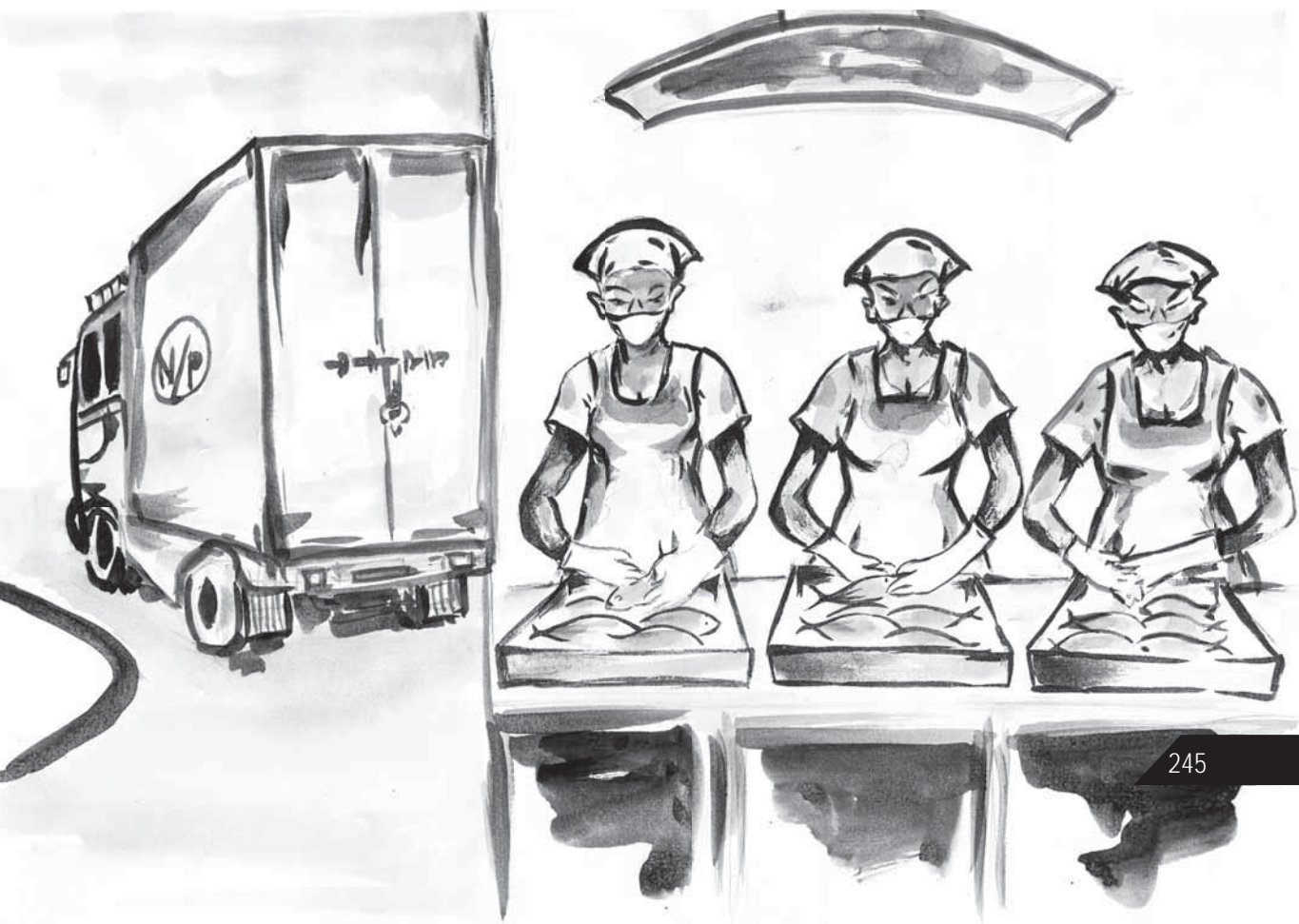


Marketing and Processing

08



Marketing And Processing

Nikitha Gopal, Shyam S. Salim, M. Krishnan, R.S. Biradar, Pradeep Katiha, Nagesh Kumar Barik, Rakesh kumar, Arpita Sharma and K.Ponnusamy

Background

India is the third largest fish producing country in the world. The sector has high potentials for rural development, domestic nutritional security, employment generation as well as export earnings. Indian fisheries sector has been witnessing a steady growth, and the annual fish production has risen to 7.85 million tonnes during 2009-10. The rate of growth of the inland sector has been high and the inland fish production is 4.87 million tonnes and has almost doubled in the last decade. It is estimated that fishing, aquaculture and allied activities provide employment to over 14 million people.

Marketing and processing are two important ancillary sectors and are important links in the value chain in the fisheries sector. These sectors provide livelihood support for larger number of households by income generation through fish marketing and processing activities. More than 70 per cent of the fish produced in the country is channelled into the domestic market, while the rest is processed and its contribution is to the tune around Rs. 9,921 crores in foreign exchange. The processing industry in India has been almost entirely export oriented and employs mainly women. Approximately 10 lakh people are engaged in seafood processing industry in India. The industry is spread in the coastal states of the country. There are 369 seafood processing units, of which 265 are EU approved, and more than 900 exporters. Considering the marketing activities, the landing centres serve as primary markets and the wholesale markets situated at a distance away from actual fish landing centres act as secondary markets. The retail markets normally situated near to consuming centres work as tertiary markets. In some cases, wholesale markets may also have a separate retail section. Normally, secondary and tertiary markets are located in interior areas.

Recently an increased attention has been given to education and literacy of fishing community which is supposed to play a major role in achieving livelihoods (Maddox, 2007). The relationship between the income generated and livelihood are often supplemented by the

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literacy level and health status of the people engaged in various activities. FAO and ILO have advocated that “literacy and numeracy are essential for workers to increase their productivity and income”. Accessibility to educational institutions and programmes will improve the livelihood of fishermen, by diversifying their income generating activities (FAO, 2006). Likewise, strong and continued health is a requirement for achieving sustainable livelihood for fishing communities. It has been reported that the work stress and health hazards of the fish processing works are considerably high due to the productivity demand and the low levels of technology used (Gopal, N, *et al.*, 2009). With this background, the present study tries to throw light on the general demographic, occupational, income generation, educational and health status of fisher households engaged in fish marketing and processing activities across various coastal states of India.

Objectives of the Study

The objective of the present study was to assess the status of literacy, health and income of fisher folk engaged in fish marketing and processing activities along the coastal states of India.

Area of study and sampling frame

The sampling frame for the study to assess the literacy, income and health status of persons involved in allied activities of marketing and processing in the fisheries sector is given in Table 8.1.

Table 8.1 Area of study and sampling frame

Sl. No.	Sub-sector	Details	Sample size
1.	Processing	Kerala, Gujarat, Andhra Pradesh and Maharashtra	248
2.	Marketing	Kerala, Gujarat, Andhra Pradesh, Maharashtra, West Bengal, Madhya Pradesh and Delhi	400
3.	Total		648

The study was done among the households engaged in marketing and processing activities in seven coastal states of India which include Kerala, Gujarat, Andhra Pradesh, Maharashtra, Delhi, Madhya Pradesh and West Bengal. A sample of 50 processing households each were selected from Kerala, Gujarat, Maharashtra and nearly 98 samples from Andhra Pradesh making the total sample size as 248. Similarly a total sample size of 400 was decided for the

Table 8.2: Detailed sampling frame of the study

Sl. No.	State	Sample size (processing)	Sample size (marketing)
1.	West Bengal		50
2.	Andhra Pradesh	97	100
3.	Kerala	51	50
4.	Maharashtra	50	50
5.	Gujarat	50	50
6.	Delhi		50
7.	Madhya Pradesh		50
8.	Total	248	400

households engaged in marketing activities along the 7 coastal states Kerala, Gujarat, Andhra Pradesh, Maharashtra, Delhi, Madhya Pradesh and West Bengal (Table 8.2)

Further details about the districts selected for data collection in various states is given in Table 8.3. Random sampling was followed for collection of the information based on a pre-tested questionnaire designed for the study.

Table 8. 3: Districts selected for the study

Sector	State	District(s)				
Pro- cessing	Kerala	Calicut	Ernakulam	Kollam	Malappuram	Trivandrum
	Gujarat	Junagadh	Porbandar			
	Andhra Pradesh	Visakhapatnam				
	Maharashtra	Thane	Raigad			
Mar- keting	Kerala	Calicut	Ernakulam	Kollam	Malappuram	Trivandrum
	Gujarat	Junagadh	Porbandar			
	Andhra Pradesh	Visakhapatnam				
	Maharashtra	Thane	Raigad	Ratnagiri		
	West Bengal	Howrah				
	Delhi	Delhi				
	Madhya Pradesh	Bhopal	Raisen	Sehore		

Methodology

Field level data collection was carried out from selected states. The data collection was done using a structured survey schedule after a reconnaissance survey from the selected sample respondents. The data collection was on four parameters viz., the general particulars, literacy, health, and income profiling. The data covered both urban and rural households and also represented the three sectors viz., the mechanized, motorized, and the traditional sectors. The data collection was done by the project team in most cases and in some location trained enumerators were employed. The data collected were tabulated and the results were analyzed.

Conventional tools of analysis and percentage analysis were done to process the data and bring out the literacy, income and health status of the fishers in India and to arrive at meaningful conclusions. The data obtained from the respondents were systematically tabulated for the purpose of analysis.

The results and discussions are presented under the following heads for marketing and processing sectors.

- A. General particulars
- B. Literacy profile
- C. Health profile
- D. Income profile

A. General particulars

The general particulars of the respondents like age distribution, family and household information and male-female ratio are presented in this section.

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(i) Age distribution

Table 8.4: Age wise details of the sample respondents in post- harvest sector (years)

States	Age categories			Total
	<35	36-55	>56	
Andhra Pradesh	75 (38.07)	106 (53.81)	16 (8.12)	197
Delhi	33 (66.00)	12 (24.00)	5 (10.00)	50
Gujarat	38 (38.00)	57 (57.00)	5 (5.00)	100
Kerala	12 (11.88)	62 (61.39)	27 (26.73)	101
Madhya Pradesh	25 (50.00)	22 (44.00)	3 (6.00)	50
Maharashtra	11 (11.00)	69 (69.00)	20 (20.00)	100
West Bengal	19 (38.00)	27 (54.00)	4 (8.00)	50
Total	213 (32.87)	355 (54.78)	80 (12.35)	648

Figures in parenthesis indicate percentage to total

The age distribution of the respondents is given in Table 8.4. Most respondents fell in the category of 36-55 years (54.78 per cent). This trend was observed in Andhra Pradesh, Gujarat, Kerala, Madhya Pradesh, Maharashtra and West Bengal. In comparison with the other states Delhi & Madhya Pradesh were having more respondents from the age group below 35 years with 66 per cent and 55 per cent respectively. Only 12.35 per cent of the respondents fell in the age group above 56 years. Marketing and processing is generally carried out by persons in the active working age group, as it requires skill as well as physical exertion in some cases, especially in marketing. Since the younger group was involved in fish marketing in both these states, majority of the respondents in marketing were from the same category

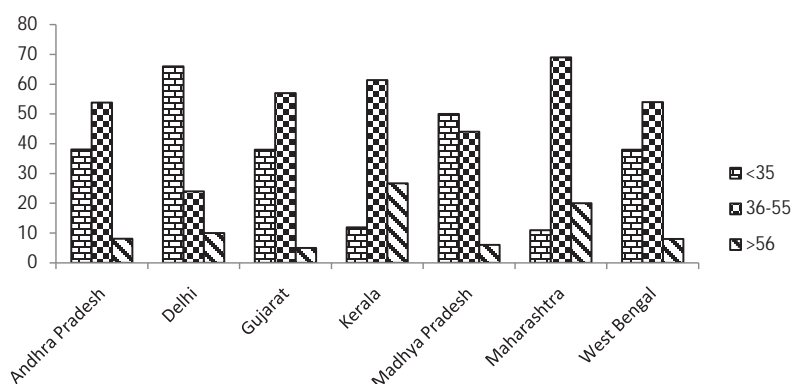


Fig. 8.1: Age distribution of respondents in the post harvest sector

The state wise age distribution of the persons involved in marketing and processing is indicated in figure 8.1. In Andhra Pradesh (53.81 per cent), Gujarat (57.00 per cent), Kerala (61.39 per cent), Maharashtra (69.00 per cent) and West Bengal (54.00 per cent) the maximum number of respondents were in the middle age group of 36-55 years. In Delhi (66.00per cent) and Madhya Pradesh (50.00 per cent) the respondents in age group below 35 years dominated. The younger group was involved in fish marketing in both these places, as only respondents belonging to marketing were selected in these two states. The older age group (above 56 years) was comparatively less among the respondents with 8.12 per cent in Andhra Pradesh, 10.00 per

cent in Delhi, 5.00 per cent in Gujarat, 26.73 per cent in Kerala, 6.00 per cent in Maharashtra and 8.00 per cent in West Bengal. The percentage of respondents in old age category is slightly higher in Kerala and Maharashtra where they have been involved in marketing and processing longer than in other states.

Table 8.5: Household particulars of the sample respondents in post- harvest sector –male and female (Number)

States	Households	Male	Female	Total	Male-Female Ratio
Andhra Pradesh	197	290 (48.90)	303 (51.10)	593	0.96
Delhi	50	103 (53.65)	89 (46.35)	192	1.16
Gujarat	100	198 (49.50)	202 (50.50)	400	0.98
Kerala	101	199 (48.54)	211 (51.46)	410	0.94
Madhya Pradesh	50	122 (57.82)	89 (42.18)	211	1.37
Maharashtra	100	229 (51.93)	212 (48.07)	441	1.08
West Bengal	50	124 (53.45)	108 (46.35)	232	1.15
Total	648	1265 (51.03)	1214 (48.97)	2479	0.96

Figures in parenthesis indicate percentage to total

(ii) Family composition

The family composition of the respondents is indicated in Table 8.5. It can be observed from the table that overall; males outnumber the females with the male-female ratio being 1.04. More than males females were seen in Delhi, Madhya Pradesh, Maharashtra and West Bengal with the male - female ratio being 1.16, 1.37, 1.08 and 1.15 respectively (Fig. 8.2). The number of females was more in Andhra Pradesh, Gujarat and Kerala with the male-female ratio being 0.96, 0.98 and 0.94 respectively. The coastal states like Andhra Pradesh, Gujarat and Kerala had more females than males in households, compared to inland states like Delhi and Madhya Pradesh. Among coastal states Maharashtra and Gujarat also had households with more men than women.

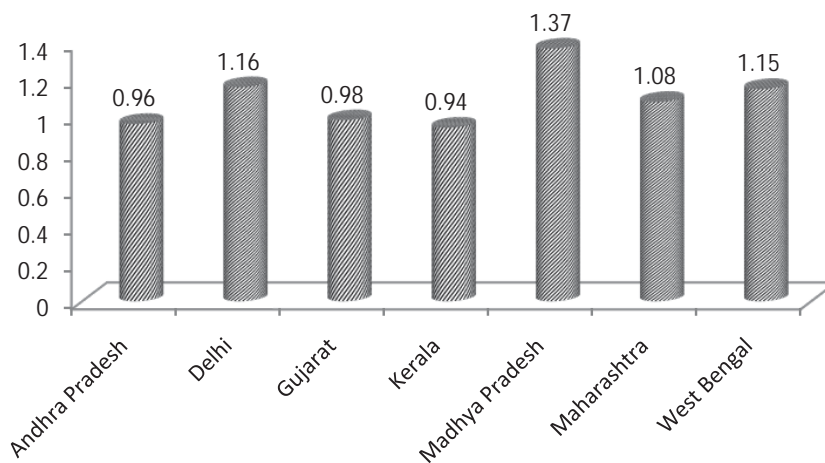


Figure 8.2: Male-female ratio of the respondent households

(iii) Family size

The family size of respondent households is given in Table 8.6. It can be observed that, 64.51 per cent of the families are in the size group 2-4, indicating that the small family norm has been widely adopted in the households engaged in marketing and processing of fish. 29.32 per cent of families fall in the family size group of 5-6 and the rest in the other size groups. In 4.01 per cent of the households there was only one member in the family. The overall average family size was 4.03.

Table 8.6: Family size of the respondent households in post- harvest sector (Number)

States	Family Size					To- tal	Average family size
	1	2-4	5-6	7-10	>10		
Andhra Pradesh	19 (9.64)	15 (80.20)	19 (9.64)	1 (0.51)	0 (0.00)	197	3.01
Delhi	1 (2.00)	32 (64.00)	16 (32.00)	1 (2.00)	0 (0.00)	50	3.84
Gujarat	4 (4.00)	59 (59.00)	36 (36.00)	1 (1.00)	0 (0.00)	100	4.00
Kerala	1 (0.99)	61 (60.40)	36 (35.64)	3 (2.97)	0 (0.00)	101	4.06
Madhya Pradesh	1 (2.00)	31 (62.00)	18 (36.00)	0 (0.00)	0 (0.00)	50	4.22
Maharashtra	0 (0.00)	53 (53.00)	42 (42.00)	5 (5.00)	0 (0.00)	100	4.41
West Bengal	0 (0.00)	24 (48.00)	23 (46.00)	2 (4.00)	1 (2.00)	50	4.64
Total	26 (4.01)	418 (64.51)	190 (29.32)	13 (2.01)	1 (0.15)	648	4.03

Figures in parenthesis indicate percentage to total

In 80.20 per cent households in Andhra Pradesh, 64.00 per cent in Delhi, 59.00 per cent in Gujarat, 60.40 per cent in Kerala, 62.00 per cent in Madhya Pradesh, 53.00 per cent in Maharashtra and 48.00 in West Bengal the family size was 2-4 members. The average family size was 3.01 in Andhra Pradesh, 3.84 in Delhi, 4.00 in Gujarat, 4.06 in Kerala, 4.22 in Madhya Pradesh, 4.41 in Maharashtra and 4.64 in West Bengal (Fig. 8.3)

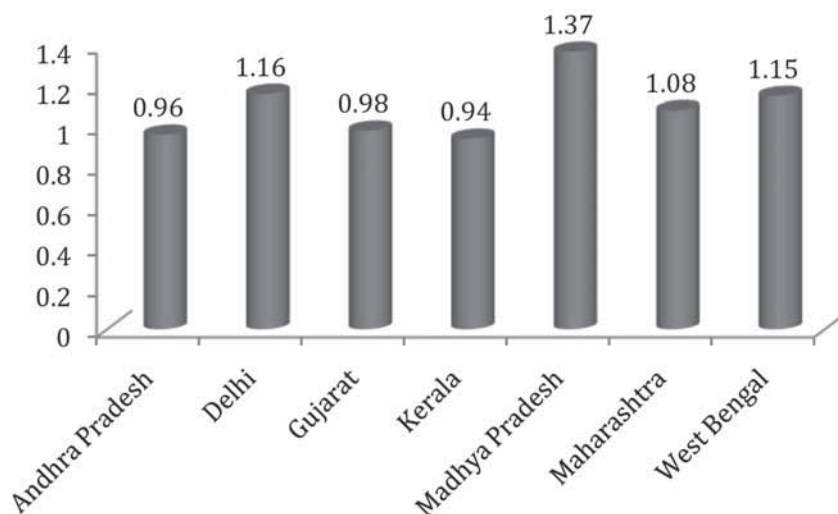


Figure 8.3: Family size of respondent households

(iv) Age composition

The age composition of the respondent households is represented in Table 8.7. The age composition is represented by adults (more than 15 years) and children (less than 15 years). The male- female ratio of the adult group (>15 years) was found to be 1.05:1.00 whereas the same for the children (<15 years) was found to be 1.07:1.00. Adult females in the age group of above 15 year outnumber the males in Gujarat and Kerala, while in all other states the number of females was less than the males. Female children were more than male children in the state of Gujarat.

The percentage of adult male was most in Madhya Pradesh (67.71 per cent) followed by Delhi (54.41 per cent), West Bengal (52.83 per cent) and Andhra Pradesh (50.10 per cent). Females were more in Kerala (51.95 per cent) and Gujarat (50.57 per cent). Male children were more in most states except Gujarat (50.36 per cent) and the male and female children were equal in Andhra Pradesh.

Table 8.7: Age composition of the respondent households in post- harvest sector (Number)

States	Adult (> 15 years)		Children (< 15 years)		Total		Adult-Child Ratio
	Male	Female	Male	Female	Male	Female	
A.P	252 (50.10)	251 (49.90)	45 (50.00)	45 (50.00)	297	296	5.59
Delhi	74 (54.41)	62 (45.59)	29 (51.79)	27 (48.21)	103	89	2.43
Gujarat	130 (49.43)	133 (50.57)	68 (49.64)	69 (50.36)	198	202	1.92
Kerala	160 (48.05)	173 (51.95)	39 (50.65)	38 (49.35)	199	211	4.32
Madhya Pradesh	87 (59.18)	60 (40.82)	35 (54.69)	29 (45.31)	122	89	2.30
Maharashtra	201 (51.67)	188 (48.33)	28 (53.85)	24 (46.15)	229	212	7.48
West Bengal	84 (52.83)	75 (47.17)	40 (54.79)	33 (45.21)	124	108	2.18
Total	904 (51.04)	867 (48.96)	244 (51.26)	232 (48.74)	1148	1099	3.52

Figures in parenthesis indicate percentage to total

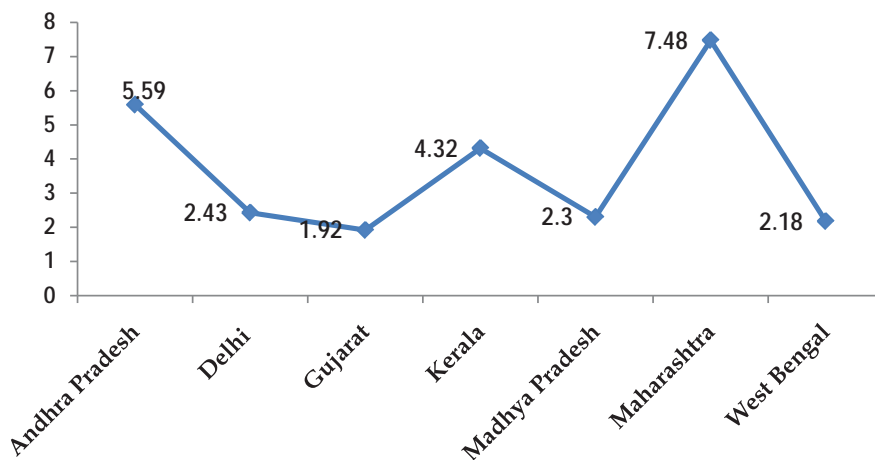


Fig 8.4: Adult – child ratio in respondent households

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The adult-child ratio is given in Fig 8.4. It can be observed that the ratio is highest in Maharashtra (7.48) and least for Gujarat (1.92). For other states it is 4.31 for Kerala, 2.43 for Delhi, 2.30 for Madhya Pradesh and 2.18 for West Bengal.

Table 8.8: Male- Female Ratio

States	Adult (M-F ratio)	Children (M-F ratio)	Male-Female ratio
Andhra Pradesh	1.00	1.00	0.94
Delhi	1.19	1.07	0.98
Gujarat	0.98	0.99	1.08
Kerala	0.92	1.03	1.15
Madhya Pradesh	1.45	1.21	0.96
Maharashtra	1.07	1.17	1.16
West Bengal	1.12	1.21	1.37
Total	1.05	1.07	1.04

The male female ratio among the adult and children is indicated in Table 8.8 and Figure 8.5. It can be noticed that the male – female ratios among the adult and children is favourable to the male in most states like Delhi, Madhya Pradesh, Maharashtra and West Bengal. In Kerala and Gujarat it is favourable to females in adults and in the case of children, it is favourable only in Gujarat.

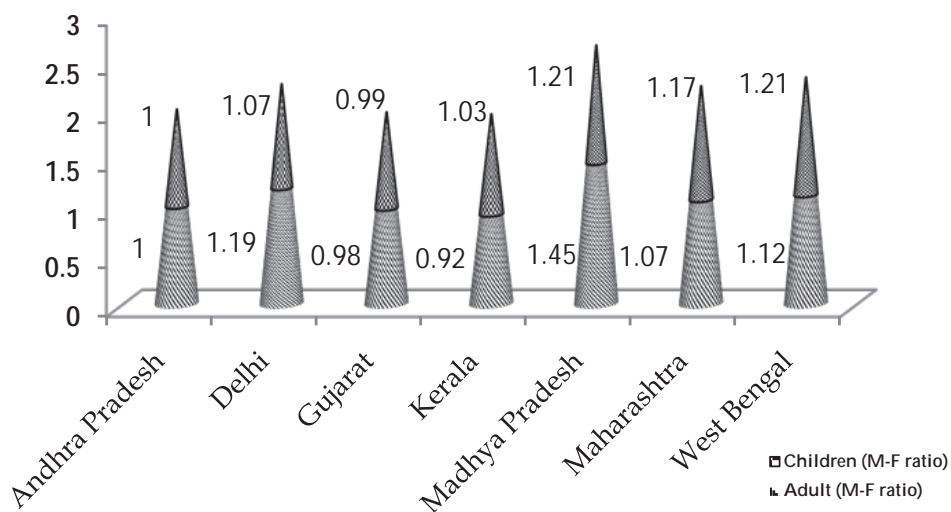


Fig. 8.5: Male-Female ratio among adults and children of respondent households

B. Literacy status

The level of literacy among persons in the allied sectors of fish marketing and processing was studied by assessing the level of literacy among respondents and their access to educational institutions.

(i) Literacy Status

The level of literacy as observed from participation in school and college education is given in Table 8.9. The primary level indicated schooling till fourth grade, secondary level indicated by high school, secondary and vocational education. The collegiate level of education was denoted by collegiate and professional education.

On the whole, 19.35 per cent of the respondents were illiterate, while the rest 80.65 per cent had acquired some form of literacy. The percentage of illiterates was more in Andhra Pradesh (36.26 per cent), followed by Madhya Pradesh (29.17 per cent), Delhi (20.50 per cent), West Bengal (17.65 per cent), Gujarat (15.08 per cent) and least for Kerala (4.19 per cent).

The literacy rate is given in fig 6, and it can be observed that it is highest in Kerala (95.81 per cent) and lowest for Andhra Pradesh (63.74 per cent).

The maximum number of respondents studied upto the secondary level (46.92 per cent) and the rest upto primary (17.65 per cent) level. Only 6.33 per cent of the respondents have gone upto the college level. A maximum of 27.44 per cent of respondents from Maharashtra have gone to college while this percentage is less than 10 in all other states.

In general, persons engaged in marketing and processing have better literacy skills than in other sectors as they deal with consumers and work in processing factories where education is an added advantage to their trade.

Table 8.9: Education of respondent households in post- harvest sector - Continuing and Dropout (Number)

States	Illiterate	Literate	Primary Level	Secondary Level	Collegiate Level	Total	Literacy Rate
Andhra Pradesh	215 (36.26)	378	56 (9.44)	287 (48.40)	35 (5.90)	593	63.74
Delhi	33 (20.50)	128	106 (65.84)	8 (4.97)	14 (8.70)	161	79.50
Gujarat	57 (15.08)	321	131 (34.66)	173 (45.77)	17 (4.50)	378	84.92
Kerala	17 (4.19)	389	97 (23.89)	257 (63.30)	35 (8.62)	406	95.81
Madhya Pradesh	56 (29.17)	136	73 (38.02)	52 (27.08)	11 (5.73)	192	70.83
Maharashtra	45 (10.20)	396	56 (12.70)	219 (49.66)	121 (27.44)	441	89.80

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West Bengal	39 (17.65)	182	39 (17.65)	124 (56.11)	14 (6.33)	221	82.35
Total	462 (19.35)	1930	558 (23.38)	1120 (46.92)	247 (10.35)	2387	80.69

Figures in parenthesis indicate percentage to total

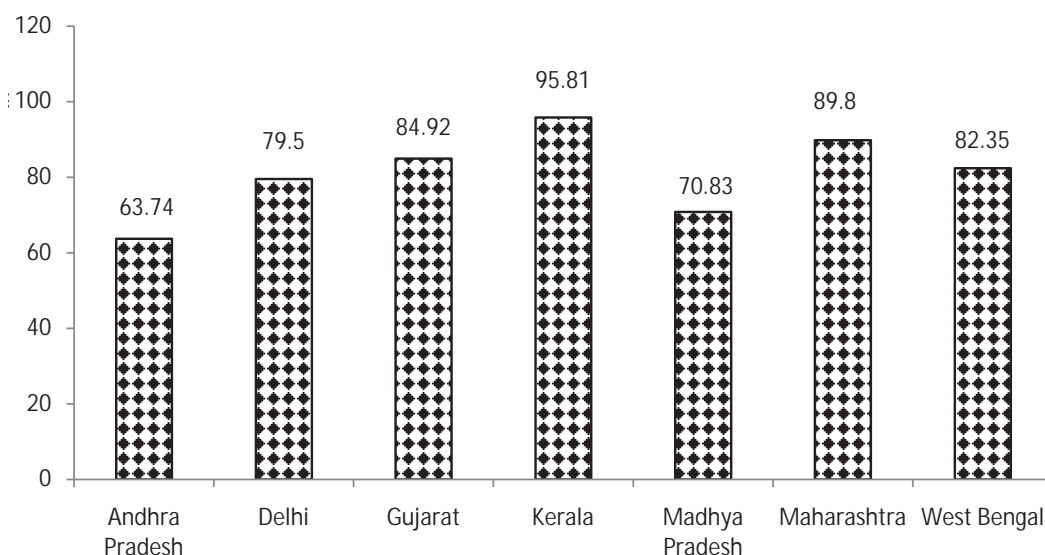


Fig 8.6: Literacy rate of fishers involved in post harvest fisheries sector in states

(ii) Educational status

The information on education of the respondents in terms of continuance and discontinuance of education is given in Table 8.10.

The dropouts were more at secondary level of education with 73.26 per cent ranging from 100 per cent in Delhi and 46.97 per cent in Maharashtra Fig 8.7. The dropout at primary level of education was about 18.25 per cent ranging from 40.86 per cent in Gujarat to 1.52 per cent in Maharashtra. Though the number of collegiate was high in Maharashtra, the drop out rate was also high at 51.52 per cent.

The continuing-drop out ratio was 0.99 on the whole and it was 1.76 for Maharashtra, followed by 0.69 for Gujarat, 0.57 for West Bengal, 0.35 for Madhya Pradesh, 0.34 for Kerala, 0.69 for Gujarat and 0.24 for Delhi (Fig. 8.8).

Maharashtra rated the highest in the schooling rate of children among other states including Kerala where the literacy rates were higher. The demonstration benefit of education is probably a reason for this. Better steps have to be initiated to retain children in school. Initiatives like the mid-day meal are to be made more wide spread.

Table 8.10: Literacy Profile of the respondent families in post- harvest sector (Number)

States	Continuing	Drop outs			Total	Con- tinuing - Drop out ratio
		Primary	Secondary	Collegiate		
Andhra Pradesh	360	NA	NA	NA	NA	-
Delhi	25	0	103 (100.00)	0	103	0.24
Gujarat	64	38 (40.86)	51 (54.84)	4 (4.30)	93	0.69
Kerala	98	64 (21.99)	212 (72.85)	15 (5.15)	291	0.34
Madhya Pradesh	35	39 (38.61)	49 (48.51)	13 (12.87)	101	0.35
Maharashtra	116	1 (1.52)	31 (46.97)	34 (51.52)	66	1.76
West Bengal	71	0 (0.00)	124 (100.00)	0 (0.00)	124	0.57
Total	769	142 (18.25)	570 (73.26)	66 (8.48)	778	0.99

Figures in parenthesis indicate percentage to total

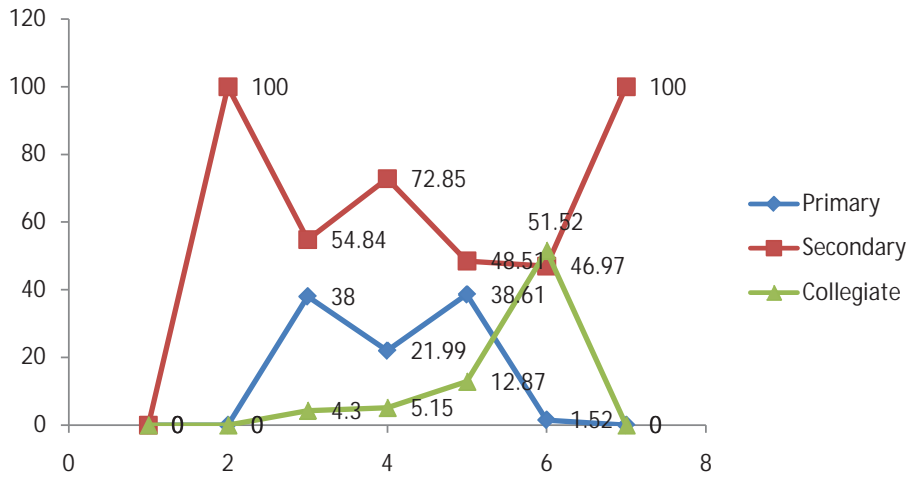


Fig. 8.7: Drop-out at various stages of education among respondents

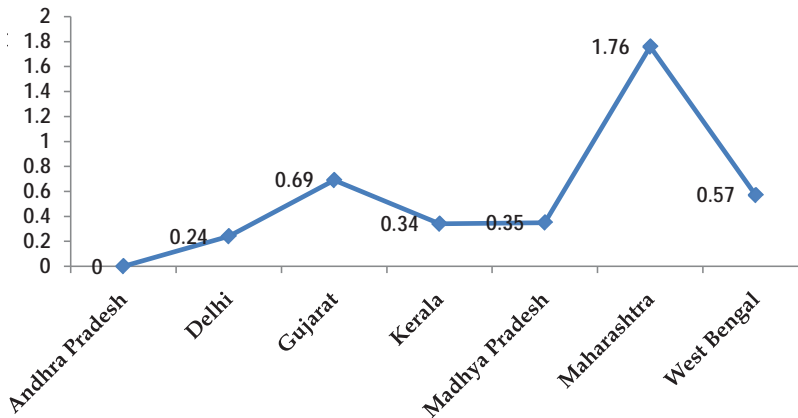


Fig 8. 8: Continuing-drop out ratio among respondents in various states

(iii) Access to educational institutions

Access to education is of primary importance in ensuring a literate population. The access to educational institutions by persons engaged in allied activities like marketing and processing of fish were studied by assessing the distance to educational institution. The average distance to primary school was 1.41 km and to high school was 3.00 km (Table 8. 11). Colleges were available at a distance of 8.73 km and professional colleges at a distance of 11.90 km.

Educational institutions were available within a radius of 6.26 km in all the states studied. In Gujarat the range was 10.42 km, in Kerala 9.995 km, in Delhi 7.42 km, in Andhra Pradesh 4.86 km, in West Bengal 4.64 km, in Maharashtra 4.51 km and in Madhya Pradesh it was 2.03 km. Primary schools were available within a distance of 0.67 km in West Bengal to 2.10 km in Andhra Pradesh, secondary school within a distance of 1.50 km in Madhya Pradesh to 6.61 km in Gujarat, colleges within a distance of 2.60 km in Madhya Pradesh to 15.29 km in Gujarat and professional colleges within a distance of 3.20 km in Madhya Pradesh to 23.14 km in Kerala (Fig. 8.9).

Thus it is clear that the access to education is good for all the families engaged in fish marketing and processing.

Table 8.11: Access to education post-harvest sector (km)

States	Distance to nearby educational institution (in km)				Total
	Primary School	High School	College	Professional	
Andhra Pradesh	2.10	2.70	4.70	9.95	4.86
Delhi	1.20	2.30	11.32	14.86	7.42
Gujarat	1.94	6.61	15.29	17.82	10.42
Kerala	2.11	3.68	10.88	23.14	9.95
Madhya Pradesh	0.80	1.50	2.60	3.20	2.03
Maharashtra	1.07	2.66	9.29	5.00	4.51
West Bengal	0.67	1.52	7.04	9.34	4.64
Average	1.41	3.00	8.73	11.90	6.26

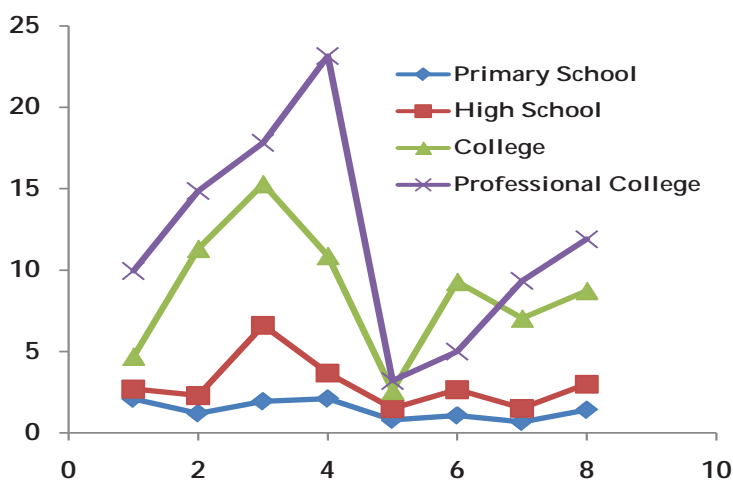


Fig 8.9: Literacy rate of persons involved in post harvest fisheries sector in states

C. Health status of respondent households

Health is another social factor which is very important to ensure the well being of the population. The health status of person engaged in allied post harvest activities in fisheries like marketing and processing was studied through making observations regarding vaccination regime, discontinuation of vaccinations, birth weight of infants, incidence of maternal and child mortality, incidence of common diseases and special ailments including lifestyle diseases. Disease management aspects like access to health care; and problems and suggestions for better health care facilities were also studied.

(i) Vaccination regime of infants / children (less than 15 years)

The average age of administration of vaccination and incidence of discontinuation among infants/children with age less than 15 years in the selected states of India is given in Table 8.12.

The vaccination for Pox, BCG, MMR and Polio were regularly taken by all the families covered under the study. The average age at which the vaccination for pox was given to the child was between 1 day and 5 years for different types of vaccinations. No instance of discontinuation of vaccinations was observed in the states studied. Consistent campaigns by Government regarding the health benefits of vaccinations have had an impact in the community.

Table 8.12. Vaccination regime of infants / children (less than 15 years) – Average age of administration and incidence of discontinuation (Post- harvest)

States	Average age of administration and incidence of discontinuation (percentage)									
	Pox		BCG		MMR		Polio		Others	
	Age	IOD (per cent)	Age	IOD (per cent)	Age	IOD (per cent)	Age	IOD (per cent)	Age	IOD (per cent)
Andhra Pradesh	-	0.00	6 Wks	0.00	9-12 mts	0.00	6 Wks	0.00	9-12 Wks	0.00
Delhi	-	-	-	-	-	-	-	-	-	-
Gujarat	1 day – 5 years	0.00	1 day – 5 years	0.00	1 day – 5 years	0.00	1 day – 5 years	0.00	1 day – 5 years	0.00
Kerala	0.60	0.00	0.30	0.00	0.62	0.00	3.80	0.00	-	-
Madhya Pradesh	1	0.00	1	0.00	1	0.00	Upto 5 yrs	0.00	0	0.00
Maharashtra	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
West Bengal	10 months	0.00	1 Month	0.00	18 month	0.00	Upto 5years	0.00	Nil	0.00
Total	1 day – 5 years	0.00	1 day – 5 years	0.00	1 day – 5 years	0.00	1 day – 5 years	0.00	9 weeks - 5 years	0.00

Normally Polio administration continues till the age of 5 years

(ii) Birth weight of infants

The birth weight of infants in households engaged in post-harvest sector is given in Table 8.13 and Fig 8. 10. The average birth weight of males was 2.77 kg and that of females was 2.58 kg. The birth weight ranges from 2.32 kg in Maharashtra to 3.06 kg in Delhi. In most states the birth weight of male children was higher than that of female children

Table 8.13: Birth weight of infants (Post- harvest)

States	Weight (kg)		
	Male	Female	Total
Andhra Pradesh	3.00	2.50	2.75
Delhi	3.14	2.97	3.06
Gujarat	2.93	2.59	2.76
Kerala	2.89	2.65	2.77
Madhya Pradesh	2.40	2.40	2.40
Maharashtra	2.39	2.26	2.32
West Bengal	2.65	2.71	2.68
Average	2.77	2.58	2.68

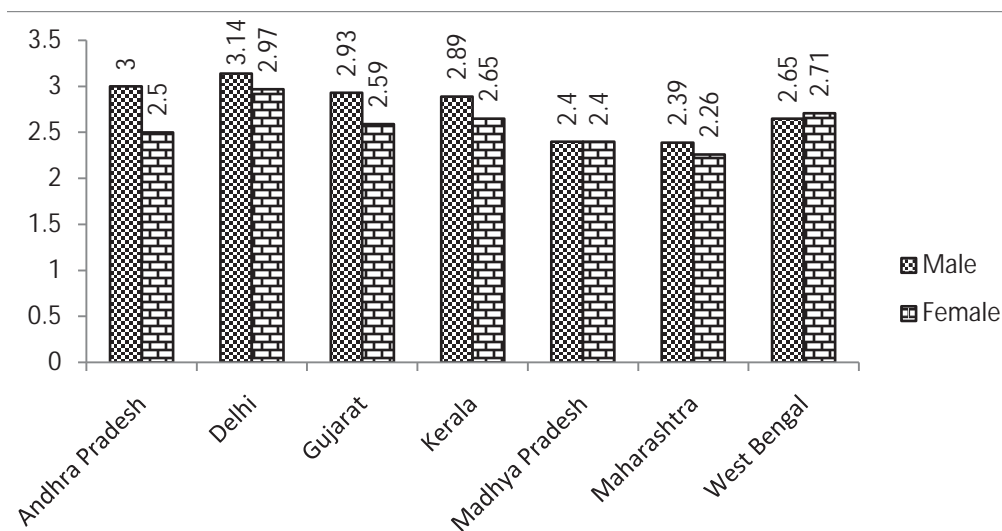


Fig. 8.10: Birth weight of infants of respondent households

(iii) Incidence of mortality among mother/ child during birth

The maternal and child mortality figures are presented in Table 8.14. In all 5 cases of maternal mortality 3 from Delhi and one each from Gujarat and Madhya Pradesh was reported. 10 child mortality cases were also recorded, four in Gujarat, two each in Delhi and Maharashtra and one each in Andhra Pradesh and Madhya Pradesh.

The reasons for maternal mortality were excessive bleeding post-delivery and in the case of children it was jaundice and pre mature delivery.

Table 8.14: Incidence of mortality among mother/child during birth (Number) (Post- harvest)

States	No of delivery	Mortality of mother/ child during birth				
		Mother	Reason	Child	Reason	Total
Andhra Pradesh	NA	0	0	1	Jaundice	1
Delhi		3	-	2	-	5
Gujarat	72	1	Excessive bleeding	4		5
Kerala	9	0	0	0	0	0
Madhya Pradesh		1 (2.00)	Not known	1 (2.00)	Not known	2 (4.00)
Maharashtra	NA	0	0	2	PMD	2
West Bengal		-	-	-	-	-
Total		5	-	10	-	15

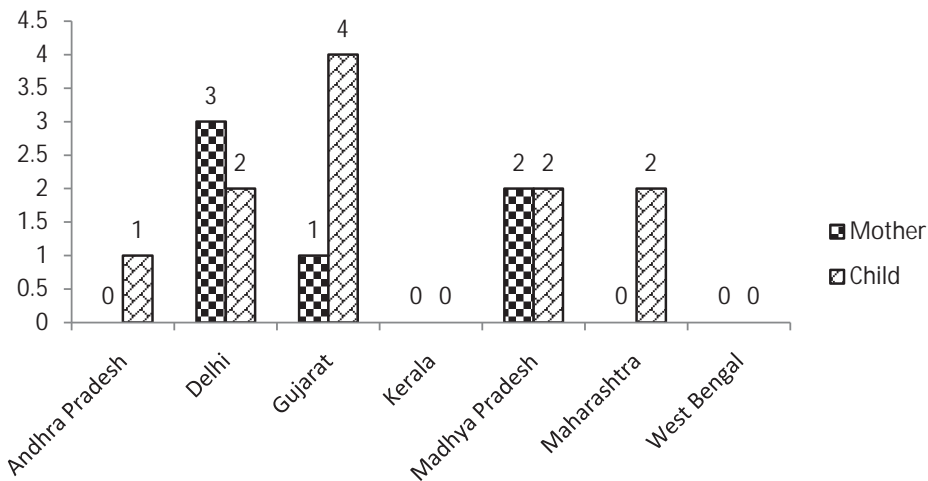


Fig 8.11: Maternal and child mortality cases in respondent households

(iv) Incidence of diseases among adults

The incidence, frequency, and previous occurrence of diseases among the adult family members of the respondents from the post harvest fisheries sector, engaged in allied activities of marketing and processing, across the states are discussed in the Table 8.15 and 8.16.

The average annual frequency was found to be 1.10 and 1.51 respectively for males and females.

The most frequently occurring health problems were fever and body aches. Diarrhoea, gastroenteric disorders were also reported with a frequency of 1.73 and 1.62 for males and 1.63 and 1.13 for females respectively. Reproductive disorders were reported by females with the frequency being 0.71. This could be higher as women usually suppress such information. Skin disorders have occurred to the tune of 1.23 times for men and 1.55 times for women. Skin problems, especially in the hands, are commonly found in seafood processing workers

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due to constant exposure to cold conditions. Special ailments/conditions like cardiac failure, TB, anaemia and others have also been reported.

Across the states, the trends are similar with fever and flu dominating the disease occurrence. Special ailments like cardiac failure and TB was reported from Gujarat, Maharashtra and West Bengal. Anaemia was also reported in Madhya Pradesh besides the above states. Blood Pressure was reported in one case in West Bengal. No cases of AIDS were reported. It is also important to note that no case of diabetes was reported which is a rapidly spreading life style disease in many states.

Previous occurrence of health problems also indicate that the commonly occurring diseases were fever and flu, body aches, diarrhoea, gastro enteric diseases and skin diseases. Occurrence of skin diseases was more with a frequency of 1.94 in males and 2.05 in females. Reproductive disorders were also reported by females.

The frequency of special ailments was 1.00 for cardiac failure in males, 2.73 and 0.54 for males and females for TB and 1.14 and 1.36 for males and females for anaemia.

Table 8.15: Incidence of diseases among adult (Male and Female) - Annual frequency (Post- harvest)

Sl. No.	Diseases	Andhra Pradesh		Delhi		Gujarat		Kerala		Madhya Pradesh		Maharashtra		West Bengal		Total	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
(i) Common Diseases																	
1.	Fever/ Flu	1.67	1.85	2.00	1.75	3.68	3.75	2.52	2.75	3.25	2.75	1.60	1.75	1.45	1.65	2.31	2.32
2.	Body aches	Nil	Nil	Nil	Nil	2.00	2.50	4.15	4.05	Nil	Nil	1.47	1.27	1.50	1.70	2.28	2.38
3.	Diahorrea	Nil	Nil	Nil	Nil	3.45	3.25	Nil	Nil	Nil	Nil	0.75	0.66	1.00	1.00	1.73	1.63
4.	Gastro enteric disease	Nil	Nil	Nil	Nil	0.60	1.00	1.20	0.60	Nil	Nil	0.83	0.66	3.88	2.25	1.62	1.13
5.	Skin disorder	Nil	Nil	Nil	Nil	0.5	Nil	0.60	2.00	Nil	Nil	0.66	1.10	2.00	Nil	1.23	1.55
6.	Reproductive disorder	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.20	Nil	Nil	Nil	0.72	Nil	1.20	0.00	0.71
(ii) Special Ailments																	
7.	Cardiac failure	Nil	Nil	Nil	Nil	1.00	Nil	Nil	Nil	Nil	Nil	0.33	Nil	1.00	Nil	0.77	0.00
8.	TB	Nil	Nil	Nil	Nil	Nil	Nil	0.20	Nil	Nil	Nil	0.33	0.33	1.00	Nil	0.51	0.33
9.	Anaemia	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.20	Nil	Nil	0.66	0.66	Nil	1.17	0.66	0.68
10.	Diabetes	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.00	0.00
11.	Blood Pressure	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	1.00	1.52	1.00	1.52
12.	AIDS	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.00	0.00
13.	Others*	Nil	Nil	Nil	Nil	Nil	Nil	1.40	0.60	Nil	Nil	0.70	0.33	1.42	1.63	1.17	2.56
	Total	1.67	1.85	2.00	1.75	1.87	2.63	1.73	1.49	3.25	2.75	0.78	0.83	1.58	1.52	1.10	1.51

Table 8.16: Incidence of diseases among adult (Male and Female) Previous occurrence

Sl. No.	Diseases	Andhra Pradesh		Delhi		Gujarat		Kerala		Madhya Pradesh		Maharashtra		West Bengal		Total	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
(i) Common Diseases																	
1.	Fever/ Flu	0.96	1.00	1.25	1.50	1.57	1.00	3.03	2.84	1.60	1.60	2.35	3.04	1.90	1.75	1.81	1.82
2.	Body aches	0.03	0.05	0.95	0.86	Nil	Nil	1.95	1.56	3.0	Nil	2.51	2.54	Nil	1.00	1.69	1.20
3.	Diahorrea	Nil	Nil	Nil	Nil	0.58	3.42	0.60	1.20	Nil	1.00	3.00	0.77	1.00	1.00	1.30	1.48
4.	Gastro enteric disease	Nil	Nil	Nil	Nil	0.57	1.50	0.46	0.60	1.2	1.3	1.75	1.83	Nil	1.50	1.00	1.35
5.	Skin disorder	Nil	Nil	Nil	Nil	Nil	Nil	3.15	1.40	1.0	1.0	1.66	3.75	Nil	Nil	1.94	2.05
6.	Reproductive disorder	Nil	Nil	Nil	Nil	Nil	Nil	1.20	Nil	Nil	Nil	Nil	1.16	Nil	Nil	0.00	1.18
(ii) Special Ailments																	
7.	Cardiac failure	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	1.00	Nil	1.66	Nil	Nil	Nil	1.33	0.00
8.	TB	Nil	Nil	Nil	Nil	Nil	Nil	4.80	Nil	1.00	Nil	0.66	0.54	Nil	Nil	2.73	0.54
9.	Anaemia	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.40	1.00	1.00	1.33	2.30	1.10	1.75	1.14	1.36
10.	Diabetes	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.00	0.00
11.	Blood Pressure	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.00	0.00
12.	AIDS	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.00	0.00
13.	Others*	Nil	Nil	Nil	Nil	1.5	Nil	0.60	0.40	1.5	1.8	2.70	0.33	Nil	Nil	1.58	0.84
Total		0.50	0.53	1.10	1.18	0.91	1.97	2.08	1.20	1.41	1.28	1.96	1.99	1.33	1.40	1.12	0.91

(v) Incidence of diseases among children

The previous occurrence of diseases among children is discussed in Table 8.17 and 8.18.

Fever and flu are the most common ailments among children with a frequency of 1.99 for males and 2.08 for females. This was followed by Diaphorrea with incidence reported at 1.05 for males and 0.89 for females. Gastro enteric disorders and skin diseases were also reported. One case of heart ailment, TB and anaemia was reported from Gujarat. Anaemia was also reported from Maharashtra and West Bengal.

Table 8.17: Incidence of diseases among children (Male and Female) - Annual frequency (Post- harvest)

Sl. No.	Diseases	Andhra Pradesh		Delhi		Gujarat		Kerala		Madhya Pradesh		Maharashtra		West Bengal		Total	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
(i) Common Diseases																	
1.	Fever/ Flu	1.81	2.94	1.75	1.62	2.70	2.05	3.27	3.34	1.50	1.50	1.00	1.00	1.90	1.75	1.99	2.03
2.	Body aches	Nil	Nil	Nil	Nil	Nil	0.50	Nil	0.20	Nil	Nil	1.00	0.66	Nil	1.00	1.00	0.59
3.	Diaphorrea	Nil	Nil	Nil	Nil	1.50	1.70	0.20	0.20	1.5	Nil	Nil	0.66	1.00	1.00	1.05	0.89
4.	Gastro enteric disease	Nil	Nil	Nil	Nil	0.60	0.65	Nil	Nil	Nil	Nil	1.33	0.33	Nil	0.33	0.97	0.44
5.	Skin disorder	Nil	Nil	Nil	Nil	Nil	Nil	0.20	0.20	1.00	1.00	0.33	0.33	Nil	Nil	0.67	0.51
6.	Reproductive disorder	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
(ii) Special Ailments																	
7.	Cardiac failure	Nil	Nil	Nil	Nil	0.33	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.33	0.00
8.	TB	Nil	Nil	Nil	Nil	0.33	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.33	0.00
9.	Anaemia	Nil	Nil	Nil	Nil	0.33	Nil	Nil	Nil	Nil	Nil	Nil	1.00	1.00	1.50	0.67	1.25
10.	Diabetes	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
11.	BloodPressure	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
12.	AIDS	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
13.	Others*	Nil	Nil	Nil	Nil	2.33	Nil	Nil	Nil	Nil	1.00	0.33	1.25	2.50	1.25	1.72	1.17
	Total	1.81	2.94	1.75	1.62	1.35	1.23	1.74	0.99	1.33	1.17	0.72	0.75	1.60	1.14	0.90	0.98

(* others include Thyroid, Sinus)

Previous occurrences were also that of the common health problems like fever and flu, diarrhoea, gastro enteric problems and skin disorders.

Table 8.18: Incidence of diseases among children (Male and Female) - Previous occurrence (No. of months) (Post- harvest)

Sl. No.	Diseases	Andhra Pradesh		Delhi		Gujarat		Kerala		Madhya Pradesh		Maharashtra		West Bengal		Total	
		M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
(i) Common Diseases																	
1.	Fever/ Flu	1.60	1.80	1.86	1.90	Nil	Nil	2.32	2.01	3.90	3.70	2.67	2.32	2.26	2.81	2.44	2.42
2.	Body aches	Nil	Nil	Nil	Nil	0.50	Nil	Nil	0.20			1.33	0.50	Nil	0.75	0.92	0.49
3.	Diathorrea	Nil	Nil	Nil	Nil	1.50	2.75	0.20	0.40	1.00	4.00	Nil	1.00	1.50	2.75	1.05	2.18
4.	Gastro enteric disease	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.66	1.22	Nil	1.00	0.66	1.11
5.	Skin disorder	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.40	2.00	2.00	0.33	2.33	Nil	Nil	1.17	1.58
6.	Reproductive disorder	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.66	Nil	Nil	0.00	0.66
(ii) Special Ailments																	
7.	Cardiac failure	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.00	0.00
8.	TB	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.00	0.00
9.	Anaemia	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.00	0.00
10.	Diabetes	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.00	0.00
11.	Blood Pressure	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.00	0.00
12.	AIDS	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	0.00	0.00
13.	Others*	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	4.00	Nil	Nil	Nil	Nil	0.00	4.00
	Total	1.60	1.80	1.86	1.90	1.00	2.75	1.26	0.75	2.30	3.23	1.25	1.34	1.88	1.83	1.04	1.41

(* others include Thyroid, Sinus)

(vi) Access to health care

The access to health care as observed from the distance to nearest primary health centre (PHC) and hospital is given in Table 8.19. Results show that the nearest PHC is at a distance of 2.68 km and the nearest hospital at a distance of 6.63 kms on an average. For different states it was 1.00 km and 2.00 km for Andhra Pradesh, 2.15 km and 1.00 km for Delhi, 5.79 km and 12.59 km for Gujarat, 3.34 km and 11.52 km for Kerala, 2.00 km and 2.80 km for Madhya Pradesh, 1.60 km and 7.71 km for Maharashtra and 2.90 km and 8.82 km for West Bengal (Fig 8.12).

It is important to note that atleast a PHC is available within a distance of 1 to 6 km in all states and the maximum distance to a hospital is around 13 km. Fairly good health care facilities are available to the households engaged in allied fisheries activities like marketing and processing.

Table 8.19: Access to health care - Post-harvest sector (km)

States	Primary Health Centre	Hospital
Andhra Pradesh	1.00	2.00
Delhi	2.15	1.00
Gujarat	5.79	12.59
Kerala	3.34	11.52
Madhya Pradesh	2.00	2.80
Maharashtra	1.60	7.71
West Bengal	2.90	8.82
Total	2.68	6.63

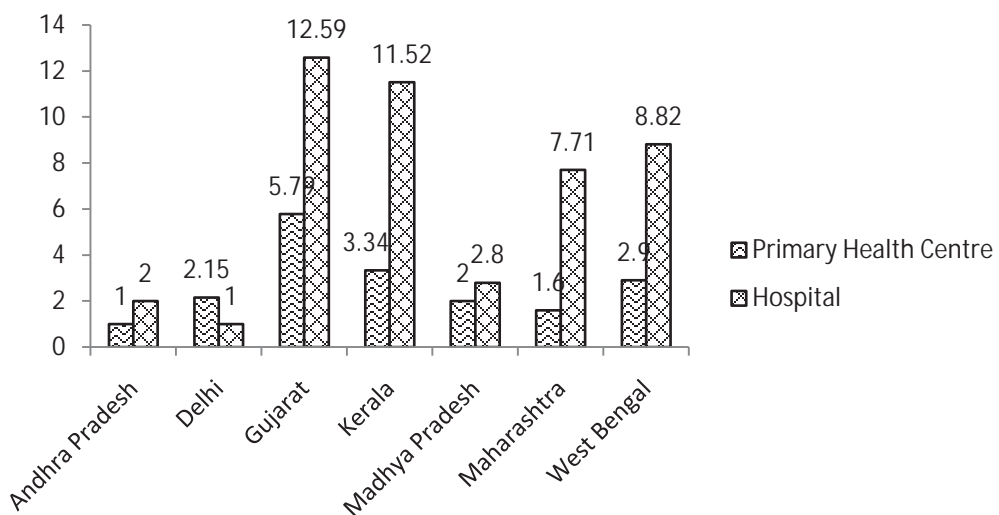


Fig 8.12: Access to nearest PHC/hospital

(vii) Problems in health management

The major problems in health management of respondent households were assessed based on opinions collected from the respondents.

The major reasons suggested include, non-availability of specialist and paramedicines in health centres (26.77 per cent), difficulty in accessing the hospital due to distance (16.67 per cent mainly in Gujarat and Kerala where the distance to hospitals was longer), lack of adequate effective medicines (15.15 per cent), poor infrastructure (10.86 per cent), problems on cleanliness/sanitation (8.59 per cent) and drinking water problem (5.56 per cent) (Table 8.20, Fig.8.13).

Table 8.20. Problems in health management (Frequency) (Post- harvest)

Sl. No	Problems	AP	Delhi	Guj	Ker	MP	Mah	WB	Total	Per cent to total
1.	Difficulty in accessing the hospital due to distance	0	0	27	20	0	4	15	66	16.67
2.	Non availability of specialist and paramedics in health centers	0	0	1	8	50	0	47	106	26.77
3.	Poor infrastructure	0	0	5	28	0	0	10	43	10.86
4.	Lack of adequate effective medicines	0	0	0	18	0	0	42	60	15.15
5.	Problems on Cleanliness/ Sanitation	0	0	0	34	0	0	0	34	8.59
6.	Drinking water problem	1	0	0	21	0	0	0	22	5.56
7.	Work related stress	1	0	0	0	0	0	0	1	0.25
8.	Others	0	0	64	0	0	0	0	64	16.16
9.	Total	2	0	97	129	50	4	114	396	100.00

Non-availability of medicines was the major reason in Madhya Pradesh, while poor infrastructure, lack of effective medicines, lack of cleanliness and sanitation and drinking water issues were the problems highlighted in Kerala.

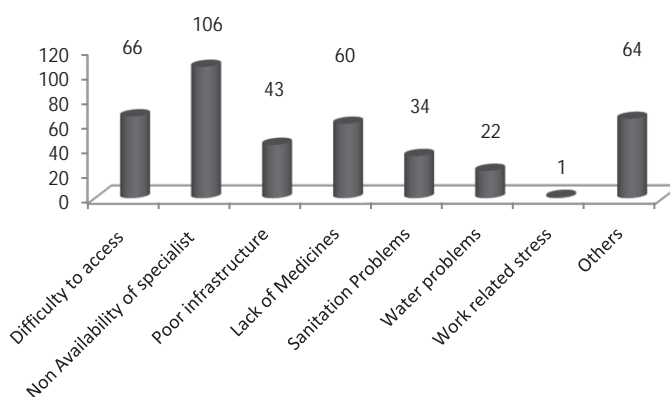


Fig 8.13: Problems in health management of respondents

(viii) Suggestions to improve healthcare facilities

Suggestions on improving health care facilities were obtained from the respondents and are given in Table 8.21 and Figure 8.14.

The most important suggestion was to make available sufficient medicines for all diseases free of cost which was stated by 37.65 per cent of respondents. The next suggestion was to construct modern hospitals with all infrastructural facilities and health care (21.18 per cent) and to provide facilities for doctors in these centres so that they are available round the clock (18.43 per cent). The other suggestions include increasing the number of doctors and specialist (10.59 per cent), drinking water facilities in hospitals (9.80 per cent) and provision of ambulances in case of emergencies (2.35 per cent).

Table 8.21 Suggestions to improve health care facilities (Frequency) (Post- harvest)

Sl. No:	Suggestions	AP	Delhi	Guj	Ker	MP	Mah	WB	Total	Per cent to total
1.	Increase the number of doctors/ specialists	0	0	4	4	0	4	15	27	10.59
2.	Make quarters facility for doctors so that they are available 24 x 7	0	0	0	0	0	0	47	47	18.43
3.	Make available sufficient medicines for all diseases with free of cost	0	0	0	36	50	0	10	96	37.65
4.	Construct the modern hospital with all infrastructure and health care facilities.	0	0	8	4	0	0	42	54	21.18
5.	Provide ambulance for emergency (especially during delivery accidents, etc.)	0	0	0	6	0	0	0	6	2.35
6.	Need good drinking water facility	0	0	0	25	0	0	0	25	9.80
7.	Total	0	0	12	75	50	4	114	255	100.00

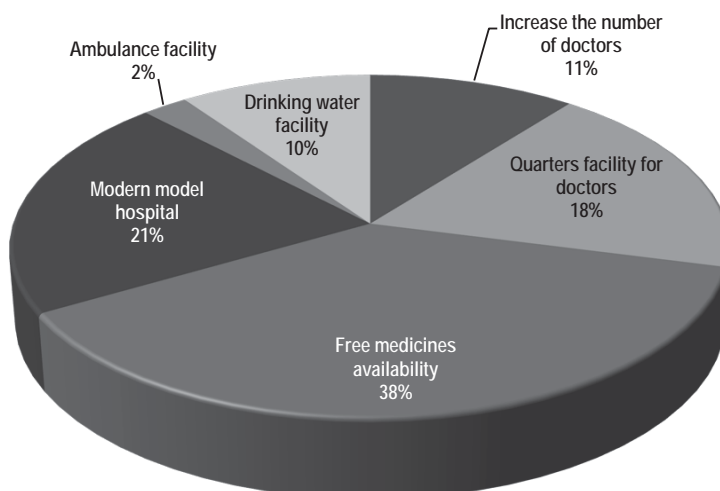


Fig 8.14: Suggestions to improve health care

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The respondents in Kerala and Madhya Pradesh (89.58 per cent) opined that sufficient medicines must be made available in hospitals, while respondents from West Bengal wanted modern hospitals and more number of doctors and specialists.

D. Income status

The income profiling of the respondent households was done by looking at the monthly income patterns of respondent households, their expenditure patterns, savings and indebtedness and credit sources and uses.

(i) Monthly income pattern

The income pattern of the respondent households that are engaged in marketing and processing of fish is given in Table 8.22.

The major income sources were classified into fishery related, labor, agriculture, business and others. The highest monthly average income generated by the total respondents were through fisheries sector with an average amount of Rs. 41057.40 (83.46 per cent of the total income) followed by income from labour sector at Rs. 5071.09 (10.31 per cent), other sectors at Rs. 1587.52 (3.23 per cent), business at Rs.1359.95 (2.76 per cent) and agricultural sector at Rs. 116.16 (0.24 per cent) (Fig. 8.15). The highest monthly income was observed in Maharashtra with 97.45 per cent of total income generated from fisheries alone.

Table 8.22: Income profile of the respondents (Rs./month) (Post-harvest)

States	Enterprise					Total
	Fishery	Labour	Agriculture	Business	Any others	
Andhra Pradesh	2115.15 (82.36)	201.92 (7.86)	0.00 (0.00)	251.15 (9.78)	0.00 (0.00)	2568.22
Delhi	3788.00 (90.45)	400.00 (9.55)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	4188.00
Gujarat	7436.02 (83.57)	1462.39 (16.43)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	8898.41
Kerala	3553.54 (61.76)	862.59 (14.99)	116.16 (2.02)	634.40 (11.02)	587.52 (10.21)	5754.21
Madhya Pradesh	3700.00 (54.06)	2144.19 (31.33)	0.00 (0.00)	0.00 (0.00)	1000.0 (14.61)	6844.19
Maharashtra	18159.44 (97.45)	0.00 (0.00)	0.00 (0.00)	474.40 (2.55)	0.00 (0.00)	18633.84
West Bengal	2305.25 (100.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	2305.25
Total	41057.40 (83.46)	5071.09 (10.31)	116.16 (0.24)	1359.95 (2.76)	1587.52 (3.23)	49192.12

Figures in parenthesis indicate percentage to total

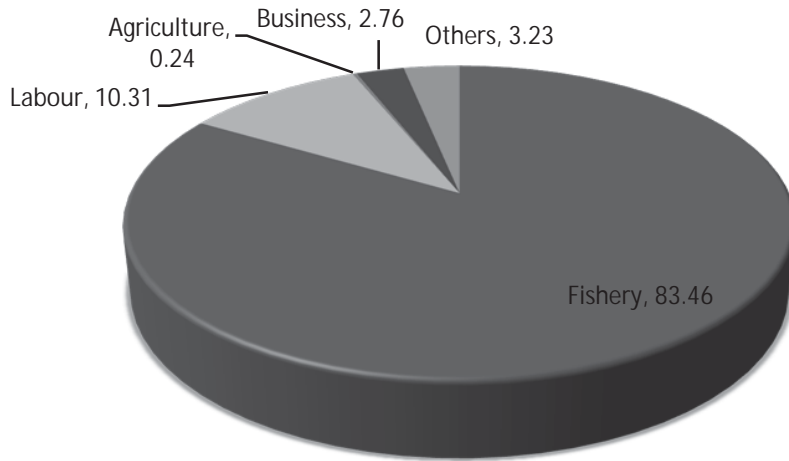


Fig. 8.15: Major sources of income

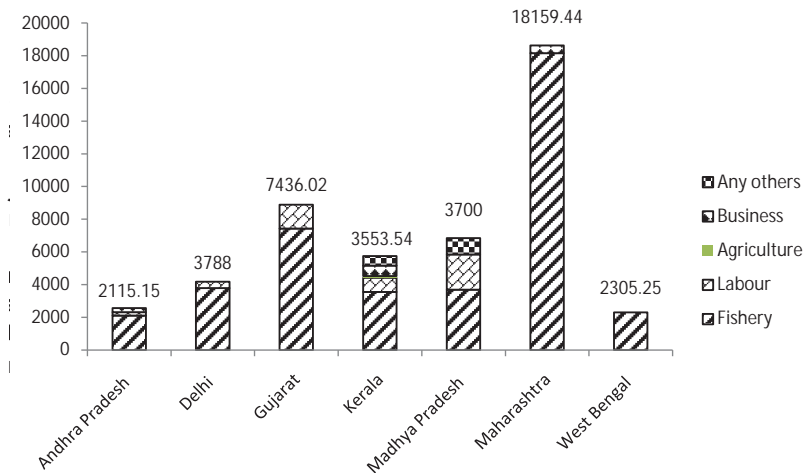


Fig. 8.16: Major sources of income across states

The lowest income in absolute term was registered at West Bengal with Rs. 2305.25. However, the state wise monthly income status of the respondents indicated that West Bengal state has the highest income from fisheries sector which contributed to cent per cent of the total income as the respondents mainly engaged in fisheries activity alone.

(ii) Involvement in non-fisheries activities

The Involvement of respondent' households in non fisheries activities are given in Table 8.23

Business is the most sought after income earning activity for 46.63 per cent of the respondents. 41.83 per cent of the respondents went as labour and 11.54 per cent carried out agriculture and other activities (Fig. 8.17). The major non-fishery related activity was business in Andhra Pradesh (41.24 per cent), Madhya Pradesh (51.55 per cent) and Maharashtra (17.53

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Table 8.23. Respondents involvement in non-fisheries activities (Post- harvest)

States	Respondents involved in non-fisheries activities				Total
	Labour	Agriculture	Business	Any others	
Andhra Pradesh	0	0	40	0	40
Delhi	24	0	0	0	24
Gujarat	17	0	0	0	17
Kerala	46	4	7	20	77
Madhya Pradesh	0	0	50	0	50
Maharashtra	0	0	17	0	17
West Bengal	0	0	0	0	0
Total	87	4	97	20	208

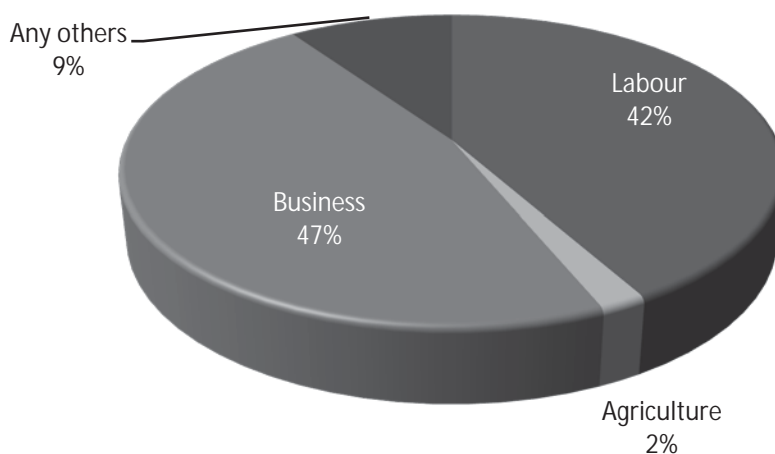


Fig 8.17: Non-fisheries related activities taken up

per cent). While in Delhi, Gujarat and Kerala 27.59, 19.54, 52.87 per cent of persons were engaged in labour respectively (Fig. 8.18). Respondents in West Bengal did not go for any other work except fish marketing. Since the post harvest fishing activities alone are no longer sufficient to support the households, other livelihood options were explored.

(iii) Pattern of expenditure

The major household expenses measured include expenditure on food, clothing, fuel, medical, education, entertainment, personals and durables. The pattern of expenditure of respondent household engaged in marketing and processing of fish is given in Table 8.24.

On an average, 31.41 per cent of the expenditure is still for food in the sample households indicating that the standard of living is still low as a major share of expenditure goes into meeting basic household necessities (Fig. 8.19). 20.39 per cent of expenditure is on durables which is much sought after and 16.31 per cent of expenditure is on clothing. Medical expenses account for 7.23 per cent, entertainment 6.31 per cent and education 6.03 per cent. The personal expenses of respondents accounts for 8.59 per cent.

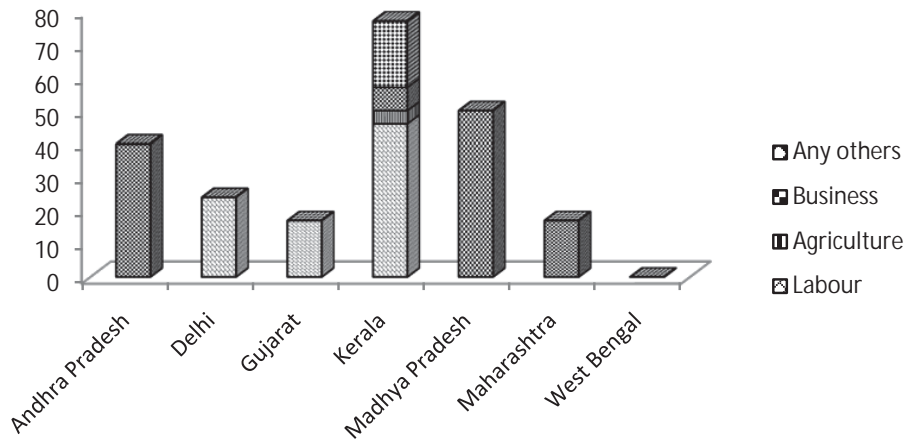


Fig. 8.18: Non-fisheries activity across states

The average amount spent by respondents in most states for food was with the range being 60.30 per cent in West Bengal to 28.75 per cent in Andhra Pradesh (Fig. 8.20). The maximum amount spent for education is in Delhi (10.18 per cent) followed by Kerala (9.44 per cent). Respondents in Gujarat (39.06 per cent) spend maximum on clothing and Delhi (8.01 per cent) and Madhya Pradesh (6.70 per cent) on fuel.

The total expenditure varied from Rs. 849.20 in Madhya Pradesh to Rs. 14424.95 in Maharashtra.

Table 8.24: Pattern of expenditure of the fisher family (monthly) (Post-harvest)

States	Items								Total
	Food	Clothing	Fuel	Medical	Educational	Entertainment	Personal	Durables	
Andhra Pradesh	3004.80 (33.48)	852.88 (9.50)	601.73 (6.70)	601.92 (6.71)	400.00 (4.46)	1603.84 (17.87)	1842.30 (20.53)	67.30 (0.75)	8974.77
Delhi	793 (9.87)	39.05 (0.49)	43.06 (0.54)	46.71 (0.58)	119.00 (1.48)	44.88 (0.56)	283.78 (3.53)	6666.67 (82.96)	8036.13
Gujarat	2724.99 (49.22)	378.72 (6.84)	443.66 (8.01)	796.00 (14.38)	563.71 (10.18)	279.84 (5.05)	349.23 (6.31)	0.00 (0.00)	5536.15
Kerala	1399.85 (28.75)	236.76 (4.86)	160.93 (3.31)	204.14 (4.19)	195.14 (4.01)	182.18 (3.74)	393.58 (8.08)	2095.82 (43.05)	4868.40
Madhya Pradesh	444.00 (52.28)	44.90 (5.29)	50.40 (5.93)	44.50 (5.24)	38.60 (4.55)	106.80 (12.58)	110.60 (13.02)	9.40 (1.11)	849.20
Maharashtra	4492.80 (31.15)	5634.08 (39.06)	273.92 (1.90)	1414.00 (9.80)	1186.40 (8.22)	520.40 (3.61)	621.60 (4.31)	281.75 (1.95)	14424.95
West Bengal	1189.00 (58.42)	108.65 (5.34)	93.59 (4.60)	124.64 (6.12)	192.18 (9.44)	85.82 (4.22)	241.37 (11.86)	0.00 (0.00)	2035.25
Total	14048.44 (31.41)	7295.04 (16.31)	1667.29 (3.73)	3231.91 (7.23)	2695.03 (6.03)	2823.76 (6.31)	3842.46 (8.59)	9120.94 (20.39)	44724.87

Figures in parenthesis indicate percentage to total

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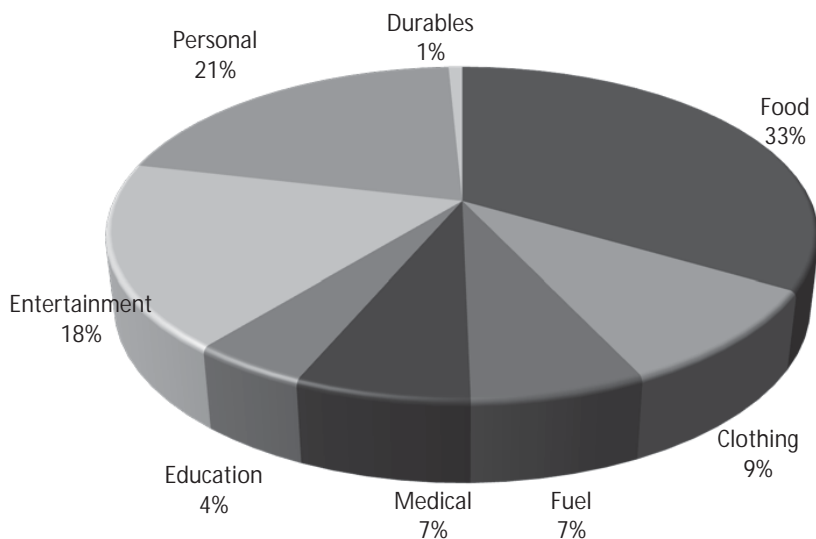


Fig. 8.19: Expenditure pattern of respondent households

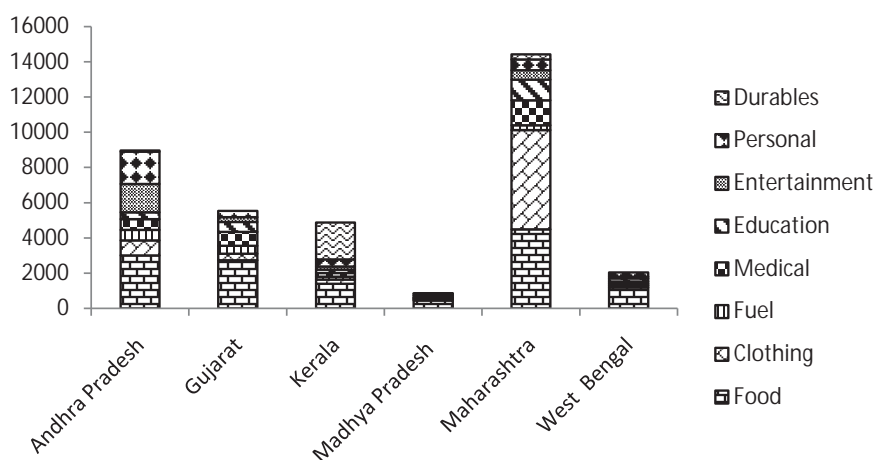


Fig. 8.20: Expenditure pattern across states

(iv) Savings

The savings of the respondent households are indicated in Table 8.25.

It can be observed from the table that 41.45 per cent of the respondents did not have any savings. Most of the respondents had savings of less than Rs. 50000 (47.69 per cent). About 4.23 per cent of respondents had savings ranging from Rs. 50000 to Rs. 100000 and 0.20 per cent had a saving of more than Rs. 100000. 6.44 per cent of the respondents had some savings, the amount was not mentioned.

39.84 per cent of respondents in Andhra Pradesh, 20.32 per cent in Kerala, 20.12 per cent in Maharashtra, 10.06 per cent in Madhya Pradesh, 8.05 per cent in Gujarat and 1.61 per

cent in Delhi had savings (Fig 8.21). In most states the amount was less than Rs. 50000.

Savings pattern of respondents in Delhi was low due to high expenditure.

Table 8.25: Savings details of respondent households (Post- harvest)

States	Frequency of respondents having Savings				Have savings but amount not mentioned	Total
	Nil	< 50 k	50-100.00k	>100.00K		
Andhra Pradesh	99	79	20	0	0	198
Delhi	0	8	0	0	0	8
Gujarat	7	0	1	0	32	40
Kerala	67	33	0	1	0	101
Madhya Pradesh	5	45	0	0	0	50
Maharashtra	28	72	0	0	0	100
West Bengal	0	0	0	0	0	0
Total	206	237	21	1	32	497

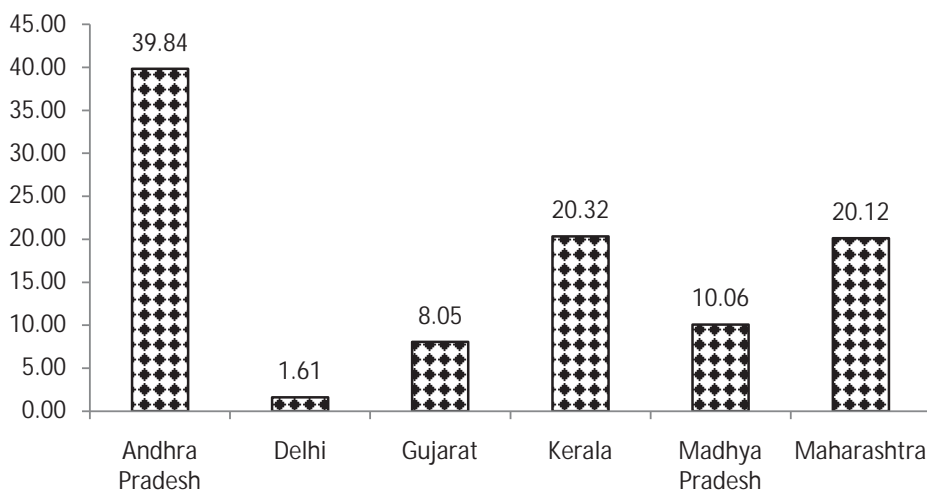


Fig 8.21: Extent of savings in respondent households

(v) Indebtedness of the respondents households

About 41.45 per cent of the households engaged in allied post harvest fisheries activities were not having savings (Table 8.25). It can be seen from table 8.26, that 299 respondent households of the total 648 households had debts (Fig 8.22.). Of the total indebted families, 31.77 per cent were in Andhra Pradesh, 25.42 per cent in Kerala, 15.05 per cent in Madhya Pradesh and 12.37 per cent in Maharashtra. The average amount ranged from Rs. 1, 76,729 in Kerala to Rs. 17,600 in Andhra Pradesh (Fig 8.23). The maximum amount repaid was also in Kerala with Rs. 38308. Except Kerala and Maharashtra, repayment was nil in other states. On the whole the average debt was Rs. 4, 93,425 and the repayment was Rs. 52209.00.

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Table 8.26. Indebtedness of the sample respondents (Post- harvest)

States	Access to Health care (km)		
	Number of persons	Average Amount per person	Average Amount repaid
Andhra Pradesh	95 (31.77)	17600 (3.57)	0 (0.00)
Delhi	20 (6.69)	113833 (23.08)	0 (0.00)
Gujarat	24 (8.03)	41538 (8.42)	0 (0.00)
Kerala	76 (25.42)	176729 (35.83)	38308 (73.37)
Madhya Pradesh	45 (15.05)	580 (0.12)	0 (0.00)
Maharashtra	37 (12.37)	61962 (12.56)	13901 (26.63)
West Bengal	2 (0.67)	81000 (16.42)	0 (0.00)
Total	299	493242	52209

Figures in parenthesis indicate percentage to total

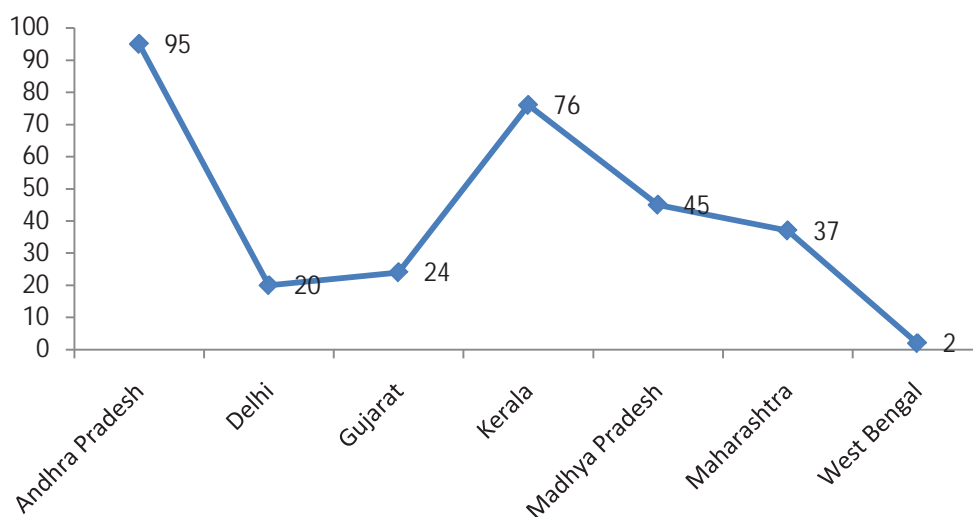


Fig. 8.22: Status of indebtedness

(vi) Sources of lending

While it is clear that most respondents in the post harvest fisheries sector had availed loans, the sources of this credit were also looked into. The lending organizations are given in (Table 8.27).

A total of 346 respondents had availed loans for various purposes. Jewel loans were the most popular source to depend upon for 118 respondents of Andhra Pradesh (34.10 per cent). Friends and relatives and institutional lenders like banks were the next to depend upon with 17.43 per cent each. This is followed by loans from co-operatives (14.45 per cent). Interestingly private money lenders were not seem to be so popular among the respondents in this sector.

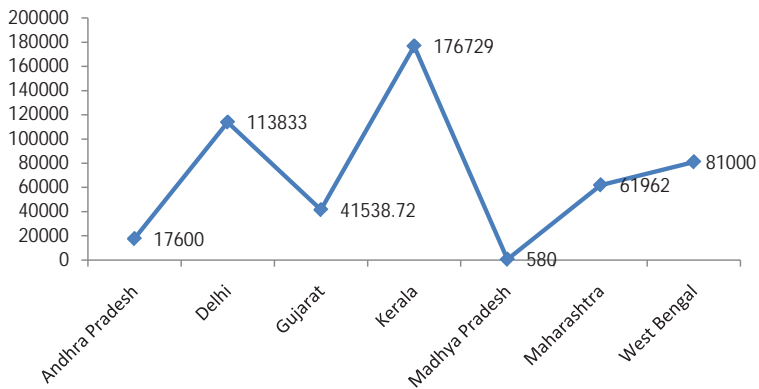


Fig. 8.23: Average debt among respondents across states (Rs)

In Andhra Pradesh as mentioned jewel loans dominated, followed by friends and relatives (12.50 per cent). In Delhi majority availed loans from banks (40.00 per cent). In Kerala major source of loans was co-operatives followed by private money lenders and others (30.00 per cent each). In Gujarat, friends and relatives was the major source (68.75 per cent) followed by other (27.08 per cent). In Kerala loans from co-operatives (53.95 per cent) was dominant followed by private money lenders (23.68 per cent) and banks (22.37 per cent). In Madhya Pradesh, Maharashtra and West Bengal banks were the major sources of loan with 88.86, 48.78, 50.00 per cent of beneficiaries respectively.

Table 8.27 Sources of lending (Number of respondents who had availed(post-harvest)

Sl. No:	Sources	AP	Delhi	GU	RMP	Mah	WB	Total	Per cent to total
1.	Banks	9	4	1	8	20	1	60	17.34
2.	Co-operative	9	0	0	0	0	0	50	14.45
3.	Private money lenders	4	3	1	0	0	0	26	7.51
4.	Friends / Relatives	20	0	33	1	6	0	60	17.34
5.	Jewel loans	118	0	0	0	0	0	118	34.10
6.	Others	0	3	13	0	15	1	32	9.25
7.	Total	160	10	48	9	41	2	346	100.00

(vii) Purpose of availing loans

The details on the purpose of availing loans and number of loans availed by the respondent households are indicated in Table 8.28.

The major purposes of loans availed was for fishery related activity (34.41 per cent) followed by health and social security reasons (28.18) and house construction or purchase of land (15.24). (Fig 8.24).

State-wise comparison of purpose of availing loan indicates that in Andhra Pradesh fishery activity was the main reason, while in Delhi expenditure on education was the important factor (Fig 8.25). In Gujarat, Madhya Pradesh and Maharashtra other issues were dominant, while in Kerala it was for house construction.

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Table 8.28: Purpose of availing loans
(Number of respondents who had availed*) (Post- harvest)

Sl. No:	Purpose	AP	Delhi	Guj	Ker	MP	Mah	WB	Total	Per cent to total
1.	Fishery activity related	128	0	2	10	0	9	0	149	34.41
2.	House construction / Land purchase	8	2	0	48	2	7	1	66	15.24
3.	Marriage expense	32	1	0	11	0	0	0	43	9.93
4.	Education	16	3	0	3	0	0	0	19	4.39
5.	Health and Social Security	96	0	7	5	1	13	0	122	28.18
6.	Any others	0	0	16	0	6	11	1	34	7.85
7.	Total	280	6	25	77	9	40	2	433	100.00

Figures in parenthesis indicate percentage to total

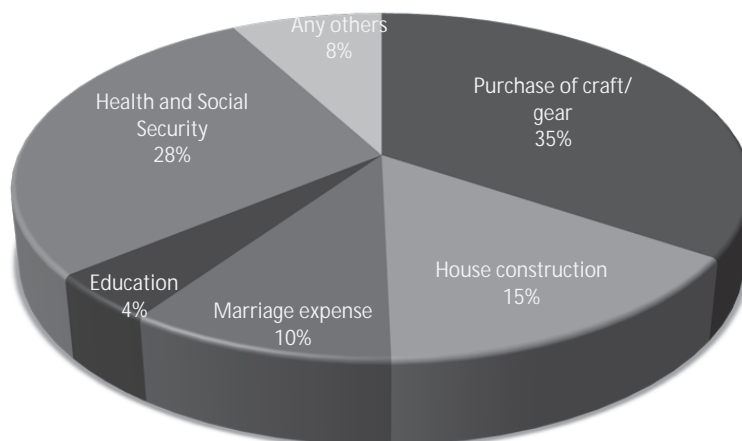


Fig 8.24: Purpose of availing loans

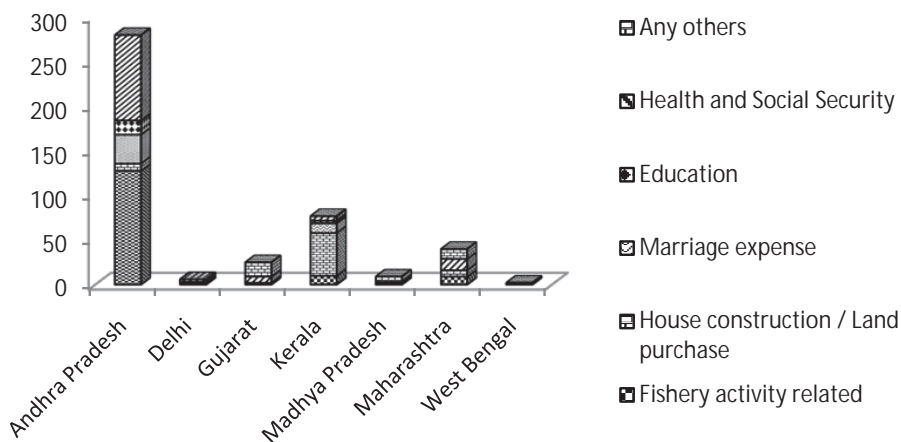


Fig 8.25: Purpose of availing loans across states

(viii) Suggestions to enhance the income and employment generation

The percentage response of the respondents' suggestions for enhancing the income and employment generation by fishermen is indicated in table 8.29.

Regulation of fish marketing through institutional interventions was the major suggestion given by 50 per cent of the respondents owing to the fact that the income of persons involved in allied post harvest fishery activities is greatly affected by intermediaries

Need for arranging institutional financial support like micro credit for fisheries SHGs etc. was suggested by 47.06 per cent of respondents.

Table 8.29: Suggestions for enhancing the income and employment generation by fishermen (percentage response) (Post- harvest)

Sl. No	Suggestions	AP	Delhi	Guj	Ker	MP	Mah	WB	Total
1.	Arranging the institutional financial support like micro credit for fisheries, SHG, etc	0	0	0	28	5	0	15	48
2.	Regulation of fish marketing through institutional interventions	0	0	0	0	1	0	50	51
3.	Vocational training for fisherwomen to undertake house hold income activities during dry/ off season	0	0	0	0	0	0	0	0
4.	Regulation of PDS and supply of the basic food items and fuel (like kerosene, LPG etc) by the Govt. agencies	0	0	0	0	2	0	0	2
5.	Provisional of rural infrastructure for general societal / human development	0	0	0	0	1	0	0	1
6.	Total	0	0	0	28	9	0	65	102

