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The profile and attitude of agricultural under graduate girl students towards higher education

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Abstract
This study examines the profile and attitudes of undergraduate female students in agricultural programs towards higher education. Conducted during the 2022-2025 academic years at the College of Agriculture, Parbhani and Latur. The research involved 120 students. Data were collected using a pre-tested structured interview schedule, which focused on students' academic performance, family background, and attitudes toward higher education. The results indicate diverse academic performances, with 47.50% of students achieving a CGPA above 8.00, while only 5% scored below 6.00 CGPA. In terms of caste distribution, 41.67% of the students belonged to the general (open) category, with smaller proportions representing OBC, SC, and ST groups. Family income levels varied, with 69.17% of students' families earning from Rs. 1,00,000 to Rs 5,00,000 annually. Most students (40.00%) reported low participation in extracurricular activities, though 26.67% used the library on a daily basis. ICT exposure also varied, with 63.33% indicating medium levels of exposure. Achievement motivation was predominantly moderate, with 75.00% of students falling within the medium motivation range. Regarding family background, the majority of students (63.33%) came from nuclear families, with 51.67% of their families involved in agriculture. The study also assessed students' attitudes toward higher education in agriculture, revealing that 50.00% held a favourable attitude, and 45.00% had a strongly favourable attitude toward pursuing further education in the field. These findings provide crucial insights into the socio-economic, academic, and attitudinal characteristics of female students in agricultural education, offering valuable implications for policymakers and educational institutions in fostering an environment that encourages these students to pursue higher education in agriculture.

Keywords: Agricultural education, undergraduate female students, higher education, academic performance, family background and attitude

1. Introduction
The pursuit of higher education is a key driver of individual empowerment and societal progress, particularly in fields like agriculture, where women have become vital contributors. Despite their significant role in global agricultural production, women remain underrepresented in advanced agricultural education programs. This study focuses on understanding the attitudes of agricultural undergraduate female students towards higher education, exploring the factors that shape their perceptions, motivations, and challenges.

Although women make up a substantial portion of the agricultural workforce, their representation in Master's and Doctoral programs is disproportionately low compared to men (Aldosari *et al*., 2017) [3]. Factors such as societal norms, gender stereotypes, familial responsibilities, and

limited access to resources influence female students' academic journeys and career aspirations. Despite facing these challenges, female students often perform well academically, particularly in areas related to international agricultural issues (Bletscher *et al*., 2022) [8], suggesting that with adequate support, they can excel and contribute significantly to the sector.

The dynamics of gender in agricultural education are complex, with female students navigating academic and societal expectations. The lack of tailored institutional support, such as mentorship and career guidance, further compounds these challenges. Therefore, understanding the attitudes of agricultural undergraduate girls is essential for identifying barriers and developing strategies to enhance their academic success and professional opportunities. This research aims to provide valuable insights into how to foster

a supportive environment for female students in agriculture, ultimately promoting gender equity in agricultural education and strengthening women's contributions to the agricultural sector.

2. Materials and Methodology
The present study utilized an ex-post facto research design and was conducted during the 2022-2025 academic years among 120 undergraduate students in Agriculture from the College of Agriculture Parbhani and Latur. Data was collected using a pre-tested structured interview schedule designed to assess the attitudes of agricultural undergraduate female students towards higher education. Various operational definitions and scoring methods were employed to measure independent variables, including academic performance, caste, parental education, family type, participation in extra-curricular activities, library use, ICT exposure, achievement motivation, family occupation, income, landholding, and self-confidence. Academic performance was evaluated based on CGPA scores, while caste and parental education were categorized and scored using pre-established scales. Participation in extra-curricular activities was scored based on involvement at different levels, and library exposure was measured by frequency of use. ICT exposure was assessed based on proficiency in various computer skills, and achievement motivation was gauged using a scale developed by Bijula Balan (2003) [6]. The respondents' family occupation, income, landholding, and self-confidence were also scored following established classification systems. The data collected were analyzed using statistical tools such as frequency, percentage, mean, and standard deviation. Ajit (2004) [2]'s scale was used to measure the attitude of agricultural undergraduate female students towards higher education. The total responses were categorized into five groups based on the equal class interval method.

3. Results and Discussion
3.1 Profile characteristics of under graduate girl students
Table 1 provides an in-depth analysis of the profile characteristics of undergraduate female students, offering insights into their academic, social, and personal traits. The majority of students (47.50%) achieved a CGPA above 8.00, followed by 34.17% falling within the CGPA range of 6.91 to 8.00. A smaller proportion (5%) of students have a CGPA below 6.00. This distribution suggests that most students are performing well academically, which is consistent with findings from Christian (2010) [7] and Patter (2011) [15], who reported similar patterns in academic performance among university students.

In terms of caste composition, 41.67% of students belong to the general (open) category, 26.67% to other backward castes (OBC), 12.50% to scheduled castes (SC), and 8.33% to scheduled tribes (ST). Smaller groups of students belong to VJ/NT (9.16%) and SBC (1.67%) categories. This caste distribution aligns with previous studies by Aher (2010) [1], Kawale (2013) [13], and Barge (2018) [4], which reported comparable representations of various caste categories in educational institutions. A significant portion of students (40.00%) reported very low involvement in extra-curricular activities, with scores up to 0. Only 22.50% of students

engaged in extra-curricular activities at a very high level (above and 5 score). This finding is consistent with previous research by Sathyan (2008) [16], Aher (2010) [1], Kawale (2013) [13], and Barge (2018) [4], who also found low levels of student participation in extra-curricular activities. These results suggest that students may prioritize academics over non-academic pursuits or face barriers to engaging in extra-curricular activities.

The frequency of library use shows that 26.67% of students visit the library every day, whereas 17.50% use the library only once every six months. Additionally, 10.83% of students never use the library. These findings are partially consistent with the studies by Patel (2007) [14] and Barge (2018), [4] which also reported variable levels of library usage. The relatively high percentage of students with infrequent or no library visits could indicate a need for increased library engagement strategies. In terms of ICT exposure, 20.00% of students reported low exposure (up to 6), while 16.67% exhibited very high exposure (27 and above). This finding is partially consistent with the research by Kawale (2013) [13], Barge (2018) [4]. Which also found varied levels of ICT engagement among students. These results highlight the importance of fostering greater ICT exposure and access to better equip students for academic and future professional success.

Achievement motivation is predominantly moderate, with 75.00% of students scoring between 13 to 19, indicating a balanced drive to succeed. However, 14.00% and 16.00% of students displayed both low and high levels of achievement motivation respectively. This suggests a diversity in students' motivational profiles, which could influence their academic performance and career aspirations. Regarding self-confidence, 58.33% of students rated themselves as having medium self-confidence (45 to 59 score), while 27.50% demonstrated very high self-confidence and 14.17% has low self-confidence. This finding is consistent with previous studies by Cristian (2010), Patter (2011) [15]. which observed varying levels of self-confidence among students.

Overall, the data indicates that most students perform reasonably well academically, engage minimally in extra-curricular activities, and exhibit medium to high self-confidence. However, there is significant variation in their ICT exposure and achievement motivation levels, suggesting the need for targeted interventions to address these disparities.

3.2 Family profile characteristics
The profile characteristics of undergraduate female students related to their family background are presented in Table 2, offering valuable insights into family type, occupation, income, landholding, and parental education.

In terms of family type, the majority of students (63.33%) come from nuclear families, while 36.67% belong to joint families. This finding is consistent with the studies of Karande (2008) [11] and Shinde (2011) [17], who also observed a predominance of nuclear families among their study populations. Regarding family occupation, 51.67% of students' families are primarily engaged in agriculture, while 13.33% are involved in a combination of agriculture and animal husbandry or agriculture and service. A smaller percentage of families rely solely on business (10%) or service (11.67%) occupations. These findings align with the

work of Kadam (2010) [10], Kavathekar (2011) [12], and Barge (2018) [4], which highlighted agriculture as a predominant occupation in rural families.

When examining family income levels, 69.17% of families fall into the medium-income category (from Rs 1,00,001 to Rs5,00,000), 23.33% have high-level income (Rs. 5,00,001 and above), and 7.50% belong to the low-income category (up to Rs 1,00,000). This income distribution reflects the economic diversity among the families of the students surveyed. These results are partially consistent with findings by Aher (2010) [1], who also reported a mix of income levels in their studies of student backgrounds. In terms of family landholding, 40.83% of students come from families with marginal landholding (up to 1 acre), while 28.33% have small landholdings (1.01 to 2.00 acres). Smaller proportions of families have semi-marginal (17.50%), medium (12.50%), or large landholdings (0.84%). These findings are partially in agreement with Kawale (2013) [13], who also observed variations in landholding sizes among rural families.

Looking at parental education levels, a significant proportion of mothers (29.16%) have received college education or higher, followed by 24.17% who have completed secondary education. However, 13.33% of mothers are illiterate, and 11.67% have received pre-primary or primary education. These findings are partially consistent with Patter (2011) [15], which highlighted disparities in maternal education levels, particularly in rural and semi-urban areas. Regarding fathers' education, 31.67% have attained higher secondary education (11th to 12th standard), while 30% have completed college education or above. However, a small percentage of fathers are illiterate (2.50%), and 6.67% have received only primary education. These findings align partially with the study by Dahake (2009) [9], which also noted a significant proportion of fathers with higher secondary or college education.

Overall, these findings illustrate the socio-economic and educational backgrounds of the students' families, revealing considerable variation in family income, landholding, and parental education. These factors may significantly influence the academic experiences, opportunities, and aspirations of the students.

3.3 Attitude of agricultural under graduate girl students towards higher education.

The attitude of undergraduate female students in the field of agriculture towards pursuing higher education has become an important area of study, particularly as new opportunities arise for advanced education and career advancement in the agricultural sector. Understanding the mindset and perceptions of these students is crucial for shaping educational policies and strategies that support their aspirations. This research aims to explore the attitudes of agricultural undergraduate girls towards higher education, focusing on their motivations, aspirations, and the potential barriers they may encounter in pursuing advanced degrees.

The data collected, as shown in Table 3, reveals that the largest proportion of students (50.00%) exhibit a "favourable" attitude towards higher education in agriculture. Furthermore, 45.00% of students have a "strongly favourable" attitude, while 05.00% fall into the

"moderately favourable" category. Notably, there are no students in the "strongly unfavourable" and "unfavourable" attitude categories. These findings suggest that a significant number of students view higher education in agriculture positively, which may lead to increased enrolment in agricultural courses and programs.

As more students express interest and enthusiasm for studying agriculture, educational institutions may experience a higher demand for agricultural courses, encouraging them to offer a broader range of specialized programs. These findings align with the research of Shingare (2005) [18], Bhosale (2011) [5], Kawale (2013) [13], and Barge (2018) [4], who observed similar trends of favourable attitudes towards higher education in agriculture among students.

The overall positive attitude observed in this study indicates that there is considerable interest among undergraduate female students in pursuing further education in agriculture, which could help in addressing the evolving demands of the agricultural sector and contribute to the empowerment of women in this field.

Table 1: Profile characterises of under graduate girl students.

SL. No.	Profile characterises	Frequency	Per cent
	Academic performance		
1	More than (8.00 CGPA)	57	47.50
2	In between (6.91 to 8.00 CGPA)	41	34.17
3	In between (6.00 to 6.90 CGPA)	16	13.33
4	Below (6.00 CGPA)	06	05.00
	Caste Categories		
5	General (open)	50	41.67
6	Other backward caste	32	26.67
7	Scheduled caste	15	12.50
8	Scheduled tribes	10	08.33
9	VJ/ NT	11	09.16
10	SBC	02	01.67
	Extra curriculum activities		
11	Low (up to 0)	48	40.00
12	Medium (1 to 4)	45	37.50
13	High (5 and above)	27	22.50
	Frequency of library use		
14	Every day	32	26.66
15	Twice in week	14	11.67
16	Once in week	19	15.83
17	Once in fortnight	03	02.50
18	Once in month	14	11.67
19	Once in three month	02	01.67
20	Once in six month	21	17.50
21	Once in year	02	01.67
22	Never	13	10.83
	ICT Exposure		
23	Low (up to 6)	24	20.00
24	Medium (7 to 26)	76	63.33
25	High (27 and above)	20	16.67
	Achievement motivation		
26	Low (up to 12)	14	11.67
27	Medium (13 to 19)	90	75.00
28	High (20 and above)	16	13.33
	Self confidence		
29	Low (up to 44)	17	14.17
30	Medium (45 to 59)	70	58.33
31	High (60 and above)	33	27.50

Table 2: Family profile characteristics of respondents (N=120)

SL. No	Profile characteristics	Frequency	Per cent
	Family type		
1	Joint	44	36.67
2	Nuclear	76	63.33
	Family occupation		
3	Agriculture	62	51.67
4	Agriculture+ animal husbandry	16	13.33
5	Agriculture + service	16	13.33
6	Only service	14	11.67
7	Only business	12	10.00
	Family Income		
8	Low (up to Rs. 100000)	09	07.50
9	Medium (Rs.1,00,001/- to Rs. 5,00,000/-)	83	69.17
10	High (Rs. 5,00,001 and above)	28	23.33
	Family Land holding		
11	Marginal (Up to 1.00)	49	40.83
12	Small (1.01 to 2.00)	34	28.33
13	Semi-marginal (2.01 to 4.00)	21	17.50
14	Medium (4.01 to 10.00)	15	12.50
16	Big (Above 10.10)	01	00.84
	Mother education		
17	Illiterate	16	13.33
18	Pre-primary education	14	11.67
19	Primary education (up to 7th standard)	14	11.67
20	Secondary education (up to 8th to 10th standard)	29	24.17
21	Higher secondary education (11th to 12th standard)	12	10.00
22	College education (graduation and above)	35	29.16
	Father education		
23	Illiterate	03	02.50
24	Pre-primary education	07	05.83
25	Primary education (up to 7th standard)	08	06.67
26	Secondary education (up to 8th to 10th standard)	28	23.33
27	Higher secondary education (11th to 12th standard)	38	31.67
28	College education (graduation and above)	36	30.00

Table 3: Distribution of respondents according to their attitude towards higher education

SL. No.	Categories	Frequency	Per cent
1	Strongly unfavourable (up to 24 score)	00	00.00
2	Unfavourable (25 to 48 score)	00	00.00
3	Moderately favourable (49 to 72 score)	06	05.00
4	Favourable (73 to 96 score)	60	50.00
5	Strongly favourable (97 and above score)	54	45.00
	Total	120	100.00

4. Conclusion

In conclusion, this study reveals the varied socio-economic, academic, and attitudinal profiles of undergraduate female agricultural students. Most students come from nuclear families with agricultural backgrounds, showing diverse academic performances. While many students exhibit moderate achievement motivation, participation in extracurricular activities is low, though library and ICT exposure is more varied. A significant number of students hold a favorable attitude towards higher education in agriculture, indicating strong potential for further academic engagement. These findings provide insights for educators and policymakers to improve academic support, encourage extracurricular involvement, and create an enabling environment to enhance these students' success and aspirations in higher education.

5. Acknowledgement

Conflict of Interest

All authors declares no conflict of interest to publish this manuscript.

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