Trans. Inst. Indian Geographers
Vol. 3, No. 1, January 1981

CHANGES IN SEX RATIO OF RURAL POPULATION OF HISSAR DISTRICT 1951 - 1971 : A SPATIAL PERSPECTIVE

MEHAR SINGH GILL, Patiala

ABSTRACT : Three distinct areas : tract with agricultural frontier conditions, densely populated area with old irrigation and sparsely peopled arid tract, all within Hissar District of Punjab, provide an ideal case study for comparative analysis of sex ratio patterns during 1951 - 71.

An understanding of the sex ratio of a population in the spatial context is of fundamental importance for a proper consideration of the various demographic characterstics of any region. Apart from itself being an important regional characteristic, sex ratio not only mirrors the socio-economic conditions of an area but also reflects ' a stage in the historical development of a population (Franklin, 1956). It has a strong bearing on birth and death rates, migrational career, size and composition of households and the occupational structure of any region (Hawley, 1959).

Unlike most of the Western countries, India's population is marked by an overall deficiency of females. It is particularly true of the **Jat** dominated areas of the country, i. e. Western Uttar Pradesh, Haryana and Punjab where this deficiency comes to over 100 females for every thousanb males.

Hissar District (Fig. 1 and 2), with rural sex ratio of 871 (sex ratio of total population being 866), lies at the southern edge of this broad zone of low sex ratio. The low proportion of females has been attributed to various causes such as climate, race, religion and caste (Census of India, 1911) and also to the desire for sons that allegedly leads to higher masculinity birth (Clarke, 1960). But none of these factors fully explains this phenomenon and one has to agree with Clarke, that all spatial and temporal variations in sex ratio are an end-product of the composite effect of the excess of male births differing mortality rates of the two sexes and sex-selective migrations (Clarke, 1960).

In India the higher female death rate is attributable to serious neglect of female children, repeated pregnancies starting at an early age and continuing right upto menopause, crude and unskilful midwifery under unhygienic conditions, and lack of proper pre and post-natal care (Gosal, 1964). This ' differential care in upbringing and nourishment offsets the biological superiority of females' (Census of India, 1921).

Changes in Sex Ratio : 1901-1971

Hissar District has been a famale-deficit area throughout the period from 1901 to 1971. and its average sex ratio has never been able to touch the mark of 890 (Table I). Compared with a figure of 897 in 1901, the 1911 Census rerturned a sex ratio of 834 only, indicating a decrease of 33 females per 1,000 males during the ten years period. This drop in the number of

Table I

Hissar District Changes in Rural Sex-Ratio, 1901-1971.

Census year	Sex Ratio	Inter-censal change in Sex-Ratio
1901	867	–
1911	834	– 33
1921	883	+ 49
1931	862	– 21
1941	887	+ 25
1951	866	– 21
1961	865	– 1
1971	871	+ 6

Source : Census of India, 1971, **Haryana, General Population Tables,** Part II-A, p. 35.

Table II

Hissar Distaict Sex Ratio by Rural Urban Residence, 1971

Population Group	Total	Rural	Urban	Difference between Rural and Urban Sex Ratio
Total	866	871	837	34
Hindus	865	871	834	37
Sikhs	869	871	841	30
Muslims	857	873	602	271
Jains	979	1007	969	38
Scheduled Castes	867	869	848	21
Non-Scheduled Castes	866	872	835	37

Source : (i) **District Census Handbook of Hissar, 1951** p. , 223-24,
(ii) **District Census Handbook of Hissar, 1961,** p 258-259
(iii) Census of India, 1971, **Haryana, Social and Cultural Tables & Special Tables on Scheduled Castes and Scheduled Tribes,** part II C (i) and V-A, pp. 16-17 and 36-37.

famales was the bubonic plague of 1906-07 which proved more fatal to the females (Census of India, 1921).

The inter-decennial fluctuations in sex ratio during 1911-41 deserve an independent inquiry for their proper understanding, though it is greatly suspected that they miught be related to various epedemics famines and war time recruitment.

The next two decades, 1941-1961, recorded successive drop in sex ratio from 887 in 1941 to 866 in 1951 and 1961 respectively. This period was characterized by large scale male-selective in-migration. During 1961–71, the sex ratio again improved reaching 871 in 1971 resulting mainly from, (i) greater influx of females who mainly came to join the earlier arrived male members of their families, and (ii) increased survival ratio of females reflecting

notable drop in maternity and infant deaths.

Rural-Urban Differential in Sex Ratio

Urban sex ratio in Hissar District has always been lower than its rural counterpart irrespective of caste and religion (Table II). The difference between rural and urban sex ratio of the total population averaged around 34 in 1971. The much higher difference of 271 among the Muslims is due to highly male-predominant migration of muslim labourers to the urban areas of the district from Jammu & Kashmir, Rajasthan and Uttar Pradesh. On the other hand-among the scheduled castes, practising largely family-predominant migration, this difference was merely 21.

The rural-urban differential in sex ratio stems from excess of males in short-duration migration to urban areas (Davis, 1951). This is due to (i) social taboos as well as low level of female literacy standing against female employment in urban areas, (ii) persistence of joint family system requiring a male migrant to send his savings to his family members back in the village, and thus discouraging him from taking his wife to the town, (iii) high cost of urban living compelling many male migrants to stay alone in the towns, and (iv) the predominance of male students in urban centres.

Sex Ratio by Age Groups

Though the age data suffers from many shortcomings introdued by mis statments due to ignorance, carelessness or mis representation it reveals certain important features. The high sex ratio of 927 in the age-group 0-4 years is the result of higher male mortality than that of the females (Table III). Lesser amount of parental discrimination against female children in urban centres enables these areas to register a relatively high sex ratio (938) as against that of the rural area

Table III

Hissar District Sex Ratio by Age Groups, 1971

Age-group	Females per thousand Males		
	Total	Rural	Urban
All ages	866	871	837
0-4	927	926	938
5-9	888	894	856
10-14	883	877	920
15-19	819	829	779
20-24	870	905	729
25-29	909	932	809
30-34	941	965	832
35-39	903	906	888
40-44	883	896	824
45-49	828	836	788
50-54	719	721	711
55-59	723	711	796
60-64	727	719	776
65-69	629	615	718
70 and above	674	655	794

source : office of Census Organization Haryana, Chandigarh.

Table IV

Hissar District Sex Ratio by Different Communities of Scheduled Castes, 1971

Scheduled Caste Community	Sex Ratio	Scheduled Caste Community	Sex Ratio
Bawaria	943	Chamar	862
Sansi	941	Mazhabi	838
Balmiki	933	Dhanak	826
Od	930		

Source : Compiled from Census of India, 1971 **Haryana, Social and Cultural Tables and Special tables on Scheduled Castes and Scheduled Tribes,** Part II-C (i) and Part V-A, p. 181.

(926). The sex ratio of the district' srural population between 15 and 54 years of age is above that of its urban population because of male-predominant rural-urban migration. But beyond the age of 55 the rural sex ratio is lower than that of the urban areas which is attributable to (i) relatively high female mortality in the countryside, and (ii) return of male migrants after retirement to their homes in the rural areas.

Sex ratio again rises beyond the age of 70 years signifying greater biological durability of females as compared to the males who, particularly in advanced age, are more susceptible to various degenerative diseases and also succumb to them easily (Clarke, 1972).

Sex Ratio by Religious and caste groups

Except for the Jains, all other religious groups have the same sex ratios as the mean for the district. There is wide in divergence in sex ratio between the different scheduled castes of the district though for total scheduled castes sex ratio is the same as the general population.

In conclusion, the sex ratios of various of various raligious and caste groups are determined largely by the variations in female mortality which is inversely related to the degree of exposure of every population group to various modernizing influences. Sex-selectivity in migration further remoulds these sex ratio patterns according to its kind and intensity.

Spatial Patterns of Rural Sex Ratio, 1971

The discussion that follows is based on a choropleth map dealing with sex ratio of the general rural population. Three types of areas have been identified for the purpose of discussing rural sex ratio.

A. Areas of sex ratio with more than 900 females per 1,000 males,

B. Areas of sex ratio with 850 to 900 females per 1,000 males and,

C. Areas of sex ratio with less than 850 females per 1,000 males.

A. Areas of Relatively High Sex Ratio

Having more than 900 females for every 1,000 males, this group of areas includes about one third of the district's 1059 inhabited villages of which 43 villages in this class had an actual excess of females over males in 1971. Though found scattered all over the district their greater number is claimed by **bagar** areas especially of Loharu, Bhiwani and Hissar tahsils where, chronic abject poverty, has caused male out migration since long. The same conditions apply to the scheduled castes in nearly all the **bagar** areas. Another, small region of relatively high sex ratio is located in the southern fringe of the Rohi from where out migration to better agricultural areas of the nearby frontier tract has been

continuing, especially in the last decade. Similarly, male-selective outmovement explains relatively high female proportion in the southern Barani circle of Hansi tahsil,

B. Areas of Moderate Sex Ratio

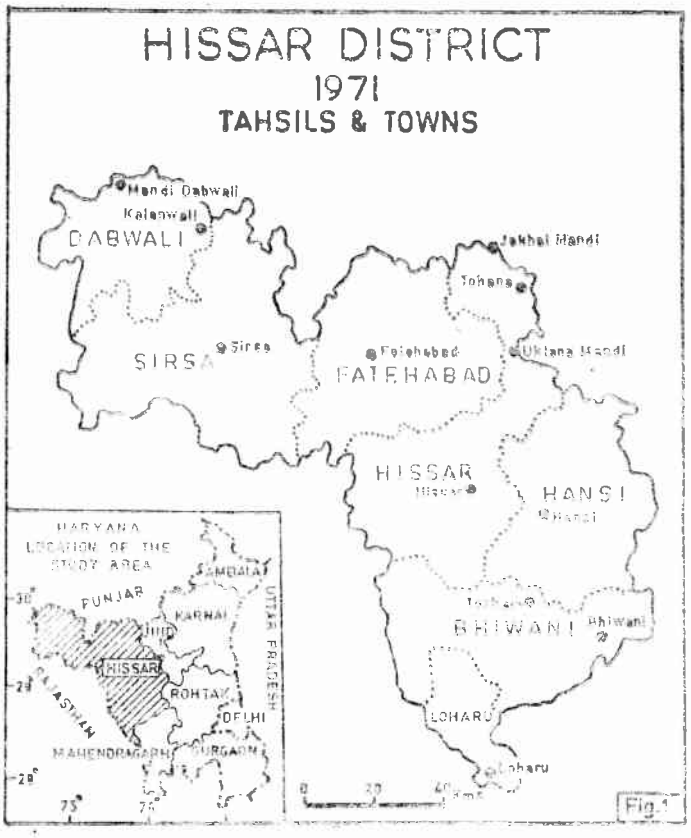
In about 37 per cent of the inhabited villages of the area, sex ratio ranges between 850 and 900 against the district average of 871. Covering large parts of the old settled upland plain, these areas stand for average conditions in the district with regard to migrational balance and sex differential in mortality. Incidentally, these tracts have a preponderance of highly conservative Jats and Rajputs who are known for their relatively less mobility.

C. Areas of Relatively Low Rural Sex Ratio

About a third of the inhabited villages have below 850 females per 1000 males. The low proportion of females resulted from male-predominnt in-migration, and was mainly associated with three types of areas; (a) areas of recent agricuitural settlement, (b) areas in the vicinity of urban centres, (c) areas where construction and other development projects were in progress in 1971.

(i) Areas of Recent Agriculture Colonization

Large parts of the frontier zone recorded less than 850 females per 1, 000 males. In about 60 villages this proprtion was even



lower than 800. It was due to greater masculinity of the stream of agricultural migrants to the area, and was particularly true of pioneers ' settlements.

(ii) Areas in the Vicinity of Towns

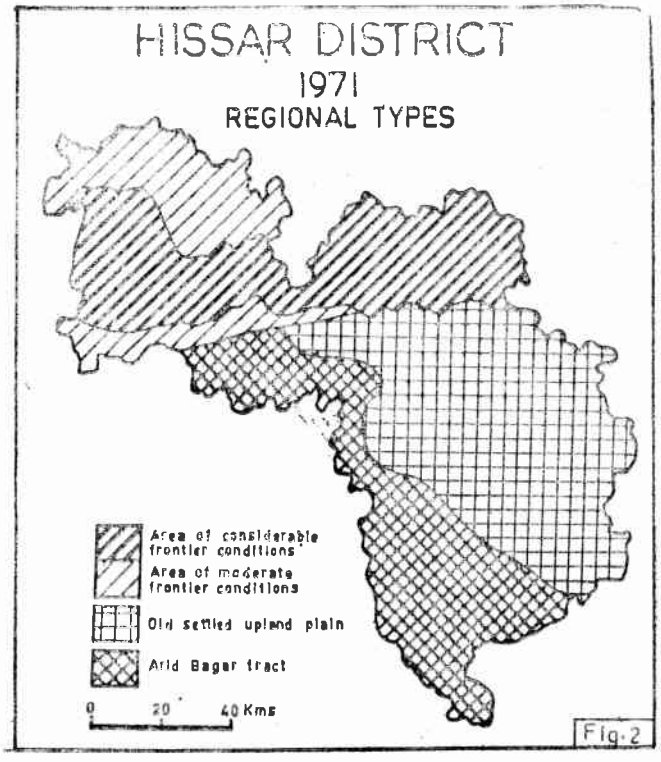
Rural areas around major urban places, namely Bhiwani, Hissar, and Sirsa have fewer than 850 females per 1000 males. This is because a sizable section of the urban male migrants often choose to reside in the surrounding rural areas with cheaper residential accommodation. Generally speaking, the large industrial towns, especially those with rapid growth of population, make for low sex ratios in the fringing rural tracts. Accordingly smaller urban centres like Jakhal Mandi, Uklana Mandi and Loharu, did not make any impact on sex ratio of their adjoining rural areas.

(iii) Areas where Construction and Other Development Projects were Under Progress in 1971.

At the time of 1971 census, low sex ratio was a common feature of areas where developmental projects like construction of link roads, and digging and brick-lining of Jui canal etc. were in progress, resulting in concentration of predominatly male workers. One such area is an east-west extending belt across the middle of Loharu Bagar, follow--ing the course of Jui canal, while the other important tract covers Behi-Siwani Bagar and the adjoining parts of Amrain Bagar.

Spatial Patterns of Change in Rural Sex Ratio, 1951-71.

As mentioned earlier, the spatial and temporal aspects of change in sex ratio are due almost entirely to the combined influence of the sex ratio at birth, unequal



mortality of the two sexes and sex-selective migration. In the absence of any evidence to the contrary, it is natural to believe that sex ratio at birth in different parts of a small area as Hissar District is unlikely to register a perceptible change within a short span of twenty years. Similarly, different religious and caste groups living here offer at best little scope of inter-group differentials in change of natural sex ratio. So, the remain--ing two factors pertaining to differential mortality of the two sexes and sex selectivity in migration are largely responsible in furnishing spatial variations in change in sex ratio. Since migration for economic reasons is highly male selective, an area of net out-migration records a rise in sex ratio, while that of net in-migration suffers a decrease in female proportion.

Conclusions

1. Hissar District has been an area of low sex ratio resulting mainly from the preponderance of male births, higher rate of female mortality, and male-selective in-migration. During the past 20 years, however, the sex ratio has increased by 5 females per 1,000 males owing partly to great decline in female mortality than that of males.

2. In 1971, areas of relatively high female proportion broadly corresponded to the economically sick regions of **bagar,** southern part of the Rohi and some patches elsewhere which have been characterized by male-predominant out-migration. By contrast, low sex ratio occurred in areas experiencing male influx such as (i) those near the majo urban centres, (ii) which had some construction project under progress, and (iii) where agricultural frontier was still active.

3. The changes in the spatial patterns of sex ratio were mainly structured by a really varying nature and intensity of migration. Most of the areas of new settlement recorded improvement in female proportion consequent upon male-followed-by-female movement into them, whereas in arid bagar areas it resulted from continual male-selective out-migration. On the other hand, areas fringing the main urban centres, and a greater part of the Nehri circle of Fatehabad. expericnced decline in sex ratio following large male inflow to these areas.

4. Inter-regional disparities, so conspicuous between the areas of recent colonization and the rest of the area in 1951, were smoothened to some extent during the period 1961/71. However, the economically poor tracts with long tradition of male-selective out-migration retained their position as areas of high sex ratio.

5. The differences in sex ratio of various caste and religious groups are largely attributable to the different rates of female mortality, intensity of migration and varying degree of male selectivity therein,

Acknowledgement

The author is grateful to Professor G. S Gosal, Geography Department, Panjab University Chandigarh, for his guidance in preparing this manuscript. His thanks are also due to Mr. Amarjit Singh Toor. Haryana Census Organization, Chandigarh,, for drawing the final maps.

References

Census of India 1911 : *India Report,* Part I, **1**, pp. 206-207.

Census of India 1921 *: India - Report*, Part I, **1**, p. 148.

Census of India 1931 *: Punjab – Report*, Part I, **18** p. 161.

Clarke, J. I. (1960) : Rural and Urban Sex Ratios in England and Wales, *Tijdschrift Voor Economische en Sociale Geografie*, **51** No. 2, 29 - 38.

_____ (1972) : *Population Geography*, Oxford. Pergamon-

Davis, Kingsley (1951) : *The Population of India and Pakistan*, Princeton, Princeton University Press

Frankl in, S. H. (1956) : The Pattern of Sex Ratios in New Zealand, *Economic Geography*, **32**, 162-176.

Gosal, G. S. (1961) : The Regionalism of Sex Ratio of India's Population, *Rural Sociology* **26**, 122 - 137.

Hawley, C. A. H. (1959) : Population Composition in *The Study of Population* ed. by P. M. Haurer and O. D. Duncan, Bombay, Asia Publishing House, of 361 - 382.

Natarajan, D. (1972) : *Changes in Sex Ratio*, Census of India, 1971, Census Centenary Monograph No. 6.

Soulsby, E. M. (1972) : Changing sex Ratios in in the Scottish Border Countries, *Scottish Geographical Magazine*, **88**, 5 - 18.

Vaisaria, P. M. (1969) : *The Sex Ratio of the Population of India*, Census of India, 1961, 1, Monograph No. 10.

Wyon, J. B. and *J. E. Gordon* (1971) : *The Khanna Study*, Cambridge, Massachusetts, Harvard University Press.

Address of the author

Mehar Singh Gill, Lecturer, Dept, of Geography, Punjabi University, Patiala, Punjab – 147 002.