

Difference in Knowledge About Paddy Cultivation Among Trained And Untrained Respondents According to Their Different Categories of Personal And Socio-Economic Characteristics

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Abstract

The study analyzed the difference in knowledge regarding paddy cultivation among trained and untrained respondents across various personal and socio-economic categories. Among trained respondents, age showed minimal influence, except in knowledge of manures and fertilizers, while caste differences revealed that Scheduled Caste respondents possessed comparatively less knowledge due to weaker economic conditions and smaller landholdings. Education significantly influenced knowledge, with respondents educated up to Intermediate and above demonstrating higher awareness, especially in production technology, fertilizers, and post-harvest practices. Economic status also played a role, particularly in the adoption of improved implements. Training programmes, especially those conducted by KVK, effectively minimized knowledge gaps, except in practices requiring financial resources. In contrast, untrained respondents exhibited wider disparities, where older age groups had higher knowledge than younger ones. Caste and education differences were significant, with educated respondents showing superior understanding. Overall, training emerged as a key factor in bridging knowledge disparities across socio-economic categories.

Keywords: Knowledge level; Trained and untrained respondents; Socio-economic characteristics; Paddy cultivation; Krishi Vigyan Kendra (KVK); Agricultural training programmes, Technology adoption.

Introduction

Paddy is the staple food of India and holds immense importance in the national economy, yet a large proportion of paddy farmers still live below the poverty line. To address food security challenges, high-yielding varieties have been developed, making India the world's second-largest rice producer after China, contributing nearly 25 per-cent of global rice production. Being the staple for over half of the world's population, paddy cultivation is vital not only for food security but also for rural livelihoods. Knowledge plays a vital role in improving agricultural productivity, particularly in the scientific management of paddy cultivation. However, variations in knowledge often arise due to differences in personal and socio-economic characteristics of farmers. Training programmes, such as those conducted by Krishi Vigyan

Kendras (KVKs), aim to bridge these gaps by providing scientific awareness and practical skills. To assess their effectiveness, it is important to compare the knowledge of trained and untrained respondents across different categories such as age, caste, education, economic status, and social status. Evidence from the study reveals that trained respondents showed relatively uniform knowledge across age groups, while caste and education created noticeable differences. Similarly, economic status influenced awareness of improved implements and costly practices. In contrast, untrained respondents displayed wider disparities, with older, educated, and economically better-off groups having greater knowledge. Thus, training emerges as a crucial factor in minimizing socio-economic disparities in agricultural knowledge. Keeping this view the present investigation was conducted with the single specific objective.

To find out the difference in Knowledge About Paddy Cultivation Among Trained And Untrained Respondents According to Their socio Personal and Socio-Economic Characteristics.

Research Methodology :

Presently, 731 Krishi Vigyan Kendras (KVKs) are functioning in the country, of which 89 are located in Uttar Pradesh. For this study, only one KVK, Sultanpur, was selected purposively. The district Sultanpur consists of 22 Community Development (CD) blocks and 2533 villages. Among these, KVK Sultanpur has adopted 8 blocks and two CD blocks, namely Dubeypur and Lamuha, were randomly chosen for the study. To select villages, a list of adopted villages under both blocks was obtained from KVK Sultanpur. From this list, four villages were randomly selected from each block where training programmes on paddy cultivation had been conducted. For comparison, eight adjoining villages were also selected as non-participant villages, resulting in a total of sixteen villages. In view of the objectives, two categories of respondents were selected—trained and untrained farmers of KVK training programmes on paddy cultivation. The respondents were chosen through proportionate random sampling. A complete list of trained and untrained farmers was prepared from each village. In cases where the number of trained farmers in a village was 35 or more, 25 percent of them were selected as respondents, while in villages with fewer than 35 trained farmers, 35 percent were included. For untrained farmers, respondents were selected in equal proportion from adjoining villages. Independent variables included age, caste, education, size of holdings, farm power, irrigation, cropping pattern, social participation, social status, economic status, and overall socio-economic status. The dependent variables were knowledge of paddy cultivation practices. Primary data were collected by the researcher himself using a structured interview schedule prepared on the basis of standardized scales. Rapport was first established with the respondents to ensure accuracy and reliability of responses. The collected data were classified, tabulated, and analyzed in accordance with the objectives and hypotheses of the study. Appropriate statistical tools such as frequency distribution, percentage, mean, and ‘t’ test were applied for analysis and interpretation.

Statistical Procedure :

For the analysis of data, appropriate statistical tools were applied to ensure meaningful interpretation. Frequency distribution and percentage were used to determine the distribution of respondents into different categories and to standardize responses for comparison. Arithmetic mean was calculated to measure the central tendency of observations, representing the average of values obtained. The ‘t’ test was employed to examine the significance of differences between the mean scores of two samples, thereby identifying whether they belonged to the same population or differed significantly. This test was particularly useful in comparing trained and untrained respondents regarding knowledge and adoption of paddy cultivation

practices. In addition, the **measurement of socio-economic status** was carried out using a standardized scale to categorize respondents based on their personal and socio-economic characteristics. These statistical tools together provided a reliable basis for analysis, interpretation, and drawing valid conclusions.

RESULTS AND DISCUSSION:

Table - 1 shows the difference in knowledge among trained respondents according to their different categories of six personal and socio-economic characteristics. It was found that there was no significant difference in knowledge about paddy cultivation among different age categories of respondents except middle and old aged respondents in respect of manures/fertilizers. This shows that age had no significant effect on the knowledge of trained respondents.

Table - 1 Difference in knowledge among trained respondents according to their different categories of personal and socio-economic characteristics

Sl. No.	Differences in Categories	Difference in Knowledge ('t' value)					
		PP	M/F	PPM	I/I	PHT	Total
1.	Age						
a.	Young Vs Middle	0.301	0.900	0.700	1.131	1.000	1.098
b.	Young Vs Old	0.700	0.550	0.400	0.717	1.000	0.342
c.	Middle Vs Old	0.650	2.279*	0.600	1.006	1.000	1.255
2.	Caste						
a.	SC Vs OBC	-2.412*	1.018	1.921	1.909	1.000	1.962
b.	SC Vs Gen.	-2.800*	2.635*	3.101*	2.744*	1.000	3.002*
c.	Gen. Vs OBC	0.402	1.947	0.702	0.526	1.000	1.005
3.	Education						
a.	Ill. Vs JHS	1.363	1.041	0.539	0.179	1.000	0.713
b.	Ill. Vs HS	0.465	0.043	0.147	0.126	0.655	0.125
c.	Ill. Vs Inter & above	0.667	0.698	0.009	0.369	0.655	0.419
d.	JHS Vs HS	0.356	0.941	0.932	0.037	0.100	0.636
e.	JHS Vs Inter & above	3.465*	3.415*	1.391	0.299	1.000	2.242*
f.	HS Vs Inter & above	1.102	0.724	0.212	0.667	6.513*	0.600
4.	Social Status						
a.	Low Vs Medium	1.116	0.662	0.994	0.607	1.000	0.746
b.	Medium Vs High	1.223	1.919	0.703	1.002	0.655	1.395
c.	Low Vs High	0.561	1.807	0.606	0.687	1.000	1.052
5.	Economic Status						
a.	Low Vs Medium	0.049	1.378	0.204	1.677	0.655	0.646
b.	Low Vs High	0.433	0.871	0.614	3.373*	1.000	0.700
c.	Medium Vs High	1.115	0.550	0.748	1.377	1.000	0.143

6.	SocioEconomic Status						
a.	Low Vs Medium	0.605	0.166	0.378	1.921	0.015	1.386
b.	Low Vs High	0.788	0.515	0.736	1.470	1.000	1.508
c.	Medium Vs High	1.081	1.682	0.446	1.269	1.000	0.266

PP - Preliminary Preparation; M/F - Manures/Fertilizers; PPM - Plant Protection Measure; I/I - Irrigation/Implements; PHT - Post Harvest Technology
 * - Significant at 5 per cent level of probability

In case of caste categories, significant difference in knowledge of scheduled caste respondents was found with other backward caste in the knowledge about preliminary preparation and with general caste category in all the practices of paddy cultivation. It may be concluded that the respondents of scheduled caste had less knowledge on scientific paddy cultivation as compared with other caste categories. This trend may be because of poor economic condition and small land holdings.

This table, further highlights that the significant difference in knowledge on production technology and manures/fertilizers as well as overall knowledge about paddy cultivation between the respondents who had education upto Junior High School & Intermediate and above. The knowledge on post harvest technology was found significantly different between the respondents who had education upto High School & Intermediate and above. The significant difference in knowledge on improved implements was also found between the respondents of low and high economic status.

It is observed from the table that the training programme of KVK has significantly reduced the gap in knowledge among different categories of personal and socio-economic status of the respondents were found only in those practices which requires the financial obligations.

The Table - 2 reveals the difference in knowledge among the untrained respondents according to their different categories of personal and socio-economic characteristics. It was found that old age categories of respondents had significant difference in knowledge with young and middle age categories in respect of all the practices of paddy cultivation except post-harvest technology. It is concluded that old age categories had significantly, high knowledge on paddy cultivation as compared with other age categories.

Table - 2 Difference in knowledge among untrained respondents according to their different categories of personal and socio-economic characteristics

Sl. No.	Differences in Categories	Difference in Knowledge ('t' value)					
		PP	M/F	PPM	I/I	PHT	Total
1.	Age						
a.	Young Vs Middle	1.475	1.845	1.139	1.678	1.435	1.751
b.	Young Vs Old	3.195*	4.076*	3.835*	3.672*	0.655	4.057*
c.	Middle Vs Old	3.522*	3.748*	3.960*	2.337*	1.435	4.237*
2.	Caste						
a.	SC Vs OBC	1.974	0.287	3.527*	2.605*	1.200	2.137*
b.	SC Vs Gen.	3.452*	2.862*	6.758*	5.438*	0.359	5.012*
c.	Gen. Vs OBC	1.070	2.752*	4.337*	2.828*	1.300	2.883*

3.	Education						
a.	Illi. Vs JHS	2.500*	1.562	4.181*	2.475*	1.100	3.253*
b.	Illi. Vs HS	1.494	1.712	4.459*	2.521*	1.800	3.026*
c.	Illi. Vs Inter & above	5.317*	5.488*	8.192*	6.507*	0.033	7.717*
d.	JHS Vs HS	0.901	0.367	1.445	0.078	0.655	0.274
e.	JHS Vs Inter & above	2.985*	3.953*	4.188*	3.145*	1.230	4.094*
f.	HS Vs Inter & above	3.782*	3.194*	2.006*	3.017*	1.400	3.425*
4.	Social Status						
a.	Low Vs Medium	5.951*	0.982	1.948	1.675	1.430	0.009
b.	Medium Vs High	0.741	1.347	0.832	0.101	1.210	0.868
c.	Low Vs High	0.079	1.149	0.615	0.410	0.064	0.878
5.	Economic Status						
a.	Low Vs Medium	0.913	0.358	1.365	1.067	1.800	1.332
b.	Low Vs High	3.984*	3.212*	3.389*	3.025*	1.200	4.155*
c.	Medium Vs High	4.076*	3.624*	3.619*	2.969*	0.415	4.037*
6.	Socio-Economic Status						
a.	Low Vs Medium	2.714*	0.581	4.699*	4.769*	1.400	3.835*
b.	Low Vs High	5.114*	4.210*	8.347*	6.156*	0.140	6.949*
c.	Medium Vs High	3.506*	3.827*	4.517*	2.238*	1.500	4.019*

PP - Preliminary Preparation; M/F - Manures/Fertilizers; PPM - Plant Protection Measure; I/I - Irrigation/Implements; PHT - Post Harvest Technology
 * - Significant at 5 per cent level of probability

In view of the difference in knowledge according to their caste categories. It was found that knowledge about plant protection measure, irrigation/implements as well as overall knowledge of paddy cultivation were found significantly difference among all the three caste categories with each other. Further, the knowledge about manures/fertilizers and general caste categories was found significantly different with scheduled caste and other backward caste categories.

As far as the education level of the respondents was concerned, significant difference in knowledge about plant protection measure, irrigation/implements and overall practices of paddy cultivation was found on all the educational categories of the respondents with each other except the knowledge among the respondents who had education upto to High School and Junior High School was found to be at par. The difference in knowledge about preliminary preparation and manures/fertilizers among the respondents who had education upto Intermediate & above was found significantly higher than the respondents who were illiterate and education upto Junior High School and High School. It ass also observed that the knowledge among educated respondents is higher than other less educated respondents.

In case of economic status of the respondents, significant difference in knowledge about all the practices of paddy cultivation except post-harvest technology among high economic status was found with low and medium economic status. It clearly reveals that the respondents of high economic status had more knowledge as compared with the respondents of other economic status.

As far as the knowledge among the respondents of different categories of socio-economic status was concerned, the significant difference in knowledge about all the practices of paddy cultivation except post-harvest technology and among three categories of respondents with each other.

Conclusion:

The study highlights significant differences in knowledge of paddy cultivation among trained and untrained respondents across personal and socio-economic categories. Training programmes organized by KVK played a vital role in minimizing knowledge gaps, particularly in technical and scientific practices, though disparities remained in areas requiring financial investment. Among trained farmers, age showed minimal influence, while caste, education, and economic status significantly shaped knowledge levels. In contrast, untrained respondents displayed wider variations, with older, educated, and economically better-off farmers possessing higher awareness. Overall, training emerged as an effective tool for bridging knowledge disparities and promoting scientific cultivation practices.

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