

Transfer of Technology through Social Media in Pandemic Perspective

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Authors' contributions

This work was carried out in collaboration among all authors. Author KS designed the study, performed the statistical analysis, wrote the protocol, collected data through interview schedule and wrote the first draft of the manuscript. Authors KRC and MT managed the analyses of the study and the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

Currently the entire world is passing through a crisis situation caused by corona virus disease 2019 (COVID-19). All activities are shuttered during lockdown but not the primitive activity i.e. Agriculture. Due to Pandemic, the extension professional contact is more digital than physical contact. In recent past extension professionals are using social media as an effective tool for transfer technology due to the enormous penetration of the internet and Smartphone's among the majority of rural India. The present study was conducted with an objective to focus on the change in usage of social media during pandemic by extension professionals. A structured questionnaire was developed to interview the Krishi Vigyan Kendra (KVK) extension professionals under ATARI, Kolkata (zone- 5) through Google forms. The usage of social media was studied with few indicators viz., time spent on social media, the purpose of using social media and individual trend of using

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social media in comparison with general and pandemic conditions. The result from the study revealed that extension professionals had a significant positive change in the time spent on social media during the pandemic situation. A drastic change was observed in the time spent categories of 4-6 hours and more than 6 hours (increased by 11.21%) due to lockdown situation. Extension professionals started to reach more participants during pandemic through social media platforms. The majority of the respondents (increased by 15.88%) justified that they could reach 100-500 farmers during pandemic with the help of social media. Positive improvement was observed in the purpose of using social media like sharing knowledge to farming community, using social media for discussion, and to promote new technological advances with the overall raise of 26 percent. More than fifty per cent (60.74%) of total respondents felt that their trend in using social media was at a medium level and only 18.69 percent of respondents felt a high trend in social media usage. From the study we can justify that the extension professionals had a positive change in the usage of social media platforms in a productive way to transfer the technology to the farming community.

Keywords: Extension professionals; pandemic; social media; transfer of technology.

1. INTRODUCTION

Krishi Vigyan Kendra's (KVK's) are providing location specific, need based services to farming communities and important stakeholders in transfer of technology. To provide right information at right time and place through proper channels is crucial for farming communities to take informed decisions[1]. Kaplan and Haenlein [2] define social media as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0 and that allow the "creation and exchange of user-generated content." Krishi Vigyan Kendra's are functioning as knowledge and resource centers and important stakeholders in transfer of technology but there is no chances of physical and direct contact then extension professional of KVK choose social media as a platform for transfer of technology as it is most familiar tool the among farming community [3]. According to Sandhya Keelery [4] the results of a survey on the impact of the corona virus disease 2019 (COVID-19) on media usage across India, there was a spike in usage of social networking applications in the first phase of the nation-wide lockdown. This stabilized in the following weeks with individual users reporting an average 3 hours and 37 minutes on social media in the last week of June this year. Increased availability of internet connections and access in recent years propelled by central governments Digital India initiatives was directly proportional to social media users. The objective of study is to focus on the change in usage of social media during pandemic by extension professionals of KVK's.

2. RESEARCH METHODOLOGY

An online data collection tool Google form was used for the survey purpose and shared through

E-mails and WhatsApp. Structured questionnaire was developed to interview the KVK extension professionals under study area ATARI, Kolkata (zone- 5). Complete enumeration technique was followed and out of 300 extension professionals 107 responded so, the response rate is 35%.

Primary data used for the study, the data was collected by researcher. Data obtained were analyzed using descriptive statistics such as percentage, frequency distribution, standard deviation and mean score. Variables considered for study are time spent, dissemination capacity, purpose of using social media, Individual trend of using social media.

3. DISCUSSION

3.1 Time Spent on Social Media

In general 48.5% of respondents spent less than 2 hours on Social media but during Pandemic it was increase in case of almost 45% in 2-4 hours and even 13.08% on more than 6 hours. It seems that Pandemic result in growth over general situation due to leisure time during lockdown.

3.2 Dissemination Capacity

The number of clients (such as farmers, agri-input dealers, seed growers, agri entrepreneurs etc.) reached through their social media platforms by agricultural extension professionals can be considered as "dissemination capacity"[5]. From Fig.2 graph In general more than 50% of professionals reach only up to 100 clients. But due to pandemic around 42% respondents reach 100-500 clients and even greater than 1000 by 18.69% of respondents. It is mainly due to advent of the digital revolution and increased access to mobile phones

(58.94%) in rural areas, TRAI[6] and other digital technologies by farmers to access customized, actionable agricultural information precisely that could revolutionize farming communities and improve their livelihoods and involvement of agricultural extension professionals with effective digitize content development for social media.

3.3 Purpose of Using Social Media

Results from the Fig. 3. graph clearly show the percent difference between pandemic to general condition incase using social media for various purposes[7].

- It was Increased by 25% for professional communication due to work from home initially.
- Where as to find news and events purpose decreased by 61.68% due monotony of corona news.
- Even it shows decrease in personal communication purpose by 87.85% as given priority to other professional purposes.
- There was a drastic increase by around 113% during pandemic for the purpose to exchange knowledge and as discussion platforms because of its easy access and no alternate tool to reach them as directly.
- Around 50% increase was observed to promote new technological advances because of its extended reach for the benefit of farmers.

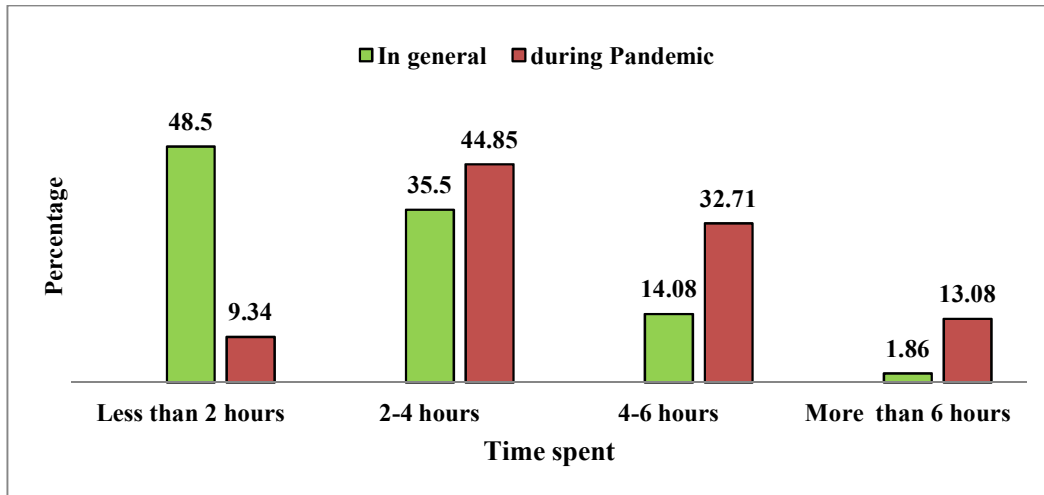


Fig. 1. Distribution of respondents according to the time spent on social media

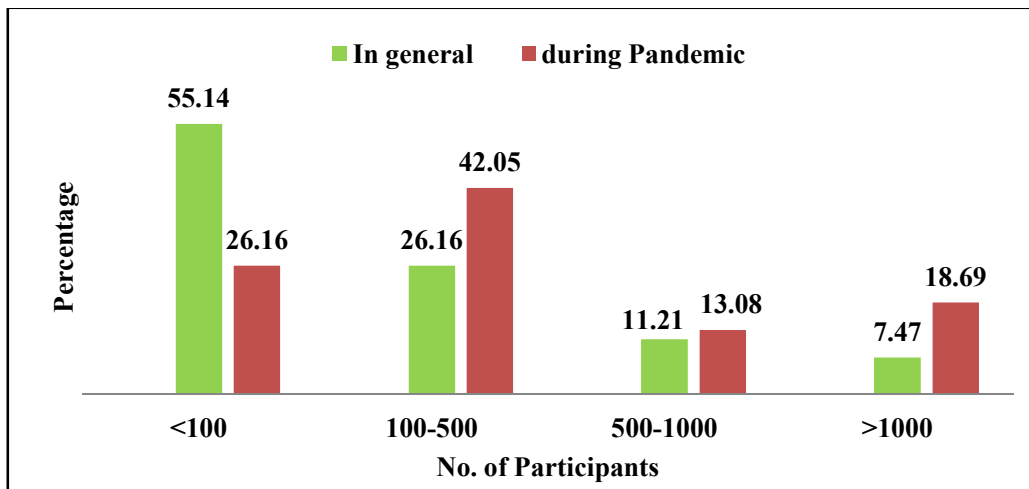


Fig. 2. Distribution of respondents according to their dissemination capacity through social media platforms

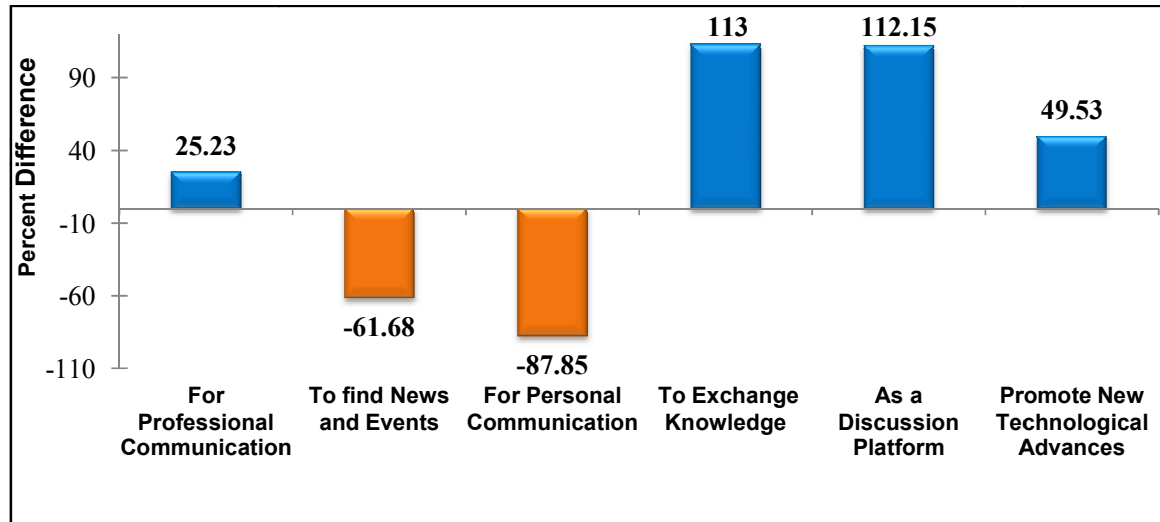


Fig. 3. Purpose of using social media

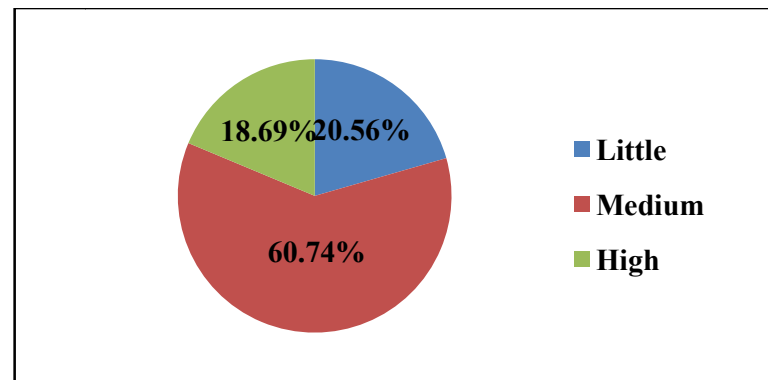


Fig. 4. Trend in usage of social media

3.4 Trend in Usage of Social Media

From the Fig.4. it was observed that increasing trend in usage of social media at individual level i.e., 20.56 percent little usage by respondents, most of respondents around 60% fall under medium category and high usage in case of 18.69 per cent respondents. The possible reason might be that with increased internet penetration and growing social media presence will raise awareness on latest farm technologies and proved immensely useful to farmers in seeking solutions to their day to day agricultural problems pertaining to crop production, plant protection, weather advisories, livestock diseases and overcoming marketing problems during pandemic. Timely information availability ensured farmers overcome travelling difficulties in far way extension institutions during lock down period and helped them to receive immediate advice and save their crop from losses. Relevant solutions through commodity based Whats App groups helped owners to reduce pest and diseases and post-harvest losses. Social media facilitates the farmers to get information at their doorsteps and seeking information did not require any substantial time and effort of farmers to obtain the information.

4. CONCLUSION

The overall purpose using social media was increased by 26 per cent among extension professional Transfer of Technology through social media even through it is a common practice but currently it gained more importance as there is no such effective alternative means to reach those many stake holders [8]. Krishi Vigyan Kendra's are already maintaining farmer WhatsApp groups and Blogs and it can increase through certain other means like short duration YouTube videos, Facebook stories etc. It has huge potential as it makes collaboration and participation of clients for getting quick feedback [9]. Mostly during crisis situations such as any natural disasters or social emergencies or pest and disease outbreak like Fall Army Warm infestation, Locust attack, it facilitates faster communication and mitigates losses helping stakeholders to react quickly.

The Extension professional to farmer's ratio was too low as 1:1037. Along with traditional methods the government should give emphasis on ICT enabled for effective outreach among farming community. But its success depends on effective involvement of grassroots level organizations

and stakeholders [10]. Social media is can be used as complementary tool to traditional extension services.

5. CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the authors.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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QUESTIONNAIRE

Q.Time spent on social media per day

Sl.no.	Category	In general	During lockdown
1	Less than 2 hours		
2	2-4 hours		
3	4-6 hours		
4	More than 6 hours		

Q. Number of clients you are reaching through social media platforms

Sl.no.	Category	In general	During lockdown
1	<100		
2	100-500		
3	500-1000		
4	>1000		

Q.Purpose of using social media

Based on different conditions

Sl.no.	Category	In general	During lockdown
1	To share personal and/or professional information		
2	To find about news and events		
3	To communicate with friends and relatives		
4	To exchange knowledge		
5	As a discussion platform		
6	To promote new technological advances		

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