

Original Research Article

<https://doi.org/10.20546/ijcmas.2020.906.282>

Perception of Krishi Vigyan Kendra Scientists Regarding Social media for Agricultural Development

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ABSTRACT

The present research study was conducted in Andhra Pradesh, Karnataka, Kerala, Lakshadweep, Puducherry, Tamil Nadu and Telangana during 2019-2020 to analyze the perception of Krishi Vigyan Kendra (KVK) scientists regarding social media for agricultural development. One hundred and sixty one scientists from 117 Krishi Vigyan Kendras were interviewed for the purpose. The results revealed that nearly three-fourth (77.02%) of the KVK scientists had good to better perception regarding social media, while a little more than one-fifth of the KVK scientists (22.98%) possessed poor perception towards social media. It was also found that job experience, job performance, scientific orientation, job involvement, organizational climate, abroad exposure/ countries visited, mass media participation, number of publications, education, achievement motivation, innovative proneness, e-readiness, competition orientation, field activities conducted and training received by KVK scientists had significant to highly significant relationship with their perception regarding social media for agricultural development.

Keywords

Perception, Social media, KVK scientists, Agricultural development

Article Info

Accepted:
18 May 2020
Available Online:
10 June 2020

Introduction

Capturing millions of users from all over the world, social media has become one of the most popular means of interacting and information-sharing. Social media can be defined as web based tools of electronic communication that allow users to interact, create, share, retrieve and exchange information and ideas in any form (text, pictures, video, etc.) that can be discussed upon, archived and used by anyone in virtual

communities and networks (Suchiradipta and Saravanan, 2016). The annual growth rate of social media users worldwide is 13 per cent whereas in India it is 31 per cent. In the agricultural sector, there is an increasing rate of social media usage amongst stakeholders. Today, farmers are using Facebook, Twitter and other tools to access and disseminate the news. Farmers are sharing pictures of their farms on Facebook; selling products on Twitter and connecting with experts on WhatsApp. The scientists of Krishi Vigyan

Kendras (KVKs) play a pro-active role in transferring latest technologies with beneficial impacts to the farmers at grassroots level. They continuously improve their knowledge and skills by updating themselves regarding latest information and technologies. Social media speeds up connections between scientists in the virtual space and it can be used effectively by the KVK scientists for agricultural development (Jayashree, 2018). In this backdrop, the present study has been carried out with the following specific objectives includes to analyse the perception of KVK Scientists regarding social media for agricultural development. And also to know the relationship between personal, socio-economic, psychological and communication characteristics of KVK scientists and their perception regarding social media for agricultural development.

Materials and Methods

The present study was carried out in Andhra Pradesh, Karnataka, Kerala, Lakshadweep, Puducherry, Tamil Nadu and Telangana during 2019-2020. One hundred and sixty one scientists working in 117 Krishi Vigyan Kendras were purposively selected as the sample of the study. Ex post-facto research design was adopted for conducting the study.

Perception in the present study was operationally defined as '*clear understanding of the usefulness of social media for agricultural development*'. A scale to measure the perception of KVK scientists was specifically developed for the study. The perception scale consisted of 49 statements (Table 1) and the response was collected on a five-point continuum, namely, strongly agree, agree, undecided, disagree and strongly disagree with assigned score of 5,4,3,2 and 1, respectively. The perception score of a respondent was calculated by adding up the scores obtained by him/her on all items/statements. The perception score of the

scale ranged from a minimum of 49 to a maximum of 245. Higher score on this scale indicates that the respondent has better perception regarding social media for agricultural development. The KVK scientists were administered with the perception scale developed. Based on the mean (190.99) and half standard deviation (8.44), the respondents were categorized into three perception categories, viz., poor, good and better. Information on personal, socio-economic, psychological and communication characteristics (independent variables) of KVK scientists was collected using a structured questionnaire with suitable scales. The collected data was scored, tabulated and analyzed using frequency, mean, standard deviation and correlation test.

Results and Discussion

Dimension-wise perception of KVK Scientists regarding social media for agricultural development

The dimension-wise perception of KVK Scientists regarding social media for agricultural development is presented in Table 1.

With regard to the perception of KVK scientists in respect of the sub-component 'social media for knowledge and skill development', it was found that the statement: 'scientists can get timely information about many conferences, workshops and new publications using social media' received first rank followed by the statements such as, 'social media is a useful tool for learning about new agricultural information' (Rank II) and 'social media gives the farmers an opportunity to learn from the experiences of their counterparts worldwide' (Rank III). The last and seventh rank was received for the statement 'information by scientific fraternity on social media helps farmers have a better understanding about agriculture'.

In respect of the perception of KVK scientists with regard to the sub-component 'social media for mobilizing farmers', it was seen that the first rank was accorded to the statement 'social media can provide information to farmers about various traders and prices offered by them', whereas the statements namely, 'social media are handy to indicate precise location of farmer's field, thus saving time' and 'farmers can use social media to improve their income from farms and other rural businesses' were accorded the second and third ranks, respectively. The statement namely, 'finance options for agricultural activities can be made available with the help of social media, by scientists' was accorded the last and sixth rank.

The preference of KVK scientists in respect of their perception towards the sub-component 'social media for inclusion and accessibility', reveals that the statement viz., 'farmers can freely express their problems and felt needs on social media' secured first rank, while the statements: 'farmers can gain easy access to specific sources of information via social media' and 'social media has been useful in finding new markets for perishable crops like fruits and vegetables' secured second and third ranks, respectively. The statements namely, 'social media can bring together a collective voice and attract policy makers' attention to the issue being posted' and 'farmers on social media can come together and help each other in forming cooperative societies', received fifth rank.

With regard to the perception of the respondent in respect of the sub-component 'social media for professionalism', it was observed that 'it is more encouraging to work with a colleague who uses social media for agricultural development than with one who does not' secured first rank, whereas the statement namely, 'posts from co-farmers regarding their produce instills a competitive

spirit in farmers to perform better' and 'social media helps farmers to fine-tune their production strategies to match the speedy rates of change in consumer demand' secured the second and last (sixth) ranks, respectively.

In respect of the perception of KVK scientists with regard to the sub-component 'social media for outreach', the results revealed that the statement viz., 'with the help of social media, it is possible to increase the accessibility of KVK scientists to more farmers' obtained first rank, while the statements namely, 'social media increases the online visibility of extension websites, for quicker information dissemination' and 'social media helps extension workers in gaining first-hand experience of the living condition of the farmer and farmer's family' obtained second and last (sixth) ranks, respectively.

The statement namely, 'the voice notes, photos, videos and text messages that can be shared via social media have made modern extension effectual' received first rank in respect of the perception of KVK scientists with regard to the sub-component 'social media for effectiveness'. The statement which received second and third ranks were: 'social media can be used to better analyze the real-time situation of a farmer's field in an effective manner' and 'suppliers can use social media to conduct real-time market research and identify consumer preferences', respectively. Whereas, the statement namely, 'social media lacks in verified and authentic scientific information on agriculture to intervene with farmers', received the sixth and last rank.

With respect to the perception of KVK scientists towards the sub-component 'social media for communication', it was found that the statement viz., 'dissemination of knowledge is faster through social media than traditional mass media channels of extension

communication' secured first rank, while the statements namely, 'for agricultural scientists, communication has become hassle-free, as managing contacts have become easier with social media' and 'less literate farmers can also interact with agricultural scientists via social media', secured second and last (sixth) ranks, respectively.

In regard to the KVK scientists perception towards the sub-component 'drawbacks/limitations of social media', it is seen that the statement 'negative comments and instant critical feedback received in social media demotivates the agricultural scientist' was assigned first rank, whereas the statement namely, 'the large number of responses on social media causes tiredness and stress' was assigned the last rank by the KVK scientists.

It can be referred that the KVK scientists possessed better perception towards the social media in bringing about agricultural development in all the eight sub-components of perception which were studied.

Overall perception of KVK scientists regarding social media for agricultural development

A bird's eye view of Table 2 reveals that nearly three-fourth (77.02%) of the KVK scientists had good to better perception regarding the social media, while a little more than one-fifth of the KVK scientists (22.98%) possessed poor perception towards social media. Nearly three-fourth (77.02%) of the KVK scientists possessed good to better perception regarding social media because the social media are useful tools for learning; they provide timely information, act as a good platforms to portray the indigenous knowledge of farmers, increases agricultural scientist's professional competence, helps in obtaining larger feedback from the farmers and disseminate the knowledge faster than

traditional mass media channels.

Relationship between personal, socio-economic, psychological and communication characteristics of KVK scientists and their perception regarding social media for agricultural development

The results in Table 3 reveals that rural urban background, job satisfaction and awards/recognition received of KVK scientists had no relationship with their perception regarding social media for agricultural development. The age and perceived work load of KVK scientists had negative and significant relationship at five per cent level with the perception regarding social media for agricultural development. Job experience, job performance, scientific orientation, job involvement, organizational climate, abroad exposure/ countries visited, mass media participation and number of publications of KVK scientists had positive and significant relationship at five per cent level with the perception regarding social media for agricultural development, whereas variables such as education, achievement motivation, innovative proneness, e-readiness, competition orientation, field activities conducted and training received of KVK scientists had positive and highly significant relationship at one per cent level with their perception regarding social media for agricultural development. It can be inferred that for every unit increase in the job experience, job performance, scientific orientation, job involvement, organizational climate, abroad exposure/ countries visited, mass media participation, number of publications, education, achievement motivation, innovative proneness, e-readiness, competition orientation, field activities conducted and training received of KVK scientists there will be an increase in the better perception towards social media for agricultural development.

Table.1 Dimension-wise perception of KVK Scientists regarding social media for agricultural development

(n=161)

| Sl. No. | Perception statements | KVK Scientists | |
|-------------|--|------------------|------|
| | | Perception score | Rank |
| I. | Social media for knowledge and skill development | | |
| 1. | Social media is a useful tool for learning about new agricultural information | 748 | II |
| 2. | Information by scientific fraternity on social media helps farmers have a better understanding about agriculture | 680 | VII |
| 3. | Social media gives opportunities for agricultural scientists to create content in order to promote learning among farmers | 726 | V |
| 4. | Scientists can get timely information about many conferences, workshops and new publications using social media | 749 | I |
| 5. | New business opportunities can be discovered by farmers while using social media | 727 | IV |
| 6. | Social media gives the farmers an opportunity to learn from the experiences of their counterparts worldwide | 738 | III |
| 7. | Social media are good platforms to portray the indigenous knowledge of farmers and bring more ITKs to the limelight | 714 | VI |
| II. | Social media for mobilizing farmers | | |
| 8. | Social media are handy to indicate precise location of farmer's field, thus saving time | 703 | II |
| 9. | Farmers can use social media to improve their income from farms and other rural businesses | 680 | III |
| 10. | Social media can provide information to farmers about various traders and prices offered by them | 716 | I |
| 11. | Processing firms can be contacted via social media, by which shelf-life and price of agricultural produce can be increased | 657 | IV |
| 12. | Finance options for agricultural activities can be made available with the help of social media, by scientists | 543 | VI |
| 13. | Social media makes it certain that farmers can improve their timing of getting crops to the market | 656 | V |
| III. | Social media for inclusion and accessibility | | |
| 14. | Farmers can freely express their problems and felt needs on social media | 715 | I |
| 15. | Social media can bring together a collective voice and attract policy makers' attention to the issue being posted | 646 | V |

| | | | |
|------------|---|-----|-----|
| 16. | Social media gives a chance to farmers to become active stakeholders of development efforts | 657 | IV |
| 17. | Farmers can gain easy access to specific sources of information via social media | 703 | II |
| 18. | Social media has been useful in finding new markets for perishable crops like fruits and vegetables | 691 | III |
| 19. | Farmers on social media can come together and help each other in forming cooperative societies | 646 | V |
| IV. | Social media for professionalism | | |
| 20. | It is more encouraging to work with a colleague who uses social media for agricultural development than with one who doesn't | 690 | I |
| 21. | The use of social media increases an agricultural scientist's professional competence | 642 | IV |
| 22. | Posts from co-farmers regarding their produce instills a competitive spirit in farmers to perform better | 657 | II |
| 23. | It is necessary for scientists to be technologically skilful to use social media | 634 | V |
| 24. | Scientists have to be actively involved in social media in order to influence farmers positively | 645 | III |
| 25. | Social media helps farmers to fine-tune their production strategies to match the speedy rates of change in consumer demand | 621 | VI |
| V. | Social media for outreach | | |
| 26. | With the help of social media, it is possible to increase the accessibility of KVK scientists to more farmers | 750 | I |
| 27. | Social media helps extension workers in gaining first-hand experience of the living condition of the farmer and farmer's family | 552 | VI |
| 28. | Social media is an effective tool to bring together all the stakeholders of Agricultural Knowledge Information System | 635 | V |
| 29. | Social media increases the online visibility of extension websites, for quicker information dissemination | 658 | II |
| 30. | Social media fosters communication and collaboration between scientists regardless of their geographical location | 657 | III |
| 31. | Social media provides easy avenues to the scientists for regularly reaching audiences related to agriculture | 647 | IV |
| VI. | Social media for effectiveness | | |
| 32. | Farmers need more to the messages that the scientists post on social media compared to other media | 598 | V |
| 33. | Social media provides farmers the facility of direct, instant communication with consumers, by avoiding middlemen | 599 | IV |
| 34. | Social media lacks in verified and authentic scientific information on agriculture to intervene with farmers | 403 | VI |

| | | | |
|-------------|---|-----|-----|
| 35. | The voice notes, photos, videos and text messages that can be shared via social media have made modern extension effectual | 702 | I |
| 36. | Social media can be used to better analyze the real-time situation of a farmer's field in an effective manner | 667 | II |
| 37. | Suppliers can use social media to conduct real-time market research and identify consumer preferences | 611 | III |
| VII. | Social media for communication | | |
| 38. | For agricultural scientists, communication has become hassle-free, as managing contacts have become easier with social media | 675 | II |
| 39. | Professional communication via social media is more popular among scientists when compared to informal communication | 598 | V |
| 40. | Social media strengthens up connections between scientists in the virtual space when compared to connections within the academic circle | 667 | III |
| 41. | Dissemination of knowledge is faster through social media than traditional mass media channels of extension communication | 677 | I |
| 42. | Less literate farmers can also interact with agricultural scientists via social media | 574 | VI |
| 43. | Social media helps scientists in obtaining larger feedback from the farmers | 645 | IV |
| VIII | Drawbacks/ limitations of Social media | | |
| 44. | Knowledge transferred through social media is valued less by farmers than personal communication | 436 | II |
| 45. | Negative comments and instant critical feedback received in social media de-motivates the agricultural scientist | 460 | I |
| 46. | Social media is not a silver bullet and should be combined with traditional communication methods for effective transfer of technology | 345 | VI |
| 47. | In rural areas, where internet connectivity is very poor, social media is not a good solution for transferring technology | 427 | III |
| 48. | Encouraging participation of farmers in social media interactions and ensuring their continuous engagement is a tough task | 357 | V |
| 49. | The large number of responses on social media causes tiredness and stress | 412 | IV |

Table.2 Overall perception of KVK scientists regarding social media for agricultural development

(n=161)

| Sl. No. | Perception category | KVK scientists | |
|--------------|-----------------------------|----------------|----------|
| | | Number | Per cent |
| 1. | Poor (< 182.55 score) | 37 | 22.98 |
| 2. | Good(182.55 – 199.43 score) | 59 | 36.65 |
| 3. | Better (>199.43 score) | 65 | 40.37 |
| Total | | 161 | 100.00 |

Mean= 190.99; Standard deviation= 16.88

Table.3 Relationship between personal, socio-economic, psychological and communication characteristics of KVK Scientists and their perception regarding social media for agricultural development

(n=161)

| Sl. No. | Characteristics | Correlation coefficient ('r' value) |
|-----------------|--|-------------------------------------|
| X ₁ | Age | -0.201* |
| X ₂ | Education | 0.361** |
| X ₃ | Rural urban background | 0.091 ^{NS} |
| X ₄ | Job experience | 0.211* |
| X ₅ | Job satisfaction | 0.017 ^{NS} |
| X ₆ | Job performance | 0.222* |
| X ₇ | Achievement motivation | 0.316** |
| X ₈ | Innovative proneness | 0.412** |
| X ₉ | Scientific orientation | 0.202* |
| X ₁₀ | Perceived work load | -0.219* |
| X ₁₁ | Job involvement | 0.242* |
| X ₁₂ | e-readiness | 0.444** |
| X ₁₃ | Organizational climate | 0.210* |
| X ₁₄ | Competition orientation | 0.267** |
| X ₁₅ | Awards/ recognition received | 0.088 ^{NS} |
| X ₁₆ | Abroad exposure/ countries visited | 0.216* |
| X ₁₇ | Field activities conducted | 0.311** |
| X ₁₈ | Mass media utilization | 0.211* |
| X ₁₉ | Trainings received | 0.399** |
| X ₂₀ | Number of publications | 0.199* |
| X ₂₁ | Participation in seminars/ conferences | 0.231* |

NS=Non-significant, * Significant at 5 per cent level, ** Significant at 1 per cent level

The study results revealed that as high as 77.02 per cent of the KVK scientists had good to better perception regarding the social media, while a little more than one-fifth of the KVK scientists (22.98%) possessed poor perception towards social media. Further it was found that for every unit increase in job experience, job performance, scientific orientation, job involvement, organizational climate, abroad exposure/ countries visited, mass media participation, number of publications, education, achievement motivation, innovative proneness, e-readiness, competition orientation, field activities conducted and training received by KVK scientists, there was an increase in their better perception towards social media for agricultural development. Therefore, regular

and periodic training on social media should be provided to KVK scientists for the effective and efficient use of social media for agricultural development.

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How to cite this article:

Dishant Jojit James, M. Shivamurthy, S. Ganesamoorthi and Lakshminarayan, M.T. 2020. Perception of Krishi Vigyan Kendra Scientists Regarding Social media for Agricultural Development. *Int.J.Curr.Microbiol.App.Sci*. 9(06): 2304-2312.
doi: <https://doi.org/10.20546/ijcmas.2020.906.282>