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RELATIONSHIP BETWEEN FARMERS' PROFILE AND THEIR SOCIAL MEDIA UTILISATION BEHAVIOUR

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ABSTRACT

In the ever-changing realm of agriculture, social media has transformed from a basic networking platform to a crucial component of contemporary farming methods, gaining considerable traction among farmers. Across Vadodara and Chhotaudepur districts in Gujarat, this research explores how platforms like Facebook, Twitter and WhatsApp have revolutionized the way farmers access information, connect with peers and navigate market dynamics. By investigating the relationship between farmers' profiles and their social media utilization behaviour, this study sheds light on key determinants influencing farmers' engagement with digital platforms. Through statistical analysis and regression modelling, the research uncovers the pivotal role of factors such as education, social participation and scientific orientation in driving farmers' adoption of social media. Moreover, it examines direct and indirect effects of various socio-economic and psychological factors, emphasizing the complex interplay shaping farmers' digital engagement. Ultimately, the findings underscore the urgent need for tailored interventions to enhance farmers' digital literacy and leverage social media as a powerful tool for sustainable agricultural development.

Keywords: *social media utilisation behaviour, digital literacy, correlation co-efficient, regression analysis, direct-indirect effect*

INTRODUCTION

In today's ever-evolving agricultural landscape, the role of social media among farmers has transcended mere connectivity to become a cornerstone of modern farming practices. Across the globe, platforms like Facebook, Twitter and WhatsApp have revolutionized how farmers access information, connect with peers and navigate market dynamics (Patel and Vinaya, 2021). From sharing real-time updates on weather conditions to exchanging insights on crop management techniques, social media has become an indispensable tool for agricultural communities worldwide.

Understanding the intricacies of social media usage among farmers holds immense importance for multiple reasons. Firstly, it provides invaluable insights into the evolving needs and preferences of agricultural stakeholders, allowing policymakers and extension services to tailor their interventions effectively. By addressing challenges such as digital literacy gaps and connectivity issues, targeted initiatives can unlock the full potential of social media, particularly in rural and marginalized farming communities. Moreover, studying social media usage patterns offers a window into emerging trends and innovations within the agricultural sector, fostering resilience and driving sustainable development (Patel and Vinaya, 2022). Thus, this research not only enhances our understanding of digital dynamics in agriculture but also paves the way for transformative interventions that empower farmers and strengthen agricultural systems.

OBJECTIVES

(1) To study the relationship between social media utilisation behaviour of farmers and their profile

(2) To study the step-wise multiple regression of farmers and their social media utilisation behaviour

(3) To study the direct and indirect effect between farmers and their social media utilisation behaviour

METHODOLOGY

The study took place in Vadodara and Chhotaudepur districts, central Gujarat. Dabhoi and Karjan talukas were randomly selected from Vadodara, while Chhotaudepur and Jetpur Pavi were chosen from Chhotaudepur district.

From each taluka five villages were selected and from each selected village six farmers were selected randomly for the study. Total 120 farmers were selected randomly. Out of 120 farmers, 90 were using social media, while 30 were not. Thus, the sample size of the study was confined to 90 farmers who were using social media. *Ex-post-Facto* research design was used in the present study (Kerlinger, 1976). The data were collected through pre-tested Gujarati interview schedule and investigator contacted all the data personally. The data were gathered, processed and analyzed to draw the meaningful conclusion. The statistical tools used for the analysis of the data were percentage, mean, standard deviation, correlation coefficient, regression analysis and direct-indirect effect. The data collected through interview survey were coded, tabulated and analyzed using SPSS and Microsoft excel.

RESULTS AND DISCUSSION

It is apparent from the data presented in the table 1 that education, social participation, scientific orientation, innovativeness, risk orientation and knowledge about social media had positive and highly significant relationship with social media utilisation behaviour among farmers.

The possible reasons for the above trend may be attributed to the fact that education helps an individual in acquisition of knowledge, broadening the vision and motivating towards higher accomplishment. Higher formal education might have helped to a greater extent in absorption and understanding of the very social media applications which might have enabled to develop skills for the utilisation of social media. Social participation of farmers with the people who were utilizing the social media, farmers might get inspired to know more about social media and ultimately started utilizing social media. Their awareness and knowledge of scientific tools and services related to agriculture may contribute to their increased utilisation of social media. Farmers with higher levels of innovativeness are more likely to utilize social media due to their eagerness to adopt new approaches and technologies in agriculture. The positive relationship suggests that farmers with a greater risk orientation are more open to exploring new technologies, ideas and information available through social media, which ultimately influences their utilisation behaviour. Farmers who have higher knowledge about social media are more likely to utilize it for various purposes related to agriculture.

Annual income and extension participation had positive and significant relationship with social media utilisation behaviour of farmers. The probable reason might be, income level plays a significant role in determining farmers' engagement with social media platforms. Farmers with higher income may have better access to technology and resources, allowing them to actively use social media for obtaining agricultural information and engaging in market-related activities. As a result, farmers who actively participate in extension programs may be more inclined to explore and adopt social media as an additional resource for information and networking.

Age and farming experience had negative and highly significant relationship with social media utilisation behaviour of farmers. This finding suggests that middle-aged and older farmers may have lower utilisation of social media due to factors such as limited technological familiarity, limited access to technology, lack of interest, time constraints and reliance on established information sources within their farming communities.

Table 1: Relationship between social media utilisation behaviour and profile of farmers (n=120)

Sr. No.	Independent variables	('r' value for social media utilisation behaviour)
X_1	**Age**	-0.584**
X_2	**Education**	0.444**
X_3	**Farming experience**	-0.460**
X_4	**Land holding**	0.148
X_5	**Annual income**	0.255*
X_6	**Occupation**	0.030
X_7	**Social participation**	0.511**
X_8	**Training received**	0.098
X_9	**Extension participation**	0.242*
X_{10}	**Scientific orientation**	0.485**
X_{11}	**Innovativeness**	0.459**
X_{12}	**Risk orientation**	0.282**
X_{13}	**Knowledge about social media**	0.311**

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Land holding, occupation and training received had non-significant relationship with social media utilisation behaviour. This finding suggests that land holding and occupation of farmers is non-determining factors in social media utilisation. The non-significant relationship between training received by farmers and their social media utilisation behaviour could be attributed to limited access to relevant training, technological barriers, attitudinal factors and the lack of support systems.

From the table 2, it can be observed that out of thirteen independent variables, five variables were acquainting influence on social media utilisation behaviour. All the independent variables together had explained 61.10 per cent variation as indicated by R^2 value.

Table 2: Step-wise multiple regression analysis of social media utilisation behaviour among farmers

Model	Independent variable	(R)	(R^2)	(b)	S. E.	(SPRC)	Rank
1	**Age**	0.584	0.341 (34.10)	-2.734	0.538	-0.753	5th
2	**Age + Social participation**	0.692	0.478 (47.80)	13.378	3.010	0.336	2nd
3	**Age + Social participation + Education**	0.724	0.524 (52.40)	10.642	2.715	0.316	3rd
4	**Age + Social participation + Education + Farming experience**	0.743	0.553 (55.30)	1.303	0.535	0.368	1st
5	**Age + Social participation + Education + Farming experience + Occupation**	0.760	0.577 (57.70)	-7.068	3.217	-0.163	4th

The partial 'b' values of these five variables were converted in to standard partial 'b' values which were -0.753 for age, 0.336 for age + social participation, 0.316 for age + social participation + education, 0.368 for age + social participation + education + farming experience, -0.163 for age + social participation + education + farming experience + occupation. The 't' values or partial 'b' values were significant in case of all the five independent variables.

According to the highest to lowest standard partial 'b' values, the models were tabulated according to their ranks as first rank to age + social participation + education + farming experience, second rank to age + social participation, third rank to age + social participation + education, fourth rank to age + social participation + education + farming experience + occupation and fifth rank to age.

Path analysis was performed on all thirteen variables, revealing that the observed relationships between them were not entirely absolute but rather a combination of absolute and relative connections. Other variables also played a role in influencing these relationships collectively.

Direct effect

The data in Table 3 revealed that social participation (0.3003) had exerted maximum direct positive effect to determine social media utilisation behaviour among farmers followed by education (0.2844), annual income (0.2556), farming experience (0.2551), innovativeness (0.1108), risk orientation (0.0974), training received (0.0376), extension participation (0.0287) and knowledge about social media (0.0239).

As far as negative direct effect is concerned, age (-0.7522) had exerted maximum direct negative effect followed by risk scientific orientation (-0.2636), occupation (-0.1931) and land holding (-0.1245) for determination of social media utilisation behaviour.

Based on the data analysis, it can be inferred that education, farming experience and social participation were the primary variables that exerted the highest positive direct influence on farmers' social media utilisation behaviour. On the other hand, age and risk orientation were found to have a negative direct effect on social media utilisation.

Table 3: Direct and indirect effect of personal, socio-economical, communicational and psychological characteristics of respondents on social media utilisation behaviour (n=120)

Sr. No.	Variables	Direct effect	Total Indirect effect	Substantial Indirect effect	
				1	2
X_1	**Age**	-0.7522	0.1682	0.2230 (X3)	0.1776 (X10)
X_2	**Education**	0.2844	0.1593	0.2143 (X1)	-0.1591 (X10)
X_3	**Farming experience**	0.2551	-0.7151	-0.6575 (X1)	0.1599 (X10)
X_4	**Land holding**	-0.1245	0.2729	0.1916 (X5)	0.0546 (X7)
X_5	**Annual income**	0.2556	-0.0008	-0.0933 (X4)	0.0807 (X2)
X_6	**Occupation**	-0.1931	0.2236	0.1171 (X1)	0.0783 (X2)
X_7	**Social participation**	0.3003	0.2110	0.1983 (X1)	0.0790 (X2)
X_8	**Training received**	0.0376	0.0604	0.0622 (X2)	-0.0466 (X1)
X_9	**Extension participation**	0.0287	0.2136	0.1366 (X5)	0.1088 (X1)
X_{10}	**Scientific orientation**	-0.2636	0.7489	0.5067 (X1)	0.1717 (X2)
X_{11}	**Innovativeness**	0.1108	0.3483	0.4316 (X1)	-0.2261 (X10)
X_{12}	**Risk orientation**	0.0974	0.1842	0.1935 (X1)	-0.1411 (X10)
X_{13}	**Knowledge about social media**	0.0239	0.2871	0.2485 (X1)	0.1110 (X2)

Total indirect effect

When considering the total indirect effect on social media utilisation behaviour among farmers, it becomes evident that 11 variables had a positive impact. Scientific orientation (0.7489) was found to have a positive total indirect effect through age (0.5067) and education (0.1717). Innovativeness (0.3483) had a positive total indirect effect through age (0.4316) and scientific orientation (-0.2261). Knowledge about social media (0.2871) had a positive total indirect effect through age (0.2485) and education (0.1110). Land holding (0.2729) had a positive total indirect effect through annual income (0.1916) and social participation (0.0546). Occupation (0.2236) had a positive total indirect effect through age (0.1171) and education (0.0783). Extension participation (0.2136) had a positive total indirect effect through annual income (0.1366) and age (0.1088). Social participation (0.2110) had a positive total indirect effect through age (0.1983) and education (0.0790). Risk orientation (0.1842) had a positive total indirect effect through age (0.1935) and scientific orientation (-0.1411). Age (0.1682) had a positive total indirect effect through farming experience (0.2230) and scientific orientation (0.1776). Education (0.1593) had a positive total indirect effect through age (0.2143) and scientific orientation (-0.1591). Lastly, training received (0.0604) had a positive total indirect effect through education (0.0622) and age (-0.0466).

Among the variables analyzed, two variables were found to have a negative total indirect effect on farmers' social media utilisation behaviour. Farming experience (-0.7151) exhibited a negative total indirect effect through age (-0.6575) and scientific orientation (0.1599). Similarly, annual income (-0.0008) demonstrated a negative total indirect effect through land holding (-0.0933) and education (0.0807).

Substantial indirect effect

Data further revealed that out of 26 substantial indirect effects, ten each routed through age, six each routed through education, five each routed through scientific orientation, two each routed through annual income, one each routed through farming experience, one each routed through land holding and one each routed through social participation.

With regards to substantial indirect effect the first substantial negative indirect effect on social media utilisation behaviour was put forth by farming experience (-0.6575) through age, innovativeness (-0.2261) through scientific orientation, education (-0.1591) through scientific orientation, risk orientation (-0.1411) through scientific orientation, annual income (-0.0933) through land holding and training received (-0.0466) through age. However, first substantial positive indirect effect on social media utilisation behaviour was put forth by scientific orientation (0.5067) through age.

It could be concluded that age was exerted highest direct as well as substantial indirect effect, where scientific orientation was exerted highest indirect effect on social media utilisation behaviour.

CONCLUSION

In conclusion, the findings of this study highlight the complex interplay between various socio-economic, personal, communicational and psychological factors influencing farmers' utilization of social media. Education, farming experience and social participation emerge as key determinants positively affecting social media utilization among farmers. Conversely, age and risk orientation show negative direct effects on social media utilization. Moreover, while certain factors exhibit direct effects, several others demonstrate substantial indirect effects, indicating the intricate pathways through which these variables influence social media utilization behaviour. Notably, scientific orientation emerges as a significant factor with the highest total indirect effect, suggesting its pivotal role in shaping farmers' engagement with social media. These findings underscore the importance of Tailored educational programs and targeted interventions to enhance farmers' digital literacy and promote their active participation in social media platforms for agricultural information exchange, market engagement, and innovation adoption. Further research could delve deeper into understanding the nuanced dynamics of these factors and explore effective strategies to leverage social media as a powerful tool for agricultural development and knowledge dissemination.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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