondents%
Rural	Counsel the woman/family	63.14	86.49
	Tell doctors/clinic not to do it	17.72	10
	Inform NGO	1.14	0
	Inform Police	13.98	2.98
	Inform Media	1.72	0
	Inform Implementing body	1.15	.08
	Others	1.15	0
	Total	100 (350)	100 (370)
Urban	Counsel the woman/family	54	77
	Tell doctors/clinic not to do it	30	10
	Inform NGO	5.33	3.76
	Inform Police	8.67	6.93
	Inform Media	2	2.31
	Inform Implementing body	0	0
	Others	0	0
	Total	100 (150)	100 (130)

Source: Computed by Author

2. Health Workers:

Health workers are the second important pillar in the study of female feticide, after the community. Health workers like ANMs, ASHA, AWW & LHVs always in contact with the target group (pregnant women’s). Target groups in maximum cases discussed their issues with health workers. That’s why interaction and interview of these health workers are very useful to know about the actual issues related with “Female feticide”.

a) When health workers encounter with pregnant women:

On the point of regular encounter with the pregnant women, ANMs (88%), ASHA (86%), AWW (90%) and LHVs (86%) reported that throughout the pregnancy period. Very less number contacted to these Health groups on becoming pregnant and at the time of delivery.

b) Reasons for referring the pregnant women:

The various reasons are cited by the health workers for referring pregnant women are as follows. Around 90% of health workers reported that due to heavy bleeding, they refer pregnant women. As per 85% health workers second most important factor is on reporting by women herself, they refer that lady.

c) Pregnant woman asking for sex detection of fetus, place and health workers reply:

When question was asked to the health workers, whether pregnant women ask for the sex-determination of the fetus. The reply was yes by 42% of ANMs, 26% of ASHA, 21% of AWWs and 46% of LHVs. As per them they were asked by pregnant women about the sex determination of the fetus.

Table-18 Do Pregnant Woman ask for sex detection of fetus

Designation	Response	% & Number of Respondents
ANM	Yes	43.43
	Number	30
ASHA	Yes	26.1
	Number	46
AWW	Yes	21.16
	Number	52
LHV	Yes	44.45
	Number	9

Source: Computed by Author

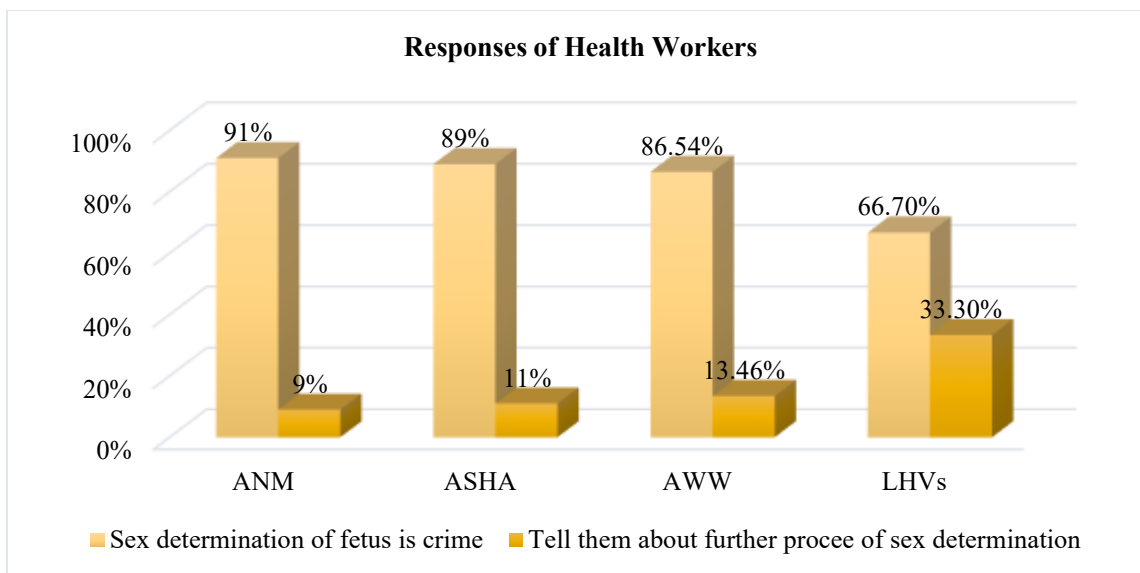


Figure-2

How do the health workers respond for query related to sex determination & its places, is also very important. Because if they get positive responses from health workers, its leads to “Female feticide” s. Around 90% of ANM, ASHA and AWW warn them that this is a crime, only nearly 10% of them help in further process. But this amount is more when we are taking about LHVs. Which is not good for “Female feticide”. (Figure No.1)

d) Awareness that girl ratio is decreasing day by day and the person they hold responsible for it:

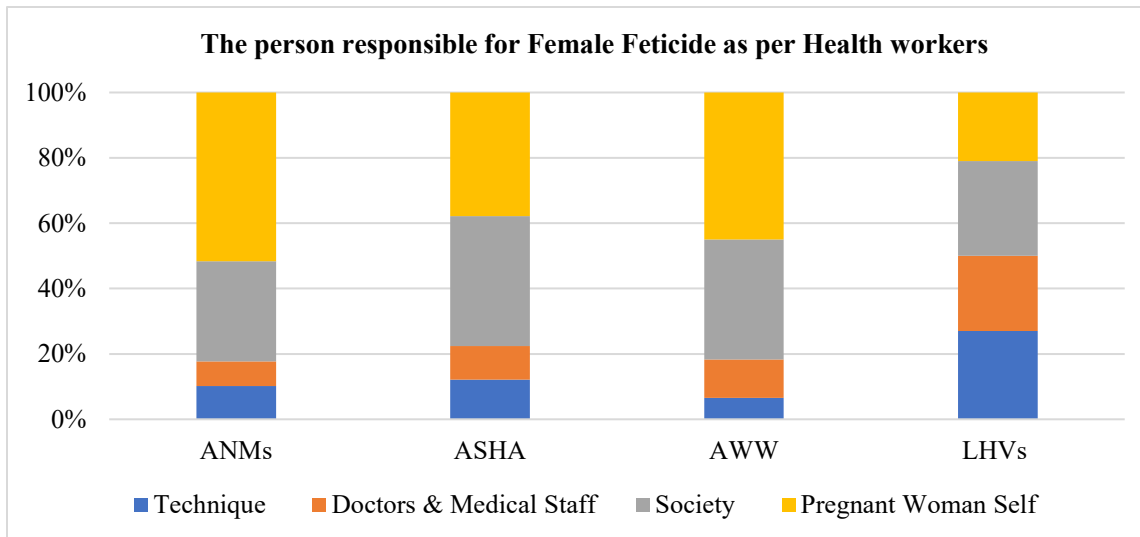


Figure-3

The health workers are aware about the decreasing number of girls and trying to reduce it on their own level. As per the health workers different persons are responsible for “Female feticide”. As per ANMs ASHA, AWW and LHVs, pregnant woman herself responsible for it. After this society, technique and doctors are responsible for “Female feticide”. (Figure No. 2)

e) Reasons for stopping girl’s birth:

While the birth of girl child is not welcomed, had many reasons extended by all the cadres of health workers, as per the 65% health workers the principal reason one being son is needed for maintaining family tree (for family procreation) and others are to accomplish the religious rituals and economic security in old age (Table No. 19).

Table-19 Reasons for stopping girl’s birth as per health workers

Designation	Response	For family procreation	To accomplish the religious rituals	Economic security in old age
ANM	Yes (%)	60	23.33	16.67
	Number	(18) 30	7(30)	5(30)
ASHA	Yes (%)	56.67	26.67	20
	Number	(17) 30	8 (30)	6 (30)
AWW	Yes (%)	66.67	20	13.33
	Number	(20) 30	6 (30)	4 (30)
LHV	Yes (%)	63.33	16.67	20
	Number	(19) 30	5 (30)	6 (30)

Source: Computed by Author

f) Societal repercussions of decreasing girl child sex ration:

The opinion of health workers on societal repercussions was recorded, and as per the 90% of the health workers it creates imbalance in society. As per around 75% of health workers crime increase and when we talking about crimes specifically against women 80% health workers agree with this fact. As per health workers polyandry is also an important consequence of decreasing sex ration. (Figure No. 3)

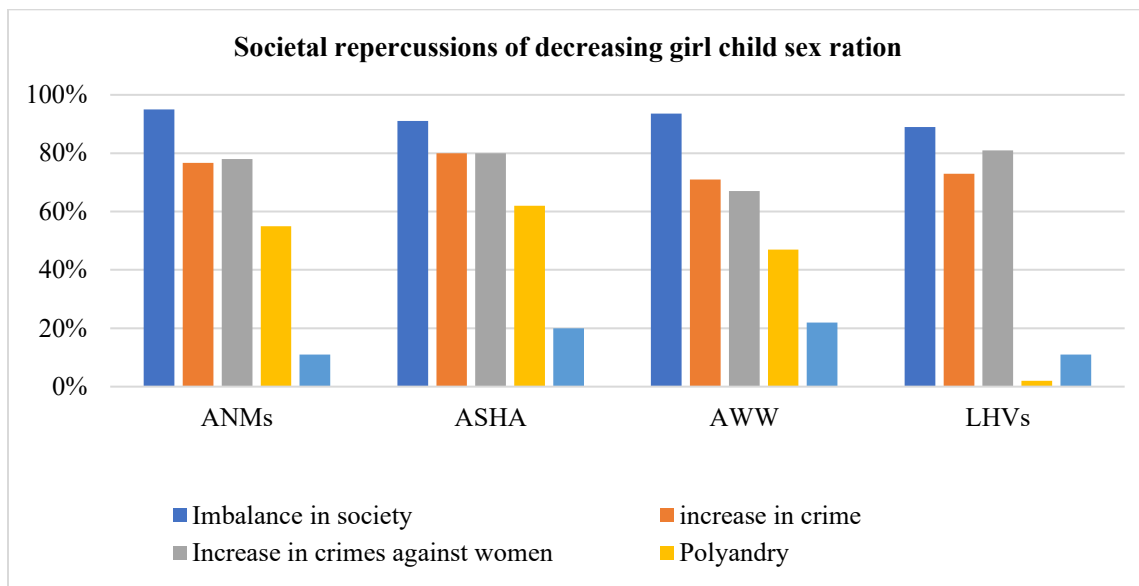


Figure-4

g) Various reasons cited for girl feticide:

As per the wealth workers there are various reasons for the girl feticide". The most important reason as per them is misuse of appropriate technique. The second most reason is lack of awareness and other main reasons are dowry system, feeling of social insecurity and son preference for procreation and religious rituals (Table No. 20).

Table-20 Various reasons cited for girl feticide" by health workers

		Misuse of the appropriate technique	Lack of awareness	Dowry System	Feeling of social insecurity	Son preference
Designation	Response					
ANM	Yes (%)	36.67	23.33	20	6.67	13.33
	Number	(11) 30	7 (30)	6 (30)	02 (30)	04 (30)
ASHA	Yes (%)	43.33	30	3.33	10	16.67
	Number	(13) 30	9 (30)	1 (30)	03 (30)	05 (30)
AWW	Yes (%)	30	20	10	3.33	36.67
	Number	9 (30)	6 (30)	3 (30)	01 (30)	11 (30)
LHV	Yes (%)	16.67	10	13.33	6.67	46.67
	Number	(5) 30	3 (30)	04 (30)	02 (30)	14 (30)

Source: Computed by Author

h) Action after knowing that sex detection activities are going on:

As per maximum numbers of the health workers, pregnant women and her family should be counseled. Which is a best remedy for the issue of "Female feticide". Number of health workers opined that it should be inform the appropriate authority police or NGOs.

3. General perception of doctors pertaining to PNPNDT Act

The doctors from the study area were probed on their awareness of the PCPNDT Act and their opinions were recorded reference to "Female feticide" and reasons thereof. Some of the important observations are as under:

a) Registration of the centre by appropriate authority

The discussions it comes out that, 90% of the government doctors and 88% of the private doctors knew that centers with the facility of pre-natal diagnostic techniques needs to be registered with appropriate authority.

b) Awareness about PCPNDT Act and penal provisions:

All the government as well as private doctors aware about the PCPNDT Act. This awareness was universally spread throughout the study area. This awareness act as a barrier for the "Female feticide". More than 90% of government and private doctors are also aware about the prevention of misuse of technique and proper implementation of the act. The level of awareness about the penal provisions in PCPNDT act among the doctors were very high, i.e., 97% in government doctors and 95% private doctors.

c) Services that a registered center is not expected to offer:

On average 95% of government and 79% of private doctors are aware about the services that a centre is not expected to offer. The main services which not expected to offer by centers are; sex-determination, unqualified person managing the centre, advertisement for the promotion of sex-determination and display of sign indicating sex detection services (Figure No. 4).

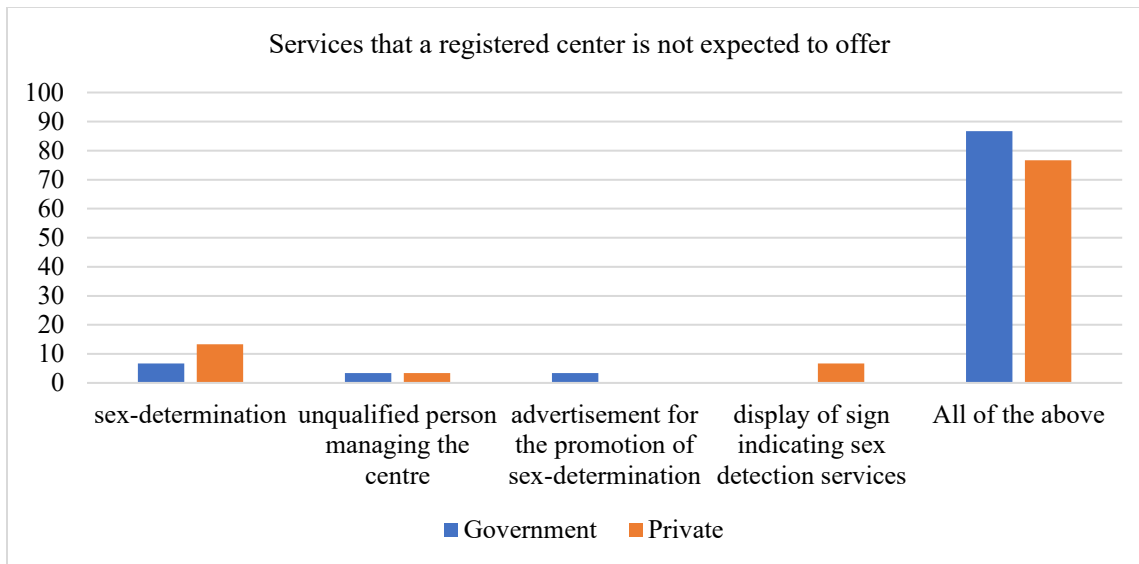


Figure-5

d) Reasons of sex determination during pregnancy:

Opinion was also sought for the possible reasons why pregnant women are interested in sex determination. Reasons extended were-need of son for family procreation (32% by government doctors and 47% by private doctors) followed by illness of pregnant women (38% government doctors and 35% by private doctors). In other reasons abnormal conditions of fetus, dowry system, social customs, and religious rituals (Figure No. 5).

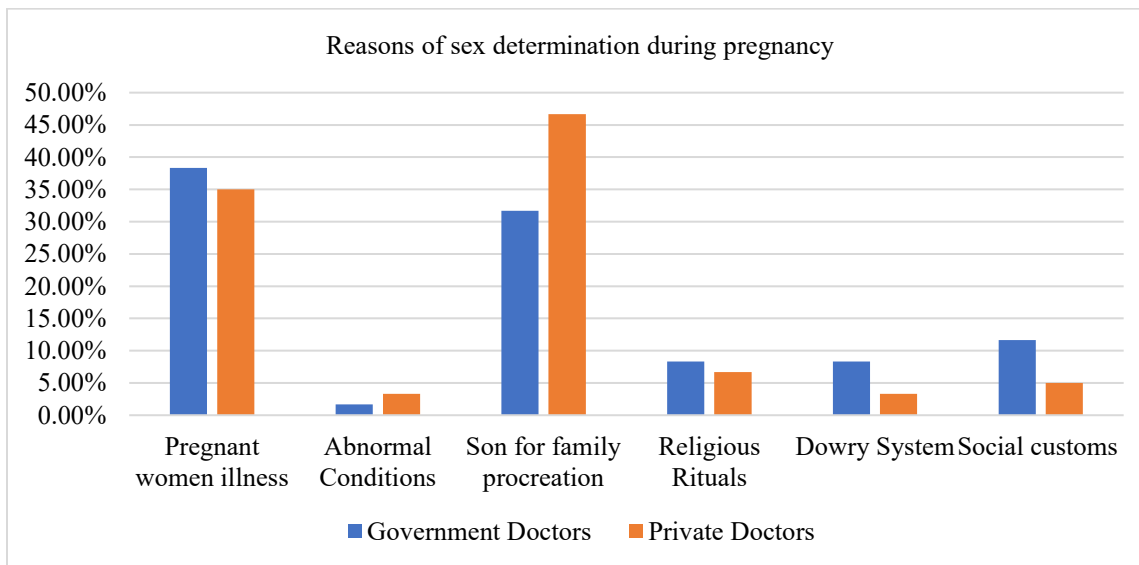


Figure-6

e) Awareness that girl ratio is decreasing day by day and the reasons responsible for it:

The awareness and reasons for decrease in the number of girls as perceived by the medical doctors. The main responsible factors as per doctors is importance given to boys over the girls. After that lack of education is also responsible for low girl ratio in society. Other responsible factors are social customs, law of nature and dowry system (Figure No. 6)

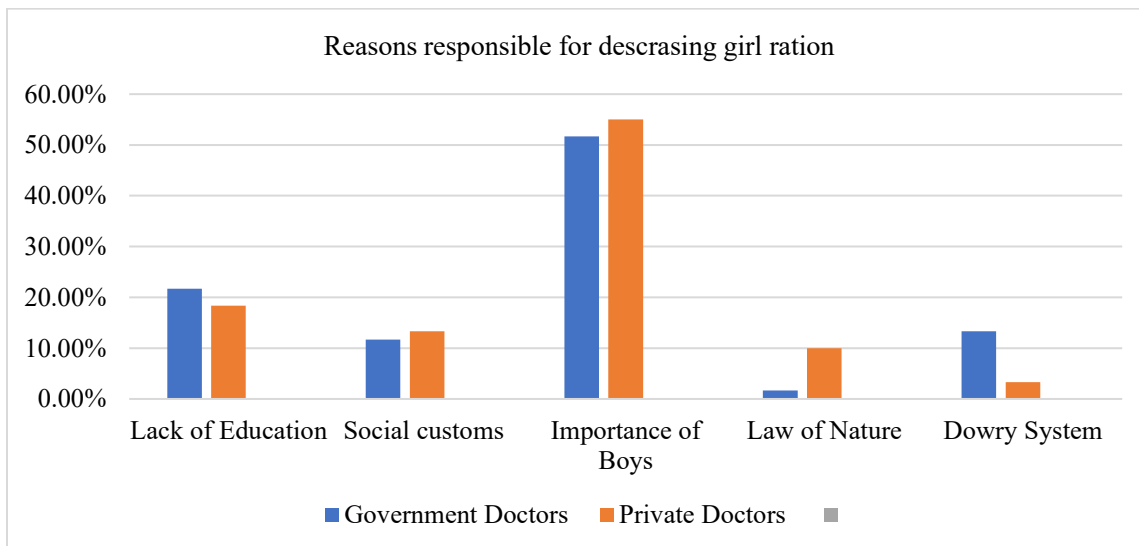


Figure-7

Summary and Conclusions:

Despite the natural biological balance, the persistence of “Female feticide” and negative child sex ratios remains a pressing concern. The existing evidence, reiterated time and again, highlights the defiance of efforts to address this issue. The developments in technology, intended to facilitate healthy physiological outcomes, have been regularly misused under various pretexts.

There are well-crafted legislations in place, but societal pressures and economic forces driving the profession have rendered them ineffective. A study involving 1000 community respondents, 60 doctors, and 120 health workers at the district level shed light on various issues. The higher authorities demonstrated a better understanding of the implementation mechanism, penal provisions, and the damages caused by the misuse of techniques in already distorted sex ratios.

However, at the district level, there is a need for greater awareness and impassivity, particularly regarding regular monitoring of registered centers and booking defaulters. While all authorities have expressed concern over the decreasing sex ratio, it appears that this concern has not translated into action, as evident from data triangulated from different sources. Out of the total number of live births (918) in the study area, there were 509 male children and 409 females in the age group 0-6 years, giving a child sex ratio of 733 per 1000 male children, which is below the state average, but then the averages always hide the disparities and the realities get lost in the vortex of numbers.

In the study area, the number of women who were pregnant at the time of survey was 175, which is 35% of the total women in the study area. These pregnant women revealed that 40% preferred a male child, while 16% preferred a female child. Alarming, 18% of pregnant women underwent ultrasound tests for sex determination without medical advice, highlighting the role of educated and elite individuals in perpetuating “Female feticide”.

These findings underscore the need for concerted efforts to address the deep-rooted societal values driving “Female feticide”. The Indian government has enacted the Pre-Conception and Pre-Natal Diagnostic Techniques Act (PCPNDT) to ban and punish prenatal sex screening and “Female feticide”. However, the effectiveness of this legislation remains a concern, and its implementation requires greater emphasis.

The community respondents cited various reasons for preferring sons, with the most common excuse being the need to maintain the family tree (70%). Although awareness of the PCPNDT Act and its provisions is widespread among both sexes in urban and rural areas, the findings indicate that this knowledge has not translated into changed practices, and the girl child remains neglected.

The social consequences of a “Female feticide” are a concern for community respondents, but this concern has not been translated into action. Health workers effectively track pregnancy periods and are well-versed in referral conditions. However, the high “Female feticide” ratio raises questions about the effectiveness of health worker responses.

Pregnant women often contact health workers seeking sex detection centers but are counseled against it due to its illegal status. Nonetheless, 18% of women self-motivated undergo ultrasound tests for sex detection. This suggests that societal forces exploiting the preference for male children are undermining the efforts of health workers.

The community, health workers, and medical officers collectively acknowledge that societal pressures and pregnant women themselves are responsible for violating the PCPNDT Act. They are aware that a distorted sex ratio leads to polyandry, increased crime, and sexual violence. However, deep-seated values have been challenging to address.

There is a pressing need to implement the PCPNDT Act effectively. Health workers recognize the importance of awareness campaigns and collaboration with NGOs and media to promote the value of the girl child. The study emphasizes the need for counseling pregnant women and their families to accept the girl child.

Doctors and health workers are aware of the statutory requirements for operating ultrasound centers, including registration and display of signage indicating the illegality of sex determination. However, poor enforcement has led to widespread flouting of these obligations.

Recommendations:

In the view of the observations, a set of recommendations are being made as follows:

Short-Term Recommendations:

1. **Enhanced Enforcement:** Strengthen enforcement mechanisms to ensure compliance with the PCPNDT Act, particularly regarding registration and display of signage at ultrasound centers.
2. **Awareness Campaigns:** Conduct awareness campaigns in collaboration with NGOs, media, and health workers to promote the value of the girl child and the consequences of “Female feticide”.
3. **Counseling Services:** Provide counseling services to pregnant women and their families to encourage acceptance of the girl child.
4. **Training for Health Workers:** Provide training for health workers on the PCPNDT Act, its provisions, and the importance of promoting the value of the girl child.

Long-Term Recommendations:

1. **Addressing Deep-Rooted Values:** Develop strategies to address deep-rooted societal values that perpetuate “Female feticide”, such as the preference for male children.
2. **Empowering Women:** Empower women through education, economic opportunities, and social support to make informed decisions about their reproductive health.

3. Community Engagement: Engage with communities to promote the value of the girl child and encourage collective action against “Female feticide”.
4. Monitoring and Evaluation: Establish a robust monitoring and evaluation system to track progress, identify gaps, and inform policy decisions.

Policy-Level Recommendations:

1. Strengthening the PCPNDT Act: Strengthen the PCPNDT Act by increasing penalties for violators, improving enforcement mechanisms, and ensuring effective implementation.
2. Integrating “Female feticide” into National Health Programs: Integrate “Female feticide” into national health programs, such as the National Rural Health Mission, to ensure a comprehensive approach to addressing the issue.
3. Increasing Funding: Increase funding for programs and initiatives aimed at preventing “Female feticide” and promoting the value of the girl child.

Highlights of Changes

- Included recent data-driven analysis connecting societal, economic, and technological elements that contribute to female feticide.
- Highlighted the disparity between awareness and implementation at the community level.
- Expanded on specific recommendations to include actionable strategies for both the short and long term, in line with existing national policies and innovations.
- Incorporated the involvement of health workers, media, and technology in preventive measures.
- Presented conclusions and recommendations in a comprehensive manner that is relevant to policy, enhancing their practical use.

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