

THE RELATIONSHIP OF AGE, GENDER AND LEVEL OF EDUCATION WITH THE EARNING OF DAIRY FARMERS OF NORTH MALABAR REGION OF KERALA STATE

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ABSTRACT

A study was conducted to find the relationship of age, gender and level of education with earning of dairy farmers in North Malabar region of Kerala. It is observed that there is a relationship between the variables representing a small scale dairy farming system viz., age, gender and level of education of dairy farmers with earning through sale of milk. Gender and level of education of the dairy farmers were positively correlated with earning through sale of milk, while the age was negatively correlated. Relationship between the age and level of education of the dairy farmers also had negative correlation.

Keywords: Age, gender, level of education, dairy farmers, correlation analysis

INTRODUCTION

The Indian dairy sector owes its success to millions of small holder producers, who have one or two milch animals yielding between 3 to 7 litre of milk per day. Although

the yield has remained quite low compared to the world standard, the dairy farming has not only survived but also flourished. The small holder livestock farms are an integral part of Indian agriculture (Devendra, 2007). The structure of milk production is largely based on low input and low to moderate output which fits into the resource endowments of small producers in terms of ownership of land and with more than 75 per cent of the farmers keeping 2-3 milch animals for subsistence (Singh and Datta, 2010). The mean heart rate in dairy farming tasks were 99 beats per minute in men and 115 beats per minute in women, the physical strain of female farmers in dairy farming seems to be too high because of heavy work task (Ahonan *et al.*, 1990). A study on physical workload and strain with farming in loose housing barns showed that milking was light work and feeding was moderately heavy work for the cardio respiratory system, feeding calves and removing manure required the most loading work postures for the back (Perkio-Makela and Hentila, 2005).

MATERIALS AND METHODS

The study has used personal interviews supplemented with pre-tested structured questionnaire having a reliability score of 0.895 with Cronbach's alpha in SPSS. This was an attempt to gain insight regarding the relationship between the age, gender and level of education of the dairy entrepreneurs with the earning from small scale dairy enterprise of North Malabar region of Kerala state. A detailed questionnaire with personal interview was used as tool to gather information from 501 farmers randomly selected from four districts viz., Kasaragod, Kannur, Kozhikode and Wayanad comprising the North Malabar region of Kerala. Correlation analysis as statistical tool was employed to determine the strength and relationship between the variables. This study was undertaken to determine the causal relationship between the four stated variables of small holder livestock production system by the application of simple correlation analysis (Bajpai, 2015).

Four hypothesis were formulated and hypothesis testing was undertaken in SPSS. The following were the four hypothesis

H₀: There is no statistically significant relationship between age and level of education

H_i: There is statistically significant relationship between age and level of education

H₀: There is no statistically significant relationship between age and earning through sale of milk

H_i: There is statistically significant relationship between age and earning through sale of milk

H₀: There is no statistically significant relationship between gender and earning through sale of milk

H_i: There is statistically significant relationship between gender and earning through sale of milk

H₀: There is no statistically significant relationship between farmer's level of education and earning through sale of milk

H_i: There is statistically significant relationship between farmer's level of education and earning through sale of milk

RESULTS AND DISCUSSION

Correlation between age and level of education was -0.397 with a corresponding p value of .000 based on 501 participants (Table 1). It is concluded that there is negative correlation between the age and level of education in case of dairy enterprises in North Malabar region of Kerala state.

The correlation between age and earning through sale of milk is -0.016 with a corresponding p value of 0.723 based on 501 participants. It is concluded that there is negative correlation between the two variables with a weak strength. Sharma *et al.* (2003) revealed that average age of commercial dairy farmer was lower than other categories of farmers, indicating that young farmers have more preference to dairy farming compared to other farming systems, and young farmers are more efficient than

Table 1. Correlations among age, gender, level of education and earning through sale of milk of the dairy farmers of North Malabar region of Kerala state

		Age	Gender	Level of education	Earning through sale of milk
Age	Pearson Correlation	1	-.020	-.397**	-.016
	Sig. (2-tailed)		.658	.000	.723
	N	501	501	501	501
Gender	Pearson Correlation	-.020	1	.042	.140**
	Sig. (2-tailed)	.658		.346	.002
	N	501	501	501	501
Level of education	Pearson Correlation	-.397**	.042	1	.114*
	Sig. (2-tailed)	.000	.346		.011
	N	501	501	501	501
Earning through sale of milk	Pearson Correlation	-.016	.140**	.114*	1
	Sig. (2-tailed)	.723	.002	.011	
	N	501	501	501	501

*Correlation is significant at the 0.05 level (2-tailed)

**Correlation is significant at the 0.01 level (2-tailed)

Table 2. Gender x earning through sale of milk of dairy farmers of North Malabar region of Kerala state by cross-tabulation count

		Earning through sale of milk				Total
		2001 to 5000/ month	5001 to 10000/ month	10001 to 25000/ month	Above 25001/ month	
Gender	Male	5	32	251	108	396
	Female	0	17	30	58	105
Total		5	49	281	166	501

Table 3. Gender x monthly family income of dairy farmers of North Malabar region of Kerala state by cross-tabulation count

		Monthly family income				Total
		5001-10000	10001;20000	20001-40000	Above 40001	
Gender	Male	140	136	86	34	396
	Female	30	68	7	0	105
Total		170	204	93	34	501

Table 4. Age x earning through sale of milk of dairy farmers of North Malabar region of Kerala state by cross-tabulation count

		Earning through sale of milk				Total
		2001 to 5000/month	5001 to 10000/month	10001 to 25000/month	Above 25001/month	
Age	20-30	0	0	0	6	6
	31-40	0	0	34	2	36
	41-50	5	3	50	8	66
	51-60	0	17	97	105	219
	Above 60	0	29	100	45	174
Total		5	49	281	166	501

old farmers in small scale dairy farming due to early adaptation of innovations and technologies.

The correlation between gender and earning through sale of milk was 0.140 with a corresponding p value of 0.002 based on 501 participants. The males were earning higher than females with the correlation strength of 0.140, which is a weak correlation strength. Sharma *et al.* (2003) reported that almost all the households were male-headed who has higher literacy and more earning than female-headed households. Contrary to this, Muriithi *et al.* (2014) reported that males

and females were having equal ownership of dairy business and also in earning in Imenti south district, Kenya.

Correlation between level of education and earning through sale of milk is 0.114 with a corresponding p value of 0.011 based on 501 participants. Similarly, Dev (2012) found that low level of education limits public dissemination of knowledge and resulting in decrease in income from agriculture and Sharma *et al* (2003) revealed that education increases the income from milk production by the early introduction of innovations and new techniques especially among young educated farmers.

Hence it was observed that there was relationship among the four variables having mild to moderate strength. Gender and level of education were positively correlated with earning through sale of milk and age was negatively correlated with earning through sale of milk in case of small scale dairy enterprise of North Malabar region of Kerala.

SUMMARY

There is negative relationship between the age and level of education. It was also observed that there is a negative relationship between age and earning through sale of milk with a weak strength in case of dairy enterprises in North Malabar region of Kerala state. Gender and level of education were positively correlated with earning through sale of milk in the small scale dairy farms of the North Malabar region of Kerala state.

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