PLANT SCIENCE TODAY
Vol 12(sp3): 01–10
https://doi.org/10.14719/pst.10373

eISSN 2348-1900

RESEARCH ARTICLE

Impact of social media on academic activities of agricultural students

Nirmala Lourduraj[1], Brindha Irulandi[2*] & Jothilakshmi[3]

[1]Agricultural Extension (SMS), ICAR- Krishi Vigyan Kendra, Madurai 625 104, Tamil Nadu, India
[2]Department of Agricultural Extension and Rural Sociology, Agriculture College and Research Institute, Tamil Nadu Agriculture University, Madurai 625 104, Tamil Nadu, India
[3]Food Science (SMS), ICAR- Krishi Vigyan Kendra, Madurai 625 104, Tamil Nadu, India

*Correspondence email - bindhuirulandi@gmail.com

Received: 30 June 2025; Accepted: 20 October 2025; Available online: Version 1.0: 16 December 2025

Cite this article: Nirmala L, Brindha I, Jothilakshmi. Impact of social media on academic activities of agricultural students. Plant Science Today. 2025;12 (sp3):01–10. https://doi.org/10.14719/pst.10373

Abstract

The study analysed social media usage among 120 students, with data collected through questionnaires and analyzed using percentages. Most respondents were girls, with 78 % attending private schools and 93 % residing in hostels. A rural background was reported by 53 % of the respondents. Regarding career preferences, 75 % aimed for government jobs, 19.16 % chose business and only 3.33 % opted for a scientist career path. A majority (61 %) were regular social media users, favouring platforms such WhatsApp, YouTube and Instagram, while Facebook, Snapchat and Twitter were less popular. Social media was used by 60 % for academic purposes, though 67 % believed it did not improve their academic performance. Agriculture-related websites were accessed by 81 % of students, with Agritech Portal (58 %) and Uzhavan App (17 %) being the most used, while others like Agrimoon, Meghdoot and FAO were less accessed. Social media increased awareness of agriculture-related jobs for 93 % of respondents and 53 % felt it influenced their career choices. A majority (59 %) agreed that globalization of communication supports job acquisition and 48 % believed social media offers opportunities for better careers. Challenges included distractions (41 %) and exposure to cyberbullying (10 %), though 53.33 % reported no psychological impact. However, 21.67 % noted negative psychological effects. To address these issues, 78 % suggested self-control, 93 % recommended time management and 44 % pointed to extracurricular activities. Key problems identified were addiction, distraction, overthinking and health-related issues. Students emphasized self-discipline and time management as solutions to these challenges. The findings indicate that while social media facilitated career awareness and academic engagement, its potential to distract from studies and cause psychological effects highlighted the importance of balanced usage and proper time management.

Keywords: academic activities; agricultural students; cyber distractions; digital influence; educational impact; social media

Introduction

Social media is an online platform used by people to build social networks and relationships with others who share similar interests, activities, backgrounds or real-life connections. In other way social media is a digital platform that allow user interaction and sharing user-generated content through an online app for networking purposes (1). It has a significant impact on young people, as they use their devices to check status updates and stay connected. It offers various forms of communication, such as blogs, micro-blogs, wikis, photo-sharing sites, instant messaging, video-sharing sites, podcasts, widgets and virtual worlds. It allows individuals to communicate, expand knowledge, develop interests and be entertained, while professionals can expand their knowledge and build professional networks. “Social media is about sociology and psychology more than technology” - Brain Solis.

Internet usage has proliferated in the past decade to become an essential part of life. There is a very large community which utilizes the internet for education, employment opportunities and for establishing a social relationship between users connected through the internet worldwide. In recent time, social media became an essential element of individual lives. In India, there will be 907.4 million total internet users (64 % of population) by 2023, up from 398.2 million (29 % of population) in 2018 and also there will be 966.4 million total mobile users (68 % of population) by 2023, up from 763.1 million (56 % of population) in 2018. Social media enhances engagement and capabilities in schools by providing a learning platform for students to connect, access information and research. However, it also has some negative effects, such as increased loneliness and isolation.

Social media’s acceptance in daily life drives its impact on education and its potential to change the future of education (2). Students have the opportunity to improve their academic performance and optimize their knowledge by collection of relevant information made available through social media Social media generate visibility around social, ethical, environmental and political views or issues in the society (3). It spreads educational related materials quickly and efficiently. It provides companies with new marketing opportunities.

Students have the opportunity to improve their academic performance and optimize their knowledge via the collection of relevant information made available through social media (4). Students in today's schools have the opportunity to engage with a variety of online communities by using a variety of social media platforms. When it comes to assisting students in getting to know one another and working together on the learning process, there is no instrument that compares favourably to social media (5). It helps to close the communication gap between the students by giving them the chance to discuss the challenges they are facing with any given work and enabling them to get solutions from their other students or classmates (6).

The advancement of technology enables students to receive knowledge from many sources without being constrained by distance or time. The advancement of education also leads to the usage of technology, which enables students to obtain learning material directly from their own hands. Students' access to information through their devices has the potential to affect their educational aspirations, job expectations and self-efficacy in selecting a vocation. Research has shown that mass media influence career selection process by shaping personal choices since it contributes to character development, language and habit formation (7).

Creating new channels that companies can use to find, recruit and hire new employees. It also increases the number of social contacts of groups and individuals and producing new jobs associated with social media networks and consulting. It allows a platform for group discussion and opinion sharing thus it helpful for their future career (8). Regarding the constraints major issue is cyberbullying. Cyberbullying includes sending, posting and sharing negative, harmful, false or mean content about someone else (9). It can include sharing personal or private information about someone else causing embarrassment or humiliation. Some cyberbullying crosses the line into unlawful or criminal behaviour. The most common places where cyberbullying occurs are Facebook, Instagram, Snapchat and Tik Tok.

Materials and Methods

The study employed a proportionate random sampling technique to select 120 students, ensuring representation from each year. The sample size for each year was determined using the formula:

$$m = (N_i/N) \times n$$

Where,

N_i= number of respondents to be selected from the i^{th} year the total sample size. N = total number of respondents. n = total sample size. Primary data were collected through a structured questionnaire designed to gather information on students' preferences for entrepreneurship. The questionnaire, distributed via Google Forms on social media platforms, allowed respondents to self-report their answers.

Secondary data were obtained from journals, websites and newspapers to support the study. Data were analyzed using percentage analysis to summarize response distributions, correlation analysis to identify relationships among variables and regression analysis to determine the influence of independent variables on dependent variables and a Z-test to evaluate the statistical significance of differences between group means or proportions. The Z-test was conducted due to the large sample size and the availability of population parameters, ensuring robust statistical inference.

All analyses were performed using SPSS software, which facilitated precise and efficient data computation. This approach ensured a comprehensive and systematic examination of the research objectives.

Results and Discussion

Table 1 provides insights into various demographic, educational, social media usage and career-related behaviours and preferences of the surveyed group. Below is a discussion of the findings, categorized by key themes:

Demographic and educational background

The majority of respondents (73 %) are less than 21 years old, indicating a youthful population (10). Females outnumber males, comprising 61 % of the sample (11). Educationally, a significant portion (78 %) attended private schools, while government and government-aided schools account for only 10 % and 12 %, respectively. Rural backgrounds slightly predominate (53 %) over urban ones (47 %) and most respondents (93 %) are hostel residents, highlighting a preference for living on campus for academic purposes (12).

Career aspirations

Government jobs are the most popular career choice (75 %), followed by business (19 %), while becoming a scientist (3 %) is less favoured. A minimal proportion (1.67 %) remains undecided. This reflects a preference for job security and stability, often associated with government employment (13).

Social media usage patterns

The data reveal widespread usage of social media platforms, with WhatsApp leading at 61.17 % usage for 2 hr daily. YouTube is also popular (59.17 % for 2 hr daily), whereas platforms like Facebook, Twitter and Instagram see relatively lower daily engagement (14). For instance, 93.33 % of respondents do not use Facebook and 90.83 % do not use Twitter. Interestingly, a notable segment (38.3 %) does not use Instagram either, suggesting varying levels of engagement across platforms (15).

Impact of social media on education and career

Social media's role in academics presents mixed opinions. While 60 % believe it is a beneficial tool for academic activities, 56 % disagree with the notion that it improves academic performance. However, 93 % agree that social media raises awareness of agriculture-related job opportunities, demonstrating its influence on career awareness (16). A majority (53 %) also believe that social media interactions shape their career choices, indicating its significant role in guiding future plans.

Preference for agriculture-related websites

About 67 % of respondents access agriculture-related websites, with the AgriTech portal being the most popular (55.83 %). Other platforms like the Uzhavan app (12.5 %), Agrimoon app (8.33 %) and Meghdoot app (6.67 %) are less frequently used. This highlights a moderate yet promising engagement with digital resources for agriculture education (17).

Table 1. Profile of agricultural students

S. No	Category	Number	Per cent
I.	**Age**		
	Less than 21 years	88	73.00
	21 years	25	21.00
	More than 21 years	7	6.00
II.	**Gender**		
	Male	47	39.00
	Female	73	61.00
III.	**Educational status**		
	Government school	12	10.00
	Government aided school	14	12.00
	Private school	94	78.00
IV.	**Rural and urban background**		
	Rural	64	53.00
	Urban	56	47.00
V.	**Residential place**		
	Day scholar	8	7.00
	Hosteller	112	93.00
VI.	**Career choice**		
	Government job	90	75.00
	Scientist	4	3.00
	Business	23	19.00
	Any job	1	0.83
	Not yet decided	2	1.67
VII.	**Social media usage (hr/day)**		
		WhatsApp	
	Not used	5	4.17
	2 hr/ day	83	61.17
	4 hr/ day	24	20.00
	6 hr/ day	5	4.17
	8 hr/ day	1	0.83
	10 hr/ day	2	1.67
		You tube	
	Not used	32	26.67
	2 hr/ day	71	59.17
	4 hr/ day	14	11.66
	6 hr/ day	3	2.5
	8 hr/ day	0	0
	10 hr/ day	0	0
		Instagram	
	Not used	46	38.30
	2 hr/ day	43	35.80
	4 hr/ day	23	19.66
	6 hr/ day	5	4.17
	8 hr/ day	3	2.5
	10 hr/ day	0	0
		Facebook	
	Not used	112	93.33
	2 hr/ day	5	4.17
	4 hr/ day	2	1.67
	6 hr/ day	0	0
	8 hr/ day	1	0.83
	10 hr/ day	0	0
		Twitter	
	Not used	109	90.83
	2 hr/ day	8	6.67
	4 hr/ day	2	1.67
	6 hr/ day	1	0.83
	8 hr/ day	0	0
	10 hr/ day	0	0
VIII.	**Preference of social media for academic activities**		
	Yes	72	60.00
	Maybe	31	26.00
	No	17	14.00
IX.	**Improvement of academic performance after social media usage**		
	Agree	36	30.00
	Partially agree	17	14.00
	Disagree	67	56.00
X.	**Usage of agriculture related websites**		
	Yes	81	67.00
	No	39	33.00

XI.	**Agriculture related websites/ Apps used**		
	Agri tech portal	67	55.83
	Uzhavan app	15	12.5
	Agrimoon app	10	8.33
	Meghdoot app	8	6.67
	CMOT	5	4.17
	Killi legend	7	5.83
	Ministry of agriculture	5	4.17
	FAO	3	2.50
XII.	**Looking for new educational channels to educate themselves**		
	Yes	88	73.00
	No	32	27.00
XIII.	**Social media provide sophisticated studying experience**		
	Agree	34	28.00
	Strongly agree	10	8.00
	Neutral	66	56.00
	Strongly disagree	0	0
	Disagree	10	8.00
XIV.	**Social media helps them in aware different jobs related to agriculture**		
	Yes	112	93.00
	No	8	7.00
XV.	**Social media interaction influences their career choice**		
	Yes	63	53.00
	Maybe	36	30.00
	No	21	17.00
XVII.	**Globalization of communication helps them for obtaining job**		
	Yes	71	59.00
	Maybe	42	35.00
	No	7	6.00
XVII.	**Social media provide them a huge platform to get good jobs**		
	Yes	57	48.00
	Maybe	51	42.00
	No	12	10.00

Globalization and job opportunities

A significant proportion (59 %) agrees that globalization of communication aids job acquisition. Moreover, 48 % believe social media provides a platform to secure good jobs, although 42 % are only moderately confident about this (18).

Interest in educational channels

There is a strong interest in new educational channels, with 73 % looking to explore them. This reflects a proactive attitude toward continuous learning. Additionally, 56 % remain neutral regarding whether social media offers a sophisticated studying experience, though 36 % (agree and strongly agree combined) recognize its value in enhancing learning (19).

Relationship between the profiles with utilization level of agricultural students

Table 2 shows the correlation and regression analysis that explores the relationship between various independent variables and the utilization of social media and agricultural-related platforms among agricultural students. The findings are based on correlation (r values), regression coefficients, t values and p values to assess the significance of each variable's contribution. The correlation coefficients (r values) reveal the strength and direction of relationships between the independent variables and the dependent variable. Significant findings include:

Gender (X_2)

Shows a strong positive correlation (r = 0.478**) with utilization, suggesting significant gender-based differences.

Influence on career choice (X_{13})

Exhibits the highest positive correlation (r = 0.576**), indicating that social media strongly impacts career decisions (20).

Awareness on agri-related jobs (X_{12})

Also has a strong positive correlation (r = 0.522), emphasizing social media's role in job awareness.

Age (X_1), rural/urban background (X_3) and social media usage (X_6)

Moderate positive correlations (r = 0.349*, 0.377*, 0.334*), reflecting their relevance in shaping utilization patterns.

Other variables, such as globalization of communication (X_{14}) and huge platform for jobs (X_{15}), show weaker positive correlations but still influence social media utilization. The regression coefficients and significance values highlight the variables that significantly impact utilization:

Gender (X_2)

Gender is a highly significant predictor, indicating notable differences in utilization patterns between male and female students (21).

Career Choice (X_5)

Career choice strongly influences how students utilize social media for agricultural purposes.

Social Media Usage (X_6)

The extent of social media usage positively impacts agricultural students' utilization.

Educational Channels (X_{10})

The use of educational channels significantly predicts the extent of utilization (22).

Table 2. Relationship between the profiles with utilization level of agricultural students

Variable number	Independent variable	'r' value	Regression co-efficient	't' value	'P' value
X_1	Age	0.349*	0.238	1.958	0.075
X_2	Gender	0.478**	0.351**	3.183	0.001
X_3	Rural/urban background	0.377*	0.111	1.136	0.065
X_4	Residential status	0.101	0.205	0.210	0.006
X_5	Career choice	0.187	0.345**	3.352	0.000
X_6	Social media usage	0.334*	0.283**	2.273	0.001
X_7	Impact on academic activities	0.105	0.002	0.311	0.047
X_8	Improvement in academic performance	0.222	0.255	0.020	3.256
X9	Usage of agri related websites/ Apps	0.035	0.030	0.241	0.445
X10	Educational channels	0.144	0.002*	0.308	0.005
X11	Sophisticated studying experience	0.113	0.065	0.101	0.918
X12	Awareness on agri related jobs	0.522	0.090*	2.460	0.003
X13	Influence on career choice	0.576**	0.175*	2.320	0.004
X14	Globalization of communication	0.285*	0.105	1.784	0.165
X15	Huge platform to get good jobs	0.288	0.116	0.071	1.660

Awareness on Agri-Related Jobs (X_{12})

Students' awareness of agriculture-related jobs significantly contributes to their utilization patterns.

Influence on Career Choice (X_{13})

The influence of social media on career choices plays a significant role in shaping utilization. The findings indicate that gender, career aspirations, social media usage and awareness of agricultural job opportunities significantly influence the utilization patterns of agricultural students.

Social media platforms emerged as a vital medium for information dissemination and professional engagement (23). Students with clear career goals and awareness of agricultural careers are more proactive in leveraging resources, which aligns with the need for targeted programs to enhance awareness and accessibility. Non-significant variables, such as residential status and sophisticated study experiences, may require further investigation to determine their indirect or context-specific impacts (24). Moreover, improving educational channels and highlighting their benefits could enhance the effective utilization of agricultural resources among students.

Factor influencing the utilization of social media among agricultural students

Table 3 analysis of Z test highlights the direct and indirect effects of independent variables on agricultural students' resource utilization through path analysis. Direct effects, total indirect effects and substantial indirect contributors are analysed to understand their relative contributions. In direct effects show the immediate impact of independent variables on utilization and observations include:

Sophisticated studying experience (0.290)

This variable had the highest direct effect, indicating that students who perceived studying as more sophisticated were more likely to engage with agricultural resources. This finding underscores the importance of aligning resource design with modern, interactive learning experiences.

Table 3. Factor influencing the utilization of social media among agricultural students

Variable number	Independent variable	Direct effect	Total indirect effect	Substantial indirect effect		
				I	II	III
X_1	Age	0.246	0.312	0.088 X_4	0.082 X_2	0.065 X_7
X_2	Gender	0.095	0.030	0.029 X_7	0.026 X_{12}	0.025 X_{14}
X_3	Rural/urban background	0.048	0.003	0.012 X_4	0.010 X_{10}	0.008 X_{11}
X_4	Residential status	0.040	0.050	0.005 X_5	0.004 X_{14}	0.003 X_1
X_5	Career choice	0.009	0.004	0.002 X_8	0.009 X_3	0.007 X_6
X_6	Social media usage	0.089	0.073	0.016 X_1	0.007 X_5	0.015 X_5
X_7	Impact on academic activities	0.245	0.338	0.035 X_9	0.027 X_{13}	0.026 X_{10}
X_8	Academic performance	0.123	0.132	0.038 X_{13}	0.022 X_7	0.025 X_3
X_9	Agri related websites/ Apps	0.050	0.070	0.005 X_3	0.002 X_9	0.001 X_5
X_{10}	Educational channels	0.024	0.027	0.007 X_{12}	0.005 X_1	0.003 X_8
X_{11}	Sophisticated studying experience	0.290	0.035	0.028 X_6	0.020 X_4	0.009 X_6
X_{12}	Awareness on agri related jobs	0.040	0.090	0.008 X_2	0.005 X_3	0.004 X_5
X_{13}	Influence on career choice	0.059	0.175	0.019 X_{14}	0.018 X_{15}	0.016 X_{13}
X_{14}	Globalization of communication	0.187	0.306	0.205 X_7	0.107 X_{11}	0.009 X_7
X_{15}	Huge platform to get good jobs	0.200	0.131	0.071 X_1	0.040 X_{10}	0.390 X_{14}

Globalization of communication (0.187)

A significant direct effect suggests that global communication avenues enhance resource utilization by providing broader exposure to opportunities and information.

Huge platform for good jobs (0.200)

The strong direct effect highlights the value of platforms offering job-related opportunities, emphasizing their role in motivating students to explore agricultural careers.

Impact on academic activities (0.245)

The strong direct effect indicates that social media has a substantial and immediate influence on students' academic activities. This suggests that platforms used for educational content, virtual discussions and academic networking significantly shape how agricultural students learn, access information and organize their studies. Moreover, the considerable indirect effect demonstrates that academic activities are further impacted by factors such as motivation, learning engagement and access to digital resources.

Social Media Usage (0.089)

A moderate direct effect indicates the relevance of social media in accessing and engaging with agricultural resources. A high direct effect shows that students perceive academic integration of resources as a critical factor influencing their utilization behaviour. The total indirect effects reveal how variables influence utilization through mediators. The analysis shows:

Age (0.312)

Age had the highest total indirect effect, mediated significantly by residential status (0.082), gender (0.065) and impact on academic activities (0.088). Younger students are more influenced by their living environment and academic motivations.

Globalization of communication (0.306)

The substantial indirect effect of impact on academic activities (0.107) indicates that global communication indirectly improves resource utilization by fostering academic engagement.

Impact on academic activities (0.338)

This variable's indirect effects through agri-related websites (0.027), career choice (0.026) and educational channels (0.035) show that integrating resources into academics amplifies their effectiveness.

Huge platform for good jobs (0.131)

Indirect effects through age (0.040), educational channels (0.390) and globalization of communication (0.071) indicate that platforms catering to career aspirations significantly enhance resource engagement.

Globalization of communication (0.205)

Impacted significantly by impact on academic activities (0.107), it emphasizes that global exposure indirectly influences utilization through academic integration.

Sophisticated studying experience (0.028)

Indirectly affected by social media usage (0.020), suggesting that interactive and engaging study methods foster resource utilization.

Age (0.088)

Mediated by residential status (0.082), showing that living conditions play a crucial role in influencing younger students.

Social Media usage (0.016)

Substantial indirect effects through career choice (0.015) highlight its role in linking academic and professional aspirations. The Z test analysis demonstrates the multifaceted relationships between variables and resource utilization:

Direct influences

Variables like sophisticated studying experience and globalization of communication directly motivate students to engage with agricultural resources (24). This suggests the need for resource developers to emphasize global content and interactive tools.

Indirect effects

Mediators like residential status, social media usage and academic integration amplify the utilization of resources. Tailored interventions in these areas can enhance overall effectiveness.

Role of career aspirations

Career-related platforms and educational channels significantly influence utilization patterns. Providing career-oriented content can motivate students further (25).

Age and social media

Younger students and those actively using social media are more inclined towards resource engagement, underlining the importance of adapting content to digital platforms.

Constraints faced by agricultural students

Table 4 identifies various constraints faced by agricultural students due to social media usage. These challenges can be broadly categorized into distractions, health impacts, psychological effects and exposure to misinformation, highlighting the need for balanced usage of social media in academic and personal lives.

Distraction from studies

A significant proportion of students (41.67 %) reported that social media distracts them from their studies; while 40 % expressed uncertainty and only 18.33 % disagreed. The ubiquitous nature of social media and its constant notifications divert students' focus, impacting their ability to concentrate on academic activities (26).

Exposure to cyberbullying

Cyberbullying emerged as a concern for 10 % of respondents, while 24 % were unsure if they had experienced it. However, a majority (66 %) reported no exposure to cyberbullying. While not a predominant issue, the possibility of encountering harassment online can create a negative environment for students (27).

Psychological effects

Social media usage reportedly caused psychological issues such as anxiety and depression in 22 % of students, with 25 % expressing uncertainty about its effects. A notable 53 % did not perceive any psychological impact. The platform's curated content, peer comparisons and negative interactions may contribute to emotional strain in some users.

Health impacts due to excessive screen time

A considerable number of students (37.50 %) acknowledged health issues due to excessive screen time, while 41.67 % were uncertain. Health problems, such as eye strain, headaches and fatigue, result from prolonged exposure to screens (28). Only 20.83 % did not perceive this as a challenge.

Table 4. Constraints faced by agricultural students

S. no.	Category	Number	Percent
I.	**Social media distract them from the studies**		
	Yes	50	41.67
	Maybe	48	40.00
	No	22	18.33
II.	**Social media expose them to cyberbullying**		
	Yes	12	10.00
	Maybe	29	24.00
	No	79	66.00
III.	**Social media psychologically (anxiety, depression) affect them**		
	Yes	26	22.00
	Maybe	30	25.00
	No	64	53.00
IV.	**Social media causes excessive screen time leading to health issues**		
	Yes	45	37.50
	Maybe	50	41.67
	No	25	20.83
V.	**Social media reduces their physical activity**		
	Yes	67	55.83
	Maybe	38	31.67
	No	15	12.50
VI.	**Social media increases exposure to misinformation**		
	Yes	33	27.50
	Maybe	60	50.00
	No	27	22.50
VII.	**Social media impacts their sleep schedule**		
	Yes	58	48.33
	Maybe	40	33.33
	No	22	18.34
VIII.	**Social media decreases their attention span**		
	Yes	39	32.50
	Maybe	52	43.33
	No	29	24.17

Reduction in physical activity

Social media usage was found to reduce physical activity for 55.83 % of respondents. Sedentary behaviour associated with prolonged screen use impacts overall physical health, including fitness and energy levels. However, 31.67 % remained unsure and 12.50 % denied facing this issue.

Exposure to misinformation

A significant concern highlighted by the study was exposure to misinformation, with 27.50 % of students agreeing and 50 % uncertain. While only 22.50 % disagreed, the spread of unreliable information on social media can misguide students, particularly in agriculture, where precise knowledge is crucial.

Sleep schedule disruption

Social media disrupted the sleep schedules of 48.33 % of students, with 33.33 % expressing uncertainty. Sleep deprivation, caused by late-night browsing and addiction to content, can lead to fatigue and decreased academic performance (29). However, 18.34 % stated that their sleep patterns remained unaffected.

Decrease in attention span

A decline in attention span due to social media was reported by 32.50 % of students, with 43.33 % uncertain about the impact. Constantly switching between platforms and consuming short-form content reduces the ability to focus for extended periods. However, 24.17 % disagreed with this constraint.

Distractions from studies and reduced attention span highlight the need for time management strategies and conscious usage of social media during academic hr (30). Excessive screen time and physical inactivity call for initiatives promoting offline activities and balanced digital habits. Students experiencing anxiety or depression require awareness campaigns and accessible mental health resources to manage stress effectively. Workshops on critical thinking and fact-checking can empower students to identify reliable sources of information, particularly in agriculture.

Encouraging social media detox periods and setting usage limits can help mitigate sleep disruptions and overall dependence (31). The distractions, health impacts and psychological strain underscore the importance of promoting digital literacy and self-regulation among students. Strategies like time management, screen time monitoring and encouraging physical activity can mitigate these negative effects. Universities and educators can play a critical role by providing workshops on balanced social media use and incorporating wellness programs into the curriculum. Ultimately, fostering a mindful approach to social media can help students harness its benefits while minimizing its drawbacks.

Suggestions to overcome the problems

Table 5 highlights a range of actionable suggestions aimed at addressing the challenges posed by social media usage among agricultural students. These recommendations are designed to improve self-regulation, enhance academic focus and mitigate the adverse effects of social media. Self-control (55.83 %) was identified as the most significant suggestion, with more than half of the respondents agreeing on its importance. Developing self-discipline is critical for managing time spent on social media. Practical strategies like setting usage limits and practicing mindfulness can empower students to focus on their academic goals, while minimizing distractions. Time management was highlighted by 40 % of the participants as a vital skill. Social media often consumes significant amounts of time, leading to procrastination.

Table 5. Suggestions to overcome the problems

S. no.	Category	Number	Percent
1.	Self-control	67	55.83
2.	Time management	48	40.00
3.	Extracurricular activities	22	18.33
4.	Digital literacy programs	55	45.83
5.	Workshops on stress management	42	35.00
6.	Encouraging offline social interactions	35	29.17
7.	Implementing screen time tracking apps	49	40.83
8.	Awareness campaigns on misinformation	38	31.67
9.	Promoting physical activity breaks	50	41.67
10.	Integration of educational social media content	47	39.17

Structured schedules and prioritizing tasks can help students allocate appropriate time for academic activities and leisure, ensuring a healthy balance (32). Participation in extracurricular activities (18.33 %) was suggested to reduce social media dependency. Physical and creative outlets such as sports, arts or community service can help students engage in meaningful, real-world interactions and reduce excessive screen time. Nearly 45.83 % of respondents recommended digital literacy programs. These initiatives can educate students about the responsible use of social media, including privacy settings, identifying credible information and avoiding harmful interactions. This knowledge is especially valuable for agricultural students, who often rely on online platforms for education and networking (33).

Stress management workshops were proposed by 35 % of participants. Prolonged use of social media can lead to anxiety and mental health challenges. Workshops focusing on relaxation techniques, time-out strategies and emotional regulation can help students cope with the psychological pressures of social media (34). Around 29.17 % of respondents emphasized the need for offline interactions. Building in-person relationships and participating in community activities can provide emotional support, foster communication skills and reduce feelings of isolation caused by excessive online engagement.

Screen time tracking apps were recommended by over 40 % of respondents. These tools can help students monitor and regulate their social media usage. Notifications and daily summaries can act as reminders to balance screen time with other activities. Awareness campaigns addressing misinformation were supported by nearly 31.67 % of participants. These campaigns can train students to critically evaluate online content, differentiate credible sources and avoid the spread of inaccurate information, which is particularly relevant in agricultural education (35). Physical activity breaks were recommended by 41.67 % of respondents as an effective way to counteract the sedentary lifestyle associated with social media use.

Regular breaks for exercise or outdoor activities can enhance physical and mental well-being, fostering a more active lifestyle. Approximately 39.17 % of respondents suggested leveraging social media for educational purposes. Platforms can be used to share agricultural knowledge, career guidance and study materials. Creating engaging and informative content can transform social media into a constructive academic tool. The suggestions emphasize a holistic approach to addressing social media's impact on agricultural students. A combination of self-regulation, structured time management and supportive educational programs can empower students to navigate social media effectively.

Conclusion

The study underlines the importance of social media and digital tools in shaping the educational and career outlook of this group. While the enthusiasm for leveraging technology is evident, the mixed responses regarding academic improvement highlight the need for structured guidance in integrating these tools effectively. Moreover, the preference for government jobs suggests that aspirations align with stability and long-term security. This discussion underscores the evolving role of social media as an influential medium in education and career planning, particularly in agricultural domains. The findings highlight the significant role of social media in influencing education, career awareness and job-seeking behaviour among the respondents. Platforms like WhatsApp and YouTube dominate daily usage, while agriculture-related websites and apps play a pivotal role in disseminating specialized knowledge. However, the perceived benefits of social media for academic improvement remain contested, pointing to the need for targeted awareness programs to optimize its educational utility.

The correlation and regression analysis highlight that gender, career choice, social media usage and awareness of agricultural-related jobs are the most significant determinants of social media and technological utilization among agricultural students. These factors underscore the importance of targeted strategies to maximize the potential of social media for academic and career development. Efforts to improve accessibility, promote awareness of agricultural opportunities and integrate digital tools into learning processes can significantly enhance the utility of these platforms for agricultural students. The Z test model reveals a complex interplay of direct and indirect effects among variables influencing agricultural resource utilization. Key drivers include sophisticated study methods, career aspirations and globalization of communication, while mediators like social media and residential conditions amplify these effects. Future strategies should focus on optimizing digital resources, aligning content with career goals and fostering global academic engagement to maximize student utilization. The constraints highlighted in this study reveal a dual-edged relationship between social media and agricultural students. While it serves as a vital tool for communication, learning and job awareness, its unregulated use poses significant challenges.

While social media provides agricultural students with opportunities for learning and career growth, its associated constraints demand proactive measures. Institutions should focus on fostering awareness, promoting healthy digital habits and integrating technology responsibly into the educational ecosystem to maximize its benefits while minimizing its adverse effects. Balancing the benefits of social media with its potential drawbacks is

essential for fostering a generation of digitally literate, physically active and mentally resilient agricultural professionals. These actionable steps can help students maximize social media's potential while mitigating its adverse effects.

Acknowledgements

We extend my heartfelt thanks go to the research team for their unwavering support, dedication and collaboration. We would also like to acknowledge all the participants of this study, particularly the agricultural students, whose time and cooperation made this research possible.

Authors' contributions

BI conceptualized and designed the research study, conducted the data analysis and wrote the manuscript. NL contributed to the revision and refinement of the manuscript, provided critical feedback and approved the final version of the manuscript. J assisted in data collection, reviewed the manuscript and provided valuable suggestions for improvement.

Compliance with ethical standards

Conflict of interest: Authors do not have any conflict of interests to declare.

Ethical issues: None

References

1. Tajudeen FP, Jaafar NI, Ainin S. Understanding the impact of social media usage among organizations. Inf Manag. 2018;55(3):308-21. https://doi.org/10.1016/j.im.2017.08.004
2. Al-Bahrani A, Patel D, Sheridan B. Engaging students using social media: The students' perspective. Int Rev Econ Educ. 2015;19:36-50. https://doi.org/10.1016/j.iree.2015.06.001
3. Bal E, Bicen H. The purpose of students' social media use and determining their perspectives on education. Procedia Comput Sci. 2017;120:177-81. https://doi.org/10.1016/j.procs.2017.11.226
4. Celestine AU, Nonyelum OF. Impact of social media on students' academic performance. Int J Sci Eng Res. 2018;9(3):1454-62.
5. Lau WW. Effects of social media usage and social media multitasking on the academic performance of university students. Comput Hum Behav. 2017;68:286-91. https://doi.org/10.1016/j.chb.2016.11.043
6. Fazil AW, Hakimi M, Akrami K, Akrami M, Akrami F. Exploring the role of social media in bridging gaps and facilitating global communication. Stud Media J Commun. 2024;2(1):13-21. https://doi.org/10.32996/smjc
7. Kumar SD, Soundarapandiyan K, Meera S. Sentience of career opportunities and career development using social media–A study with reference to Tamil Nadu. J Big Data Technol Bus Anal. 2022;1(1):7-14. https://doi.org/10.46610/JBDTBA.2022.v01i01.002
8. McCabe MB. Social media marketing strategies for career advancement: An analysis of LinkedIn. J Bus Behav Sci. 2017;29(1):85.
9. Hamm MP, Newton AS, Chisholm A, Shulhan J, Milne A, Sundar P, et al. Prevalence and effect of cyberbullying on children and young people: A scoping review of social media studies. JAMA Pediatr. 2015;169(8):770-7. https://doi.org/10.1001/jamapediatrics.2015.0944
10. Wojdan W, Wdowiak K, Witas A, Drogoń J, Brakowiecki W. The impact of social media on the lifestyle of young people. Pol J Public Health. 2020;130:8-13. https://doi.org/10.2478/pjph-2020-0003
11. Zheng W, Yuan C-H, Chang W-H, Wu Y-CJ. Profile pictures on social media: Gender and regional differences. Comput Hum Behav. 2016;63:891-8. https://doi.org/10.1016/j.chb.2016.06.041
12. Martí P, Serrano-Estrada L, Nolasco-Cirugeda A. Social media data: Challenges, opportunities and limitations in urban studies. Comput Environ Urban Syst. 2019;74:161-74. https://doi.org/10.1016/j.compenvurbsys.2018.11.001
13. Adedotun KO, Elegbede CB, Lapite AO, Idhalama OU, Aluede O. Assessing the role of social media in shaping career aspirations among lecturers in Nigeria: A quantitative analysis. Glob J Soc Sci Stud. 2024;10(2):88-103. https://doi.org/10.55284/gjss.v10i2.1239
14. Aleksandrova YG, Parusheva SS. Social media usage patterns in higher education institutions–An empirical study. Int J Emerg Technol Learn. 2019;14(5):108. https://doi.org/10.3991/ijet.v14i05.9720
15. Trifiro BM, Gerson J. Social media usage patterns: Research note regarding the lack of universal validated measures for active and passive use. Soc Media Soc. 2019;5(2):2056305119848743. https://doi.org/10.1177/2056305119848743
16. Donelan H. Social media for professional development and networking opportunities in academia. J Further High Educ. 2016;40(5):706-29. https://doi.org/10.1080/0309877X.2015.1014321
17. Balkrishna BB, Deshmukh AA. A study on role of social media in agriculture marketing and its scope. Int J Manag IT Eng. 2017;7(4):416-23.
18. Thornton D, Holloway M. The impact of social media on collaboration in global organizations. J Inf Syst Technol Plan. 2016;8(19):137-56.
19. Sumida Garcia L, Costa Silva CM. Differences between perceived usefulness of social media and institutional channels by undergraduate students. Interact Technol Smart Educ. 2017;14(3):196-215. https://doi.org/10.1108/ITSE-01-2017-0009
20. Tanko D, Tuncer T, Dogan S, Akbal E. Regression methods for social media data analysis. Mugla J Sci Technol. 2022;8(1):31-40. https://doi.org/10.22531/muglajsci.1028299
21. York C. A regression approach to testing genetic influence on communication behavior: Social media use as an example. Comput Hum Behav. 2017;73:100-9. https://doi.org/10.1016/j.chb.2017.03.029
22. Masele JJ, Magova GB. Towards social media usage for promotional activities in Tanzanian pension schemes: A factor scores regression analysis of perceived factors. Bus Manag Rev. 2017;20(1):38-52.
23. Hawi NS, Samaha M. The relations among social media addiction, self-esteem and life satisfaction in university students. Soc Sci Comput Rev. 2017;35(5):576-86. https://doi.org/10.1177/0894439316660340
24. Rochdiana FF, Darmawan MRI, Dewi NA, Husna WZ, Audina ZD, Arianti ND. The influence of the use of social media on the intensity of worshipping the millennial generation using linear regression. Khazanah J Relig Technol. 2023;1(1):15-9. https://doi.org/10.15575/kjrt.v1i1.161
25. Poecze F, Ebster C, Strauss C. Social media metrics and sentiment analysis to evaluate the effectiveness of social media posts. Procedia Comput Sci. 2018;130:660-6. https://doi.org/10.1016/j.procs.2018.04.117
26. Xie J-Q, Rost DH, Wang F-X, Wang J-L, Monk RL. The association between excessive social media use and distraction: An eye movement tracking study. Inf Manag. 2021;58(2):103415. https://doi.org/10.1016/j.im.2020.103415
27. Ademiluyi A, Li C, Park A. Implications and preventions of cyberbullying and social exclusion in social media: Systematic review. JMIR Form Res. 2022;6(1):e30286.
28. Gillespie KM, Branjerdporn G, Woerwag Mehta S, Glegg J, Porter M, Bartlett SE. The impact of screen time and social media on youth

self-harm behaviour and suicide: A protocol for systematic reviews. PLoS One. 2024;19(12):e0314621. https://doi.org/10.1371/journal.pone.0314621

29. Kaur P, Dhir A, Alkhalifa AK, Tandon A. Social media platforms and sleep problems: A systematic literature review, synthesis and framework for future research. Internet Res. 2021;31(4):1121-52. https://doi.org/10.1108/INTR-04-2020-0187
30. Carstens DS, Doss SK, Kies SC. Social media impact on attention span. J Manag Eng Integr. 2018;11(1).
31. Shahzad W, Hanif R, Haroon R. The impact of social media addiction on self-esteem, attention span, sleep quality and phubbing behavior. Pak J Humanit Soc Sci. 2024;12(2):2148-56.
32. De-Juanas Á, García-Castilla FJ, Galán-Casado D, Díaz-Esterri J. Time management by young people in social difficulties: suggestions for improving their life trajectories. Int J Environ Res Public Health. 2020;17(23):9070. https://doi.org/10.3390/ijerph17239070
33. Ranieri M, Bruni I, Kupiainen R. Digital and media literacy in teacher education: Findings and recommendations from the European Project e-MEL. Ital J Educ Res. 2018;20:151-66.
34. Bhargava D, Trivedi H. A study of causes of stress and stress management among youth. IRA Int J Manag Soc Sci. 2018;11(03):108-17. https://doi.org/10.21013/jmss.v11.n3.p1
35. Allcott H, Gentzkow M, Yu C. Trends in the diffusion of misinformation on social media. Res Polit. 2019;6(2):2053168019848554. https://doi.org/10.1177/2053168019848554

Additional information

Peer review: Publisher thanks Sectional Editor and the other anonymous reviewers for their contribution to the peer review of this work.

Reprints & permissions information is available at https://horizonepublishing.com/journals/index.php/PST/open_access_policy

Publisher's Note: Horizon e-Publishing Group remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Indexing: Plant Science Today, published by Horizon e-Publishing Group, is covered by Scopus, Web of Science, BIOSIS Previews, Clarivate Analytics, NAAS, UGC Care, etc
See https://horizonepublishing.com/journals/index.php/PST/indexing_abstracting

Publisher information: Plant Science Today is published by HORIZON e-Publishing Group with support from Empirion Publishers Private Limited, Thiruvananthapuram, India.