



Employment Status of Women in the Seafood Processing Sector of Gujarat

P. Jeyanthi^{1*}, Nikita Gopal¹, L. N. Murthy² and V. Geethalakshmi¹

¹ ICAR-Central Institute of Fisheries Technology, P.O. Matsyapuri, Cochin - 682 029, India

² Research Centre of ICAR-Central Institute of Fisheries Technology, Navi Mumbai - 400 703, India

Abstract

More than 75% of the workforce in the seafood processing sector in India are women. This study explored the employment status of women in seafood processing sector in Gujarat, which is one of the largest states in terms of number of seafood processing plants and quantity of seafood exports. The male to female ratio in the industry was 1:1.74 and 1:1.66 in the contractual and permanent employment categories respectively. About 63% of the respondents were under 30 years of age and unmarried. The monthly wages of women workers at the floor level was ₹ 2594/- which is much lower than the minimum wages prescribed by the Gujarat State for unskilled workers which is ₹ 214.90 day⁻¹. It was observed that the major determinants of women's employment in the sector were their educational status and wages. The wage of worker in processing sector showed significant positive relationship with age, education and work experience.

Keywords: Employment pattern, women, seafood processing sector, pre-processing sector

Introduction

Gujarat is an important State involved in seafood processing, with 64 processing units, out of which 34% are EU approved. Gujarat is also the largest seafood exporter both in terms of quantity and value and exported around 2 lakh t, valued ₹ 2150 crores annually. The sector offers very good scope for employment, especially for women. It was observed from past studies that women are the dominant

workforce in the sector with more than 90% in pre-processing centres and 70% in processing units (Beena, 1990; Nikita et al., 2009; Sathyan et al., 2014). They are active in fish handling, weighing, grading, trimming, processing and packing activities and this was observed in most of the countries irrespective of cultural and economic differences (Nishchith, 2000). The skill of the workers was as important as the quality of raw material in the seafood processing and the dexterity shown by women in handling the product was of the main reasons for their predominance in the sector.

Employment of women in seafood processing units was largely contractual and evidence exists that employment conditions were not favourable (Nishchith, 2000). Working environment resulting in occupational allergies and health disorders in workers have also been reported (Jeebhay et al., 2000). This study was undertaken to assess the employment status of women in seafood processing sector in Gujarat.

Materials and Methods

The study was carried out in five EU approved seafood processing plants of Gujarat during 2011. Primary data was collected from the workers involved in processing and pre-processing activities through a structured questionnaire. In all, 148 women respondents working at the floor level, 89 from processing and 59 from pre-processing sector were interviewed. Percentages and averages have been used for analysing the employment status of the workers. Pearson correlation model was used for determining the functional relationship between the socio-economic parameters and work participation (Almazan et al., 2011). The binary logistic regression model was carried out to assess the factors influencing employment (Kouser et al., 2012; Tinashe et al., 2013). The variables; age, education,

Received 29 December 2014; Revised 27 January 2015; Accepted 11 March 2015

* E-mail: tvjeyanthi@gmail.com

family size, work experience, marital status and present wages were taken into account for the analysis. The mathematical derivation of the model is;

$$Z_i = \text{LOG} \left(\frac{P_i}{1 - P_i} \right)$$

$$Z_i = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3 X_3 + \alpha_4 X_4 + \alpha_5 X_5 + \alpha_6 X_6 + \epsilon$$

Where,

Z_i = binary dependent variable (1 = Processing workers and 0 = Pre-processing workers)

X_1 = age of the respondent

X_2 = education status of the respondent

X_3 = marital status of the respondent

X_4 = family size of the respondent

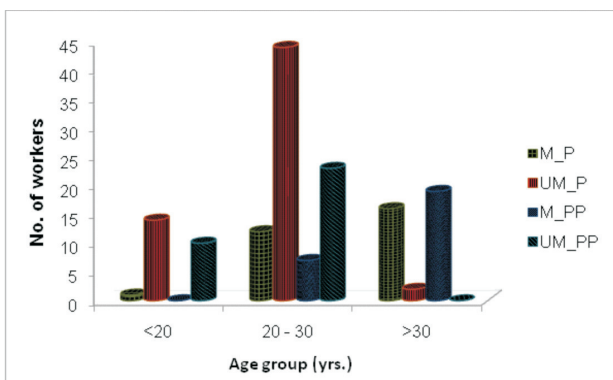
X_5 = work experience of the respondent

X_6 = present wages of the respondent

ϵ = error term

Results and Discussion

Age and marital status relationship revealed that 73.33% of the processing and 69.74% of the pre-processing respondents belonged to the age group of 20–30 years and were unmarried (Fig. 1). A majority of women above 30 years of age in processing (55.17%) and pre-processing sectors



* M_P = Married (Processing); UM_P = Unmarried (Processing); M_PP = Married (Pre-processing) and UM_PP = Unmarried (Pre-processing)

Fig. 1. Age and marital status of women in seafood processing units

(73.08%) were married. It was noticed that majority of the women were from Kerala and were recruited on contractual basis (Dhanya, 2013). Earlier studies have also shown that more than 45% of the women in the seafood processing plants were from Kerala (Nikita et al., 2009). The existence of poverty, indebtedness, high unemployment, increased cost of living and family conditions have forced these women to travel far off places for livelihood. Seafood processing plants prefer mainly young, unmarried and non-locals so that they can spend longer hours at work and are not bogged down by family responsibilities (Saradamoni, 1995; Hisano, 2000; Nikita et al., 2009; Rahman et al., 2010).

The overall literacy rate was high for the respondents in processing (69.66%) and pre-processing (66.10%). Women with high school level of education were 25.84% in processing and 10.17% in pre-processing (Table 1). The illiterate work force was high in pre-processing (33.90%). It was observed that women working at the floor level were also having some minimum level of education. However, this has not proved sufficient for them to bargain for their rights and their employment is still considered to be unskilled and falls in the unorganized sector (Panini, 1999).

Table 1. Educational status of women in seafood processing plants

Education level	Processing		Pre-processing	
	No.	%	No.	%
Illiterate	27	30.34	20	33.90
Primary	10	11.24	17	28.81
Middle school	29	32.58	16	27.12
High school	23	25.84	6	10.17
Total	89	100.00	59	100.00

The pattern of employment in the seafood industry showed that there is an involvement of two women for every men in the seafood industry with the male and female ratio being 1:1.66 in the permanent category and 1:1.74 in the contractual category (Beena, 1990; Saradamoni, 1995; Nishchith, 2000). The rate of participation was more in contractual category with 69.46% of women and 30.54% of men. The average work experience of women in processing and pre-processing sector was 3 and 4 years respectively. More than 25% of the women in processing and pre-processing had only one year of

experience. About 71% in processing and 76% in pre-processing had less than five years of experience. From this, it was evident that there was no job security for the women employed in seafood sector (Samantray & Pathak, 2001).

The daily earnings of women were ₹ 86.82 (\$1.72) for the processing worker and Rs. 82.31 (\$1.63) for the pre-processing worker which was slightly higher than the \$1.25 day⁻¹ prescribed by World Bank as the international poverty line (www.dataworldbank.org). The average monthly income of women in the processing and pre-processing sector was ₹ 2604.57 and ₹ 2469.31 respectively. About 43% of women in processing and 62% in the pre-processing were earning less than ₹ 2500 month⁻¹. These wage rates are much lower than the minimum wages prescribed for seafood industries by the Gujarat State under the Minimum Wages Act, 1948 (GOI, 2013) which is ₹ 214.90 day⁻¹. Panini (1999) found gender inequality in wage rates and also comparatively low wages for women than men. Nishchith (2000) estimated that women were paid 10% less than men engaged in similar jobs. It was observed that 20.22% of processing and 20.33% of pre-processing women have had no increment in their wages. Only 5.62 and 3.37% in processing and pre-processing respectively enjoyed annual increment. There is no specific guideline or law supporting the wage fixation or annual increment in the seafood processing sector (Rahman et al., 2010). Often, the low wages forced the workers to work for over-time and earn additional income.

It was observed that in all the age groups, the percentage contribution to family income was high from illiterate group (Table 2). In the processing and pre-processing sectors, a higher percentage contribution to family income was by women above 30 years (57.56%) and between 20 and 30 years (38.08%) of age group when women are in the productive age-group with families to support. More than 70% of the respondents expressed that there is no scope for skill development through training, as their work is mainly of unskilled and of a routine type at the pre-processing level. Improvement in hygiene and quality was obtained through training of women workers in the seafood processing plants

Table 2. Percentage contribution to family income

Age group	Illiterate	Primary	Middle	High school
Processing workers				
<20	33.97	29.51	32.76	33.78
20-30	39.68	35.60	29.05	28.86
>30	38.79	57.56	37.85	27.34
Pre-processing workers				
<20	42.86	30.06	35.76	29.69
20-30	29.91	28.16	37.84	25.68
>30	38.08	42.50	30.56	19.45
<20	42.86	30.06	35.76	29.69

Table 3. Pearson correlation matrix on wage of workers in the seafood processing sector

Particulars	Age	Marital status	Education	Work experience	Wage advancement
Processing sector					
Age	1.000				
Marital status	-0.342	1.000			
Education	0.640	-0.192	1.000		
Work experience	0.355	-0.178	0.549	1.000	
Wage advancement	-0.119	0.227	0.003	0.126	1.000
Pre-processing sector					
Age	1.000				
Marital status	0.658	1.000			
Education	-0.236	0.125	1.000		
Work experience	-0.378	0.249	-0.217	1.000	
Wage advancement	0.324	0.127	0.025	-0.514	1.000

(Rahman et al., 2010; Dhanya, 2013). A one percent increase in training days would result in three per cent increase in productivity, which ultimately increases the share of overall productivity by 16% (ILO, 2010).

To assess the relation of present wages of women workers with age, education, work experience and marital status, Pearson correlation co-efficient was carried out. The results showed that the present wage was positively correlated with age, education status and work experience, but negatively correlated with marital status. It was observed that education, work experience and wage advancement was positively and highly correlated with the women employment in the processing sector which is negatively correlated with the factors in the pre-processing sector of the seafood processing plants (Table 3).

It was observed from the binary logistic results that employment in seafood processing units was positively influenced by age, education, work experience and present wages and the major determinants of employment were educational status and wages in the processing sector. (Table 4).

Table 4. Factors determining women employment in the seafood processing plants

Variable	Co-efficient	S.E
Constant	-7.923	3.317
Age	0.033	0.040
Educational status	0.576*	0.195
Marital status	-0.461	0.519
Family size	-0.272	0.162
Work experience	0.029	0.067
Present wages	0.004*	0.001

Log likelihood ratio = -85.59*;

McFadden's Rho-Squared = 0.148;

* Significant at 1% level.

The present study examined the status of women employment in the seafood processing units in Gujarat. Due to increase in awareness on hygiene, quality and food safety worldwide, it is important to improve the quality of products exported which is ultimately determined by the women employed in the sector. But, the employment pattern is not entirely favourable because of low wages, wage

discrimination and lack of opportunities for skill enhancement. Provision of skill development combined with proper wage fixation will go a long way in benefiting the industry. Strong legal support and welfare schemes exclusively for women in seafood processing sector will effectively ensure employment security and benefits.

Acknowledgements

The authors express their sincere thanks to the Director, Central Institute of Fisheries Technology, Cochin for support and facilities provided for the study. The authors also gratefully acknowledge the technical support of personnel at Veraval Research Centre of CIFT who were involved in data collection.

References

- Almazan, C.V., Trienekens, J.H. and Bijman, J. (2011) Sustainable contracts in the Bottled Tawilis value chain in Taal, Batangas, Philippines. *Int. J. Food System Dynamics*. 2(4): 420-430
- Beena, D. (1990) Problems of working women in the fish processing industry. In: *Women in Indian Fisheries-Proceedings of the Workshop on Women in Fisheries* (Gadhagar, S.R., Ed), pp 19-20, AFSIB Special Publication.No.8, Asian Fisheries Society, Indian Branch, Mangalore, India
- Dhanya, G. (2013) Status of women employed in seafood pre-processing units of Alapuzha, Kerala. *Fishing Chimes*. 33 (7): 41-45
- Government of India (2013) Report on the Working of The Minimum Wages Act, 1948 for the year 2011. Ministry of Labour and Employment, Labour Bureau. (http://www.labourbureau.nic.in/Min_Wages_Report_2011.pdf) (Accessed on 24 February, 2014)
- Hisano, K. (2000) Globalisation, Sub-contracting Structures in Japan and Women's Working Conditions. *UNEAC Asia Papers No. 3*. 60 p, Kyushu University, Japan
- ILO (2010) A Skilled Workforce for Strong, Sustainable and Balanced Growth: A G20 Training Strategy. 40p. Organisation for Economic Co-operation and Development, International Labour Office, Geneva
- Jeebhay, M.F., Lopata, A.L. and Robins, T.G. (2000) Seafood processing in South Africa: A study of working practices, occupational health services and allergic health problems in the industry. *Occup. Med.* 50(6): 406-413
- Kouser, R., Qureshi, S., Shahzad, F.A. and Hasan, H. (2012) Factors influencing the customer's satisfaction and switching behavior in cellular services of Pakistan. *Int. J. Res. Busi.* 2(1): 15-25

- Nikita, G., Geethalakshmi V., Unnithan, G.R., Murthy L.N. and Jeyanthi, P. (2009) Women in the Seafood Processing Sector in the Post-Globalization Scenario – An Analysis. *www.icsf.net. (E - Publication)*
- Nishchith, V.D. (2000) Role and status of women employed in seafood processing units in India. Proceedings of the International Symposium on Women in Asian Fisheries. pp 127-135. Fifth Asian Fisheries Forum, Asian Fisheries Society, Chiang Mai, Thailand
- Panini, D. (1999) Legal rights of workers in fish processing industries. CEC Working Paper, 44 p, Centre for Education and Communication, New Delhi, India
- Rahman, S.M.A., Hasanuzzaman, M., Azam, M.R., Hossain, M.A. and Mazhabuddin, Kh. (2010) The socio-economic status of women in some selected seafood industries. *Marine. Res. Aqua.* 1(1): 21-29
- Samantray, K. and Pathak, S.C. (2001) An overview of women in the Indian fisheries sector and suggestions for improvement of their socio-economic status. In: International Symposium on Women in Asian Fisheries. 181p, Fifth Asian Fisheries Forum, 13 November, 1998. Chiang Mai, Thailand
- Saradamoni, (1995) Crisis in fishing industry and women's migration: the case of Kerala. In: Women and Seasonal Labour Migration in Rural India (Shenks and bergan, L., Ed) pp 104-105, Indo-Dutch studies on Development Alternatives No. 16. Sage Publications, New Delhi, India
- Sathyan, N., Afsal, V.V. and Thomas, V. (2014) The present status of seafood pre-processing facilities in Kerala with reference to Alleppey district. *Int. J. Res. Fish. Aquacult.* 4(1): 39-46
- Tinashe, M.V., Edward, M.P., Dadirayil, M., Never, M., Godfrey, C., Joseph, M. and Joseph, C. (2013) An analysis of the factors influencing the smallholder communal cotton farmers' decision to adopt contract farming- A case of Zaka district. *Bull. Env. Pharmacol. Life Sci.* 2 (6): 131-134
- World Bank Data, Poverty headcount ratio at \$ 1.25 a day (PPP) (% of population), Available at: <http://data.worldbank.org/indicator/SI.POV.DDAY> (Accessed on 12 March 2015)