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## A study on demographic and socio-economic attributes of the agricultural postgraduate students of Dr. PDKV, Akola and IGKV, Raipur

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### Abstract

The demographic characteristics namely Gender, Family occupation and Family background along with socioeconomic characteristics namely family annual income and annual expenditure pattern were studied. For gaining the information google forms were circulated among the sample of students from two universities namely Dr. Panjabrao Deshmukh Krishi Vidyapeeth, Akola (Dr. PDKV, Akola) and Indira Gandhi Krishi Vishvavidyalay, Raipur (IGKV, Raipur).

A total of 179 responses were collected. The study revealed that number of students from the gender was somehow equal among the students of both the universities. There was almost uniform distribution of students among the three family backgrounds. This brings to light the fact that agricultural education has turned equally accessible to all the students regardless of the family background to which they belong. Family occupation of majority of students in IGKV, Raipur was government services while in students of Dr PDKV, Akola it was agriculture. This suggested that students from agricultural background were more motivated to undertake agricultural education. The family annual income of majority of students in Dr PDKV, Akola was upto Rs.60, 000 while for students of Raipur it was found to be in the range of Rs.2,40,001 -Rs.500,000. This revealed a better economic condition of students in IGKV, Raipur when compared to students in Dr PDKV, Akola. Moreover, the annual expenditure of the students in IGKV, Raipur was more than students in Dr PDKV, Akola. As the family annual income of students in IGKV, Raipur was more, this led to more annual expenditure on the part of the students in the same.

**Keywords:** demographic, socio-economic, agriculture, postgraduate students, gender, family background, family occupation, family annual income, annual expenditure pattern

### 1. Introduction

The advent of the Covid-19 pandemic posed a greater challenge to the functioning of the various prospects of life. Among the most affected ones, was the field of education. This time called for the swift transformation of the educational system, the answer to which was provided by the information and communication technology tools. With the object of gaining an insight into the situation, the present study was carried out in the Agricultural universities of Maharashtra and Chhattisgarh. During this endeavour, the demographic and Socio-economic profile of the students was studied.

### 2. Methodology

There were around 363 post graduate students registered and studying in IGKV, Raipur in faculty of Agriculture (316) and Agriculture Engineering (47) while 224 post graduate students were registered and studying in Dr PDKV, Akola in faculty of Agriculture (197) and Agriculture Engineering (27) respectively during the session 2019-20.

Out of them 30 per cent, students were selected through disproportionate random stratified sampling for this study. In this way total of 67 postgraduate students from Akola while 109 postgraduate students from Raipur who summed up to a total of 176 students were considered as respondents for the present study. Ex-post-facto design of research was followed for the present study.

Variables selected for the study of demography of the students were Sex, Family background, Family occupation while for socio-economic status Family annual income and Annual expenditure pattern were selected.

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### 3 Results and Discussion

#### 3.1 Demographic Attributes

**Table 1:** Distribution of agricultural postgraduate students according to their Gender

Sl. No.	Gender	Dr PDKV, Akola		IGKV, Raipur	
		F (n=84)	%	F (n=95)	%
1.	Male	39	46.43	48	50.52
2.	Female	45	53.57	47	49.48

##### 3.1.1 Gender

As it is quite evident from the observation of the structure of the society, that availability of facilities to individuals varies according to their sex. So, taking this into consideration, sex was taken as a variable. The students were asked to connote their sex in the questionnaire. The data concerning sex has been reported in the Table 1.

The data presented for Dr PDKV, Akola and IGKV, Raipur revealed that in Akola 46.43 per cent of students were males while, 53.57 per cent were females. In Raipur 50.52 per cent of students were males, while, 49.48 per cent were females. It is quite evident from the figures that number of males and females is somewhat same in both the Universities.

The equal population of the students of both the sex also leads to the conclusion that students interested in agricultural education from both the genders is quite equal. This aligns with the results from the previous research by Chandrakar (2014) [2] wherein the male and female students pursuing postgraduation in the field of agriculture were nearly equal. Also, the results so obtained were found to be in line with the researches by Rajput (2007) [9], Williams and Agbo (2013) [14] and Hafa and Moubtassime (2021) [5].

##### 3.1.2 Family occupation

The occupation being pursued in the family determines the exposure and facilities that a student receives. Along with it, the income the family receives depends more or less on the occupation. This in turn affects the exposure to ICT tools one gains. This led inclusion of family occupation as a variable. The students were asked to connote their family occupation from the options provided to them in the questionnaire. The data concerning family occupation has been reported in table 2.

The data presented for Dr PDKV, Akola and IGKV, Raipur revealed that in Akola majority of students (54.76%) reported agriculture as their family occupation followed by government services (29.76%), business (11.90%) with least having a family occupation in private services (3.58%). The trend was quite different in Raipur with the majority of students (41.05%) who reported government services as their occupation followed by agriculture (35.78%), business (13.68%) with the least having a family occupation as private services (9.49%). It could be inferred that the majority of family occupation in Raipur were government services followed by agriculture while in Akola it is agriculture followed by government services.

The findings reported by Chandrakar (2014) [2] were somewhat similar to the present study due to similarity of research area that is Raipur. Therein the students with government occupational background were somewhat higher (54.74%). However, the findings by Bano (2019) [1] in

Haryana suggested that 38.67 per cent of students had government services as family background which was in line with the present study revealing 41.05 per cent of students of Raipur with the governmental background. While only 29.76 per cent in Akola had government occupation suggesting a deviation from the findings. While in Akola the proportion of students' family occupation in agricultural fields was higher owing to 54.76 per cent of the students.

So, it could be concluded comprehensively that the results so obtained were in alignment with the researches by Chandrakar (2014) [2], Thakur (2017) [13], while the result were only partially in agreement with the researches by Chaubey (2015) [3] and Bano (2019) [1].

**Table 2:** Distribution of agricultural postgraduate students according to their family occupation

Family occupation	Dr PDKV, Akola		IGKV, Raipur	
	F (n=84)	%	F (n=95)	%
Government Services	25	29.76	39	41.05
Business	10	11.90	13	13.68
Agriculture	46	54.76	34	35.78
Private companies	03	03.58	09	09.49

##### 3.1.3 Family background

The family background affects the ICT infrastructural facilities, availability of ICT tools and a general awareness and outlook towards them. So, this variable was taken under study. The students were asked to connote their family background from the options provided to them in the questionnaire. The data concerning family background has been reported in table 3.

The data presented for Dr PDKV, Akola and IGKV, Raipur revealed that in Akola 35.71 per cent students belonged to rural background followed by 33.34 per cent belonging to semi-urban and 30.95 per cent to urban background. While in Raipur 35.80 per cent students belonged to rural background followed by 34.73 per cent belonging to urban and 29.47 per cent belonging to semi-urban. It can be inferred that the respondents were distributed nearly in equal proportions among the three categories.

The overall distribution of the students according to the background was somewhat equal across all three categories. This suggested that the students regardless of their background were being provided with equal opportunities. However, the past study by Bano (2019) [1] conducted in Haryana suggested a higher proportion of students from an urban background. Also, the study by Chandrakar (2014) [2] carried out in the terrain of Raipur suggested that 50 per cent of the students were from rural background followed by semi-urban and urban respectively. Also, the results furnished by Sridevi and Indraani (2015) [12], Thakur (2017) [13] and Bano (2019) [1] were found to be in contradiction with the present study. The findings by Kumar and Kaur (2018) suggested an equal proportion of rural and urban students in the study. Hence, the results so obtained were not in alignment with the researches by Rajput (2007) [9], Chandrakar (2014) [2], Sridevi and Indrani (2015) [12], Thakur (2017) [13], Bano (2019) [1] as in these researches the rural population made up of majority proportion followed by semi-urbans and least of urban proportion.

**Table 3:** Distribution of agricultural postgraduate students according to their family background

Family background	Dr PDKV, Akola		IGKV, Raipur	
	F (n=84)	%	F (n=95)	%
Rural	30	35.71	34	35.80
Semi-urban	28	33.34	28	29.47
Urban	26	30.95	33	34.73

### 3.2 Socio-economic characteristics

#### 3.2.1 Family annual income:

**Table 4:** Distribution of agricultural postgraduate students according to their family annual income

Family annual income	Dr PDKV, Akola		IGKV, Raipur	
	F (n=84)	%	F (n=95)	%
Up to Rs.60,000	27	32.14	10	10.52
Rs.60,000-Rs.1,20,000	24	28.57	23	24.21
Rs.1,20,001-Rs.2,40,000	4	4.76	11	11.58
Rs.2,40,001-Rs.5,00,000	13	15.48	29	30.52
More than Rs.5,00,000	16	19.05	22	23.17
$\bar{X}$ = 300798.93, $\sigma$ = 293001.15				

The income that a family receives annually determines the economic conditions of that respective family. Thus, affecting the possession of things by the family, fulfilment of the family needs and infrastructure as a whole. Thus, it can directly affect the accessibility and availability of ICT tools to the students. The students were asked to connote their family annual income in the questionnaire. The data concerning family annual income has been reported in table 4.

The data presented for Dr PDKV Akola and IGKV, Raipur revealed that in Akola 32.14 per cent of student reported their income up to Rs.60,000; 28.57 per cent had income Rs.60,001 to Rs.1,20,000 ; 19.05 per cent had more than Rs.5,00,000 income; 15.48 per cent had Rs.2,40,001 to Rs.5,00,000; and 4.76 per cent had Rs.1,20,001 to Rs.2,40,000. While in Raipur 30.52 per cent of students had Rs.2,40,001 to Rs.5,00,000; 24.21 per cent had 60,001 to Rs.1,20,000; 23.17 per cent had more than Rs.5 lakhs income, 11.58 per cent had Rs.1,20,001 to Rs.2,40,000 and 10.52 per cent had up to Rs.60,000. From the data presented it could be clearly observed that there was a disparity in the distribution of students in family annual income with respect to both the universities.

As it was quite explicit from the data that the deviation of the proportion of the students from the average annual annual income was quite high. The least number of students (8.38%) were found in the range of Rs.1.2 - Rs.2.4 lakhs in the present study. While the students were somehow equally distributed in the rest of the categories. As it could be clearly seen in the data set that the majority of students in Akola belonged to the range of up to Rs.60,000 while on the contrary, in Raipur majority belonged to the range Rs.2.4-5 lakhs. This suggested a disparity between the students of the two regions economically. This can be understood from the previous data based on family occupation. As the majority of students in Raipur had a government background hence enjoying a higher income while in Akola the number of students with government background were less. This explains the reason of less proportion of students in higher income categories. Also furthering the discussion, majority of students in Akola were from agricultural background. So, it could be concluded that the income incurred from the agricultural sector might be less. This suggests that agricultural sector needs sufficient guidance for improving the productivity and economic conditions of agriculturists in Maharashtra. The findings by

Chandrakar (2014) <sup>[2]</sup> coincided with the data for the region of Raipur as majority of students belonged to the same category of Rs.2.4-5 lakhs. The findings were further supported by Thakur (2019).

The annual expenditure pattern presented in the table 5 suggests that the amount of expenditure on internet and other allied ICT tools was less. So, it could be seen that the internet services were not expensive. Hence it can be clearly seen that buying of the ICT services is not restrained by the financial factor. This was supported by the findings by Singh et. al. (2021) <sup>[11]</sup> who suggested that the cost of internet has reduced in last few years in India with a meagre cost of Rs.1 per 1 GB of data which has additionally led to the exponential growth of internet usage in India. This has led to the further penetration of internet in India. This further provides the fact that the internet services are affordable in India. Also, internet services being the key to ICT usage, it has a greater utility in plethora of sectors. So, taking all the above factors in consideration, it could be concluded that the annual income did not significantly affect the ICT usage.

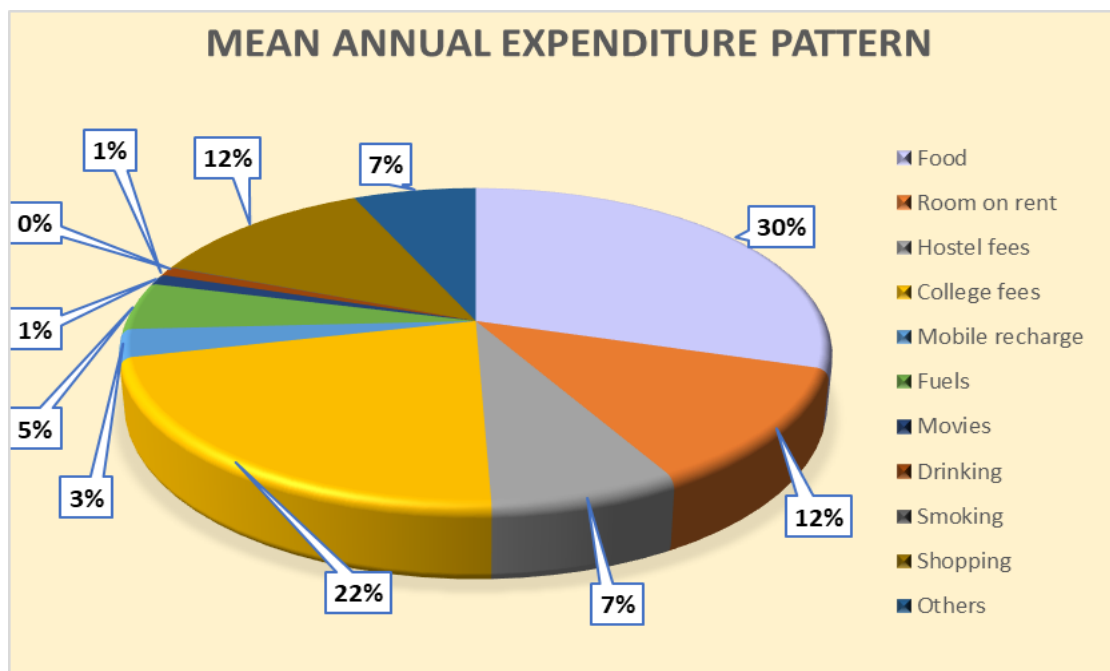
Moreover, as far as the expensive ICT tools are concerned, they come under one-time-high-input category. Also, the internet cafes provide internet services with meagre prices. So, the usage of the ICT tools seems to be unaffected by the annual income.

Some amount of Future research works should be focussed on the conditions of farmers to understand the current scenario. Also, ICT usage might find substantial contribution to the development.

#### 3.2.2 Annual expenditure pattern

**Table 5:** Distribution of agricultural postgraduate students according to their annual expenditure pattern

Annual expenditure	Dr PDKV, Akola		IGKV, Raipur	
	F (n=84)	%	F (n=95)	%
Less than Rs.20,000	20	23.81	09	09.47
Rs.20,000-Rs.40,000	26	30.95	23	24.21
Rs.40,001-Rs.60,000	13	15.48	29	30.53
Rs.60,001-Rs.80,000	12	14.28	16	16.84
More than 80,000	13	15.48	18	18.95



**Fig 1:** Mean annual expenditure of agricultural postgraduate students

The annual expenditure of a student can provide the idea about the proportion of money expended on ICT tools thereby signifying their priority conferred to expenditures of ICT tools as compared to their daily other expenditures. The students were asked to connote their expenditure for the various daily needs for which they were provided with a list of particulars for which they had to provide a value in the questionnaire.

The data concerning annual expenditures has been presented in Figure 5. The data revealed that on an average the students expended Rs.70,223.35 annually. The large slice of this expenditure owed to food (29.76%), followed by college fees (21.92%), rent of rooms (12.13%), hostel fees (7.50%), other expenditures (6.59%), fuels (4.84%), mobile recharge and internet (2.86%). Also, the students spent 1.06 per cent on movies followed by 0.88 per cent on drinking along with 0.08 per cent on smoking. This distribution was found to be more or less the same for both the universities.

As the data explicitly presents that large amount (29.76%) of expenditure was on Regular food by the students. But as the study was taken during the period of the Covid-19 pandemic during which students suffered the evils of lockdown wherein they were obliged to evict hostels. This led to their temporary shifting to vicinities in their proximity to the colleges. Due to this, students had to face the double-edged sword of expenditure as they had to pay for a hostel in the first half before the lockdown while in the second half, they incurred expenditure for rooms on rent outside the campus. The annual expenditure pattern presented in the Table 5 also suggested that the amount of expenditure on internet and other allied ICT tools was less. So, it could be seen that the internet services were not expensive.

The findings obtained were in line with those of Patidar (2002), Chandrakar (2014)<sup>[2]</sup>, Thakur (2017)<sup>[13]</sup> and Jo *et al.* (2018) suggesting that there have been no changes in the expenditure pattern across the time.

Based on the summation of all the particulars for each of the students, an annual expenditure was calculated for individual students. Later on, they were categorised into 5 different categories. This distribution has been clearly presented in table 5.

The data presented for Dr PDKV Akola and IGKV, Raipur revealed that in Akola, 30.95 per cent of students had Rs.20,001 to Rs.40,000; 23.81 per cent had less than Rs.20,000; 15.48 per cent had Rs.40,001 to Rs.60,000; 15.48 per cent had more than Rs.80,000; and 14.28 per cent had Rs.60,001 to Rs.80,000. In Raipur, 30.53 per cent of students had Rs.40,001-Rs.60,000; 24.21 per cent had Rs.20,001-Rs.40,000; 18.95 per cent had more than Rs.80,001; 16.84 per cent had Rs.60,001-Rs.80,000; and 9.47 per cent had less than Rs.20,000.

As far as the distribution of the students according to their annual expenditure pattern was concerned, comprehensively it could be quoted that there was a more of normal distribution since the majority of the students belonged to the categories of Rs.20,000-40,000 and Rs.40,000-60,000. But still looking at the data according to the region, it was quite evident that expenditure was higher in Raipur as compared to those in Akola. To further elaborate the factors, it could be put that since the proportion of students with higher family income were more in Raipur compared to that of Akola, this suggests more purchasing capabilities of students of Raipur than those of Akola. Hence the annual expenditure was also evidently higher in Raipur. The distribution was in alignment with that of Chandrakar (2014)<sup>[2]</sup> and Thakur (2017)<sup>[13]</sup> suggesting the somewhat equivalency of the data across the timeline.

#### 4. Conclusion

The number of males and females undertaken in the study were more or less the same in both the universities with a total of 48.60 per cent of Males and 51.40 per cent of females. The family occupation of the majority of the students in Akola was Agriculture (54.76%) While, in Raipur it was Government services (41.05%) While, the least pursued occupation was Jobs at private companies at both Akola (3.58%) and Raipur (9.49%). The majority of students belonged to Rural background namely 35.71 per cent in Akola and 35.80 per cent in Raipur. Yet the data suggested somewhat overall homogeneous distribution of students in urban (35.76%), semi-urban (31.28%) and rural background (32.96%).



The family annual income of the majority of students (32.14%) in Akola was up to 60,000 While, in Raipur (30.52%) it was between 2,40,001 to 5,00,000. While, least proportion was found in the range of 1,20,001 to 2,40,000 with 4.76 per cent in Akola and 11.58 per cent in Raipur. The higher proportion of total pocket money was spent on Regular food (37.00%) followed by shopping (15.70%) and Renting a room (15.40%). While, 1 per cent each was spent on drinking and movies with the least expenditure on Smoking (0.1%).

As far the distribution of student according to total annual expenditure was concerned the majority of students in Akola (30.95%) spent in the range of 20,001 to 40,000 While, in Raipur 30.53 per cent of students spent in the range of 40,001 to 60,000. This suggested that more annual expenditure was in Raipur compared to Akola suggesting more purchasing power in students from Raipur.

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