Socio-economic and Psychological characteristics of KVK trainees and non-trainees in selected districts of Jharkhand

ABSTRACT

This present study was conducted in Jharkhand, India, during 2021-2022, aimed to assess the socio-personal, and communication characteristics of trainee and non-trainee of Deoghar, Dumka, and Giridih districts of Jharkhand.The Data were collected from 200 trainee and 200 non-trainee respondents using stratified random sampling and analysed using appropriate statistical tests. The results indicate that the majority of farmers had limited education, with most living in semi-cemented or cemented houses. Marginal farmers were predominant in both groups, with low annual income levels. Trainee respondents exhibited higher levels of innovativeness and leadership ability compared to non-trainees, suggesting a positive impact of training programs. However, both groups showed a need for improvement in scientific orientation. The study underscores the importance of targeted interventions to improve education, infrastructure, and income levels among farmers in Jharkhand. Training programs should focus on enhancing not only technical skills but also innovativeness, leadership, and scientific orientation to enhance agricultural productivity and livelihoods in the region. The major sources of communication where radio ,television newspaper, magazine etc.

Comment [U1]: 1.The abstract does not clearly outline the research findings.
2.The abstract should include conclusions drawn from the research findings.

KEYWORDS:socio-economic, psychological characteristics, trainee, non-trainee

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INTORDUCTON

Agriculture forms the foundation of India's economy, providing rural communities with food security, employment, and livelihoods. With approximately half of the population reliant on agriculture and related sectors, it plays a pivotal role in job creation. The progress in agricultural science has facilitated advancements in seed quality, planting techniques, disease control, irrigation, and machinery use, enhancing productivity. However, a current concern is the insufficient high-quality food grain output in farmers' fields, particularly in light of the nation's changing population dynamics.

Comment [U2]:
1. The background does not present data on the number of farmers in the research location or how they have been conducting agriculture thus far.
2. Clarify the existing gap in this research.

In addition to providing farmers with a competitive edge over traditional methods, agricultural innovations and the widespread adoption of new technologies are crucial for achieving food security and improving living standards in the country. Farmers require access to modern

Comment [U3]: Please include the sources used

technologies, essential resources, and up-to-date information across all agricultural sectors, including crops, livestock, forestry, and fisheries, to realize their full potential. In this context, the Indian Government has established a comprehensive network of Krishi Vigyan Kendra (KVKs) in every rural district of the country under the Indian Council for Agricultural Research (ICAR). These KVKs, operating within the National Agricultural Research and Education System, serve as key agents for disseminating modern technologies, educating farmers, and providing them with crucial input support. The 731 Krishi Vigyan Kendra (KVKs) established by the Indian Council of Agricultural Research (ICAR) aim to assess, refine, and demonstrate technologies through various activities. These KVKs must adapt to evolving agricultural conditions by addressing contemporary issues such as climate change, market-driven extension, mechanization, agri-business, and others. It is essential to ascertain the adoption and acceptance of new technologies by farmers. Are farmers able to effectively utilize these advancements, and to what extent are KVKs assisting them in this regard? Evaluating the effectiveness of KVKs in achieving these objectives is crucial.

Comment [U4]: Please include the sources used

Understanding the personal, socio-economic, and communication characteristics of farmers is crucial for devising effective agricultural extension programs and policies. This study focuses on exploring these aspects among farmers in the Deoghar, Dumka, and Giridih districts of Jharkhand. These districts, known for their agricultural diversity and significance, present a unique context for understanding the complexities of farmer livelihoods.

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In recent years, Jharkhand has witnessed significant changes in its agricultural landscape, driven by factors such as climate change, market dynamics, and government policies. These changes have implications for farmers' decision-making processes, access to resources, and overall well-being. By examining the personal characteristics, socio-economic status, and communication patterns of farmers in these districts, this study aims to provide valuable insights into the challenges and opportunities faced by them.

RESEARCH METHODOLOGY

Comment [U6]: In the methodology section, please specify the type of research, research design, and determination of sample size.

The study was conducted in Jharkhand state, India, during 2021-2022, focusing on wheat and mushroom cultivation technology. Three districts—Deoghar, Dumka, and Giridih—were selected for their specific issues related to agriculture. From these districts, four blocks were chosen: Deoghar and Devipur from Deoghar district, Dumka from Dumka district, and Bengabad from Giridih district. These blocks were selected due to the poor socio-economic status and lack of awareness among farmers regarding agricultural technology advancements. The selected blocks comprised 129 villages in Deoghar, 90 in Devipur, 75 in Dumka, and 38 in Bengabad, totaling 16 villages randomly selected from these blocks. The sampling method used was stratified random

sampling, categorizing farmers into marginal, small, medium, and large categories, with a proportionate random sampling technique applied to determine the sample size.

Comment [U7]: Please include the sources used

Data collection involved primary sources, focusing on socio-economic and psychological attributes of the respondents. Interview schedules were developed in consultation with experts in the field, incorporating standard indices and scales. The collected data were classified, tabulated, and analysed using appropriate statistical tests.

RESULT AND DISCUSSION

Comment [U8]: In the results and discussion section, please include previous studies that could be used as a comparison in the discussion. The article presents only results in the form of percentages but does not show similar or conflicting findings from previous studies, which warrants discussion.

This section presents the result of the study undertaken and the relevant interpretation and discussion in the light of the objectives of the study.

Table- 1. Distribution of respondents according to their socio-economic condition

Variables	**Trainee (n=200)**		**Non-Trainee (n=200)**	
1. Age	**f**	**%**	**f**	**%**
Young(18-35)	68	34.00	103	51.50
Middle(36-55)	89	44.50	38	19.00
Old (>56)	43	21.50	59	29.50
2. Education	**f**	**%**	**f**	**%**
Illiterate	47	23.50	83	41.50
Primary School	17	08.50	15	7.50
Junior High School	19	09.50	34	17.00
High School	51	25.50	30	15.00
Intermediate	37	18.50	29	14.50
Graduation and above	29	14.50	09	04.50
3. Occupation	**f**	**%**	**f**	**%**
Agriculture	143	71.50	156	78.00
Agriculture + business	38	19.00	33	16.50
Agriculture + Service	19	09.50	11	05.50
4. Land holding	**f**	**%**	**f**	**%**

Marginal farmers (below 1.00)	125	62.50	113	56.50
Small farmers (1.01 to 2.00)	34	17.00	47	23.50
Medium farmers (2.01 to 3.00)	29	14.50	32	16.00
Large farmers (above 3.01)	12	06.00	08	04.00
5. Housing pattern	**f**	**%**	**f**	**%**
Hut	39	19.50	46	23.00
Semi Cemented	98	49.00	102	51.00
Cemented	63	31.50	52	26.00
6. Annual Income	**f**	**%**	**f**	**%**
Low (below 50000)	75	37.50	110	55.00
Medium (50001-100000)	90	45.00	66	33.00
High (100001 and above)	35	17.50	24	12.00
7. Family type	**f**	**%**	**f**	**%**
Nuclear Family	129	64.50	121	60.50
Joint Family	71	35.50	79	39.50
8. Family size	**f**	**%**	**f**	**%**
Smallfamily(up to 5 members)	92	46.00	69	34.50
Mediumfamily(6 to 8 members)	73	36.50	87	43.50
Largefamily (above 9 members)	35	17.50	44	22.00
9. Mass Media Exposure	**f**	**%**	**f**	**%**
Radio	128	64.00	39	19.50
Television	101	50.50	32	16.50
Newspaper	42	21.00	57	28.50
Agricultural Journal/Magazine	11	05.50	24	12.00
10. Participation extension program	**f**	**%**	**f**	**%**

Low (0-5)	15	07.50	62	31.00
Medium (6-10)	109	54.50	112	56.00
High (Above 10 score)	76	38.00	26	13.00
11. Innovativeness	**f**	**%**	**f**	**%**
Low	22	11.00	111	55.50
Medium	75	37.50	62	31.00
High	103	51.50	27	13.50
12. Leadership Ability	**f**	**%**	**f**	**%**
Low Below (6-9)	09	4.50	89	44.50
Medium (10-12)	89	44.50	72	36.00
High (13-15)	102	39.00	39.00	19.50
13. Scientific orientation	**f**	**%**	**f**	**%**
Low (8-10)	31	15.50	126	63.00
Medium (11 to 13)	66	33.00	53	26.50
High (14-16)	103	51.50	21	10.50
14. Economic motivation	**f**	**%**	**f**	**%**
Low (7-9)	35	17.50	121	60.50
Medium (10 to 12)	78	39.00	62	31.00
High (13-15)	87	43.50	17	8.50
15. Overall Socio-Economic	**f**	**%**	**f**	**%**
Low	18	09.00	101	50.50
Medium	79	39.50	66	33.00
High	103	51.50	33	16.50

Background variables of respondents

The socio- personal, economic, social participation, and psychological profile of the respondents was analysed taking various independent variables.

Socio-personal variables

The socio-personal characteristics of the respondents were analyzed with respect to their age, education, housing pattern, family type, and family size. It was evident from Table 1 that 44.50% of the trainees were in the middle age group, followed by 34.00% in the young age group, while 21.50% of the trainees were in the old age group. In the non-trainee group, 19.00% were also in the middle age group, whereas 29.50% of non-trainees were in the old age group. 51.50% of non-trainees were in the young age group. The table shows that the majority of farmers in the study area had not attained a high level of education. Specifically, 23.50% of trainees and 41.50% of non-trainees were completely illiterate, while 08.50% of trainees and 7.50% of non-trainees had only completed primary school. 09.50% of trainees and 17.00% of non-trainees had completed Junior High School, and 25.50% of trainees and 15.00% of non-trainees had completed High School, while 18.50% of trainees and 14.50% of non-trainees had education up to the Intermediate level. In the study area, the majority of trainee respondents (49.00%) had semi-cemented houses, followed by 31.50% with cemented houses and 19.50% with huts. Among non-trainee respondents, 51.00% had semi-cemented houses, 26.00% had cemented houses, and 23.00% had huts. The data revealed that out of the two hundred trainee respondents, 64.50% had nuclear families and 35.50% had joint families, while among non-trainee respondents, 60.50% had nuclear families and 39.50% had joint families. Regarding family size, the majority of trainees (46.00%) belonged to small families, followed by 36.50% in medium families and 17.50% in large families. Among non-trainee respondents, 43.50% belonged to medium families, 34.50% to small families, and 22.00% to large families. A similar findingsis also reported by **Singh *et al.* (2016), Patidar (2011).**

Economic Variables

The economic variables of the respondents were also analyzed. Regarding the size of landholding, the majority of trainee respondents (62.50%) were marginal farmers, followed by 17.00% small farmers, 14.50% medium farmers, and 06.00% large farmers. Among non-trainee respondents, 56.50% were marginal farmers, 23.50% small farmers, 16.00% medium farmers, and 04.00% large farmers. Furthermore, the data revealed that most trainee respondents (71.50%) were engaged in agriculture as their primary occupation, followed by 19.00% in agriculture + business and 09.50% in agriculture + service. Among non-trainee respondents, 78.00% were engaged in agriculture, 16.50% in agriculture + business, and 05.50% in agriculture + service.In terms of annual income, 37.50% of trainees and 55.00% of non-trainees fell into the annual income group up to below Rs. 50,000/-. 45.00% of trainees

and 33.00% of non-trainees were in the annual income group of Rs. 50,001 to 100,000. 17.50% of trainees and 12.00% of non-trainees were in the annual income group above Rs. 100,001.

Regarding economic motivation, 39.00% of trainee respondents had a medium level of economic motivation, 43.50% had high motivation, and 17.50% had low motivation. Among non-trainee respondents, 60.50% had low economic motivation, 31.00% had medium motivation, and 8.50% had high motivation.A similar findings is also reported by **Jakkawad*et al*. (2019), Ahmad *et al.* (2012), Ahire *et al.* (2018).**

Social participation variables

Under the study, one social participation variables were considered table indicated that 7.50 per cent trainee had low participation in extension programmes where as 54.50 per cent trainee had medium participation in extension programmes while 38.00 per cent had high participation in extension programmes. A similar findings is also reported by **Jakkawad*et al*. (2019).**

Psychological variables

Three psychological variables—innovativeness, leadership ability, and scientific orientation—were considered in this study. Among trainee respondents, 11.00% exhibited "Low" levels of innovativeness, while 37.50% fell into the "Medium" category, and 51.50% showcased "High" levels of innovativeness. In contrast, the non-trainee group displayed a higher percentage of "Low" innovativeness (55.50%) and a lower percentage of "High" innovativeness (13.50%), with the majority (31.00%) categorized as having "Medium" innovativeness. Regarding leadership ability, the majority of participants in both categories fell into the "Medium" leadership ability range, accounting for 44.50% in each group. Interestingly, the trainee group had a slightly higher proportion of individuals with "High" leadership ability (51.00% compared to 19.50% among non-trainees), suggesting a potential positive impact of training on developing higher leadership skills. In terms of scientific orientation, 33.00% of trainee respondents had a medium level, 51.50% had a high level, and 15.50% had a low level. Among non-trainee respondents, the majority (63.00%) had a low level, followed by 26.50% with a medium level, and 10.50% with a high level of scientific orientation.A similar findings is also reported by **Tidke*et al.* (2012), Paradva (2018).**

Overall Socio-Economic status

Table shows that out of two hundred trainee respondents 39.50% had medium level of Socio-Economic level followed by 51.50 % had high and 09.00% had low level of Socio-Economic level. While majority of the non-trainee respondents 50.50% had low level of economic motivation followed by, 33.00% had medium and 16.50 and high level of economic motivation.A similar findings is also reported by **Ajrawat and Kumar (2013).**

CONCLUSION

It was concluded that majority of the trainees have medium level of education, living in semi cemented and cemented houses, medium level of income where as in case of non-trainees' low level of education and income also. Both groups are engaged in agriculture as a major source of income. The trainees have medium to high level of innovativeness, leadership ability, scientific orientation and economic motivation where as non-trainees have low level of innovativeness, leadership ability, scientific orientation and economic motivation. Trainees have higher level of Socio economic and psychological attributes as compare to non-trainees, so training programs have a positive impact on the trainees.

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