Engagement Of Women in Fisheries and Agriculture Sectors: Basis for Empowerment for The Family and Community Development

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Abstract

Sustainable agri-fisheries are vital for achieving food security, alleviating poverty, and increasing economic growth, this paper examines the engagement of women in fisheries and agriculture sectors as the basis for empowerment for the family and community development using a descriptive design through administering questionnaires to 136 men and 150 women who rely on subsistence fishing and farming which most of them engaged around 10 to 19 years, ranging from 1 to 50 years to survive in a daily basis voluntarily participated in the study. The perceived level of satisfaction got a mean rating of 2.67 and was described as neither satisfied nor dissatisfied. The *t*-value is -0.01425, and the value of *p* is .988641. The result is *not* significant at $p < .05$. The perceived difficulties demonstrated significant differences except on the indicator "lack of transport facilities" which is not significant. On the other hand, the indicators for complications showed no significant results, except on the indicators of occupational status, quality time for the family, and prices of hog feed/fish feeds which showed significant differences, and for the capabilities, all indicators got no significant differences using unpaired t-test tool at 0.05 level. Finally, the contribution of women in agriculture and fisheries sectors was great but they are still marginalized especially on the difficulties that they have experienced in their engagement as well as on certain indicators of complications although there was equality on the capability indicators in consideration to the application of the identified strategies in promoting equality.

Keywords: Women in Fisheries and Agriculture, Gender Equality, Satisfaction

Introduction

How women are engaged in the fisheries sectors? How satisfied they are as to their perception of issues like employment data including gender differentials; legal and social status concerning involvement in fisheries sectors; organizational that includes how they are organized within the industry, what formal support system in terms of childcare and education that served them; socio-cultural constraints that affect women decisions, social status, interest, aspirations and concerns; and economic issues, particularly with gender-related earnings, discounts and other economic options.

Gender equality and women's empowerment are both human rights and are essential for attaining wide-ranging, passionate, and sustainable development. The question is, "are women empowered?" Are they enjoying gender equality? Looking at Pinoy culture, women are still under the sleeves of men. Despite the income insufficiency of the family, wives are still unwelcome to join their husbands in their fishing vessels or on the farm especially when the siblings are still very young. The fact is wives should mother their children and manage the house chores while the husbands are in the sea or farm and even when the husbands are already at home. This clearly shows the existence of stereotyping despite the call for gender equality. The full and equal participation, engagement, and benefit of women and men – in other words, gender equality – in the fisheries and aquaculture sector is fundamental for the achievement of sustainability and inclusiveness (FAO, 2020m).

Alonso-Población & Siar (2018), reported that the diversity of the role played by women's contributions to the fisheries sectors got increased recognition. However, they also reported an ambiguous difference between the low participation of women in fisherfolk

organization and stumpy access to decision-making positions in many formal fisheries-related organizations. Although the involvement of women in the fisheries sector has been recognized globally (Williams, 2008), more remains to be done to recognize and understand women's work in the sector (Weeratunge et al., 2010). Some countries were not able to see or recognized the contribution of women in Fisheries (Harper et al. 2020), this continues to exclude relative or total from management and led to women on several occasions being isolated from the resource on which they depend. The recognition of women's efforts at first alone is not a satisfactory stage to include women's opinions and thoughtfulness of their activities in the decision on management of the resources (Kleiber et al. 2014). Dizona (2019) said that there is a need for planners and policy-makers to include gender issues in the planning and designing of activities or extension programs that are intended for fisheries. Supplement the traditional roles of women, and open up opportunities for new or expanded roles and responsibilities for them.

Camotes group of Islands with three major islands has four municipalities. The main trades are small-scale farming that includes raising livestock, small to medium-boat fishing, and tourism mainly beach resorts and caves. The major employment is in educational institutions both public and private not to mention employment in the local government and cooperatives. The people can fall into the category of small income group with the exceptions of only a few and are those who engaged and managed their own businesses. During the onset of Covid 19 Pandemic women and girls played a crucial role in the response to the COVID-19 pandemic and in particular in transforming our agri-food systems. There is a need for all to work together to spark the necessary changes to empower women and girls, particularly those in rural areas (FAO, 2021u). This is true to women and girls in Camotes Island who mostly are engaged in planting vegetables and ornamental plants sold online.

This study assessed the contribution and satisfaction of the women sector to the socio-economic aspects of the community in Camotes group of Islands for the advancement of the societal and financial interconnection and the promotion of equal opportunities and rights between men and women in the fisheries and agriculture sectors.

Objectives of the study

The main purpose of this study was to assess the contribution and satisfaction of the women's sector to the socio-economic aspects of the community as basis to formulate a development plan for satisfying and sustainable living.

The purpose was attained by doing the following;

1. Evaluated the roles of women in the fisheries and agriculture sectors of the community.
2. Analyzed the difficulties, complications, and capabilities associated on the contributions of women in the socio-economic status of the community.
3. Identified strategies to promote equality among men and women in the fisheries and agriculture sectors.
4. Proposed a development plan for the enhancement and improvement of the community's satisfying and sustainable livelihood.

Important task includes the identification of the women's roles both in the family and in the community, the documentation of the difficulties, complications, and capabilities encountered in performing the roles. Analysis and presentations of potential interventions to promote gender equality and planning for the augmentation of income towards a satisfying sustainable life.

The result of this study is beneficial to the agri-fisheries sectors for the augmentation of their living condition and gender equality by empowering women to have wide participation in family and social affairs in the community. With empowered women the government will, directly and indirectly, benefit through a developed community.

Methodology:

This study used a descriptive normative survey method that utilizes a questionnaire and an interview guide to supplement the questionnaire in gathering the needed data for the study. Data gathered were analyzed and interpreted to find out the findings so that conclusions can be formulated. The result of the study can be utilized as a guide to employing effective interventions for the augmentation of the family income and promotion of gender equality that will lead to a sustainable community.

The study was conducted in Camotes group of islands namely Pacijan, Poro, and Ponson Islands that consists of four municipalities; San Francisco, Poro, Tudela and Pilar. Camotes group of Island is situated in the Northeastern part of Cebu mainland under the fifth district of Cebu Province about 56.69 *Nautical Miles* from the Danao Port to Consuelo, San Francisco Port.

The respondents of the study were the women and men in the agri-fisheries sectors in the aforementioned municipalities who are willing and able to get involved in the study and were randomly selected.

A close-ended questionnaire was administered to the predetermined respondents by hired enumerators who are well-trained both face to-face. An interview guide was used to supplement the questionnaire. Aside from the demographic profiling of the respondents, it consists of the activities participated by the men and women in agri-fisheries, the difficulties and complications encountered, and their potential were included in the survey. The strategies identified in promoting gender equality are also included.

Necessary permits were secured before the administration of the questionnaire and in conducting the interview.

The data gathered was statistically analyzed and interpreted.

Table 1
Distribution of Respondents

Municipality 1	**Frequency**	**Percentage**
Barangay 1	15	5.54
Barangay 2	15	5.54
Barangay 3	9	3.15
Barangay 4	11	3.84
Barangay 5	9	3.15
Barangay 6	13	4.55
Barangay 7	7	2.45
Barangay 8	12	4.20
Barangay 9	13	4.55
Barangay 10	7	2.45
Barangay 11	5	1.75
Barangay 12	7	2.45
Barangay 13	3	1.05
Municipality 2		
Barangay 1	46	16.08
Barangay 2	22	7.69
Barangay 3	6	2.10
Barangay 4	3	1.05
Barangay 5	18	6.29
Barangay 6	20	6.99
Barangay7	9	3.15
Barangay 8	7	2.45
Barangay 9	9	3.15

Barangay 10	4	1.39
Barangay11	16	5.59
Total	286	100

The respondents of this study who volunteered to participate were from two municipalities (coded for confidential identity). Out of 15 barangay of the first municipality only 13 were able to participate and for the second municipality of 17 barangay, only 11 participated. They are active small farmers and fishers who engage in municipal fishing within municipal waters using fishing vessels of three (3) gross tons or less, or fishing not requiring the use of fishing vessels. The most number of participants are from the barangays that are situated near the coastline.

Result and Discussion:

Demographic profiling was included to determine the representative samples of the target population and could be a powerful tool, especially in tracking changes over time.

Table 2 presents the demographic profile of the respondents who voluntarily participated in this study.

Table 2

The Demographic Profile of Respondents

Variables along with values	**f**	**%**
Gender		
Male	136	47.55
Female	150	52.45
Age		
21-	4	1.40
22-32	49	17.13
33-43	78	27.27
44-54	66	23.08
55-65	56	19.58
6+	33	11.54
Education		
Primary/ Elementary Level Grade	141	50.18
Secondary Level	131	46.62
College Level	9	3.20
Number of Family Members		
1-2	20	7.07
3-4	94	33.21
5-6	79	27.92
7-8	55	19.43
9-10	24	8.48
11+	11	3.89
Aggregate Family Income		
4,000 below	198	71.22
4,001 - 6,000	67	24.1
6,001 - 8,000	9	3.24
8,001 - 10,000	3	1.08
10,001 and above	1	0.36
Number of years engaged in Agri-fisheries activities		
Variables along with values	**f**	**%**

1-5	53	21.37
6-9	6	2.42
10-19	68	27.42
20-29	51	20.56
30-39	34	13.71
40+	36	14.52

There was a greater participation of women in this study than men and most of them is in between the age of 33 to 43 years old ranging from 20-71 years old who are mostly in the primary or elementary level of education ranging from primary to college with 3-4 members of the family from 1 to more than 11 members. The aggregate income of the most families was below 4,000 pesos, a minimum of 500 to 10, 000.00 pesos monthly which are below the poverty threshold of about PhP12,030 per month for a family of five (Mapa, 2022). This shows that these families rely on subsistence fishing and farming which most of them engaged for around 10 to 19 years, ranging from 1 to 50 years to survive on a daily basis.

Involvement in Agri-fisheries activities is about creating an environment in which a person participates more in the day-to-day accomplishments which lead to a better way of life. More direct participation helps the family to achieve its goals rapidly and effortlessly. Table 3 presents the roles in agri-fisheries involvement.

Table 3
Roles in Agri-fisheries Involvement

Variables Along with Values	f	%
Mode of Operation in Agri-fisheries Activities		
Full time	16	6.35
Part-time	220	87.3
Occasional	16	6.35
Type of Fisheries Activities		
Gleaning		
The gleaning of sea shells	238	82.93
The gleaning of sea cucumber	215	74.91
The gleaning of sea urchin	218	75.96
Gleaning of seaweeds	25	8.71
Vending		
Fresh agri-fishery products	62	21.6
Processed agri-fishery products	3	1.04
Fishing		
Fishing with hook and line	116	40.42
Fishing with nets	112	39.02
Types of agricultural activities		
Cultivation and growing of corn	229	79.79
Cultivation and growing of rice	4	1.39
Cultivation and growing of vegetables	250	87.05
Cultivation and growing of fruit trees	224	78.49
Rearing of livestock	260	90.59
Reasons for in engaging agri-fishery activities		

Financial daily needs of the family	256	89.2
Children's financial needs for education	16	5.57
Generate savings	11	3.83

The mode of operation in agri-fisheries activities mostly was part-time which means that the respondents were engaged in agricultural activities, during land preparation and planting time, and fishing are whenever it was practicable for them to go to the sea which is when the weather permits. Before going fishing they spent time rearing livestock. Only a few about 6.35 percent full-time fishermen and or farmers and 6.35 percent occasional. Most of them are engaged in gleaning. For gleaning activities, it's possible during low tide. Very few were selling agri-fisheries products. Fishing using hook and line, and net placed second to gleaning while almost all did agricultural activities. The main reason of doing these activities was mostly for financial daily needs only 5.57 % was for children's financial needs for education while the very small percentage was for savings.

The perceived level of preference and gratification derived from engaging in agri-fishery activities is the motivating force for work performed. This is about the importance or significance identified within an engagement of activities. Table 4 presents the respondents perceived satisfaction with agri-fisheries activities.

Table 4
Perceived Satisfaction with Agri-Fishery Activities

Satisfaction with current activities	f	%	x̄	Description
very satisfied	25	8.93	2.67	Neither Satisfied nor Dissatisfied
somewhat satisfied	19	6.79		
neither satisfied nor dissatisfied	85	30.36		
somewhat dissatisfied	142	50.71		
very dissatisfied	9	3.21		

Very satisfied 4.20 - 5.0
Somewhat Satisfied 3.40 - 4.19
Neither satisfied nor dissatisfied 2.60 - 3.39
Somewhat dissatisfied 1.90 – 2.59
Very dissatisfied 1.0 - 1.79

As shown in table 4, out of the 280 responses 142 answered somewhat dissatisfied, this outweighs the rest of the responses as to the perceived level of satisfaction. Summing up all the responses it got the mean of 2.67 and described as neither satisfied nor dissatisfied. The *t*-value is -0.01425, and the value of *p* is .988641. The result is *not* significant at $p < .05$. This implies that some of the needs were met and some were not and that the untiring efforts to do agri-fisheries activities is for sustainable living.

Difficulties, Complications, and Capabilities

Limited diversification and low productivity are the two most important challenges which constrain the agricultural transformation which is also attributed to climate change (Brown, et.al. 2018) on the other hand, fisheries are increasingly at risk from climate change, overfishing and data-poor management structures (Garchitorena and Po, 2022).

Difficulties pertain to the adversities to endure like deprivation of at least the minimum standard in day-to-day living situations of the people caused by some circumstances to which they bravely faced the many hardships of frontier life.

Table 5 presents the difficulties perceived in the engagement of agri-fishery activities.

Table 5
Difficulties Perceived in the Engagement of Agri-Fishery Activities

Indicators	$\bar{x}$	Description	Var	SD	Grand Mean	Description
Unavailability of ice storage	1.23	Never	0.45	0.67	2.5514	Rarely
Unavailability of fish catch	1.76	Never	0.57	0.75		
Lack of transport facilities	2.08	Rarely	1.33	1.16		
Lack of technical knowhow for hygienic handling of fresh fish and other fish products	3.83	Fairly Often	0.37	0.49		
Lack of technical knowhow for hygienic handling of fresh inland meat	3.82	Fairly Often	0.43	0.41		
Lack of technical knowhow on hygienic production of value- added products	3.8	Fairly Often	0.47	0.61		
Access to healthcare	1.34	Never	0.79	0.49		

Very Often 4.20 - 5.0 Fairly Often 3.40 - 4.19 Sometimes 2.60 - 3.39 Occasionally 1.90 – 2.59 Rarely 1.0 - 1.79

There is no ice storage plant on the Island but there is a lot of ice available for sale so this is not felt as a difficulty for the fisherfolks and farmers. Fish catch or shellfish and seaweeds from gleaning activities also was never a problem because as an Island it is surrounded by a vast and long shorelines. Health centers and barangay health workers also are very actively concerned with the health of the people it's never considered a difficulty. The difficulties were laid on the technical knowledge of the hygienic handling of wet agri-fishery products and the production of value-added products that got the rating fairly often. The overall difficulty was perceived as rare.

The success of agricultural endeavors depends on one of the biggest factors, the weather. It is also the one-factor farmers have the least control over. If it's too dry, crops won't grow. If the season is too wet, crops can rot and suffer from mold or simply drown in the standing water.

At the most basic level, the problem in fisheries sectors is the amount of catch fishermen can bring at home or to market, when too many people are catching too many fish, the price will go down and when at times of scarcity especially during the full moon or bad weather the catch is low and the price goes high sometimes it is in the wrong place at the wrong time, and sometimes using equipment and techniques that damage the natural ecosystems. These obfuscate the difficulties perceived.

Table 6 presents the complications perceived in the engagement of Agri-Fishery activities

Table 6

Complications Perceived in the Engagement of Agri-Fishery Activities

Indicators	x̄	Description	Var	SD	Grand Mean	Description
High Prices of fresh fish from the fisherman and middlemen	3.85	Fairly Often	0.32	0.57	3.068	sometimes
High Prices of processed fish products from suppliers	3.9	Fairly Often	0.24	1.16		
High Prices of chicken, pig, and cow for slaughter	3.98	Fairly Often	0.17	0.57		
Occupational status	1.43	Never	0.9	0.65		
Lack of capital	1.45	Never	1.16	0.89		
Quality Time for the family	3.77	Fairly Often	0.57	1.08		
Household chores limit agri-fishery activities	3.69	Fairly Often	0.39	0.76		
Health limits in any way the daily activities	3.32	Sometimes	0.53	0.63		
Nursing mother	1.34	Never.	0.94	0.80		
Prices of hog feeds/fish feeds	3.95	Fairly Often	0.38	0.60		

Very Often 4.20 - 5.0 Fairly Often 3.40 - 4.19 Sometimes 2.60 - 3.39 Occasionally 1.90 – 2.59 Rarely 1.0 - 1.79

The complications perceived fairly often were the prices of the agri-fishery products that are continuously going high, quality time for the family, and the unending household chores. These complications got an overall rating of 3.068, described as sometimes.

Food and other vital raw materials for the rest of the economy are made possible by the agriculture and fisheries sectors. Products and services of the nonagricultural and fisheries economy are coming from the agri-fisheries sectors. Rice and or corn was the first staple food of the Filipinos and fish was the second made fishing and farming the most important source of livelihood for many Filipinos. Table 7 presents the capabilities perceived in the engagement of Agri-Fishery activities

Table 7

Capabilities Perceived in the Engagement of Agri-Fishery Activities

Indicators	x̄	Description	Var	SD	Grand Mean	Description
Can do cooking/processing of fish and other aquatic products	3.92	Fairly Often	0.24	0.69	3.358	sometimes
Can do cooking/processing of inland meat and vegetables	3.88	Fairly Often	0.34	0.95		

Enjoying normal day-to-day activities	3.73	Fairly Often	0.64	0.73		
Ability to sell products	1.31	Never	0.71	0.97		
Parenting	3.95	Fairly Often	0.36	0.85		

Very Often 4.20 - 5.0 Fairly Often 3.40 - 4.19 Sometimes 2.60 - 3.39 Occasionally 1.90 – 2.59 Rarely 1.0 - 1.79

Day to day normal life of the people living in rural and urbanized communities is growing and rearing food to eat for subsistence living. Enjoying normal life is all that matters so they are capable of preparing food to share in every table ensuring that all members of the family are well fed and raised to become a responsible citizen. The catch from the sea and the harvest from the farm are usually enough for the family that's why the ability to sell products got only a mean of 1.31 described as never. The overall rating of the respondents' perceived capabilities was 3.358, described as sometimes.

Table 8

Identified Strategies to promote equality among men and women in the fisheries and agriculture sectors.

Indicators	Weighted $\bar{x}$	Description	Grand Mean	Description
Sharing of household chores	4.06	Fairly Often	3.88	Fairly Often
Sharing of children care and parenting	4.06	Fairly Often		
No to Domestic Violence	3.96	Fairly Often		
Help each other in gaining equal power	4.03	Fairly Often		
Listening and reflecting	4.02	Fairly Often		
Reject discriminatory attitudes	4.03	Fairly Often		
Provide anti-bias training	4.00	Fairly Often		
Raise aspirations for partners	4.06	Fairly Often		
Work together	4.07	Fairly Often		
Talk problems with partners	4.03	Fairly Often		
Freedom to use mobile phones	2.17	Rarely		
Show respect to each other	4.07	Fairly Often		

Very Often 4.20 - 5.0 Fairly Often 3.40 - 4.19 Sometimes 2.60 - 3.39 Occasionally 1.90 – 2.59 Rarely 1.0 - 1.79

The table revealed that to promote equality among men and women in the fisheries and agriculture sectors strategies such as sharing household chores, parenting, no to domestic violence, helping each other in gaining equal power, talking and listening with partners, rejecting discriminatory attitudes, provide anti-bias training, raise aspiration to partners, working together, show respect to each other garnered a rating describe as fairly often, only the freedom to use mobile phones got the description of rarely. This indicates that there was an equal division of labor at home and mobile phones if there were any are shared with the family.

The world is more and more aware of the need to fight gender inequality, which in many places is connected to other types of discrimination. To test the hypothesis that there is no significant difference between the

male and female responses on the perceived difficulties, complications, and capabilities t-test was used. Table 9 presents the significant difference between male and female responses to the perceived difficulties, complications, and capabilities

Table 9
Significant Difference between Male and Female Responses on the Perceived Difficulties, Complications, and Capabilities.

Indicators	SED	df	t-test 0.05	p-value	Significant at $P < 0.05$	Decision
Unavailability ice storage	0.084	255	2.5765	0.0105	Significant	Rejected
Unavailability of fish catch	0.090	258	5.2953	0.0001	Significant	Rejected
Lack of transport facilities	0.143	257	1.9513	0.0520	Not Significant	Accepted
Lack of technical knowhow for hygienic handling of fresh fish and other fish products	0.073	263	4.1884	0.0001	Significant	Rejected
Lack of technical knowhow for hygienic handling of fresh inland meat	0.079	262	3.7167	0.0002	Significant	Rejected
Lack of technical knowhow on hygienic production of value- added products	.0084	261	3.5613	0.0004	Significant	Rejected
Access to healthcare	0.109	261	3.2873	.0012	Significant	Rejected
Complications						
High Prices of fresh fish from the fisherman and middlemen	0.071	258	0.4184	0.6760	Not Significant	Accepted
High Prices of processed fish products from suppliers	0.061	261	0.6129	0.5404	Not Significant	Accepted
High Prices of chicken, pig, and cow for slaughter	0.051	284	0.5026	0.6157	Not Significant	Accepted
Occupational status	0.115	262	3.5319	0.0005	Significant	Rejected
Lack of capital	0.134	259	1.6238	0.1065	Not Significant	Accepted
Quality Time for the family	0.094	256	3.1484	0.0018	Significant	Rejected
Household chores limit agri-fishery activities	0.078	261	1.6884	0.0925	Not Significant	Accepted
Health limits in any way the daily activities	0.090	262	1.00070	0.3149	Not Significant	Accepted

Nursing mother	0.121	260	0.6629	0.5080	Not Significant	Accepted
Prices of hog feeds/fish feeds	0.076	261	2.4781	0.0138	Significant	Rejected
Capabilities						
Can do cooking/processing of fish and other aquatic products	0.060	265	0.0905	0.9279	Not Significant	Accepted
Can do cooking/processing of inland meat and vegetables	0.072	263	1.9422	0.0532	Not Significant	Accepted
Enjoying normal day- to-day activities	0.100	259	0.2483	0.8041	Not Significant	Accepted
Ability to sell products	0.106	254	1.1629	0.2480	Not Significant	Accepted
Parenting	0.075	260	0.5876	0.5573	Not Significant	Accepted

The perceived difficulties of male and female participants on the indicators presented demonstrated significant differences except for the indicator “lack of transport facilities” which is not significant. This means that the null hypothesis of no significant difference between the perception of the male and female respondent on these indicators are rejected except for the “lack of transport facilities” that is accepted. On the other hand, the indicators of complications showed no significant results, the null hypothesis is accepted except for the indicators of occupational status, quality time for the family, and prices of hog feed/fish feeds that showed significant differences, thus null hypothesis is rejected. For the perceived capabilities of the respondents all indicators got no significant differences so the null hypothesis is accepted by the use of an unpaired t-test tool at 0.05 level.

Conclusion

Finally, the contribution of women in agriculture and fisheries sectors was great but they are still marginalized especially on the difficulties that they have experienced in their engagement as well as on certain indicators of complications although there was equality on the capability indicators in consideration to the application of the identified strategies in promoting equality. To empower the family and develop the community, skills enhancement for men and women is highly recommended.

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