



Role Performance of Fisherwomen and the Associated Variables

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The average role performance scores of fisherwomen were found to be 53.08% and 48.03% for two samples studied from Kerala and Tamilnadu. The results have shown that the role performance differs significantly from village to village in both samples. The major roles performed by fisherwomen and the average time spent on these roles were analysed. While pre-processing and fresh fish marketing were the major roles performed by fisherwomen in Kerala, fresh fish marketing and fishing net fabrication were major roles for fisherwomen from Tamilnadu villages. In the regression analyses for the two samples, the R^2 values were found to be 0.3765 and 0.8022 with significant F values.

Key words : Fisherwomen, role performance

Fisherwomen constitute 47 percent of the total adult population in the fishing villages of India (Anon, 1992). Their role performance in various avocations besides household activities would have an import on their standard of living. In order to develop suitable employment opportunities, their role performance has to be evaluated. This article aims to identify the various roles performed by fisherwomen in the fishing villages, find out the variables associated with their role performance and determine their training needs in the various technological areas.

Materials and Methods

The study was conducted in two states viz., Kerala and Tamilnadu. In Kerala, five fishing villages from two districts viz., Ernakulam and Alleppey were selected and from these villages, a total of 135 fisherwomen respondents were randomly selected. In Tamilnadu, data were collected from 72 randomly selected fisherwomen respondents in six selected fishing villages of two districts viz., Madras and Kanyakumari. Structured interview schedules were used for data collection.

In this study, role performance was operationally defined as the extent of performance of various roles by fisherwomen in terms of the frequency of performance in a year through a 4 point rating scale viz., most often, often, sometimes and rarely. The rating scale scores were assigned by taking into consideration the average number of days spent in a year and the approximate number of hours spent in a day towards the performance of a particular role.

The quantitative independent variables were correlated with the role performance indices of fisherwomen and the regression coefficients were calculated. The mean scores of independent variables were compared by using the F tests among the three significant fisherwomen categories viz., women engaged in prawn peeling, women engaged in fresh fish marketing, and women engaged in fish curing and marketing. Training need quotient was calculated for each respondent from their responses over a 4 point rating scale for the subject areas to work out the overall training need quotient.

Table 1. Extent of role performance by fisherwomen in the selected fishing villages

Villages (Kerala)	n ₁ (135)	Role performance scores		No. of roles		Villages (Tamilnadu)	n ₂ (72)	Role performance scores		No. of roles	
		Mean	SD	Mean	SD			Mean	SD	Mean	SD
Kandakkadavu	26	40.70	10.88	1.46	0.50	Singaravelanagar	16	60.41	11.18	2.43	0.62
Puthuvypu	36	57.63	14.27	2.38	0.72	M. Kuppam	12	45.83	16.85	2.16	0.71
Narakkal	14	63.68	18.08	2.35	0.74	D.N. Kuppam	14	47.02	13.32	2.28	0.61
Ezhupunna	44	57.38	15.99	2.20	0.50	Colachel	11	37.87	19.14	1.81	0.75
Eramalloor	15	41.11	9.17	1.60	0.63	Kadiapatnam	11	40.15	11.68	1.81	0.40
						Kanyakumari	8	53.12	23.96	2.00	0.75
Overall score		53.08	16.34	2.05	0.71	Overall score		48.03	17.16	2.12	0.67
	F	11.36**					F	3.65**			

** Significant at 0.01 level of probability

Results and Discussion

The extent of role performance by fisherwomen in the selected villages are given in Table 1. It is seen that the overall role performance scores were 53.08 percent and 48.03 percent for the two samples from Kerala and Tamilnadu respectively. This revealed that the fisherwomen had remained unemployed or underemployed for considerable period in a year and hence, they could further utilise their time to

perform number of related roles such as fishing net fabrication, fresh fish and dry fish marketing, pre-processing and processing of fish, agriculture/aquaculture activities and other small scale enterprises besides their household activities.

It is evident from the mean scores on number of roles and role performance that the performance in any one of the roles or low performance in more number of roles

Table 2. Major roles performed by fisherwomen and time spent on various roles

Major roles performed	No. of respondents	Kerala (n ₁ =135)			No. of respondents	Tamilnadu (n ₂ =72)		
		%	Time spent, h day ⁻¹			%	Time spent, h day ⁻¹	
			Mean	SD			Mean	SD
Fishing net fabrication	4	2.96	4.00	1.41	14	19.45	4.79	1.97
Fresh fish marketing	34	25.19	5.25	1.93	36	50.00	5.89	2.15
Peeling of shrimps	41	30.37	6.61	1.85	0	0	0	0
Pre-processing other than peeling	10	7.41	6.80	1.39	0	0	0	0
Fish drying and sale	15	11.11	6.93	1.98	12	16.67	5.75	2.05
Household activities only	20	14.82	11.10	2.29	5	6.94	8.00	1.41
Backwater fishing	5	3.70	5.20	0.84	0	0	0	0
Agriculture/Aquaculture/others	6	4.44	4.83	3.47	5	6.94	5.20	1.09

would result only in low scores. Here the score can be improved by involving in more number of roles for sufficiently longer period. The F tests showed that the role performance by fisherwomen had differed significantly from village to village for the two samples.

Table 3. Qualitative variables of selected fisherwomen respondents in Kerala and Tamilnadu

Variables	Kerala (n ₁ =135)		Tamilnadu (n ₂ =72)	
	Frequency	%	Frequency	%
Nature of family:				
a) Joint	6	4.44	6	8.33
b) Nuclear	129	95.56	66	91.67
Marital status:				
a) Unmarried	30	22.22	7	9.82
b) Married	105	77.78	62	86.11
c) Widow	0	0	3	4.17
Distance to place of work:				
a) Less than 6 km	95	70.37	66	91.67
b) 6-20 km	17	12.59	0	0
c) Not applicable	23	17.04	6	8.33
Type of house:				
a) Pucca ¹	8	5.93	1	1.39
b) Semi-pucca ³	98	72.59	34	47.22
c) Kutch ²	29	21.48	37	51.39
Special participation:				
a) Member	54	40.00	23	31.94
b) Non-member	81	60.00	49	68.06
Job satisfaction:				
a) Satisfied	100	74.07	34	47.22
b) Not satisfied	35	25.93	38	52.78

1 Pucca - Brick and mortar construction with tile/reinforced roofing

2 Kutch - Thatched roofing with clay/brick/wooden walls

3 Semi-pucca - different combinations of pucca and kutch constructions

Table 2 presents the major roles performed by fisherwomen and the average time spent per day on these roles whenever they were performed as major roles. It is seen from Table 2 that the fisherwomen respondents of the area of

study in Kerala had performed all the eight roles listed and the roles such as peeling of shrimps and pre-processing of fish (37.78%), and fresh fish marketing (25.19%) were performed by more percentage of respondents than the roles such as fish drying and marketing (11.11%), fishing net fabrication (2.96%), backwater fishing (3.70%) and other roles (4.44%).

The fisherwomen respondents of the area of study in Tamilnadu had performed only five roles and the roles such as fresh fish marketing (50%), fishing net fabrication (19.45%), and fish drying and marketing (16.67%) were performed by more percentage of respondents than the roles such as only 'house hold activities' (6.94%) and other roles (6.94%). It is also evident that in both samples only a few (14.82% and 6.94%, respectively) had performed 'household activities alone'. The average number of hours spent per day on each role had varied according to the nature of role, off-seasons in fishing, number of women in the family and availability of infra-structural facilities.

The qualitative variables of the selected fisherwomen respondents are given in Table 3. It is seen that irrespective of the type of work, most of the respondents in both samples had almost similar status conditions on the variables such as type of family, place of work, marital status and type of house. The mean values of the individual oriented variables given in Table 4 also confirmed this similarity. Job satisfaction was more among the respondents from Kerala, probably, due to the differential perceptions on their nature of work.

The correlation coefficients calculated between the selected variables and role performance are given in Table 4. Among the fisherwomen respondents from Kerala,

Table 4. Correlation and regression coefficients of the selected variables of fisherwomen and their role performance

Variables	Kerala (n ₁ =135)					Tamilnadu (n ₂ =72)				
	Mean	SD	r	Partial 'b'	't'	Mean	SD	r	Partial 'b'	't'
Age, years	35.90	11.20	0.22**	0.31	2.38*	34.51	9.57	0.26*	-0.15	1.21
Education, scores	3.74	1.29	-0.07	0.61	0.59	2.55	1.48	-0.27*	-0.17	1.52
No. of employed members	2.60	1.37	0.07	2.80	1.78	2.48	0.90	.00	0.05	0.04
No. of days employed in a year	159.33	101.35	0.46**	0.07	4.44**	171.59	95.19	0.37**	0.09	7.13**
Extent of land owned, cents	7.67	6.21	-0.01	-0.14	0.76	3.52	0.92	-0.25*	-0.27	0.20
Total annual income Rs.	8067.25	3613.38	0.02	-0.00	1.57	7544.44	4880.35	-0.05	.00	1.89
Information sources used, scores	3.70	2.79	-0.11	-0.76	1.58	2.26	0.93	0.12	1.05	0.88
Consultation pattern, scores	5.22	2.01	0.03	1.05	1.67	4.27	0.96	0.09	-0.35	0.33
Time spent on primary occupation, h	5.12	2.86	0.35**	2.89	4.22**	5.19	2.43	0.48**	3.92	7.50**
Time spent on household activities, h	4.26	3.53	-0.23**	1.77	2.89**	3.61	3.04	0.39**	4.59	11.99*
R ₁ ² = 0.3765; F ₁ = 7.490**;						R ₂ ² = 0.8032 F ₂ = 24.898**				
Y ₁ = 4.636 + 0.311x ₁ * + 0.616x ₂ + 2.807x ₃ + 0.0721x ₄ ** - 0.15x ₅ - 0.001x ₆ - 0.765x ₇ + 1.056x ₈ + 2.895x ₉ ** + 1.770x ₁₀ **						Y ₂ = -0.6699 - 0.1515x ₁ - 1.1796x ₂ + 0.0568x ₃ + 0.098x ₄ ** - 0.276x ₅ + 0.0004x ₆ + 1.057x ₇ - 0.353x ₈ + 3.923x ₉ ** + 4.594x ₁₀ **				

* Significant at 5 per cent level; **Significant at 1 per cent level

it is evident that whenever there was increase in the variables such as the age, total number of days employed in a year and time spent on primary occupation, there was also increase in the role performance scores. Only one variable (time spent on household activities) had significant negative correlation with their role performance.

Among the respondents from Tamilnadu, it was seen that aged, married fisherwomen engaged in income generating activities in addition to their household family roles had higher role performance scores than the young and unmarried women. But, the two variables viz., education and extent of land possessed had significant negative correlation with the role performance and so their status perception might have influenced them for the

non-performance of certain roles. Anbarasan (1985) reported that factors such as the age, marital status, education and employment generally influenced the fisherwomen's role and status in the fishing villages of Tamilnadu. Govind *et al.* (1992) reported that the participation of farm women in farm activities had negative correlation with the three variables farm size, annual income and social participation out of the 13 socio-personal variables analysed.

In the regression analyses for the two samples, the R² values were found to be 0.3765 and 0.8032 with significant F values. The prediction equations derived from the analyses are given in Table 4. Both samples confirmed the operational relationship between the significant variables and the role performance. It was seen that only

Table 5. Differential characteristics of fisherwomen primarily engaged in prawn peeling, fish marketing and fish drying in the selected villages of Kerala

Variables	Women engaged in peeling (n ₁ =41)		Women engaged in fish marketing (n ₂ =34)		Women engaged in fish drying (n ₃ =15)		F
	Mean	SD	Mean	SD	Mean	SD	
Age, years	29.53	9.31	42.79	7.91	38.93	10.18	21.23**
Education, scores	3.90	1.17	3.50	1.39	3.93	1.27	1.08
No. of members in the family	5.00	1.64	5.32	1.42	6.80	3.21	4.91**
No. of members employed	2.56	1.11	2.50	1.37	3.26	1.70	1.92
No. of days employed/yr	146.34	62.71	255.14	62.16	183.33	74.51	26.62**
Extent of land owned, cents	8.16	5.02	7.72	5.82	7.15	13.63	0.10
Total annual income, Rs.	7300.00	2777.29	8470.58	3127.44	8953.33	4615.01	1.92
Use of information sources, scores	4.31	2.47	3.02	1.89	3.86	2.19	3.12**
Consultation pattern, scores	5.17	1.77	5.17	2.50	6.06	1.53	1.18
Time spent on primary occupation, h	6.60	1.85	5.25	1.93	6.93	1.98	6.25**
Time spent on household activities, h	3.12	2.07	3.20	1.83	2.60	1.63	0.54
Role performance index	53.04	14.16	61.02	14.75	66.66	8.90	6.48**

* Significant at $p < 0.05$; ** Significant at $p < 0.01$

37.65% variation had been accounted by the selected ten variables among the respondents from Kerala.

The differential characteristics of fisherwomen respondents from Kerala primarily engaged in prawn peeling, fresh fish marketing, and fish drying are given in Table 5. Among the 12 variables, there were significant mean differences between the three categories only on six of the variables viz., age, number of members in the family, number of days employed, information sources used, time spent on primary occupation and role performance. In Table 6 also, the variables such as age,

number of days employed, information sources used, educational status, and role performance were found to have differentiated the three categories of fisherwomen from Tamilnadu.

In both samples, the women engaged in fish marketing were more aged and employed for more number of days than the women in the other two categories. The fisherwomen engaged in fish marketing and fish drying had higher role performance scores in both samples due to their involvement in various activities viz., fish unloading, sorting, weighing, processing, drying, packaging and marketing besides

Table 6. Differential characteristics of Fisherwomen primarily engaged in fresh fish marketing, net fabrication and fish drying in the selected villages of Tamilnadu

Variables	Women engaged in fish marketing (n ₁ =36)		Women engaged net fabrication (n ₂ =14)		Women engaged in fishing drying (n ₃ =12)		F
	Mean	SD	Mean	SED	Mean	SD	
Age, years	38.22	8.65	32.36	7.57	29.58	10.61	5.26**
Education, scores	1.83	3.64	1.39	3.17	1.47	13.03**	
No. of employed numbers	2.56	0.81	2.21	0.80	2.92	1.16	2.04
No. of days employed yr ⁻¹	230.00	56.83	88.21	28.46	130.83	51.07	45.89**
Extent of land owned, cents	3.36	0.93	3.50	0.85	3.33	0.49	0.24
Use of information sources, scores	2.31	0.79	1.50	0.52	2.42	0.99	6.25**
Consultation pattern, scores	4.25	0.91	4.29	1.44	4.17	0.72	0.05
Time spent on primary occupation, h	5.89	2.15	4.79	1.97	5.75	2.05	1.43
Time spent on household activities, h	2.92	2.39	4.78	3.58	3.00	2.95	2.36
Role performance index	54.16	15.75	37.50	16.26	42.36	16.07	6.49**

** Significant at p < 0.01 level of probability

their household roles. Edeltraud (1982) also reported that fisherwomen engaged in fish marketing could make decisions independently and played a more important

economic role in the fishing villages of Tamilnadu due to their involvement in the small scale shore-based fishery activities.

Table 7. Training needs of fisherwomen on the various subject areas

Subject areas	Respondents who needed training*				Subject areas	Respondents who needed training*			
	Kerala (n ₁ =135)		Tamilnadu (n ₂ =72)			Kerala (n ₁ =135)		Tamilnadu (n ₂ =72)	
	Frequency	%	Frequency	%		Frequency	%	Frequency	%
Fabrication of fishing gears	39	28.88	31	43.06	Quality control aspects	14	10.37	5	6.94
Processing of sea foods	34	25.18	0	0	Handling and transportation of fish	9	6.66	23	31.94
Pre-processing of seafoods	30	22.22	0	0	Health and family Welfare	8	5.92	7	9.72
Production of fishery byproducts	29	21.48	49	68.06	Food nutrition and hygiene	7	5.18	1	1.39
Fish curing technology	19	14.07	44	61.11	Fish/prawn culture	5	3.70	3	4.17

Overall training need quotient (n₁=135) = 11.55; (n₂=72) = 18.33, * Multiple responses

The training needs of fisherwomen in the various subject areas are given in Table 7. It is seen that the percentage of respondents who need training in the various subjects and the overall quotient scores were low. This could be attributed to the differential perceptions on the availability of infrastructural facilities in the particular villages, skills involved, nature of training facilities available at various institutions and to the individuals' socio-economic conditions.

Hence, to improve the role performance and the related socio-economic conditions of fisherwomen, there is ample scope for the various developmental agencies to provide the organisational support and assistance suited to the specific villages. In addition to the various shore-based fishery activities, fisherwomen may have to diversify their income generating activities.

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References

- Anbarasan Karuna (1985) *Factors that influence the role and status of fisherwomen*. BOBP/WP/33, Madras, India
- Anon (1992) *Fishing Chimes*, II, 10, p. 8
- Edeltraud, D. (1982) *Three fishing villages in Tamilnadu - A socio-economic study with special reference to the role and status of women*. BOBP/WP/14, Bay of Bengal Programme, Madras, India
- Govind, Santha Subramanyan, V.S. & Alagesan, V. (1992) *Tamilnadu Journal of Extn. Education*, 3, 406