Factors Affecting Occupational Perception of Agricultural Undergraduates towards Agriculture as a Profession

Abstract

India's economy heavily relies on agriculture, with a significant portion of the population dependent on it for their livelihood. Despite its potential for agribusiness, youth interest in agriculture is waning. Engaging and retaining young people in this sector is crucial for future food security. This study examines the association of independent variables on the occupational perception of agriculture graduates towards agriculture as a profession. Understanding these relationships is vital for supporting the farming community in the future. A sample of 120 final-year B.Sc. Agriculture students were selected using random sampling from PAU, Ludhiana, and PJTSAU, Hyderabad. Data were collected through questionnaires distributed to the respondents. Statistical tools like correlation coefficient and chi-square analysis were used to test the relationship between variables. From the study, it was found that family monthly income, landholding, and family background were significantly correlated with the perception of agricultural undergraduates towards agriculture as a profession. Additionally, there was an association between respondents'family size and their perception of agriculture as a profession.

***Keywords**: Agriculture, Association, Occupation, Perception, Profession*

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Introduction

Agriculture drives growth in many developing countries, making its development one of the most effective strategies for reducing hunger and poverty (Agumagu *et al.*, 2019; Amungwa & Baye, 2014). India's economy is particularly heavily reliant on agriculture, with a large portion of the population depending on it for their livelihood. Approximately 50 percent of the population is directly or indirectly involved in agriculture (Naik *et al.*, 2021). India is a youthful nation with a population exceeding 1.41 billion, according to the latest United Nations data from World Meter. Currently, over 65% of the population is under the age of 35. Despite being an agriculture-based country with immense potential for agribusiness, the interest of young people

in agriculture is waning. Engaging and retaining youth in this sector is crucial for the nation's future food security. It is essential to attract young people and rekindle their interest, encouraging them to aspire to become agri-entrepreneurs or to choose self-employment as a career (Rai *et al*., 2022). India is a global leader in the agriculture sector, serving as the primary source of livelihood for approximately 55% of its population. The country boasts the world's largest buffalo herd and the most extensive areas planted with wheat, rice, and cotton. India is also the leading producer of milk, pulses, and spices, and ranks second in the production of fruits, vegetables, tea, farmed fish, cotton, sugarcane, wheat, rice, and sugar. With the second-largest agricultural land area globally, the sector employs nearly half of the nation’s workforce, making farmers essential to our sustenance (India Brand Equity Foundation, 2024). The current state of Indian agriculture is the result of several significant revolutions, including the Green Revolution (food grains), the White Revolution (milk), the Yellow Revolution (oil seeds), the Blue Revolution (fishery), the Silver Revolution (eggs), and Grey Revolution (fertilizers). These advancements highlight the impact of science and technology, applied by skilled professionals in the agriculture sector. This progress has been facilitated by agricultural education, which has produced trained experts dedicated to serving the field (Dayalan *et al*., 2018). In this context, aside from administration and research, agricultural education plays a crucial role in enhancing agricultural production specifically and developing rural society more broadly. Consequently, the advancement of agriculture can be seen as dependent on the quality and quantity of trained manpower necessary for implementing various agricultural development activities (Naik *et al*., 2019).

Agricultural universities have been established across the country to provide education in agriculture and related fields, aiming to develop skilled professionals to advance the nation's

agriculture. Currently, there are 63state agricultural universities, 4 deemed universities, and 3 central agricultural universities in India. Each year, these institutions enroll approximately 15,000 students in undergraduate programs, around 7,000 students in various postgraduate courses, and about 1,700 students for doctoral degrees. Additionally, numerous private colleges, both affiliated and non-affiliated with various State Agricultural Universities (SAUs), also enroll a significant number of students annually. (Rai *et al*., 2022). The Bachelor of Science degree in agriculture is a foundational step in agricultural education. It aims to equip students with the knowledge, skills, and experience necessary to become valuable assets in the agriculture sector (James and Denis, 2015). Despite agriculture offering numerous employment opportunities after graduation, there is a prevailing belief that farming is a non-professional, less prestigious, and less profitable career choice for graduates (Dayalan *et al*., 2018). A study by Mehta et al. (2011) revealed that agriculture graduates preferred civil and administrative jobs the most, followed by positions in educational and research institutions, state government jobs, agro-based public sector roles, agro-based private sector roles, and self-employment. General jobs and farming were the least preferred career options. Studies by Suryawanshi *et al*., (2010), Shivacharan (2014), Narain *et al*., (2015), and Yadav (2016) also highlighted the lukewarm attitude of youth and students toward agriculture, which poses a concern and challenge for the future of agriculture in India. Harnessing the potential of and retaining youth, especially agriculture graduates, in the sector could be a solution to issues of unemployment, poverty, and sustainability.Given the above facts and to the best of the knowledge of the researcher, no study exists regarding the factors affecting the occupational perception of agricultural undergraduates. Thus the study was conducted to assess the factors affecting the occupational perception of agricultureundergraduates of Punjab Agricultural University, Ludhiana, and Professor

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Jayashankar Telangana State Agricultural University, Hyderabad towards farming as a profession.

Materials and Methods

The population of the study was all the final year B.Sc. agricultural students of the two-state agricultural universities *i.e.*College of Agriculture, Punjab Agricultural University (PAU), Ludhiana, Punjab, and the College of Agriculture, Professor Jayashankar Telangana State Agricultural University (PJTSAU), Hyderabad, Telangana. These universities were selected purposefully for the study. A sample of 120 final-year B.Sc. Agriculture (Hons) 6-year program and B.Sc. (Agri.) 4-year program students were randomly selected from both State Agricultural Universities (SAUs). The list of students was obtained from the Deans of the Colleges of Agriculture at both universities. From the 120 students, 60 were selected from Punjab Agricultural University (PAU), Ludhiana, with 30 students from the B.Sc. Agri. (Hons) 6-year program and 30 students from the B.Sc. (Agri.) 4-year program. Since the B.Sc. Agri. (Hons) 6-year program was not available at PJTSAU in 2019, a sample of 60 B.Sc. (Agri.) students were selected from the university, making a total sample size of 120 respondents.An *ex-post facto* research design was employed for this study.

A structured questionnaire was used to collect information for the study, and the data collected was analyzed using descriptive statistics such as frequency counts and percentages. Respondents were classified into different categories based on the maximum and minimum scores obtained, using the range method. Karl Pearson's Correlation Coefficient and chi-square analysis were

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employed to study the effect of independent variables on the occupational perception of agriculture undergraduates towards agriculture as a profession.

Results and Discussion

Table 1. Distribution of the respondents according to their socio-personal profile

S. No	Variables		PAU, Ludhiana (n_1=60) f (%)	PJTSAU, Hyderabad (n_2=60) f (%)	Total respondents (n=120) f (%)
1.	**Age (Years)**				
a.	20-22		24 (40.00)	28 (46.67)	52 (43.33)
b.	23-25		36 (60.00)	32 (53.33)	68 (56.67)
2.	**Gender**				
a.	Male		34 (56.67)	34 (56.67)	68 (56.67)
b.	Female		26 (43.33)	26 (43.33)	52 (43.33)
3.	**Residential status**				
a.	Hosteller		50 (83.33)	48 (80.00)	98 (81.67)
b.	Day scholar		10 (16.67)	12 (20.00)	22 (18.33)
4	**Academic level**				
a.	Matric	>80 per cent	52 (86.66)	57 (95.00)	109 (90.83)
		>70 per cent	6 (10.00)	3 (5.00)	9 (7.50)
		>60 per cent	2 (3.33)	0 (0.00)	2 (1.66)
b.	Senior Secondary	>80 per cent	45 (75.00)	58 (96.66)	103 (85.83)
		>70 per cent	13 (21.66)	2 (3.33)	15 (12.50)
		>60 per cent	2 (3.33)	0 (0.00)	2 (1.66)
c.	B.Sc. Agri. (III/V year)	>80 per cent	18 (30.00)	33 (55.00)	51 (42.50)
		>70 per cent	37 (61.66)	26 (43.33)	63 (52.50)
		>60 per cent	5	1	6

		(8.33)	(1.66)	(5.00)
5.	**Family monthly income (Rs)**			
a.	<30,000	5 (8.33)	24 (40.00)	29 (24.17)
b.	30,000-60,000	19 (31.67)	12 (20.00)	31 (25.83)
6.	**Family background**			
a.	Urban	22 (36.67)	34 (56.67)	56 (46.67)
b.	Rural	38 (63.33)	26 (43.33)	64 (53.33)
7.	**Family size (members)**			
a.	3-5	49 (81.67)	56 (93.33)	105 (87.50)
b.	6-8	11 (18.33)	4 (6.67)	15 (12.50)
8.	**Family occupation**			
a.	Farming	16 (26.67)	15 (25.00)	31 (25.83)
b.	Subsidiary (Dairy)	3 (5.00)	3 (5.00)	6 (5.00)
c.	Non-farming			
i.	Business	14 (23.33)	13 (21.67)	27 (22.50)
ii.	Service	27 (45.00)	29 (48.33)	56 (46.67)
9.	**Family ownership of land**			
a.	Yes	36 (60.00)	41 (68.33)	77 (64.16)
b.	No	24 (40.00)	19 (31.67)	43 (35.84)
10.	**Size of operational land holding (acres)**			
a.	Marginal (<2.5)	3 (8.33)	8 (19.51)	11 (14.28)
b.	Small (2.5-5)	13 (36.11)	15 (36.50)	28 (36.36)
c.	Semi-Medium (5-10)	20 (55.55)	18 (43.90)	38 (49.35)
11.	**Workingexperience on the farm**			
a.	Had experience	14 (23.33)	11 (18.33)	25 (20.83)
b.	Had no experience	46 (76.67)	49 (81.67)	95 (79.17)

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Socio-personal profile of the respondents

Results from Table 1 show that nearly 56.67% of the respondents were in the age range of 23-25 years, while 43.33% were in the 20-22 year category. At PAU, Ludhiana, the majority of respondents (60.00%) were aged 23-25, with 40% in the 20-22 age group. Similarly, at PJTSAU,

Hyderabad, 53.33% of respondents were aged 23-25, and about 47% were in the 20-22 age group. Additionally, 56.67% of the respondents were male, and 43.33% were female. The gender distribution was consistent at both PAU, Ludhiana, and PJTSAU, Hyderabad, with 56.67% males and 43.33% females at each institution. The data also reveal that 81.67% of respondents were hostellers, while 18.33% were day-scholars. Specifically, at PAU, Ludhiana, 83.33% were hostellers and 16.67% were day-scholars, whereas, at PJTSAU, Hyderabad, 80% were hostellers and 20% were day-scholars.

Analyzing the academic performance of respondents, it was found that 90.83% had secured more than 80% in their matriculation exams, 7.50% had secured more than 70%, and only 1.66% had secured more than 60%. In their senior secondary exams, 85.83% had secured more than 80%, 12.50% had secured more than 70%, and 1.66% had secured more than 60%. For the B.Sc. Agriculture (III year), 52.50% of respondents scored more than 70%, 42.50% scored more than 80%, and 5% scored more than 60%. At PAU, Ludhiana, 86.66% of respondents scored more than 80% in matriculation, 10% scored more than 70%, and 3.33% scored more than 60%. In senior secondary exams, 75% scored more than 80%, 21.66% scored more than 70%, and 3.33% scored more than 60%. For the latest academic performance, 61.66% scored more than 70%, 30% scored more than 80%, and 8.33% scored more than 60%.At PJTSAU, Hyderabad, 95% of respondents scored more than 80% in matriculation, 5% scored more than 70%, and none scored more than 60%. In senior secondary exams, 96.66% scored more than 80%, 3% scored more than 70%, and none scored more than 60%. For the latest academic performance, 55% scored more than 80%, 43.33% scored more than 70%, and 1.66% scored more than 60%. Qualitatively, PJTSAU, Hyderabad students performed better than those from PAU, Ludhiana.

Income-wise, half of the respondents belonged to the income category of more than Rs 60,000,

25.83% to Rs 30,000-60,000, and 24.16% to less than Rs 30,000. At PAU, Ludhiana, 60% belonged to the income category of more than Rs 60,000, 31.67% to Rs 30,000-60,000, and 8.33% to less than Rs 30,000. At PJTSAU, Hyderabad, 40% belonged to the income category of more than Rs 60,000, 20% to Rs 30,000-60,000, and 40% to less than Rs 30,000.Regarding family background, 53.33% of respondents were from rural areas, and 46.67% were from urban areas. At PAU, Ludhiana, 63.33% were from rural areas, and 36.67% were from urban areas. At PJTSAU, Hyderabad, 56.67% were from urban areas, and 43.33% were from rural areas.Family size analysis showed that 87.50% of respondents belonged to families of 3-5 members, and 12.50% belonged to families of 6-8 members. At PAU, Ludhiana, 81.67% were from families of 3-5 members, and 18.33% from families of 6-8 members. At PJTSAU, Hyderabad, 93.33% were from families of 3-5 members, and 6.67% from families of 6-8 members.

Occupational analysis indicated that 25.83% of respondents had farming as the family occupation, 5% had dairy as a subsidiary occupation, 46.67% had service sector jobs, and 22.50% had business as the family occupation. At PAU, Ludhiana, 26.67% had farming, 5% had dairy, 45% had service sector jobs, and 23.33% had business. At PJTSAU, Hyderabad, 25% had farming, 5% had dairy, 48.33% had service sector jobs, and 21.67% had business. Agricultural land ownership was reported by 64.16% of respondents, with 35.84% not owning any agricultural land. At PAU, Ludhiana, 60% owned agricultural land, whereas at PJTSAU, Hyderabad, 68.33% owned agricultural land. In terms of operational landholding, 49.35% had 5-10 acres, 36.36% had 2.5-5 acres, and 14.28% had less than 2.5 acres. At PAU, Ludhiana, 55.55% had 5-10 acres, 36.11% had 2.5-5 acres, and 8.33% had less than 2.5 acres. At PJTSAU, Hyderabad, 43.90% had 5-10 acres, 36.50% had 2.5-5 acres, and 19.51% had less than 2.5 acres.

Finally, 20.83% of respondents had working experience on farms, while 79.17% did not. At

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PAU, Ludhiana, slightly more than 20% had farm work experience, whereas at PJTSAU, Hyderabad, 18.33% had farm work experience. Most students engaged in activities such as sowing seeds, weeding, cotton picking, and harvesting vegetables.

Table 2.Relationship between socio-personal characteristics and perception towards agriculture

Independent Variables		r	
		PAU, Ludhiana (n_1=60)	PJTSAU, Hyderabad (n_2=60)
Age	Perception towards agriculture	0.144	0.177
Academic Performance		0.172	0.126
Family Monthly Income		0.362*	0.078
Land Holding		0.283*	0.296*
Family background		0.278*	0.190
Working experience on the farm		0.156	0.149

*Significant at 0.05 level

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Relationship between independent variables andperception towards agriculture as a profession

An analytical look at Table 2 made it clear that for respondents at PAU, Ludhiana, and PJTSAU, Hyderabad age was found to have a non-significant correlation with the perception of agricultural undergraduates towards agriculture as a profession. Whereas academic performance and working experience on a farm were non-significantly correlated with occupational perception in both universities: PAU, Ludhiana, and PJTSAU, Hyderabad.The relationship between monthly income and family background with occupational perception towards

agriculture as a profession was significantly correlated at PAU, Ludhiana, but non-significantly correlated at PJTSAU, Hyderabad, indicating that students from PAU were more likely to be interested in agriculture concerning their monthly income and background.The relationship between operational landholding and occupational perception towards agriculture as a profession was significantly correlated at both universities: PAU, Ludhiana, and PJTSAU, Hyderabad. The size of landholding exhibited a positive relationship, as students with larger landholdings showed a greater inclination towards pursuing agriculture as a profession.

Table 3. Distribution of respondents according to the association between family size and perception

Family size	PAU, Ludhiana (n_1=60)			χ^2 value	PJTSAU, Hyderabad (n_2=60)			χ^2 value
	Not Likely f (%)	Likely f (%)	More Likely f (%)		Not Likely f (%)	Likely f (%)	More Likely f (%)	
3-5	12(20.00)	31(51.70)	6(10.00)	**0.376**	5(8.30)	36(60.00)	15(25.00)	**6.590**
6-8	3(5.00)	6(10.00)	2(3.30)	**2.d.f.**	2(3.30)	2(3.30)	0(0.00)	**2.d.f.**

*Significant at 0.05 level

Association between family size and perception towards agriculture as a profession

Using chi-square analysis, the association between family size and the perception of agricultural undergraduates towards agriculture as a profession was examined at both universities. The data from Table 3 indicates that at PAU, Ludhiana, more than half of the respondents from families with 3-5 members showed a likely perception of agriculture as a profession, followed by 20% of respondents who were not likely to perceive it as a profession and 10% who were more likely to

perceive it positively. At PJTSAU, Hyderabad, 60% of respondents had a likely perception of agriculture as a profession, one-fourth had a more likely perception, and only 8.3% were not likely to perceive it as a profession. For families with 6-8 members, at PAU, Ludhiana, 10% of respondents had a likely perception, 5% had a not likely perception, and approximately 3% had a more likely perception towards agriculture as a profession. In contrast, at PJTSAU, Hyderabad, an equal number of respondents had likely and not likely perceptions towards agriculture as a profession, with none falling into the more likely perception category. The chi-square analysis revealed no significant association between family size and perception of agriculture as a profession at PAU, Ludhiana. However, at PJTSAU, Hyderabad, a significant association was found between family size and perception towards agriculture as a profession.

Conclusion

The study concluded that the ~~independent variables~~factors affecting the occupational perception of agriculture, namely family monthly income, landholding, and family background, showed a significant difference in the respondents' perception of agriculture as a profession. Furthermore, there was an association between the respondents' family size and their perception of agriculture as a profession. Concerning socio-personal profile majority of respondents were hostellers and were in the age group of 23-25 years. The data indicated that male students were more compared to female students. A substantial proportion of respondents secured distinction at both the matriculation and senior secondary levels, and their academic performance in the B.Sc. (Agri.) program was predominantly first class. Most of the respondents came from rural family backgrounds. Half of the respondents reported self-sufficient family income per month and belonged to families with semi-medium landholdings. However, the majority of respondents lacked practical working experience on the farm.

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