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### Correlational analysis of profile of vegetable growers and their extension needs

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#### Abstract

Vegetable growing is becoming more and more important in low-income households. Given that it yields more and generates a higher economic return faster than food grains, cultivating vegetables has a great deal of potential to improve socioeconomic status of small and marginal farmers. The present study was conducted to know the relationship between the profile of vegetable growers and their extension needs. Exploratory research design was used to carry out the study. A sample of 120 respondents were selected by covering 10 villages of two districts in Amaravati Division of Maharashtra State for the purpose of the study. The results of correlation revealed that, the characteristics of the respondent's *viz.*, education, family size, annual income, land holding, social participation, information sharing behaviour, source of information, innovativeness, risk orientation had positive and highly significant relationship with their extension needs. In case of age, area under vegetables and experience in vegetable cultivation of the respondents, it was found to be negatively significant with their extension needs. This study throws light on the existing relationship of the vegetable growers and their extension needs.

**Keywords:** Correlation, extension needs, vegetables, vegetable growers

#### 1. Introduction

It is well recognized that vegetables are essential providers of micronutrients, dietary fiber, proteins, vitamins, and minerals. In addition to being nutritious, they may also include a variety of possible phytochemicals, antioxidants, and anti-carcinogenic properties. Vegetables being rich in nutrients is a part of balance and varied diet. These vegetables are low in energy, fat and full of nutrients. In response to this shift in attitudes about nutrition and lifestyle, there is a noticeable increase in demand for fruits and vegetables. Farmer's cultivation of vegetables has increased significantly.

Vegetable farming is becoming a more significant business, particularly for low income House Holds. Compared to food grains, it offers a larger yield and faster financial returns, therefore it has a lot of potential to improve the socio-economic status of small and marginal farmers. Vegetable cultivation in India is crucial for food security, nutritional balance, and economic stability. It provides diverse range of essential nutrients has been found to be more profitable than others, particularly food crops, as food crops are highly Labor-intensive and mainly cultivated by marginal rural farmers. These vegetable growers need timely access and exposure to the latest/ best agricultural practices (Bassangari, 2010) [2].

Vegetable crop marketing is particularly difficult and dangerous because of the produce's perishable nature, seasonal production, and bulkiness. They also have a distinct price range from producer to consumer, which is

determined by supply and demand in relationships with different intermediaries at different stages of marketing chain.

However, vegetable cultivation in India is still an unorganized sector with farmers following traditional practices. Besides, the vegetable growers are not as well served by the agriculture extension system as the farmers growing and due to this productivity and production efficiency remains low (Dhurvey *et al*, 2018) [4]. Against this backdrop, its necessary to gain some insights on relationship between vegetable growers and their extension needs.

#### 2. Objectives

To find out the correlation between profile of vegetable growers and their extension needs.

#### 3. Materials and Methods

The current study was undertaken on purposively in the state of Maharashtra. An exploratory research design was used for the study. Maharashtra state comprises of six revenue divisions *viz.*, Mumbai, Pune, Nashik, Aurangabad, Nagpur, and Amravati. Out of which Akola and Amravati districts from Amravati Division were selected for the present study. Two talukas namely, Patur taluka of Akola district and Achalpur taluka of Amravati district were purposively selected for the study as they were having high area under vegetable cultivation than other talukas of these selected districts. In Patur and Achalpur talukas, 5 villages

from each taluka and 12 respondents from each village were selected purposively based on high area under vegetable cultivation. Comprising total sample of 120 respondents for the present study. The basic instrument used for study was interview schedule. The data was collected by personal interview to get valid and complete responses. Keeping the objective of the study in view an interview schedule was developed, and was personally administered. A structured interview schedule consisting relevant questions which were related with the objectives of the study was prepared. Necessary precautions were taken to keep the language simple to get desired responses from the vegetable growers. The interview schedule was developed in English language and then translated in Marathi for use with the vegetable growers. The data collected was qualitative, it was converted into quantitative form by scoring them in Excel and later the data was analysed by using SPSS.

#### 4. Results and Discussion

Correlational analysis was done to determine the contribution of profile characteristics of the vegetable growers towards extension needs. The results obtained are presented in Table 1.

##### 4.1 Age

The value of coefficient of correlation at 1% and 5% level of significance was -0.2759 ( $r = -0.2759$ ) and was greater than table (0.210) value. Hence, null hypothesis  $H_0$  is rejected. This indicates a significant negative relationship between age and the extension needs of vegetable growers.

##### 4.2 Education

The value of coefficient of correlation at 5% level of significance was -0.1003 ( $r = 0.1003$ ) and was less than table (0.150) value. Hence, null hypothesis  $H_0$  is accepted. This indicates a non-significant negative relationship between education and the extension needs of vegetable growers.

##### 4.3 Family size

The value of coefficient of correlation at 5% level of significance was 0.2158 ( $r = 0.2158$ ) and was greater than table (0.150) value. Hence, null hypothesis  $H_0$  is rejected. This indicates a significant positive relationship between family size and the extension needs of vegetable growers.

##### 4.4 Annual income

The value of coefficient of correlation at 5% level of significance was 0.1837 ( $r = 0.1837$ ) and was greater than table (0.150) value. Hence, null hypothesis  $H_0$  is rejected. This indicates a significant positive relationship between annual income and the extension needs of vegetable growers.

##### 4.5 Land holding

The value of coefficient of correlation at 5% level of significance was -0.1289 ( $r = -0.1289$ ) and was less than table (0.150) value. Hence, null hypothesis  $H_0$  is accepted. This indicates a non-significant negative relationship between land holding and the extension needs of vegetable growers.

#### 4.6 Area under vegetables

The value of coefficient of correlation at 5% level of significance was -0.1198 ( $r = -0.1198$ ) and was less than table (0.150) value. Hence, null hypothesis  $H_0$  is accepted. This indicates a non-significant negative relationship between area under vegetables and the extension needs of vegetable growers.

**Table 1:** Correlation between selected profile of vegetable growers and their extension needs

Sl. No.	Variables	'r' Values
1.	Age	-0.2759**
2.	Education	0.1003 NS
3.	Family size	0.2158**
4.	Annual income	0.1837*
5.	Land holding	-0.1289 NS
6.	Area under vegetables	-0.1198 NS
7.	Experience in vegetable cultivation	-0.2146**
8.	Information sharing behaviour	0.0117 NS
9.	Social participation	-0.1182 NS
10.	Source of information	-0.1461 *
11.	Innovativeness	0.3472**
12.	Risk orientation	0.2458**

(\*\* significant at 1%, \* significant at 5% level of significance and NS: Non-Significant)

##### 4.7 Experience in vegetable cultivation

The value of coefficient of correlation at 1% and 5% level of significance was -0.2146 ( $r = -0.2146$ ) and was greater than table value. Hence, null hypothesis  $H_0$  is rejected. This indicates a significant negative relationship between experience in vegetable cultivation and the extension needs of vegetable growers.

##### 4.8 Information sharing behaviour

The value of coefficient of correlation at 5% level of significance was 0.0117 ( $r = 0.0117$ ) and was less than table (0.150) value. Hence, null hypothesis  $H_0$  is accepted. This indicates a non-significant positive relationship between information sharing behaviour and the extension needs of vegetable growers.

##### 4.9 Social participation

The value of coefficient of correlation at 5% level of significance was -0.1182 ( $r = -0.1182$ ) and was less than table (0.150) value. Hence, null hypothesis  $H_0$  is accepted. This indicates a non-significant negative relationship between social participation and the extension needs of vegetable growers.

##### 4.10 Source of information

The value of coefficient of correlation at 5% level of significance was -0.1461 ( $r = -0.1461$ ) and was less than table (0.150) value. Hence, null hypothesis  $H_0$  is accepted. This indicates a non-significant negative relationship between source of information and the extension needs of vegetable growers.

##### 4.11 Innovativeness

The value of coefficient of correlation at 1% and 5% level of significance was 0.3472 ( $r = 0.3472$ ) and was greater than

table (0.210) value. Hence, null hypothesis  $H_0$  is rejected. This indicates a significant positive relationship between Innovativeness and the extension needs of vegetable growers.

#### 4.12 Risk orientation

The value of coefficient of correlation at 1% and 5% level of significance was 0.2458 ( $r = 0.2458$ ) and was greater than table (0.210) value. Hence, null hypothesis  $H_0$  is rejected. This indicates a significant positive relationship between Innovativeness and the extension needs of vegetable growers.

It was seen from the above results that family size, annual income, innovativeness, risk orientation of the vegetable growers had positive and highly significant relationship with their extension needs at 0.01% level of probability. While age, experience in vegetable cultivation of vegetable growers had negative and significant relationship with their extension needs at 0.01% level of probability. It was also found that education, landholding, information sharing behaviour, social participation, and source of information of the vegetable growers had highly positive and significant relationship with their extension needs at 0.05% level of probability. While area under vegetables was found to be negatively significant at 0.05% level of probability

The correlation analysis of age, area under vegetables and experience in vegetable cultivation of the vegetable growers with their extension needs was resulted negatively significant. Thus, it indicates that, as the age, area under vegetables and experience in vegetable cultivation increases there was a decrease in their extension needs. In this case null hypothesis ( $H_0$ ) framed was rejected. These findings were found to be similar with Adebayo (2012) <sup>[1]</sup>, Deshmukh *et al.* (2015) <sup>[3]</sup> and Rawal Jyoti (2017) <sup>[5]</sup>.

#### 5. Conclusion

This study has upheld the relationship between profiles of vegetable growers with their extension needs. It was observed from the study that, the characteristics of the respondents *viz.*, education, family size, annual income land holding, information sharing behaviour, social participation, source of information, innovativeness and risk orientation had positive and highly significant relationship with their extension needs. It shows that increase in education, family size, annual income, land holding, information sharing behaviour, social participation, source of information, innovativeness, risk orientation increases the extension needs of vegetable growers. Thus, this study throws light on the existing circumstances of vegetable growers in the Maharashtra state. It provides insights for researchers, policy makers to scale up the existing policies to enhance the socioeconomic status of the vegetable growers.

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