



Empowerment of Women in Fisheries: Evidence from Ganjam District of Odisha

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Authors' contributions

This work was carried out in collaboration among all authors. Author PP has collected the primary data, conducted all the statistical analysis and wrote the first draft of the manuscript. Author SSD has designed the study and has given necessary suggestions for finalizing the study. Author SBRL has collected the secondary data and managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

The present study was conducted to assess the empowerment level of women in the fisheries sector in the Ganjam district of Odisha. In the inland sector, the highest numbers of women are of the fishermen population in Ganjam district i.e. 29476 out of a total 263514 number of female fisheries population of the state (Directorate of Fisheries, Government of Odisha, 2015). A very good concentration of women is involving in fisheries activities in this district. But when sector-specific cases are concerned, there are very few studies found where different dimensions of women empowerment through fisheries are discussed. The results revealed that the majority of the respondents (66.60%) in the Inland sector are grouped under a medium level of empowerment followed by low and high-level empowerment (16.70%). These results indicated that there is a significant move towards the empowerment of women in the case of inland fisheries. However, in the Marine sector equal percentage of respondents belonged to both medium and high levels of women empowerment i.e. each 30 (50.00%) and low level of empowerment was nil which indicates the level of empowerment in the marine fisheries activities compared to inland fisheries. With this

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background, the overall empowerment score was categorized into the low, medium, and high level of empowerment where a majority of the respondents (71.6%) were under the medium level of empowerment followed by the equal percentage of the low and high level of empowerment (14.2%). The composite score of empowerment of women is also encouraging. However, efforts are needed to bring women empowerment from medium level to a higher level. There is also a need to uplift a section of women who are still in the lower category of empowerment.

Keywords: Women; empowerment; fisheries.

1. INTRODUCTION

Empowering women and reducing gender inequalities are two key objectives of development policy in today's world. Empowerment is the capacity of individuals, groups, and/or communities to take control of their circumstances, exercise power and achieve their own goals, and the process by which, individually and collectively, they can help themselves and others to maximize the quality of their lives [1,9]. Empowerment indicates a shift from the position of enforced powerlessness to greater self-reliance[2]. Women in fishing communities play multidimensional roles and their involvement in fisheries value chains are often considered as invisible despite being active in a wide range of activities both in capture and culture fisheries[7]. Management orientation and egalitarianism were also influencing the empowerment in a positive direction. Management orientation such as planning orientation, production orientation, and marketing orientation enables a human to approaches empowerment. Egalitarianism refers to value orientation to equality. Such positive value in a society is highly appreciating as it facilitates the perception of equal accessibility and distribution of common goods among people across gender [3].

Globally women play an integral role in the aquaculture and fisheries sectors. In India, notably, of the 756,391 fisher folk involved in fishing-related activities, 365,463 are women (48.31%) [6]. In fisheries, the post-harvest sector provides maximum employment to women. The involvement of fisherwomen in fisheries-related activities provides additional income to their families. However, there are some apprehensions about the total empowerment of women in the fisheries sector in India.

Hence, in the present research, an attempt has been made to examine the empowerment impacts of fisheries activities on the women households in Odisha. In this context, several

questions related to the impact of fisheries activities on women have been raised that need to be addressed empirically. The relevant questions in this respect revolve around:

- Does participation in fisheries activities increase the decision making power and work independence of the women?
- Have they become more economically and socially stronger?
- What prevents the empowerment of women in aquaculture?

To understand and examine the above research questions the present study has been conducted and focuses on how women have been empowered socially, economically as well as in all aspects of life through fisheries activities and its impact on their standard of living in the Ganjam district of Odisha.

2. MATERIALS AND METHODS

Among 30 districts of Odisha, Ganjam district was selected purposefully for the study due to its highest fisheries production. Besides, the majority of the fishing activities in this district were carried over by women (Sources: Dist. Fisheries Officer cum - CEO BFDA & FFDA, Ganjam). Out of 22 blocks of Ganjam district, two blocks namely, Hinjilicut and Ganjam were purposively selected for the present study. From each block, two villages were selected through simple random sampling without replacement technique. In all, four villages of the district served as representing unit for this study. For the selection of respondents, a list of women involved in different fisheries activities was collected out of which one hundred twenty women (60 women from inland and 60 from the marine sector) were selected randomly, and data were collected through well-structured interview schedules.

The following five parameters of empowerment were selected for this study in the line of Rahman and Naozore[8].

1. Decision making
2. Spending ability
3. Cosmopolitaness
4. Social participation
5. Access to assets.

Several items were arranged under each of these five parameters and the women taking part in the survey were asked to indicate their perceived extent of empowerment along with the continuum scales.

After taking into account their situations influenced by fisheries activities, the empowerment score of a respondent in a particular measure was computed by adding the scores obtained in all the items of empowerment. Based on the score obtained from these variables, the extent of empowerment was calculated by computing the empowerment index.

$$\text{Empowerment index} = \frac{\text{Score obtained}}{\text{Max obtainable score}} \times 100$$

(Max. Obtainable score = 104) (After taking all the items under the five empowerment parameters)

3. RESULTS AND DISCUSSION

The data collected from the respondents were analyzed and the results are presented under the following sections.

3.1 Decision-Making Ability

The decision making abilities of the fisherwomen in the study area were worked out and categorized into high, medium and low.

Table 1. Distribution of the respondents according to their decision making ability

S. No	Category	Inland (N=60)		Marine (N=60)	
		Frequency	Percentage	Frequency	Percentage
1	Low	3	5	4	6.6
2	Medium	49	81.6	46	76.7
3	High	8	13.4	10	16.7
Total		60	100	60	100

Table 2. Distribution of the respondents according to their spending ability

S.No	Category	Inland (N=60)		Marine (N=60)	
		Frequency	Percentage	Frequency	Percentage
1	Low	5	8.4	6	10
2	Medium	44	73.3	45	75
3	High	11	18.3	9	15
Total		60	100	60	100

3.1.1 Inland sector

It is revealed from Table 1 that the majority of the respondents (81.6%) were having a medium decision making capability, whereas 13.4 percent of respondents were having a high level of decision making capability and rest 5 percent were categorized into low decision making ability group.

3.1.2 Marine sector

Under this sector, results revealed that the majority of the respondents (76.7%) were having a medium decision making capability, whereas 16.7 percent of the respondents were having a high level of decision making capability and the rest of the 6.6 percent were having low decision making ability.

3.2 Spending Ability

The spending ability of both inland and marine fisherwomen was measured in terms of high, low and medium parameters.

3.2.1 Inland sector

The study revealed that the major proportion of 73.3 percent of the respondents belonged to the medium category as far as the spending ability is concerned (Table 2) whereas, 18.3 percent from the high spending ability group and only 8.4 percent were from low category level of spending ability.

3.2.2 Marine sector

The results of the study indicated that even in the case of the marine sector also the majority of the respondents (75%) belonged to the medium

Table 3. Distribution of the respondents according to their cosmopolites

S.No	Category	Inland (N=60)		Marine (N=60)	
		Frequency	Percentage	Frequency	Percentage
1	Low	13	21.7	11	18.3
2	Medium	38	63.3	39	65
3	High	9	15	10	16.7
Total		60	100	60	100

Table 4. Distribution of the respondents according to their social participation

S.No	Category	Inland (N=60)		Marine (N=60)	
		Frequency	Percentage	Frequency	Percentage
1	Low	14	23.4	7	11.6
2	Medium	39	65	45	75
3	High	7	11.6	8	13.4
Total		60	100	60	100

spending category, followed by high spending category (11%) and low spending category (8.4%).

3.3 Cosmopoliteness

Cosmopoliteness of fisherwomen was estimated and categorized into a high, medium and low level of frequencies.

3.3.1 Inland sector

It can be observed from the results presented in the Table 3 that in the case of inland sector, majority of the women (63.3%) visited the places in medium frequency, followed by the women who visited places at low frequency (21.7%) and only 15 per cent of the women visited the places with high frequency.

3.3.2 Marine sector

In the case of marine fisherwomen, majority (65%) visited at medium frequency level, followed low-level frequency (18%) and 16.7 per cent visited at a high level frequency to different places.

3.4 Social Participation

The assessment of the social participation of all the respondents were carried out and categorized into high, medium and low groups.

3.4.1 Inland sector

The data obtained from this study regarding the participation of the respondents in various social organizations and local institutions is presented

in the Table 4. It is revealed that in inland sector, the majority (65%) belong to medium social participation category followed by low participation category (23.4%) and only 11.6 per cent of the respondent belong to high social participation category.

3.4.2 Marine sector

In marine sector, majority of the respondent (75%) were belonging to the category of medium social participation, followed by high social participation category (13.4%) and remaining 11.6 per cent were from low social participation category.

3.5 Access to Assets

Efforts were made to measure the access of the respondents to assets in terms of high, medium and low categories.

3.5.1 Inland sector

The majority of respondents i.e. 83.4 per cent belong to the category of medium level of access to assets, while only 16.6 per cent respondents belonging to a high level of access to assets. It is interesting to note that none of the respondent is having low level of access to assets.

3.5.2 Marine sector

A large section of respondents i.e. (56.6 %) had a medium level of access to assets followed a low level of access to assets category (25%) and here were only 18.4 per cent of respondents with a high level of access to assets.

Table 5. Distribution of the respondents according to their access to assets

S.No	Category	Inland (N=60)		Marine (N=60)	
		Frequency	Percentage	Frequency	Percentage
1	Low	0	0	15	25
2	Medium	50	83.4	34	56.6
3	High	10	16.6	11	18.4
Total		60	100	60	100

Table 6. Scores obtained by the respondents in five dimensions of empowerment in inland and marine sector (N=120)

S. No	Empowerment dimensions	Possible score range	Mean	SD	CV (%)
1	Decision making ability in family	0 – 36	27.5	2.7	9.81
2	Spending ability	0 – 12	6.3	2	31.74
3	Cosmo politeness	0 – 24	15.7	1.6	10.19
4	Social participation	0 – 20	11.1	1.2	10.81
5	Access to assets	0 – 12	5.6	2	35.71

Table 7. Index value of empowerment of respondents through fisheries activities (N=120)

Index value (Inland)	Index value (Marine)	Index value (Total)
63.6	64.1	63.8

3.6 Measure of Empowerment through Fisheries Activities

The empowerment of women through their participation in aquaculture was ascertained on the basis of the five points mentioned earlier.

The results presented in the Table 6 shows the possible score ranges, mean and standard deviations of the five measurements of women empowerment level which were calculated for the study. The Coefficient of variation (CV) calculated for decision making ability in family, cosmopoliteness and social participation which is 9.81%, 10.19% and 10.81% respectively are best within the tolerable limit. It indicates that these three measurements of women empowerment level are stable and consistent. However, in the case of spending ability (31.74%) and access to assets (35.71%), the relative variation appeared non-stable. Thus, it indicates that women have less say in major activities involving money. The decision making in these areas may be improved by making women self-reliant on monetary front.

3.7 Empowerment Index

The total empowerment score of a respondent was obtained by summing the scores obtained from all five measures of empowerment (Table 7). Possible scores ranged from 0 to 104. However, the obtained scores ranged from 55 to

78. Based on the score obtained from these variables, extent of empowerment was calculated by computing the empowerment index (expressed in percentage). The empowerment index value in inland sector is 63.6, whereas, in marine sector the empowerment index is 64.1. The total empowerment index value is 63.8.

The results indicated that there is still a large scope for women empowerment both in Inland sector and marine sector. This can be achieved by involving women more in income generation activities and by training programmes and policies of the Government in this direction.

3.8 Overall Empowerment Level of Respondents

The overall empowerment level of respondents was worked out and results are present in the Table 8. It reveals the level of empowerment scores of the respondent women in all five dimensions in both inland and marine sector.

3.8.1 Inland sector

The data reveals that the majority of the respondent had medium level of empowerment i.e. 66.6 per cent which is followed by low and high level of empowerment (16.7% each). These results indicated that there is a significant move towards empowerment of women in the case of inland fisheries.

Table 8. Distribution of respondents according to the empowerment level sector wise

SINo	Empowerment score	Inland (N=60)		Marine (N=60)	
		Frequency	Percentage	Frequency	Percentage
1	Low	10	16.7	0	0
2	Medium	40	66.6	30	50
3	High	10	16.7	30	50
Total		60	100	60	100

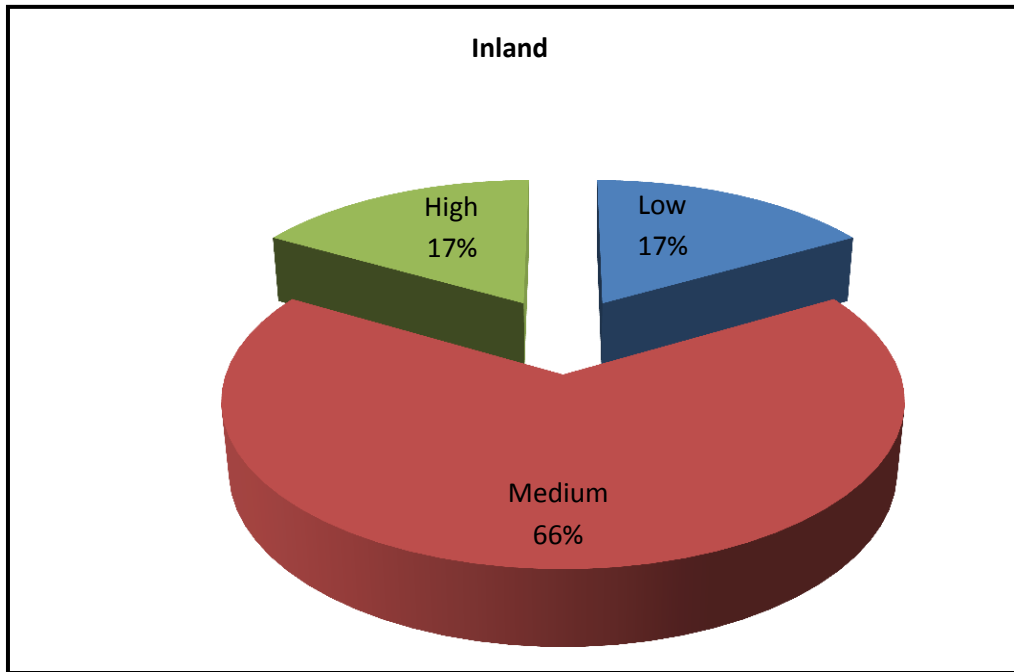


Fig. 1. Distribution of respondents according to the empowerment level in Inland sector

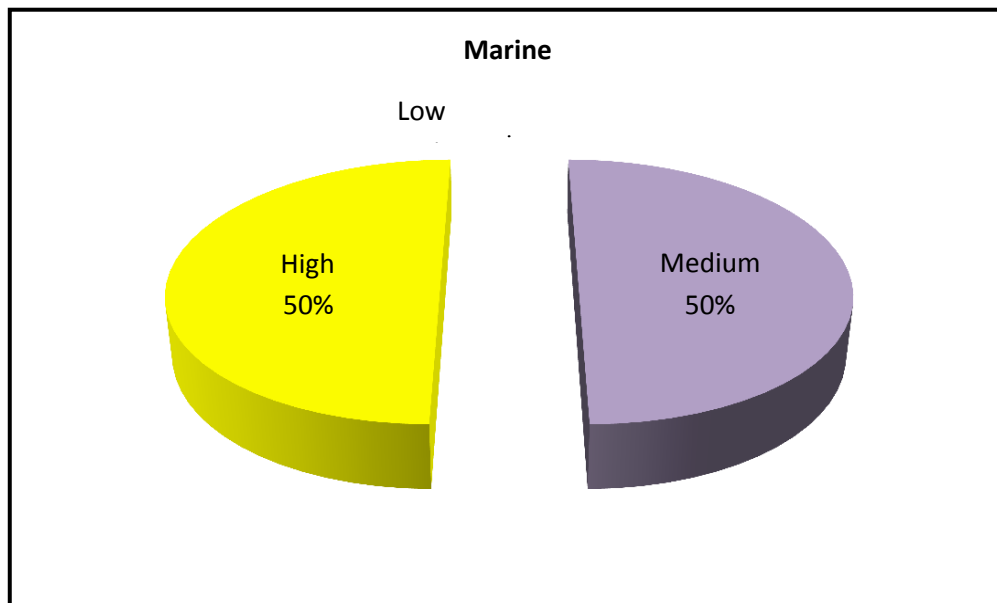


Fig. 2. Distribution of respondents according to the empowerment level in marine sector

Table 9. Distribution of total respondents according to the empowerment level

S.No.	Empowerment score (Total)	Frequency	Percentage
1	Low	17	14.2
2	Medium	86	71.6
3	High	17	14.2
Total		120	100

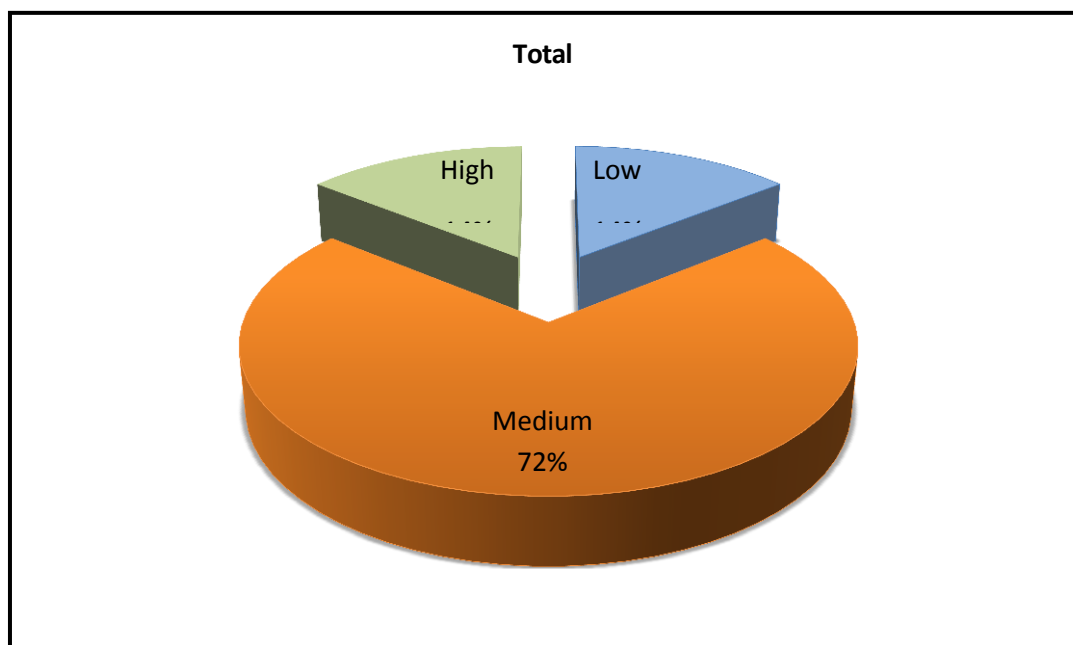


Fig. 3. Distribution of total respondents according to the empowerment level

3.8.2 Marine sector

It is revealed from the Table 9 and Fig. 2 that equal percentage of respondents belonged to both medium and high level of women empowerment (50% each) and thus low level of empowerment was nil. These results are encouraging indication towards the level of empowerment in the marine fisheries activities compared to inland fisheries.

3.9 Distribution of Total Respondents According to the Empowerment Level

The results presented in Table 9 and Fig. 3 revealed that the overall empowerment score were categorized into low, medium and high level of empowerment where a majority of the respondents (71.6%) were under medium level of empowerment followed by the equal percentage of low and high level of empowerment (14.2%). The composite score of empowerment of women is also encouraging. However, efforts are needed to bring women empowerment from medium

level to higher level. There is also a need to uplift a section woman who is still in the lower category of empowerment.

4. CONCLUSION

Women Empowerment is a multifaceted and multi-dimensional concept. It is a process through which women gain greater access to resources and also control over decision-making. Women’s Empowerment is a “bottom-up” process of transforming gender power relations, through individuals or groups developing awareness of women’s subordination and building their capacity to challenge it.

In any case, with estimates identifying more than 2.1 million women participating in small scale fishing activities[4], quantifying the role of women in fisheries is an important aspect, not only from a social but also from an economic, labour and ecological point of view [5 , 10].Thus, there is an urgent need for empowerment of women to act on their own behalf to achieve a greater control over their lives and destinies. The process of

empowerment of women enables them to realize the full potential and empower them in all spheres of life.

Empowerment of women as evidenced from Ganjam is relatively high. Only less than 15 percent of the women surveyed are reported to be in the low empowerment category. Government, civil society organisations, non-government organisations etc. need to focus attention on them. Location specific and need based vocational training programs should be organized. Adopting flexible timings and training approaches would encourage more women to participate in training sessions. Contact with extension agency need to be strengthened. More frequent contact, exposure to other states where women are engaged in commercial scale activities related to fisheries, provision of up to date information on fisheries technologies and schemes would facilitate more women to get involved in fisheries. These interventions would go a long way in ensuring social as well as economic empowerment of women.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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