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Correlates of Empowerment of Ethnic Farmwomen in Assam

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ABSTRACT

An evaluation was conducted among the ethnic livestock and poultry farm women of Goalpara district of Assam to assess the impact of their socio-economic and psychological characteristics in relation to women's empowerment in the years 2021–22. The respondents were selected via snowball sampling method, and their responses were recorded using a pre-tested interview schedule. The data indicated that factors such as social participation, age, years of livestock farming experience, contact with extension services, annual income from livestock rearing, attitudes towards scientific livestock farming, and time spent in livestock activities showed highly significant and positive correlations, while family size showed a highly significant and negative correlation with women empowerment.

INTRODUCTION

Women empowerment deals with encouraging women participation in decision making so that they can work for eradication of poverty, social integration and other areas in a holistic and sustainable manner (United Nations-DESA, 2013; Sarma & Varma, 2008). Taking all these into account, it further includes raising the status of women through education, awareness generation, enhancement of literacy and imparting training. It is also about equipping and allowing women to make life determining decisions while encountering difficult situations and problems in society (Nain & Kumar, 2010; Yadav et al., 2021; Kumari et al., 2022). The seven important pillars of women empowerment are: self-esteem, decision making, credit facility, livestock services, and access to knowledge, social support, asset ownership and market accessories. There are various means to achieve women empowerment but the chief economic activities of rural women in which they are mostly engaged are agriculture, animal husbandry, poultry keeping, pisciculture, handloom and handicraft among others (Pandey et al., 2011; Begum, 2019; Dagar & Upadhyay, 2022). The state of Assam ranks 7th in terms of poverty among the Indian states and the Goalpara district occupies 20th position in terms of Multi-dimensional Poverty Index (Govt. of Assam, 2023b).

Crop production plays an important role in enhancing calorie intake of the people but for improvement of health, protein is also equally important for which pulse and coarse grams are essential. During the period 2017-18, the total pulse production in the country was around 25.42 million tones whereas the figures for the same in the next fiscal year (2018-19) was around 23.40 million tones (Govt. of India, 2019). This reveals the decreasing trend in pulse production thereby lowering the vegetable protein availability to the masses. A similar trend was witnessed in Assam where area under pulse production fell from 1,54,706 hectares

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(2017-18) to 1,50,229 hectares (2018-19) whereas production of milk, egg and meat revealed a steady growth during 2019-20 with an increase of 946 million litres, 514 million numbers and 52,960 tonnes respectively than the previous year indicating the important role of animal husbandry and poultry sector in poverty alleviation (Govt. of Assam, 2020). The Goalpara district of Assam lying in the western region bordering the Indo-Bangladesh border plays a significant role in the production of crop, vegetables, milk, meat and egg, etc. This district is inhabited by cross sections of people of different caste, creed, religion and language (Govt. of Assam, 2023a). But the existence of different indigenous ethnic groups in this district adds an additional colour to the population pattern, where a study upon the indigenous groups bears a tremendous significance in the present-day context of indigenous versus migrants. Therefore, it was thought prudent to conduct a study in the Goalpara district of Assam with the following twin objectives: (i) To find out the level of women empowerment among different ethnic groups in Goalpara district. and (ii) To assess the correlates of women empowerment of the ethnic farmwomen.

METHODOLOGY

The women folk belonging to the three tribes Rabha, Garo, and Hajong and one ethnic group, i.e., Koch-Rajbongshi, residing in Goalpara district of Assam state of the Indian Union, were purposefully selected for the study as the population of these indigenous groups was quite prominent in the region. The respondents were selected from villages where the population of the specific tribe or ethnic group was found to be substantial and eligibility criteria of rearing at least 2 pigs or 2 goats or 1 cattle or 20 poultry fitted well. The respondents from Rabha tribe were selected from Haluapara village, while Garos from Thorko, Hajongs from Nidanpur Part 2, and Koch-Rajbongshis from Bakultola village. A total of 200 respondents taking 50 from each tribe/ethnic group were selected through snowball sampling method.

The interview schedule covered 15 independent variables viz., age, education, family size, social participation, experience in livestock farming, herd size, land size, exposure to mass media, extension contacts, and annual income from livestock and poultry farming, annual income from sources other than livestock and poultry, and total income from all sources, attitude towards improved livestock farming, liking of information sources, and time spent in livestock and poultry activities whereas the only independent variable was empowerment level of farmwomen. While measuring the empowerment level, the social and economic dimensions were taken into consideration. The empowerment level was operationalized by modifying the scale by Galiè et al., (2018) where the 10 elements were considered for improving social and economic condition from the income generated from livestock and poultry. Each element was measured by a 5-point Likert continuum. The interview schedule was pre-tested on 20 non-sample respondents by following the test-retest method and correlation coefficient was found 0.72 which was highly significant. On the other hand, content validity method was applied for accessing the validity of the instrument. The data was collected between January to March 2021. The collected data were scrutinized, processed and subjected to statistical analysis like frequency, percentage, standard deviation, correlation and regression in order to achieve the objectives.

RESULTS

From Table 1, it can be observed that 60.00 per cent each of Garo and Hajong women folk and 44.00 per cent of Rabha and Koch-Rajbongshi respondents perceived a ‘high’ level of women empowerment due to participation in livestock and poultry enterprises.

From Table 2, it is inferred that majority of the respondents (61.50%) were found to have short term experience in livestock rearing due to the fact that most of them were young. However, in case of Koch-Rajbongshi majority of the women (54.00%) had long experience which might be due to the fact that they start rearing of livestock and poultry at a very early age and also because the highest number of respondents falling under elder category belonged to this group. With reference to herd size, majority of Rabha (78.00%) and Koch-Rajbongshis (64.00%) had low herd size as they reside near township where there is less space for rearing large animals and hence, they prefer small livestock and poultry. Contrarily, the other two groups viz., Garo and Hajong live in interior villages with both large and small animals. The findings were in line with those of Nosheen et al., (2011) & Devaki et al., (2015). The pooled data showed that 65.00 per cent of the women had a low level of mass media exposure. The dissimilitude with respect to extension contact seen in case of the Garo and Hajong groups with the Koch-Rajbongshi and Rabha groups exists as because the former live in remote locations that are not very easily accessible which lowers their chances of regular extension contact. The findings were in line with that of Akbay (2006). A dissimilitude in the level of liking of information sources among the tribes/ethnic group existed which might be explained by the fact that they have different types of social setup. In case of the Garo tribe, the habitation pattern is scattered making it somewhat inconvenient for frequent interaction with neighbours and relatives. On the other hand, respondents of Rabha tribe were observed to have developed more interest in information gathering from different sources. The results were found to be contradicting those of Suchiang (2016); Pegu (2014) & Jamatia (2019) who recorded that majority of the respondents in their respective studies belonged to medium category in concern of their liking of information sources. In terms of time spent in livestock activities it was seen or observed that 44.00 per cent of the Rabha respondents spent highest time engaged in the various livestock

Table 1. Level of women empowerment through participation in livestock and poultry enterprises (N=200)

Category	Rabha (%)	Garo (%)	Hajong (%)	Koch-Rajbongshi (%)	Pooled (%)
Low (<52.33)	50.00	34.00	34.00	50.00	42.00
Medium (52.33-55.73)	6.00	6.00	6.00	6.00	6.00
High (>55.73)	44.00	60.00	60.00	44.00	52.00

Table 2. Distribution of farmwomen based on their livestock related traits

Variable	Category	Rabha (%)	Garo (%)	Hajong (%)	Koch-Rajbongshi (%)	Pooled (%)
Experience in livestock farming	Short (<16 yrs.)	26(52.00)	37(74.00)	37(74.00)	23(46.00)	123(61.50)
	Medium (16-18 yrs.)	0	0	0	0	0
	Long (>18 yrs.)	24(48.00)	13(26.00)	13(26.00)	27(54.00)	77(38.50)
Herd size	Small (<0.93)	39(78.00)	16(32.00)	32(64.00)	32(64.00)	119(59.50)
	Medium (0.93-1.24)	0	15(30.00)	3(6.00)	11(22.00)	29(14.50)
	Large (>1.24)	11(22.00)	19(38.00)	15(30.00)	7(14.00)	52(26.00)
Exposure to Mass media	Low (<3.38)	28(56.00)	41(82.00)	42(84.00)	19(38.00)	130(65.00)
	Medium (3.38-3.75)	0	0	0	0	0
	High (>3.75)	22(44.00)	9(18.00)	8(16.00)	31(62.00)	70(35.00)
Extension contact	Low (<14.68)	16(32.00)	37(74.00)	30(60.00)	28(56.00)	111(55.50)
	Medium (14.68-15.26)	7(14.00)	7(14.00)	7(14.00)	1(2.00)	22(11.00)
	High (>15.26)	27(54.00)	6(12.00)	13(26.00)	21(42.00)	67(33.50)
Annual income from livestock and poultry rearing	Low (<Rs. 3934.26)	15(30.00)	43(86.00)	39(78.00)	26(52.00)	123(61.50)
	Medium (Rs. 3934.26-Rs. 4932.74)	8(16.00)	2(4.00)	6(12.00)	11(22.00)	27(13.50)
	High (>Rs. 4932.74)	27(54.00)	5(10.00)	5(10.00)	13(26.00)	50(25.00)
Annual income from other sources	Low (<Rs.76619.72)	28(56.00)	42(84.00)	43(86.00)	22(44.00)	135(67.50)
	Medium (Rs.76619.72-Rs. 88016.28)	1(2.00)	5(10.00)	1(2.00)	4(8.00)	11(5.50)
	High (>Rs. 88016.28)	21(42.00)	3(6.00)	6(12.00)	24(48.00)	54(27.00)
Attitude towards improved livestock farming	Unfavourable (<50.94)	5(10.00)	20(40.00)	32(64.00)	32(64.00)	89(44.50)
	Neutral (50.94-51.99)	0	4(8.00)	3(6.00)	2(4.00)	9(4.50)
	Favourable (>51.99)	45(90.00)	26(52.00)	15(30.00)	16(32.00)	102(51.00)
Liking of Information sources	Low (<24.84)	11(22.00)	26(52.00)	34(68.00)	19(38.00)	90(45.00)
	Medium (24.84-25.50)	5(10.00)	4(8.00)	5(10.00)	3(6.00)	17(8.50)
	High (>25.50)	34(68.00)	20(40.00)	11(22.00)	28(56.00)	93(46.50)
Time spent in different livestock activities	Short (<1.98 hrs.)	11(22.00)	18(36.00)	12(24.00)	25(50.00)	66(33.00)
	Medium (1.98-2.10 hrs.)	17(34.00)	21(42.00)	23(46.00)	15(30.00)	76(38.00)
	Long (>2.10 hrs.)	22(44.00)	11(22.00)	15(30.00)	10(20.00)	58(29.00)

rearing activities amongst all the groups. It was observed that the majority of the Rabha tribe (54.00%) had a high level of income from involvement in livestock and poultry enterprises. A contrasting picture was seen for the Garo (86.00%), Hajong (78.00%) and Koch-Rajbongshi (52.00%) where majority of respondents reported low annual income from livestock and poultry rearing. With respect to attitude towards improved livestock and poultry farming it could be gathered that only 51.00 per cent of the total respondents had a positive attitude towards improved livestock and poultry farming and almost half of them had unfavourable or neutral attitude.

The correlational analysis as depicted in Table 3 revealed that a highly significant correlation (r = 0.249) existed between women's empowerment and the age of the respondents. Negative and highly significant correlation (r = -0.211) was observed between family size and women's empowerment in the pooled sample as well as in different groups. This can be attributed to the fact that in large families, decisions on various matters are usually taken by a patriarchal or matriarchal head who are, in most cases, found to be the in-laws. A positive and highly significant correlation was seen between social participation and women empowerment in the Garo tribe (r = 0.439) and Koch-Rajbongshi (r = 0.595) ethnic women, which was also reflected in the pooled data (r = 0.363). There was a highly significant correlation between women's empowerment and experience in livestock farming among the total respondents (r = 0.235). In the case of the Garo tribe, it was found that there was a highly significant correlation (r = 0.286) between land size and women's empowerment. The plausible reason might be that the women folk of the Garo tribe are very industrious and having larger plot of land they engage themselves in agricultural and livestock activities and thereby bringing integration in their farming system. Similarly, for the Garo tribe, it was discovered that a highly significant and positive correlation (r = 0.338) was present between mass media exposure and women's empowerment. The reason for this may be that with more mass media exposure, women get to know the current trends and affairs in society and the country as a whole. They also notice the social and cultural changes and the legal issues involving women's rights and privileges. The findings are similar to those of Mandal & Sant (2017); Deshmukh & Naik (2017); Jamatia (2019).

A highly significant and positive correlation (r = 0.323) was also seen between extension contact and the empowerment of tribal and ethnic women. The higher extension contact of the respondents might have impacted them in various ways by enhancing their knowledge level and skills and fostering a positive attitudinal shift. Similarly, a highly significant and positive correlation (r = 0.335) was also seen between annual income per year from livestock and poultry rearing and the empowerment of

Table 3. Correlational analysis of independent traits of farmwomen

	Correlates	Woman empowerment 'r'				
		Rabha	Garo	Hajong	Koch-Rajbongshi	Pooled
X1	Age	0.413**	0.206**	0.413**	0.186**	0.249**
X2	Size of family	-0.558**	0.304**	-0.559**	-0.416**	-0.211**
X3	Education	-0.432 NS	0.067 NS	-0.432 NS	0.252 NS	0.179 NS
X4	Social participation	-0.088 NS	0.439**	-0.087 NS	0.595**	0.363**
X5	Experience in livestock farming	0.387**	0.217**	0.387**	0.205**	0.235**
X6	Herd size	-0.073 NS	0.019 NS	-0.073 NS	0.211 NS	0.064 NS
X7	Size of land	0.059 NS	0.286**	0.0588 NS	0.277 NS	0.009 NS
X8	Exposure to Mass media	0.291 NS	0.338**	0.291 NS	0.269 NS	-0.034NS
X9	Extension contact	0.372**	0.380**	0.372**	0.468**	0.323**
X10	Annual income from livestock and poultry rearing	0.489**	0.686**	0.489**	0.484**	0.335**
X11	Annual income from other sources	-0.108 NS	0.163*	-0.108 NS	0.185 NS	-0.085NS
X12	Total annual income from all sources	-0.054 NS	0.204**	-0.055 NS	0.173 NS	-0.056NS
X13	Attitude towards improved livestock farming	0.272**	0.595**	0.272**	0.254**	0.278**
X14	Liking of Information sources	-0.041 NS	0.148*	-0.041 NS	0.029 NS	0.029 NS
X15	Time spent in different livestock activities	0.362**	0.569**	0.362**	0.679**	0.459**

**: p≤0.01 (Significant), *: p≤0.05 (Significant), NS (Non–significant)

tribal and ethnic women. The enhancement in their annual income and extension contact had a positive impact in their empowerment level which could be explained by the fact that the enhanced knowledge and skill gathered from extension contact could be invested for adopting newer innovations in the farm conditions. Further, the Garo farmwomen could engage themselves in some non-farm activities and thereby could derive further empowerment. In the case of the Garo tribe, a positive and significant correlation (r = 0.163) was seen between annual income per year from sources other than livestock and poultry rearing and household empowerment. This shows that the Garo women can take up other income-generating activities outside of livestock and poultry enterprises that will strengthen their home economies. Similarly, a positive and highly significant correlation (r = 0.204) was seen between total annual income from all sources and household empowerment for Garos. A highly significant and positive correlation (r = 0.278) was observed between attitudes towards improved livestock farming and women empowerment. Significant correlation (r = 0.148) was seen between the liking of information sources by the Garo respondents and household empowerment. The possible reason might be that with an increased liking for information sources, the knowledge of the women will be greater, which will empower them. A highly significant and positive correlation (r = 0.459) was seen between time spent in livestock activities and household empowerment.

The purpose of the regression assessment was to ascertain the influence and magnitude of influence of each variable on the empowerment of women. From Table 4, it can be inferred that characteristics such as social interaction, contact with extension personnel, and attitude towards livestock farming showed a significant contributing effect on women empowerment, while family size showed a highly significant and considerable effect on women empowerment in the Rabha tribe, explaining 70.40 per cent of the variation in women empowerment. In the case of the Garo, there were no significant predictors of women's empowerment present. For the Hajong tribe, educational level, herd size, and liking of information sources showed a significant influence on women's empowerment, whereas the attitude towards improved livestock farming exhibited a significantly strong correlation with women's empowerment, accounting for 68.50 per cent of the variability in women's empowerment as explained by these factors. A highly significant impact on women's empowerment was seen in the case of Koch-Rajbongshi with respect to attitude towards improved livestock farming practices and the amount of time devoted to livestock activities. The variation in women's empowerment is explained by these variables to the extent of 73.90 per cent. The findings are supported by those of Jamatia (2019).

DISCUSSION

The pooled percentage of women who perceived a high level of women's empowerment was 52.00 per cent. The findings were dissimilar to those reported by Jamatia (2019), who reported that the majority of tribal farmwomen belonging to the Jamatia and Debbarma tribes of Tripura discerned a medium level of empowerment by practicing animal husbandry. The findings related to experience were opposite to that of Patel et al., (2017) whereas similar to Borah et al., (2018) & Jamatia (2019) where majority of the respondents dwelling in fringe areas had medium level of agricultural and animal husbandry experience. The low level of mass media exposure of the tribal groups might be due to their low level of education on one hand and availability of mass media content in languages other than their mother tongue on the other. However, the Koch-Rajbongshi people having a little higher level of education could avail the facilities and thereby exhibited higher mass media exposure (62.00%). The findings are parallel with that of Devaki et al., (2015). The level of illiteracy, poor socio-economic status and lack of leisure time were speculated to be the reasons which might have deprived the respondents from getting access to various mass media sources. The main reason for low level of extension contact (55.50%) can be associated with the fact that rural women folk especially young ones are very shy in putting their thoughts forward in front of a stranger. They usually have

Table 4. Multiple regression analysis of independent traits of farmwomen with women empowerment

Correlates	Rabha		Garo		Hajong		Koch-Rajbongshi	
	"b" value	"t" value	"b" value	"t" value	"b" value	"t" value	"b" value	"t" value
Age	1.166^{NS}	1.483^{NS}	0.159^{NS}	0.319^{NS}	0.230^{NS}	0.541^{NS}	0.425^{NS}	0.918^{NS}
Size of family	-3.589^{NS}	-3.158**	1.748^{NS}	1.343 ^{NS}	0.271^{NS}	0.190^{NS}	-0.740^{NS}	-0.457^{NS}
Education	-2.603^{NS}	-1.142^{NS}	2.192^{NS}	0.986 ^{NS}	-6.539^{NS}	-2.608*	0.542^{NS}	0.233^{NS}
Social participation	-12.91^{NS}	-2.067*	9.628^{NS}	1.356 ^{NS}	-2.353^{NS}	-0.231^{NS}	4.069^{NS}	0.946^{NS}
Experience in livestock farming	-1.159 ^{NS}	-1.420^{NS}	0.309^{NS}	0.520 ^{NS}	-0.287^{NS}	-0.565^{NS}	-0.130^{NS}	-0.271^{NS}
Herd size	-5.843 ^{NS}	-1.646^{NS}	-4.037 ^{NS}	-1.664 ^{NS}	-3.621^{NS}	-2.068*	-1.863^{NS}	-0.514^{NS}
Size of land	-0.125 ^{NS}	-0.023^{NS}	-0.553 ^{NS}	-0.644 ^{NS}	0.031^{NS}	0.026^{NS}	0.087^{NS}	0.118^{NS}
Exposure to mass media	-0.217 ^{NS}	-0.151^{NS}	0.583^{NS}	0.337 ^{NS}	1.674^{NS}	1.082^{NS}	0.411^{NS}	0.254^{NS}
Extension contact	1.911^{NS}	2.711*	-0.884 ^{NS}	-0.431 ^{NS}	3.649^{NS}	1.383^{NS}	1.607^{NS}	1.605^{NS}
Annual income from livestock & poultry rearing	-0.001 ^{NS}	-0.133^{NS}	0.005^{NS}	1.344 ^{NS}	0.008^{NS}	0.495^{NS}	0.039^{NS}	1.889^{NS}
Pnnual income from other sources	-0.001 ^{NS}	-0.153^{NS}	-0.0003 ^{NS}	-0.071 ^{NS}	0.007^{NS}	0.410^{NS}	0.038^{NS}	1.830^{NS}
Total income	0.0014 ^{NS}	0.156^{NS}	0.0003 ^{NS}	0.078 ^{NS}	-0.007^{NS}	-0.411^{NS}	-0.037^{NS}	-1.831^{NS}
Attitude towards improved livestock farming	0.813 ^{NS}	2.211*	1.657^{NS}	1.985 ^{NS}	1.195^{NS}	3.414**	1.100^{NS}	2.772**
Liking of information sources	-0.830 ^{NS}	-1.271^{NS}	-0.683 ^{NS}	-0.646 ^{NS}	1.656^{NS}	2.126*	-0.898^{NS}	-1.272^{NS}
Time spent in different livestock activities	5.329^{NS}	1.632^{NS}	8.069^{NS}	1.684 ^{NS}	6.010^{NS}	1.387^{NS}	13.274^{NS}	3.329**
	R^2 =0.704, 'F' value for R=5.389**		R^2 =0.717, 'F' value for R=5.763**		R^2 =0.685, 'F' value for R=4.921**		R^2 =0.739, 'F' value for R=6.443**	

**: p≤0.01 (Significant), *: p≤0.05 (Significant), NS (Non–significant)

apprehensions about approaching unknown people and dealing with them. The main reason for the women having low level of income from livestock and poultry rearing was due to the fact that they were practicing it at a very small scale and so the income from it was low too. Some variation could be explained by the fact that as there were few avenues of income resulting in them marketing whatever stock they had effectively as compared to the other groups. The findings synchronized with Rathod et al., (2011); Upadhyay & Desai (2011); Begum (2019). Pig-rearing which is even now practiced by other tribes of that area is now considered a taboo among the Hajong and Koch-Rajbongshi groups. This may be the reason why they had unfavourable or neutral attitude towards piggery farming and its related aspects. As there were no such dubitation against the other livestock and poultry rearing practices the women were practicing them as per their convenience. The findings were in concurrence with those of Kavithaa & Rajkumar (2017); Begum (2019). As the Rabha women considered animal husbandry to be a good source of income they spent more time than the other tribes/ ethnic group in caring and feeding of their herd and flock or both. The findings were in parallel with those of Jamatia (2019) & Begum (2019).

The accumulated experience was accompanied by higher participation in livestock and poultry activities, giving them higher benefits that might have been shared, resulting in increased women's empowerment. The plausible grounds for total annual income may be that increased financial earnings can be a good motivator for women, and it can influence them to actively participate in various enterprises in various roles. The findings are backed by Deshmukh & Naik (2017); Kochar (2012) who reported improvement in economic resources of the family through participation of women. With an increased duration of time spent in animal husbandry, the rearing and caring of animals is done properly, leading to improved production and decreased mortality on the farm, which increases the income of the household from such activities and may lead to women's empowerment. Jamatia (2019); Deshmukh & Naik (2017) reported related findings in their respective studies.

CONCLUSION

The fact that almost half of the farmwomen had high level of empowerment and a substantial segment of them reported to have derived low level of empowerment goes to imply a mixed signal and poses a difficult situation which demands further examination. It augers well that extension contact and social participation exhibited to have positive correlation with women empowerment. Therefore, it can safely be concluded that both the public and private extension system need to gear up their activities in order to provide consulting more frequent services and impart training which will go a long way to enhance the knowledge and skill of the farmwomen who on their part would participate in self-help groups and joint-liability groups and other such social groups and thereby the segment of respondents lagging behind in women empowerment will try to fall in line.

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