



A Study on Effect of Socio-Economic Attributes (Age, Education and Caste) on Adoption of The Potato Growers of Shahdol District (Mp)

N.Chobitkar	PhD Scholar
V. Meshram	SMS
K.K.Singh	KVK ,Mandla & Associate professor MGCGVV, Satna (MP)

ABSTRACT

Potato is most widely grown vegetable crop in the country with a share of 42.3 per cent. The area under potato cultivation is 19,124,181 million ha. in world. The major potato growing countries are China, Russia, Ukrain and India. India is in 3rd position in potato production and in 4th position under area. Potato production has played a vital role in increasing vegetable production of the country. Potato occupied 25.6 per cent share in total vegetable production. The contribution of the country in world potato pool has increased from 6.4 per cent to 7.8 per cent during last decade with processed product commanding a large share of the potato market.

The Shahdol district comprises 5 blocks. The study was confined only in Gohparu and Beohari blocks because of the maximum area under potato crops as compared to other blocks of the district.

10 villages were selected randomly on the basis of maximum area under potato crop from Gohparu and Beohari blocks of Shahdol district

A list of farmers of each selected village, who were growing potato crops have been prepared with the help of RAEO's and other official. From each selected village, 20 potato growers were selected by using a proportionate random sampling method. Hence, the total number of selected farmers was 200.

Data were collected through personal interview with the help of pre-tested structural schedule. Total 200 respondents were selected on random basis.

KEYWORDS	potato growers, respondent, percentage, vegetable, group, cultivation
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Methodology:

The study was conducted in shahdol district of Madhya Pradesh during the year 2009 to 2010. Total 200 respondents were selected on random basis. The data were collected with the help of pre tested interview schedule. The data were analysed through mean, chi-square test. Madhya Pradesh state comprises 50 districts. Shahdol district has been selected because of the less area under potato crop in Shahdol district of M.P. The Shahdol district comprises 5 blocks. The study was confined only in Gohparu and Beohari blocks because of the maximum area under potato crops as compared to other blocks of the district. 10 villages were selected randomly on the basis of maximum area under potato crop from Gohparu and Beohari blocks of Shahdol district. A list of farmers of each selected village, who were growing potato crops have been prepared with the help of RAEO's and other official. From each selected village, 20 potato growers were selected by using a proportionate random sampling method. Hence, the total number of selected farmers was 200.

The name of the selected villages and number of respondents selected from each village are given in table.

Name of selected village and number of respondents (potato growers) of Gohparu and Byohari blocks of district Shahdol

S.No.	Block wise Name of Village	No of respondent (Potato growers)
	Gohparu block	
1.	bochki	20
2.	Skariya	20
3.	Salebehra	20
4.	Pahlwa	20
5.	Karri	20

	Byohari block	
6.	Budhba	20
7.	Bokra-bokri	20
8.	Alhara	20
9.	Akhetpur	20
10.	Pathar	20
	Total	200

Result & Discussion:

The data presented in Table 1.1 reveals that out of total respondents 38.50 per cent were of middle age group, 31.50 per cent belonged to young age group and 30.00 per cent were found in old age group.

Thus, it may be inferred from the data that higher percentage of the potato growers (38.50%) belonged to middle age group (36-50 years).

Table 1.1. Distribution of potato growers according to their age

S.No.	Categories	No. of respondents	Percentage
1.	Young age group	63	31.5
2.	Middle age group	77	38.5
3.	Old age group	60	30.0
Total		200	100.00

1.2 Education level

It is clear from the Table 1.2 that out of the total potato growers, 40.50 per cent were illiterate and 35.00 per cent had up to primary level of education and remaining 24.50 per cent had high school and above level of education.

Table 1.2. Distribution of potato growers according to their educational level

S.No.	Categories	No. of respondents	Percentage
1.	Illiterate	81	40.50
2.	Up to primary	70	35.00
3.	High school and above	49	24.50
Total		200	100.00

Thus, it can be concluded that the maximum percentage of potato growers, i.e. 40.50 per cent were illiterate.

1.3 Caste

Table 1.3. Distribution of potato growers according to their 'Caste'

S.No.	Categories	No. of respondents	Percentage
1.	SC/ST	113	56.50
2.	Other backward classes	52	26.00
3.	General	35	17.50
Total		200	100.00

The data presented in Table 1.3 revealed that out of the total potato growers, 56.50 per cent belonged to SC/ST, whereas 26.00 per cent belonged to Other backward classes and remaining 17.50 per cent general category respectively.

Thus, it can be inferred from the data that higher percentage of potato grower were belonged to SC/ST category.

Table 2.1. Association between age and adoption of the potato growers

S.No.	Age	Adoption			Total
		Low	Medium	High	
1	Young	18 (28.57)	15 (23.81)	30 (47.62)	63
2	Middle	29 (37.66)	13 (16.88)	35 (45.45)	77
3	High	18 (30.00)	25 (41.67)	17 (28.33)	60
Total		65	53	82	200

(Figures in parenthesis are percentage)

$\chi^2 = 13.05$ significant at 5% level with 4 d.f. Table value is 9.49

The data presented in Table 2.1 reveal that out of 63 potato growers belonging to the young age, 47.62 per cent had high adoption followed by 28.57 per cent low and 23.81 per cent medium adoption respectively. In case of 77 Potato growers who were belonging to middle age group, 45.45 per cent had high followed by 37.66 per cent low and 16.88 per cent had medium adoption. Whereas out of 60 potato growers who were belonging old age group, 41.67 per cent had medium adoption, 30.00 per cent had low adoption and 28.33 per cent were having high adoption.

When the data was tested statistically by applying χ^2 test, the calculated value 13.05 was found to be significant at 5% level of significance with 4 d.f. therefore the null hypothesis set for this study that there is no association between age and adoption of the potato growers is rejected. Hence, it can be concluded that age of the potato growers is associated with adoption.

Table 2.2. Association between education and adoption of the potato growers

S.No.	Education	Adoption			Total
		Low	Medium	High	
1	Low	21 (25.93)	23 (28.40)	37 (45.68)	81
2	Medium	32 (45.71)	20 (28.57)	18 (25.71)	70
3	High	12 (24.49)	10 (20.41)	27 (55.10)	49
Total		65	53	82	200

(Figures in parenthesis are percentage)

$\chi^2 = 14.92$ significant at 5% level with 4 d.f. Table value is 9.49

The data presented in Table 2.2 show the association of education level with adoption of potato growers regarding improved package of practices. It is clear from the Table that low category majority (45.68%) of the potato growers had high adoption followed by 28.40 per cent medium and 25.93 per cent had low age group and in medium category 45.71 per cent potato growers had low adoption and 28.57 per cent and 25.71 per cent medium and high adoption respectively. Whereas, in case of high level of education category 55.10 per cent had high and 24.49 per cent had low and 20.41 per cent were having medium adoption.

Where the data was tested statistically by applying χ^2 test, in 3X3 contingency Table, the calculated value 14.92 of χ^2 was 9.49, which was found to be significant at 5% level of probability with 4 d.f. therefore it can be concluded that education of potato growers had significant association with adoption.

Table 2.3. Association between caste and adoption of the potato growers

S.No.	Caste	Adoption			Total
		Low	Medium	High	
1	SC/ST	46 (40.71)	28 (24.78)	39 (34.51)	113
2	OBC	12 (23.08)	14 (26.92)	26 (50.00)	52
3	General	07 (20.00)	11 (31.43)	17 (48.57)	35
Total		65	53	82	200

(Figures in parenthesis are percentage)

$\chi^2 = 9.65$ significant at 5% level with 4 d.f. Table value is 9.49.

The data presented in Table 2.3 reveal that out of 113 potato growers belonging to SC/ST category, Majority (40.71%) had low adoption and 34.51 per cent had high and remaining 24.78 per cent had medium adoption towards improved package of practices of potato cultivation. In case of potato growers who were belong to OBC category, majority (50.00%) had high followed by 26.92 per cent had medium and 23.08 per cent low adoption respectively. In general category of the caste, majority of the potato growers were having high (48.57%) adoption.

When the data was tested statistically by applying χ^2 test, the calculated value 9.65 was found to be significant at 5% level of significance with 4 d.f. therefore, the null hypothesis is rejected for this study that there is no association between caste and adoption of potato growers is rejected. Hence, it can be concluded that caste off beneficiaries is associated with adoption. From the above Table it can also be inferred that majority of the SC/ST and OBC potato growers were having low to high adoption towards improved package of practices of potato cultivation.

Conclusions:

When the data was tested statistically by applying χ^2 test, the calculated value 13.05 was found to be significant at 5% level of significance with 4 d.f. therefore the null hypothesis set for this study that there is no association between age and adoption of the potato growers is rejected. Hence, it can be concluded that age of the potato growers is associated with adoption.

When the data was tested statistically the calculated value of χ^2 was 14.92 at 5% level with 4 d.f. which was more than the Table value of χ^2 i.e, 9.49 and is declared strongly significant. Therefore, it can be concluded that education of the potato growers was highly associated with adoption.

The value of χ^2 computed was 9.65 which was greater than Table value 9.49 at 5% level of probability with 4 d.f. and it is declared significant Note that it is significant at 1% also. We therefore the earlier stated hypothesis that there is no association between caste and adoption is rejected and it can be concluded that there is significant association between caste and adoption of potato growers.

Hence, age, education, caste play a vital role in increasing rate of adoption of potato growers.

Ways and means for enhancement of the adoption of Potato production technology among the farmers:

In view of the constraints in adoption of Potato production technology, it is necessary to develop an appropriate extension strategy for enhancement of production and productivity in the area.

The development departments should follow the extension teaching methods suitable for Potato production technology intensively and more emphasis should be given on complex technologies which need understanding of basic concept of the subject matter and learning skill before their adoption. The development departments must focus on timely availability of inputs in the area. The training programme on the farmers' field should also be organized in slack time only after assessment of training needs, so that farmers may save much of their valuable time and get least interaction with their day-to-day routine works. Some important ways and means has been discussed under for enhancement of the adoption of potato production technology among the farmers are as follows:

Information about the potato production technology should be provided in right time.

Publicity of information center should be tone to popularize the information dissemination among the respondents; more and more respondents should be motivated to access such service.

Technical and scientific literature should be in local language and optimum quantity.

Interaction among the concern agents and respondents without any hesitation.

Demonstration of potato production technology should be organized properly.

Increasing the co-operation among public and private agencies.

Monitoring and evaluation should be regularly.

Only trained trainees should impart training.

Right of information should be compulsory.

Electric supply should be maintained.

The knowledge and skill of the respondents should be improved by training.

Location specific problem should be prioritized and technological intervention should be formulated to address such problems to make the communication service more effective in solving the problem of a particular areas.

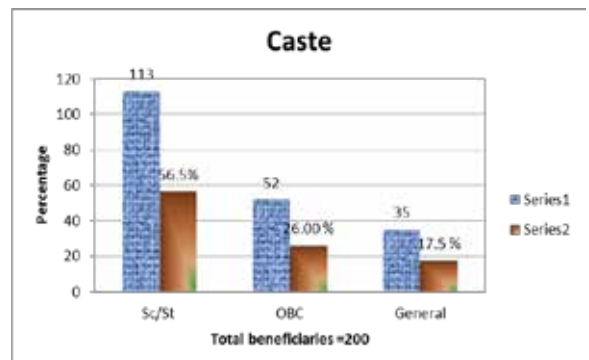
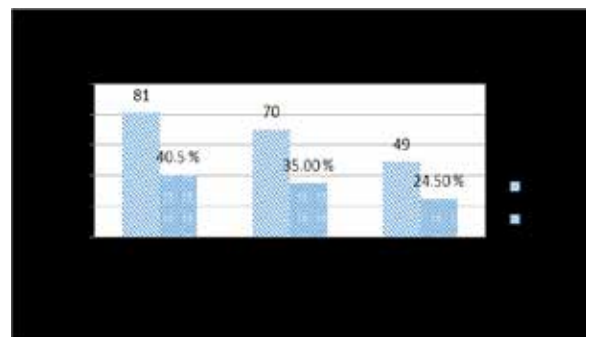
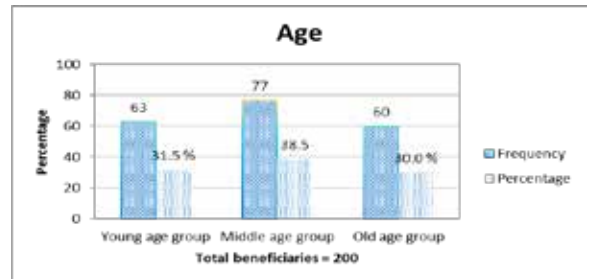


Figure 1: Bar diagram showing the distribution of potato growers according to Age, Education level and caste.

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