

WOMEN REPRODUCTIVE BEHAVIOUR AND GIRL CHILD DEFICIT IN NORTH COASTAL DISTRICTS OF ANDHRA PRADESH – FACTS AND FACTORS

By

YEEDHU JANAKI RAMUDU



Under the Guidance of
Prof. CHOUDARI APPA RAO
M.A., B.Ed., M.Phil, Ph.D.

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CONCLUSION AND POLICY IMPLICATIONS

*The year January 2015 will witness the change in lives of countless girl children and women. The pet project launched by Prime Minister Shri Narendra Modi "Beti Bachao Beti Padhao" (BBBP) Yojana (**S**ave **D**aughter, **E**ducate **D**aughter) to save and empower the girl child is making waves all over the Nation. The scheme will have focused intervention and multi-section action in almost 100 districts with low Child Sex Ratio (CSR).*

8.1 Introduction

The rationale for this study is to identify the determinants for the shortfall of girl children in Andhra Pradesh in general and in the three North Coastal Districts in particular.

The decreasing child sex ratio (F/M) has been an important concern in India's demography in recent times. The sharp decrease of girl children in the age group of 0-6 years population in the Northern States of India is commonly assumed to be the result of the rapid spread of the use of ultrasound tests and amniocentesis for sex determination, followed by sex selective induced abortions. This is reflected in the country's male-biased sex ratios and gender gaps in education, health, and mortality. Some of the key factors underlying these trends include the use of sex-selective abortions, declining fertility, differential stopping behavior which results in fewer girls being born into larger families than boys, and the greater allocation of household resources towards male children.

Historically, son preference or the mind-set that sons are more valuable than daughters has evolved and persisted due to a combination of factors. A number of studies have focused on the role played by marriage and kinship patterns. The prospect of arranging for dowry, a payment made by the bride's parents to the couple at the time of marriage, can be burdensome for parents, making daughters an economic liability. Despite the passage of the Dowry Prohibition Act of 1961, the practice of dowry payments have risen and this practice has spread to more regions and communities in India.

To fully understand the implications of the deficit of women, it is important to examine the available recent data on sex ratio at birth and if girls are not allowed to be born, it is important to understand why, when and what means are used to avoid having daughters. The study of child sex ratio for the 0-6 group is important because it provides a true indicator of the survival of the girl child. The ratio in this group is influenced by sex ratio at birth and infant mortality.

8.2 Statement of the Problem

The spread of low CSR beyond its traditional boundaries definitely gives a clue of regional influence that works beyond social influence and social proximity. Demographers and social scientists have so far tried to address the geographical pattern of CSR through density maps or through cross-tabulation that simply show the concentration of the data over the study area.

According to 2011 Census, out of 664 mandals of Andhra Pradesh, as many as 68 (10.24%), 315 (47.44%), 185 (27.86%), and 55 (8.28%) mandals have recorded the child sex ratio in the range of less than or equal to 900; 901-950; 951-980 and 981-1000 respectively. In case of

North Coastal Andhra Pradesh, Srikakulam with 15 mandals (out of 38), Vizianagaram with 15 (out of 34) and Visakhapatnam with 13 (out of 34) mandals are in the range of 901-950. As many as 14, 08, and 18 mandals respectively in Srikakulam, Vizianagaram and Visakhapatnam districts in the range of 951-980. A number of studies were conducted by researchers on child sex ratio in various parts of the country [Some of the studies are Rema Nagarajan (2019), Anjali Radkar (2018), Swagata Yadavar (2018), Himadri Bhattacharjya and Subrata Baidya (2017), Arjun B. Doke (2017), Seema Devi (2016), Khadam Hussain and Tazeem Akhter (2016), Naveen Kumar (2015), Jayashree Dey (2015), Kamal and Ashish Kumar (2014), Kamal and Ashish Kumar (2014), Mishra Paro (2013), Mamta K Shewte and Smita P Andurkar (2013), Vijay Kumar.S (2012), Navaneetham, K and A. Dharmalingam (2011), Ravinder Kaur (2010), Abhishek Singh and Faujdar Ram (2008), Sayeed Unisa, Sucharita Pujari and R.Usha (2007), Alka Barua and Hemant Apte (2007), Leela Visaria et.al. (2004), Adesh Chaturvedi and Anoop Kanna (2003), Agnihotri S Balaram (1996) and Das N.P (1989)]. These studies have identified the following causes for declining child sex ratio : sex selective female abortions; female infanticide; changing sex ratio at birth; differential under count of females than males during census; spread of female infanticide and female foeticide is related to practice of dowry; strong son preference; neglect and discrimination against girl child resulting in higher than normal female mortality at younger ages; birth order abortions; and pre-natal sex determinations. All these reasons were recognised by both social scientists and policy makers.

Sex selective abortions have been abolished in India as early as 1983, followed by South Korea in 1987 and China in 1989; Nepal banned it in 2002 when it liberalized its own law on abortions. In India, the first

sex determination related National act was introduced in 1994 and it prohibits both the use and advertising of pre-natal diagnostic services. But until 2003, when the Act was strengthened, the law was largely ignored and had no impact.

The present study plans to explore the association of various factors with the contemporary sex discrimination processes/tests and bring out their impact on the overall child sex ratio. In the process it examines the factor's relative explanatory power or strength of impact in determining or influencing the child sex ratio. The study examines and distinguishes regional variations in child sex ratios in the north coastal region of Andhra Pradesh. It also studies the role of region as reflected by its distinct social, economic, demographic and cultural correlates in determining the child sex ratio.

8.3 Hypotheses

The following null hypotheses will be tested in the foregoing study.

- a) Null Hypothesis -1: Sex of the child and its birth order has no bearing on the next birth in the family.
- b) Null Hypothesis -2 The prenatal sex identification tests have no impact on the child sex ratio in the study area.
- c) Null Hypothesis -3 There is no regional variation in the child sex ratio in the three north coastal districts of Andhra Pradesh.

8.4 Objectives

The main aim of the study is to identify the important factors responsible for low child sex ratio in North Coastal Districts of Andhra Pradesh.

- ❖ To analyse the socio-economic features of the sample women respondents in three North Coastal Districts of Andhra Pradesh.
- ❖ To identify the factors responsible for declining Child sex ratio in the study area.
- ❖ To find out the causes responsible for pre-natal sex selection and birth order in the study area.
- ❖ To examine the perceptions of the sample women respondents regarding the sex preferences in the study area.
- ❖ To suggest appropriate policy measures to increase Child sex ratio and to improve the status of girl child.

8.5 Research Methodology

The study is conducted in three North Coastal Districts of Andhra Pradesh namely Srikakulam, Vizianagaram and Visakhapatnam districts. The Study covers the lowest Child sex ratio mandals in these three districts according to 2011 Census. For in depth research, the study selected the lowest Child sex ratio mandals, one mandal from each of the above three districts. In Srikakulam district Sarubujjili mandal (884), Therlam mandal (898) in Vizianagaram District and Butchayyapeta mandal (899) in Visakhapatnam district were selected for intensive Study. The study covered six (6) sample villages, i.e., two (2) villages from each of the sample mandal. All the sample villages have been selected as per the lowest child sex ratio in 2011 ‘viz’ Gonepadu (686) and Kondavalasa (735) in Sarubujjili mandal of Srikakulam district, Kusumuru (754) and Kagam (732) from Therlam mandal in Vizianagaram district and Polepalle (739) and Gunnempudi (822) in Butchayyapeta mandal of

Visakhapatnam district. For the collection of sample, women in the age group of 15-49 years and having at least one child in the age group of 0-6 are targeted. From each village 75 women were drawn randomly from a population of eligible women in that village. As such each mandal has a representative sample of 150 women. Thus, altogether 450 women respondents have been covered for intensive study. A detailed schedule was designed and tested for accuracy and ease of collection of information from the sample women respondents. After making suitable adjustments and refinements to the schedule, the enumerators are thoroughly trained on the schedule and the logic and importance of each question was explained to them before they went into the field to collect data. Besides this primary data, secondary data from Census, Statistical Handbooks and government publications were used.

The study used the SPSS package computer software extensively for making the analysis. Besides using simple statistical techniques such as percentages, averages, an important statistical technique such as multiple regression analysis have been used appropriately to make analysis of various issues of the sample women respondents. Chi-Square tests and regressions are used to test the hypotheses.

8.6 Findings Based on Secondary Data

Andhra Pradesh after the bifurcation of Telangana ranks tenth in the size of population among all Indian States during 2011. As per the 2011 Census, the total population of Andhra Pradesh was 49.58 million. The population growth rate which was 24.20 in 1981-91 has slowed down to 13.86 during the decade 1991-2001 and it further declined to 11.10 in 2001-2011.

The literacy rates show a positive picture throughout the Census periods both at the state and national level. The total literacy rate in Andhra Pradesh was 30.17 in 1981 and it increased to 67.35 in 2011 while for India the corresponding rates were 43.57 and 74.04 respectively. The data on literacy rate shows that the total literacy, male and female literacy were considerably higher for all the decades at the national level compared to Andhra Pradesh.

Ever since the beginning of recording of population data in India, it was evident that there was always a deficit of women over men in number. Over the span of 110 years (of recorded data on population), this deficit of female population has increased, i.e., number of women per 1000 men has come down from 972 in 1901 to 933 in 2001 and after hundred years, it registered an increasing trend by 7 points i.e., to 940 in 2011. Andhra Pradesh is no different, as it is part of India and has more or less the same cultural milieu.

Andhra Pradesh has a starting figure of 1004 females per 1000 males in the year 1901 while at the national level; the sex ratio was 972 during that period. One significant observation from data is the state level sex ratio in the initial decades increased to reach 1010 in 1911 from 1004 in 1901 to 1008 in 1921, but since then there was a slow and steady fall in this rate till 1991 (976). This continuous decline was since then halted, the sex ratio increased to 983 in 2001 and further to 997 in 2011. The all India figures also show that the continuous decline was arrested in 1991 (927) and rose to 933 and 943 females per 1000 males in the subsequent censuses viz. 2001 and 2011.

In Andhra Pradesh there is a marked decline in Child Sex Ratio to the tune of 59 points from 1002 in 1961 to 943 in 2011. Considering

Census years 1981-2011, the decline was around 49 points within the three decades. The corresponding figures for India are 62 points for the same period. During 1981-2011, the child sex ratio has declined by 48 points in India. The census data indicates that Andhra Pradesh is faring better in terms of child sex ratio than that of all India level for the six census years i.e., from 1961-2011.

The most populous district in the North Coastal Andhra Pradesh was Visakhapatnam with a population more than 42.91 lakh followed by Srikakulam (27.03 lakh) and Vizianagaram (23.44 lakh) according to 2011 Census. The Census data revealed that the percentage of female population is slightly higher in all these sample districts. Therefore, the overall sex ratio in these three districts is significantly higher than that of the Andhra Pradesh state average. Similarly the Child sex ratio was also higher in these three districts, viz. Visakhapatnam (961), Vizianagaram (960) and Srikakulam (954). The state average CSR was 944.

The sample districts recorded slightly lower than the state average rate (67.4) of literacy Visakhapatnam (66.9), followed by Srikakulam (61.7), Vizianagaram (59.5).

The Vizianagaram district showed the highest sex ratio i.e., 1019, followed by Srikakulam 1015 and Visakhapatnam 1006 in 2011 Census. Butchayyapeta mandal records better sex ratio at 1013, followed by Sarubujjili (1008) and Therlam (997).

The data on child sex ratio clearly indicates that there is a drastic decline in Sarubujjili (116 points) followed by Therlam (101 points) and Butchayyapeta (86 points). In spite of relatively high literacy in Sarubujjili mandal (59%) the child sex ratio fell during 2001-2011.

The proportion of girl child population (0-6 age) is very low in almost all the low child sex ratio villages and this ratio fluctuates between a range of 40.7 per cent in Gonepadu village and 45.1 per cent in Gunnempudi village. Overall sex ratio is far higher in Gonepadu (1067) followed by Kagam (1059), Gunnempudi (1012), Kusumuru (992), Polepalle (966) and Kondavalasa (945). Gunnempudi (822) recorded better child sex ratio compared with other sample villages.

The cultivators are more predominant in Kagam (52.5%) while agricultural labour are significantly higher in Gonepadu (86.2%) followed by Polepalle (54.1%) and Kondavalasa (53.7%). The data clearly shows that hand pump and own well are used for drinking purpose in all the sample villages. All the four sources of drinking water are used in Kagam and Gunnempudi villages.

All these sample villages have very few infrastructure facilities available to them. There are four villages (Gonepadu, Kusumuru, Kagam and Gunnempudi) having Primary, Secondary school and Anganwadi centres. The common educational facilities like Primary school and Anganwadi centers are existing in all the sample villages in the study area.

It reveals that two villages out of the six have registered more girls than boy students in the primary school within the village. At the same time all the sample villages show more boys than girls studying in the high school situated within the village.

In almost all the 6 sample villages internal roads (within the villages) were cement concrete roads. There is no train and bus facility to any of these sample villages. Autos are the most common and the main source of transport to villagers in all these villages.

Registered Medical Practitioner (RMP doctor) plays a major role in four (4) villages 'viz' Kondavalasa, Kusumuru, Kagam and Gunnempudi. Almost all the sample villagers (except Polepalle) reported that the pregnant women approached moderately to the private hospital and as many as four villagers have regularly visited lady doctor during their pregnancy and ANM/ Nurses play a crucial role in providing maternal services in two villages. Coming to the perception of the women respondents on the services provided by the health personnel, majority of them said the services are good when it comes to treatment, and personal care.

8.7 Findings Based on Field Survey

The highest number of head of the households are in the age group of 31-40 years across all mandals i.e., Sarubujjili (36.7%), Therlam (30.7%) and Butchayyapeta (26.7%). Across the study area about 65 per cent of the women respondents are in the age group of below 30 years followed by 27.5 per cent 31-40 years and only 7.8 of them are in the age group of 41-49 years.

Caste and religion are two of the oldest serving social institutions of the Indian society. Majority of the women respondents belongs to backward classes (67.1%) followed by forward caste (17.4%), scheduled caste (12.2%) and scheduled tribe (3.3%) in the study area. It is observed that more than 86 per cent of the total respondents are Hindu's 12 per cent are Christians and less than two per cent belongs to Muslim religion.

The filed study on the literacy status of the women respondents shows that the 31.8 per cent of the respondents are illiterate in the sample area. Amongst the literates, those with secondary education is

highest at 25.1 per cent followed by primary education with 23.3 per cent and 11.8 per cent of them have completed higher education.

Family is the basic institution in the socialization process of an individual. Moreover, the family ascribes an initial status to the individual prior to his achieving a status on his own. The type of family in which an individual lives has significant influence on his personal and social life. An analysis of the family system of the respondents shows that most of the respondents stay in the nuclear family. The share of those staying in nuclear family is 85.8 per cent for total sample.

In terms of the distribution of size of the family, most of the respondents have a family size of 4 to 5 members. The share of respondents with 4-5 family members is dominant with 64 per cent whereas share of those living in a family size of more than 5 is 19.3 per cent. The family size with less than 4 members comes to 16.7 per cent of the total sample.

Of the total 450 respondents, 216 (48%) are engaged as agricultural labour and cultivators with 152 (33.8%). The share of those involved as non-agricultural labour, petty business and employment is 10.7, 2.4 and 5.1 per cent respectively.

Most of the respondents are staying in the Pucca houses (80.7%). Of which, 90 per cent have toilet facility and 58 percent have separate kitchen room. The data shows that 51.5 per cent of the respondents use LPG whereas 47.6 per cent use firewood as fuel sources for cooking.

Income is considered to be the most important variable in determining socio-economic status of an individual. The income of an individual also influences the quality of life. The average income of the

respondents in the sample area was found to be Rs.95111/- . The highest average income stood at Butchayyapeta mandal (Rs.99467/-) followed by Sarubujjili mandal (Rs.97300/-) and Therlam with Rs.88568/- . This shows that the incomes of the respondents are more in Butchayyapeta mandal than that of the other two mandals.

The majority of the households consumed pulses/beans, green leafy vegetables, eggs and chicken/meat/fish on a weekly basis. Most of the households consumed fruits occasionally. On the whole, the data reveals that a major proportion of the sample households (85.6%) used milk or curd on a daily basis, pulses or beans (73.4%) on a weekly basis, green leafy/vegetables (65%), other vegetables (90.7%) on a daily basis, fruits (29.6%) eggs (87%) and chicken/meat/fish (75.3%) respectively on weekly basis.

About 76 per cent of the women respondents in the study area were married between 18-22 years of age. This has no direct bearing on the child sex ratio. More than 90 per cent of the women respondents were staying with their husbands. However, those few who were staying away/separate from their husbands is mostly due to the husband's employment and family problems.

There is a different pattern on sex preference by birth order in the sample area. It was observed that as the birth order increases, the male preference is changing among the women respondents. Miscarriages are higher in the third birth order in Sarubujjili mandal compared with other two mandals. There are 82 cases which reported miscarriage/pregnancy terminated. It is observed that majority of the deliveries in the study area have been attended either by the doctor or trained ANM/Nurses. There are 62 induced abortions, 59 (95%) took place in the private hospitals.

Health of the pregnant lady is the major cause for aborting the pregnancy. The higher percentage of terminations of pregnancy took place in the first trimester, six, fourth and seventh month among the sample women respondents. As many as 58 of 82 abortions undergone Sonography or Amniocentesis tests before their abortion. This clearly indicates that these could be sex selective abortions which lead to sex ratio imbalance.

Analysing the Co-habitation aspects of the women respondents would give a pointer to their fertility outcomes. The data reveals that the highest percentage of women respondents are staying with her husband 98, 95.3 and 94 respectively in Therlam, Sarubujjili and Butchayyapeta mandals. It can be observed that nearly 96 per cent of women respondents are staying with her husband and only 4 per cent of them are not staying with her husband in the study area

Finding out the birth order differences in male/female births gives a pointer to the notional phenomena of sex selection at birth. Biologically it was proved that male children are more at birth than female children. It is observed that the male births are in the first order of births at 52.9 per cent and of female births 44.5 per cent in Sarubujjili, 53.3 per cent to 36.5 per cent in Therlam and 46.2 per cent to 38.6 per cent in Butchayyapeta mandal. As the birth order increases, the dominance of male birth is receding from 52.9 per cent at first birth order to 2 per cent at the fourth birth order, the same trends is continued in case of Therlam from 53.3 per cent to 4.8 per cent and in Butchayyapeta from 46.2 per cent to 7.1 per cent respectively.

Miscarriage is an event that results in the loss of a fetus during early pregnancy. When such an event occurs without any human intervention or an accident it is called Spontaneous Abortion (SAB), this

typically occurs during the first half of pregnancy. Of all the three sample mandals, the miscarriage proportion is high at 8.7 per cent 34.4 per cent at the second and third birth orders in Sarubujjili compared with other two mandals 7.1 per cent and 17.1 per cent in Therlam and 4.8 per cent and 11.8 per cent at the same birth order in Butchayyapeta. Miscarriages are lower in Butchayyapeta compared to their counter mandals.

It is observed that the total incidences of abortions and still births reported at 84 (two are still births), of the 25 (29.8%) incidents 18 (72%) were occurred in the first order birth during 2001-2011, 32 (38.1%) in the second birth order, of which 20 (62.5%) during 2001-2011 and out of 25 (29.8%) at third birth order 15 (60%) during the same period. The highest number of incidence of abortions recorded at 32 in Sarubujjili, followed by 28 in Therlam and 24 in Butchayyapeta mandals.

The data clearly shows that in all the three sample mandals induced abortions are significantly higher compared with natural abortions. Of the total 82 pregnancies terminated/miscarried, natural abortions constitutes only 20 (24.4%) and induced abortions are may be one or the other reasons 62 (75.6%) in the study area. One of the observation from the analysis is that there are more induced abortions if the previous births are male, a female baby and two female babies in all the sample mandals, whereas spontaneous abortions are lower.

It can be observed that the total number of female abortions recorded at 39. Of this, 9 (36%) incidents were reported at first order birth, 18 (60%) at second order birth and 12 (48%) in the third order birth in the study area. This analysis clearly indicates that in case of number of abortions of female births were recorded higher compared with male births in all the sample mandals. This adds strength to the arguments that

the abortions could be sex selective, thereby impacting the overall child sex ratio in the three North Coastal districts of Andhra Pradesh.

Going by some of the respondent's comments and their experiences, coupled with the popular belief, most of the abortions are taking place once they have some evidence either by scientific test or other crude religious sentiments and symptoms, that the pregnancy is going to result in a female baby, the fetus is removed by induced abortion where this most important decision is forced on the pregnant lady by her husband and/or in laws.

The place of delivery is very important factor on the survival of the new born. On the whole, as many as 183 (45.5%) of the total women respondents approached private hospitals for deliveries, 30.8 per cent of them in Government hospital and 20.4 per cent deliveries at home. Private hospitals play greater role in performing deliveries in the sample area. On an average, more than 70 per cent of the deliveries were attended by a doctor in these three mandals.

There is a predominant opinion among the public that induced abortions actually results in lower female child births. If that is the opinion, it would be interesting to investigate the place of induced abortions as to where the termination of pregnancy took place. On the whole, there are 62 induced abortions, of which 59 (95.2%) took place in the private hospitals and only 3 (4.8%) in Government hospital. In the sample area almost all the abortions were performed by doctors.

It was found in the field study during the data collecting that "health not permitting" and "complications in pregnancy" are more common euphemisms for terminating or controlling female child births.

The advancement of technology brought both Sonography or Amniocentesis tests within the reach of most of the people and it has resulted in the sex selective abortions causing a great sex imbalance. It is evident from the data that in all a predominant number of respondents have undergone either of these two tests.

Across the study area, as many as 58 (70.7%) of 82 abortions undergone Sonography or Amniocentesis tests before their abortions. This practice of women should be restricted through strict implementation of law and also impose penal amounts on Doctors and Private hospitals.

A staggering 97.8 per cent of the pregnant women respondents visited the health centres for their antenatal check-ups. The distribution of the health centres that the pregnant women choose for their antenatal check-up shows that most prefer the private hospital (51.4%), followed by Government hospital (31.1%), sub-centre (10.5%) and Primary Health Centres (PHCs) (7.0%).

In this sample area almost all women respondents have received medicines and nutrition supplements during pregnancy and did not take any of these items were negligible.

A total of 61.6 per cent of the women respondents said that they wanted to have a child before getting pregnant and thus that was a planned pregnancy.

A total of 95.3 per cent of the pregnancy decision were made by either the respondent herself or by her husband. Such rate stood highest for Sarubujjili and Butchayyapeta with 98.0 per cent.

The survey data shows that 80.0 per cent of the respondents preferred two children, while 17.6 per cent of the women respondents

preferred three or more children in their family. The women respondents have preferred two children are significantly higher in Butchayyapeta mandal compared to the counter parts.

A total of 76.9 per cent of the women respondents said that they preferred to give birth to a male child against 23.1 per cent of the women respondents who preferred a female child at birth. It is a general phenomenon among society that the majority of the sample women respondents have preferred a boy. The main reasons for preference a boy it that continue to the family lineage, to get name and fame and to protect the family, while only are main reason for preference a girl child is that they helpful to the mothers in the study area.

A major proportion (more than 80%) of the women respondents felt that very difficult to raising girl children in almost all the three sample areas. There are two main difficulties in raising a girl children are dowry, economic burden and education and education and dowry in the sample area. In case of a boy the difficulties are they attract bad habitués and misbehavior. Many respondents cite dowry as a major reason behind their un-willingness to raise the girl child properly.

About 63 per cent of the women respondents were not aware that the Government takes care of the girl child from her birth till she completes graduation and 89 per cent of them have benefited under Bangaru Thalli Scheme.

8.8 Empirical Analysis

Using the SPSS software package two sets of regression models were estimated. One set for the overall sex ratio and another set for the

child sex ratio. These regression models have been estimated, two for each district i.e., Srikakulam, Vizianagaram and Visakhapatnam.

These regression equations are estimated, one, for Child Sex Ratio (CSR) and another, for overall Sex Ratio (SR) as the dependent variables and male literacy, female literacy, percentage of scheduled caste population, percentage of scheduled tribe population, percentage of agricultural labourers, number of primary health centres, percentage of irrigated area, number of Anganwadi Centres (AWC), percentage of girls in anganwadi centres and percentage of villages having medical facilities as independent variables. The estimated regression equation:

$$Y_{CSR} = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + \dots + b_nx_n$$

$$Y_{SR} = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + \dots + b_nx_n$$

Where Y= Child Sex Ratio/Overall Sex Ratio

Y_{CSR} = Child Sex Ratio

Y_{SR} = Overall Sex Ratio

It is clearly visible from the results that the same set of independent variables are behaving differently in these three districts. The differences are in terms of magnitude of significance and also not being significant. For example, variables like male literacy and percentage of girls in Anganwadies are significant at 99 per cent level in Vizianagaram district while these variables are insignificant in the other two districts namely, Srikakulam and Visakhapatnam. Female literacy and percentage of SC population are significant in all the three districts but their magnitude of significance is varying. The female literacy rate is significant at 99 per cent level in both Srikakulam and Visakhapatnam districts while the same

was significant at 95 per cent level in Vizianagaram district. Similarly, the percentage of SC population is significant at 99 per cent level in both Srikakulam and Vizianagaram district while it was significant at 95 per cent level in Visakhapatnam district. ST population proportion and percentage of irrigated area is significant only in Srikakulam district while in the other two districts it was completely insignificant. Number of PHCs and villages having medical facilities in Visakhapatnam are significant at 99 per cent level while these two are significant at 95 and 90 per cent level respectively in Vizianagaram district. In Srikakulam district they are altogether insignificant. On the whole, Vizianagaram model has six independent variables which are significant while the Srikakulam model has only four and Visakhapatnam model has five significant variables.

A similar analysis done on overall sex ratio for these three sample districts.

One clear observation from this analysis is most of the variables, i.e., six of the ten independent variables are behaving in a similar fashion. Of these, three variables, namely male literacy, female literacy, villages having medical facilities are all dominantly significant in all these three districts, while percentage girls in anganwadies and number of PHCs are significant in Vizianagaram and Visakhapatnam districts though their significance levels differ slightly. Proportion of ST population is significant in Srikakulam and Visakhapatnam districts only.

The Chi-Square results gives a clear picture that out of 24 socio-economic and demographic variables, 21 variables are significant in all these three districts. The non-significant variables are “were your pregnancies planned” (Sarubujili), “religion” and “difficulty in raising a child” (Therlam) and three variables namely “were your pregnancies

planned”, “who decides to have a child in the family” and “choice of children”. Nineteen (19) of these significant variables are significant at 99% in all the three sample mandals of the study.

8.9 Policy Suggestions

Many studies have shown that Pre Natal Sex Determination is the main reason of low sex ratio in India followed by abortion of female foetuses. Besides the misuse of the technology, the patriarchal societies in many parts of India have translated their prejudice and bigotry into a compulsive preference for boys and discriminations against the girl child.

Following the outcomes of the analysis and conditions observed in the field study some appropriate suggestions for policy formulations are listed here which will help pave the way for improving the child sex ratio in general and in rural areas of Andhra Pradesh in particular.

Accessible and reliable data on sex ratios at birth and related indicators are critical for identifying and preventing the practice of sex selection. There is a dire need to properly implement government sponsored girl child programmes that provide full support to the families having girl child. Professional groups, religious leaders, civil society and the media can play a role in educating common public especially in the rural areas about the perils the society will face due to falling sex ratios and thereby help eliminating sex selection. Therefore, policy makers should focus on promoting responsible use of ultrasound and other technologies through educating and partnering with the medical community.

Unless men start regarding women as their equal partners, this differentiation between men and women shall continue unabated. No

single item of achievement like education, profession, legal rights or even the mixture of all these will work out a solution - the only feasible solution is the change of mind, the change of attitude of the men towards women. Till this is done, no amount of teaching, preaching or bargaining will help the girl child.

Intensive Information, Education and Communication (IEC) campaigns for raising awareness among the public regarding the serious consequences of decline in sex ratio. We can understand the gravity of the situation by the statement of GK Pillai, Farmer Union Home Secretary that "Whatever major steps that have been put in the last 40 years have not had any impact in the child sex ratio and therefore it requires complete review. Every policy measure has to be looked into at the Central Government, State Government and at the Panchayat level".

- Based on empirical analysis, there is a need to strengthen Anganwadi centres at the gross root levels. This could be done by giving proper training and educating the Anganwadi attendants about the nutritional requirements of pregnant women and lactating mothers along with providing them the basic nutritional food. Anganwadis should be treated as change centers which will bring in a change in the attitudes of young and lactating women in rural areas.
- There are laws preventing sex determination tests but their implementation should be stricter and the authorities need to be more vigilant and monitor the labs/hospitals which have these facilities. There should be a follow-up of every abortion that takes place and the reasons that caused should be verified by the District Medical Officer or relevant government official. The doctors and

Nursing homes who indulge in such malpractices should be taken to task and severely punished.

- Government should insist on getting the report of tests conducted by the Labs/Centres every month. The officials should conduct a random study of those patients to verify any untoward incident happened to the pregnant mother. Depending on the study Government should take strict action on the Labs/Centres.
- All the women who get pregnant should be registered by the local ANMs or hospitals and their progress should be meticulously followed till delivery and the concerned local/regional Mother and Child Hospitals should follow the new born baby and mother for another one year. The local ANMs and Mother and Child Hospitals need to report the information once in every three months to the district hospitals for recording. This can be used for random verification.
- Government should formulate a policy to regulate abortions where in the circumstances under which the abortion/medical termination of pregnancy is taking place, what is the order of the birth and if that was preceded by a scan to decide the sex of the baby in womb. If it's a female baby irrespective of the order of birth all the parties involved in this act starting from the doctor, husband, parents in law, and the expectant mother should give an explanation on record. This could to some extent help prevent female foeticide. In case of violation all the parties except the mother should be penalised heavily.
- Importance of a girl child to the balance and welfare of the society should be stressed in the schools and colleges. Along with that,

reproductive health education should be made mandatory and promoted in high schools and colleges. Awareness programmes among teenage girls about the laws of abortion and incentives to girl child should be taken up on large scale.

- All the State and Central Government Schemes on Girl Child protection should be propagated under one umbrella (single nodal agency) at district level which can remove duplication of beneficiaries and at the same will increase the number of beneficiaries. The benefits should be extending to 2 and 3 girl child families.
- The study suggests that the sex ratio only indicates to the misuse of medical technology and interventions with laws to end the practice of wanting more male children reflect poor understanding of the problem. While strict laws only can control the female infanticide and foeticide by fear of punishment, it will not eliminate the problem completely.