

Analysis of Key communicators and Non-key Communicators among Fishermen

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Key communicators in two fishing villages of Orissa coast were identified using the socio-metric technique. The results revealed that in Pentakota, there were significant differences between the key communicators and nonkey communicators on the variables such as Socio-economic status, information need, attitude towards motorisation cosmopoliteness and technological adoption whereas in another village, there were no significant differences in variables of crafts, other than risk preference and information need. Further, the socio-economic status variable was evaluated among these fishermen in terms of its components. In the regression analysis calculated between the key communicators' choice scores and their independent variables, the R^2 was found to be 0.4082 and non-significant.

Key words: Key communicators, sociometric technique, socio-economic status index.

Key communicators among fishermen are the local influentials without any formal positions in social organisations who informally influence the activities of fellow fishermen. Due to their homophilous communication and interactions with other fishermen, they would have to be involved in extension work for bringing about change and faster diffusion of technological innovations. In view of the emerging communication pattern in the traditional and modern societies, a research study was undertaken to find out the differential characteristics of key communicators and non-key communicators in the fishing villages and to determine the extent of relationship between the choice scores received by the key communicators and their selected independent variables.

Materials and Methods

For this study, two hamlets in the fishing villages of Pentakota and

Balinoliasahi were selected in Orissa state. Though both hamlets are near to Puri town (less than 4 km), FRP beach landing crafts were more predominantly operated in Pentakota than in Balinoliasahi where the non-motorised Catamarans were more predominant.

In order to identify the key communicators, the sociometric technique (Moreno, 1953) was used. A random sample of 68 heads of fishermen households in Pentakota and 54 in Balinoliasahi were contacted. Separate questionnaires were used among the respondents to get the first three choices of persons, in the order of preference, with whom, they would consult on the various subject areas of fishery technology. Based on the individual choice scores received and the mean choice scores calculated, 35 key communicators in Pentakota and 9 in Balinoliasahi were identified.

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For measuring the socio-economic status of respondents, the Socio-Economic Status Index (SESI) consisting of 20 components developed in the study and reported earlier by Bankey Bihari et al. (1995) was used. For measuring the attitude of fishermen towards motorization of traditional crafts, an attitude scale was developed based on the equal appearing interval method (Thurstone & Chave, 1929) with slight modifications in the final rating as given in Edwards (1969). The reliability of the scale was determined by test-retest method as given in Guilford (1984) and the validity of the scale was ensured by content validity.

Independent variables such as risk preference, information need, credit orientation, cosmopolitaness-localiteness, technological adoption and sources of information were measured through

different rating scales and then, corresponding index scores were calculated. Knowledge about technological practices was measured through 'teacher test' developed for the purpose. Interview schedules were used for collecting the data from 35 key communicators identified and 33 non-key communicators among the selected respondents in Pentakota. Similarly in Balinoliasahi, data were collected from 9 key communicators and 45 non-key communicators.

Results and Discussion

The mean and standard deviation of selected variables of key communicators and non-key communicators in Pentakota are given in Table 1. The 't' values revealed that there were no significant differences between the two categories of the variables such as age, number of fishing days in a year,

Table 1. Variables of Key communicators and Non-key communicators in Pentakota

Variables	Key communicators ($n_1 = 35$)		Non-key communicators ($n_2 = 33$)		t
	X_1	SD	X_2	SD	
Age (Yrs)	47.57	8.93	43.06	10.46	1.91
No. of fishing days in a year	264.85	35.09	265.15	30.01	0.03
No. of family members	9.62	3.01	9.66	7.79	0.02
Socio-economic status (Index)	61.75	6.88	56.74	9.12	2.56*
Risk Preference (Index)	62.28	11.33	60.53	12.91	0.59
Information need (Index)	54.79	14.74	41.71	13.46	3.81**
Attitude towards motorisation of crafts (Index)	76.17	7.41	72.24	3.86	2.71**
Credit utilisation (Index)	83.48	6.24	86.52	6.06	2.03*
Cosmopolitaness (Index)	51.80	22.92	70.44	32.49	2.74**
Knowledge on fishery technological practices (Index)	80.28	10.65	83.63	6.28	1.56
Technological adoption (Index)	74.85	12.21	63.03	18.11	3.17**

* Significant at 5 percent level ** Significant at 1 percent level

number of family members, risk preference and knowledge in fishery technological practices. But, there were significant differences between them on the variables such as socio-economic status (61.75 & 56.74), cosmo-politeness information need (54.79 & 41.71), attitude towards motorisation of crafts (76.17 & 72.24), credit utilisation (83.48 & 86.52), localiteness (51.80 & 70.44) and technological adoption (74.85 & 63.03).

In Balinoliasahi, except for risk preference and information need, there were no significant differences between the key communicators and non-key communicators as seen in Table 2. Here, the differences between key communicators and non-key communicators were less as compared with Pentakota. In view of less differences, homophilous communication pattern might be

applicable more in Balinoliasahi than in Pentakota.

Eventhough homophilous communication facilitates effective interpersonal communication (Rogers & Shoemaker, 1971), to improve technological adoption in Balinoliasahi ($X_1 = 53.33$ & $X_2 = 42.66$), variables which can be manipulated like credit utilisation, information need perception and socio-economic status have to be further strengthened.

The results also revealed that the percentage of key communicators identified to the number of respondents contacted was higher in Pentakota (51.47%) than in Balinoliasahi (16.66%) and this could be attributed to its progressiveness. Between the key communicators in two hamlets, key communicators in Pentakota had higher

Table 2. Variables of Key communicators and Non-key communicators in Balinoliasahi

Variables	Key communicators ($n_1 = 9$)		Non-Key communicators ($n_2 = 45$)		t
	X_1	SD	X_2	SD	
Age (Yrs)	47.33	11.40	43.20	13.66	0.84
No. of fishing days in a year	313.33	29.58	324.44	16.45	1.59
No. of family Members	7.11	1.45	6.68	2.33	0.52
Socio-economic status (Index)	45.97	4.18	47.89	6.03	0.90
Risk preference (Index)	75.83	9.51	81.11	4.87	2.47*
Information need (Index)	55.55	8.70	49.93	5.17	2.62*
Attitude towards motorisation of crafts (Index)	83.55	5.89	81.64	6.75	0.78
Credit utilisation (Index)	25.92	38.88	8.64	24.71	1.72
Cosmopoliteness-localiteness (Index)	88.88	4.71	82.95	19.04	0.92
Knowledge on fishery technological practices (Index)	72.22	5.22	72.22	4.46	0
Technological adoption (Index)	53.33	10.00	42.66	16.29	1.88

* Significant at 5 percent level; **Significant at 1 percent level

mean scores than key communicators in Balinoliasahi on variables such as socio-economic status (61.75 & 45.97), credit utilisation (83.48 & 25.92), knowledge on technological practices (80.28 & 72.22) and technological adoption (74.85 & 53.33). Hence, for extension oriented technological assistance, Balinoliasahi needed more attention than Pentakota. Information need perception has to be improved in both centres so as to utilise

the key communicators further for dissemination of information and motivation of others.

The individual socio-economic status components of key communicators and non-key communicators in Pentakota are given in Table 3.

It is seen that there were no significant differences between the key

Table 3. Mean scores on various socio-economic status (SES) components of Key communicators and Non-Key communicators in Pentakota

SES components	Weight assigned	Key Communicators (n ₁ = 35)		Non-Key communicators (n ₂ = 33)		t
		X ₁	SD	X ₂	SD	
PERSONAL FACTORS						
Experience	15	10.57	3.38	11.06	2.99	0.63
Education	6	0.55	0.96	0.27	0.79	1.32
Subsidiary occupation	4	-	-	-	-	-
Marital status	2	2.00	0.00	2.00	-	-
Information sources used	3	2.68	0.52	2.51	0.75	1.08
Type of personality	3	1.88	0.32	1.69	0.46	1.95
Peer group communication	3	2.48	0.65	2.24	0.70	1.46
SOCIAL FACTORS						
Type of family	3	2.22	0.76	2.09	0.74	0.75
Caste	3	2.00	-	2.00	-	-
Social participation	4	0.94	0.23	0.81	0.39	1.60
Social group affiliation	4	3.34	0.63	2.96	0.58	2.50*
Adherence of social values & laws	3	2.71	0.51	2.39	0.74	2.06*
ECONOMIC FACTORS						
Crew engaged	4	1.02	0.16	1.12	0.52	0.95
Land owned	5	1.00	-	1.00	-	-
House owned	5	1.00	-	1.06	0.34	1.03
Material possession	5	2.17	1.09	1.18	0.63	4.51**
Investment on craft	8	7.65	1.13	7.39	1.45	0.83
Investment on nets	7	6.70	0.98	6.46	1.02	0.97
Investment on engine	6	5.25	0.98	4.66	1.38	2.04*
Annual income	7	5.51	1.50	3.84	1.92	3.99**
Socio economic status index	100	61.75	6.88	56.74	9.12	2.56*

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

communicators and non-key communicators on the components categorised under personal factors. However, on social and economic factors, the components such as social group affiliation, adherence of social values and laws, material possession, investment on

engine, and annual income were found to have significant mean differences between the key communicators and non-key communicators. On all these five components, the key communicators were found to have higher mean scores than the non-key communicators.

Table 4. Mean scores on various socio-economic status (SES) components of Key communicators and Non-key communicators in Balinoliasahi

SES components	Weight assigned	Key communicators (n ₁ = 9)		Non-Key communicators (n ₂ = 45)		t
		X ₁	SD	X ₂	SD	
PERSONAL FACTORS						
Experience	15	10.00	2.50	10.22	3.98	0.16
Education	6	0.83	1.08	1.00	1.35	0.34
Subsidiary occupation	4	-	-	-	-	-
Marital status	2	2.00	-	2.00	-	-
Information sources used	3	1.44	0.52	1.40	0.49	0.24
Type of personality	3	1.88	0.33	1.95	0.29	0.60
Peer group communication	3	2.11	0.60	1.95	0.29	1.17
SOCIAL FACTORS						
Type of family	3	2.00	0.75	2.46	0.72	1.75
Caste	3	1.88	0.33	1.57	0.49	1.78
Social participation	4	-	-	-	-	-
Social group affiliation	4	3.11	0.60	2.95	0.29	1.17
Adherence of social values & laws	3	2.55	0.52	2.86	0.34	2.25*
ECONOMIC FACTORS						
Crew engaged	4	1.00	-	1.00	-	-
Land owned	5	1.00	-	1.00	-	-
House owned	5	1.22	0.66	1.31	1.04	0.24
Material possession	5	2.44	0.88	2.11	1.22	0.77
Investment on craft	8	2.00	-	4.22	0.76	8.61**
Investment on nets	7	3.69	0.58	4.12	0.92	1.32
Investment on engine	6	2.00	-	2.00	-	-
Annual income	7	2.77	1.30	3.86	2.08	1.50
Socio economic status index	100	45.97	4.18	48.03	6.04	0.97

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

But, in Balinoliasahi, of the 20 components listed in Table 4, there were significant differences between the key communicators and non-key communicators on only two components such as adherence of social values and laws, and investment on craft. On both these components, key communicators, had less mean scores than the non-key communicators. Thus, the percentage of key communicators to the number of fishermen contacted in Balinoliasahi was found to be less (16.66%) and one of the reasons might be their homophilous communication pattern due to less socio-economic status differences between the key communicators and non-key communicators.

Table 5 presents the correlation and regression coefficients calculated between the independent variables and the choice scores received by the key communicators. Among the 11 variables, the correlation coefficients of information need, attitude towards motorisation of crafts and technological adoption were found to have negative and significant correlation with the choice scores received by the key communicators. This implied that among key communicators in Pentakota, key communicators with lesser scores on technological adoption, attitude towards motorisation of crafts and information need perception were found to have more preference by the fellow fishermen.

Table 5. Correlation and regression coefficients computed between the independent variables of Key communicators in Pentakota and their choice scores

Variables	(n = 35)			
	Cor. coeff (r_1)	Reg. Coefft. (b_1)	Std. error (SE b_1)	t
Age	-.0121	-.0009	.0469	0.020
Number of fishing days in a year	.1757	.0048	.0090	.536
Number of family members	-.1066	-.0971	.1259	.771
Socio-economic status index	-.2214	-.0233	.0554	.421
Risk preference	-.2061	-.0330	.0459	.719
Information need	-.4938**	-.0627	.0339	1.849
Attitude towards motorisation of crafts	-.3417*	-.0117	.0598	.196
Credit utilisation	-.1540	-.0272	.0621	.438
Cosmopolitaness-localiteness	.0535	.0161	.0145	1.107
Knowledge on fishery technological practices	-.2437	.0416	.0508	.819
Technological adoption	-.4252*	-.0230	.0281	.818

* Significant at 5 per cent level

** Significant at 1 per cent level

$R^2 = 0.4082$

$F = 1.4430$

In the regression analysis, none of the regression coefficient was significant. The R^2 was found to be 0.4082 and non-significant. Hence, the variations in the extent of choice scores received by the key communicators could not be explained by the selected 11 variables, when they were taken together in the multiple regression analysis.

Thus the results revealed that the key communicators were either progressive or on the same level as that of non-key communicators. It is found that even though homophilous communication facilitates effective interpersonal communication, other variables like credit utilisation, information need perception and socio-economic status will have to be improved to increase the technological adoption. As the number of key communicators is found to be more in a progressive village than in the non-progressive village, the strategy to be adopted for the selection and training of opinion leaders

for technology transfer will have to vary with the type of village.

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