RESEARCH ARTICLE
Journal of Extension Education
Vol. 34 No.3, 2022
DOI: https://doi.org/10.26725/JEE.2022.3.34.6838-6845

Utilisation of Mobile Telephony as an EAS (Extension and Advisory Services) Tool - A Study among Livestock based Women Self-Help Groups

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ABSTRACT

Dairying provides self-employment opportunities to rural women in India. However, due to the lack of unique approaches to meet the information needs of women dairy farmers, dairying was not found profitable. Mobile phones as one of the communication channels can address the information and knowledge gap of rural women farmers. In this regard, a study was carried out about the mobile utility pattern of women farmers in livestock-based Womeh Self-Help Groups, their accessibility and affordability to mobile phones. The mobile utility pattern indicated that most of the respondents own mobile or had access through their family members and were using mobile for more than five years. SMS (Short Message Service) was the mostly used feature and were in the habit of checking SMS daily. Voice SMS was preferred over text SMS and evening time was the most preferred time for receiving SMS. Accessibility to mobile phone was observed by all the rural women in the study area, however, only a few were aware that scientific information can be received through mobiles. Most of them felt that it was good to pay for mobile extension advisory services which may improve the productivity of their farms an encouraging phenomenon towards the utilisation of digital tools for extension and advisory services.

Keywords*: Mobile Phones; Livestock; Accessibility; Affordability; Women; Self-Help Group; Andhra Pradesh*

INTRODUCTION

Livestock is considered as an important sector in poverty alleviation and as a source of livelihood of the rural people and also plays an important role in the rural economy as a support sector of the economy in India. Dairying provides self-employment opportunities and has become a secondary source of income for millions of rural families. Almost, every household in rural areas has one or two animals, which are mainly looked after by the women of the family who spend almost eight hours daily in animal production operations (Saghir, et.al, 2013), but not addressed by the extension services and also have poor access to scientific institutions and markets (Ganai, et.al., 2008). The proportion of households receiving any sort of information from veterinary institutions remained only 8 per cent as per Press Information Bureau Government of India Ministry of Statistics & Programme Implementation, Government of India, 2014. Budgetary insufficiency, shortage of

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Received: 29.05.2023; **Accepted:** 02 . 09.2023

manpower and institutional structure (Ravikumar and Chander, 2011), absence of coordination among establishments (Chander and Rathod, 2013) and obsolete approach (Hegde, 2012) are some of the contributing factors to poor scope and coverage of livestock extension services resulting in lack of access to vital information that could help in making timely and accurate decisions.

The use of Information and Communication Technology by various agricultural research institutions in the dissemination of information to the stakeholders is in vogue. Stakeholders are receiving information through various ICT platforms (Shilpa and Jirli, 2023). Mobile phones can act as a catalyst to rejuvenate extension services. Among the various ICT tools, mobile phones are used not only as a interpersonal voice communication medium but also provide access to information and hence can be considered as one of the channels to rural women who otherwise were compromised to the information needed by them on various aspects of animal husbandry activities. In this regard, a study on the mobile utility patterns of women livestock farmers would help to give insight to develop mobile livestock information services which would help them to overcome the information and knowledge gap. The present study was carried out with the objective of studying the mobile utility pattern of the women farmers in livestock-based Women Self-Help Groups (WSHG) along with their accessibility and affordability to mobile phones.

METHODOLOGY

An exploratory research design was adopted for the research study which was carried out in the Krishna district of Andhra Pradesh. Multi-stage sampling procedure was adopted for the selection of 90 women livestock farmers from 15 Women Self Help Groups (WSHG) with livestock-based activities. An interview schedule was used for data collection to know the mobile utility pattern along with the accessibility and affordability of WSHG members to mobile phones. The data collected from the respondents were scored, tabulated and analyzed using suitable statistical tools *i.e.*, frequencies, percentages, arithmetic mean and standard deviation. The results that emerged from the analysis of data were suitably interpreted and necessary conclusions and inferences were drawn.

FINDINGS AND DISCUSSION

Profile of WSHG Members

The profile of Women Self Help Group (WSHG) members would provide the basic knowledge about the socio-economic and some psychological characteristics of the respondents. Majority of the WSHG members were middle-aged (50 %) with an average age of 39.60 years. The majority of WSHG members had less formal education *i.e.* with primary education (37.77%) followed by secondary education (34.44%), had family size up to 5 members (84.44%) and were from Backward Caste (46.67%). Animal husbandry was the main occupation for 55.56 per cent of respondents, whereas it was a subsidiary occupation for 44.44 per cent of women farmers. Majority of the respondents (45.56%) were marginal farmers and cent per cent of the respondents had buffaloes with 62.22 per cent having 1-3 animals, cattle possessed by 36.67 per cent and backyard poultry by 65.56 per cent of members. Nearly three fourths (74.44%) of WSHG members had medium annual income with an average annual family income of Rs.43,154. The majority (83.33%) of the members had a medium level of innovativeness followed by low (11.11%) and high levels (05.56%).

Mobile Utility Pattern of WSHG Members

The mobile utility pattern of livestock-based WSHG members was studied in terms of characterization of the mobile usage among WSHG members and the utility of Short Message Service (SMS) feature by WSHG members as follows.

Characterization of Mobile Usage Among WSHG Members

Findings (Table 1) indicate that all the members had access to mobile phone, among which about 59 per cent have ownership and 41 per cent could utilize the mobile phones of husband and children. Mobile phone ownership in rural India is largely limited to the head of the household. However, its appreciable that 80 per cent of women farmers had access to mobile phone. Ansari and Pandey (2011) also reported that 83.34 per cent of farmers owned a mobile for more than 2 years. Nearly one-fourth (23.33%) of the women farmers were thoroughly familiar with the mobile and a good number (72.22 %) of WSHG members use mobile frequently. This frequently accessing nature of women to mobile can be taken as an advantage in reaching them with the recommended practices for better livestock farming. 100 per cent of the respondents used mobile phones for the self-help group activities followed by communication with officers (64.44%). SMS facility of the mobile was primarily used by half of the WSHG members followed by utilization of additional features like entertainment (37.78%), Frequency Modulation (FM) radio (23.33%) and camera (17.78%). It was appreciable that members could make use of mobile phones for financial transactions (47.78%), veterinary services (45.56%) and market information (23.33%) and had enhanced their ability to access market information for agriculture and livestock produce. Sife, et al. (2010) in their study on the contribution of mobile phones to rural livelihoods and poverty reduction in the Morogoro region, Tanzania stated that mobile phones reduces the costs of doing business and increases productivity by helping rural traders and farmers to secure better markets and prices; and promptly communicate business-related information. However, only 33.33 per cent of the respondents perceived that mobiles can be used for accessing the livestock based information (Table 1).

Table 1. Characterization of the Mobile Usage of WSHG members

Statement	Responses	F	%
Do you own a mobile phone?	Yes	53	58.89
	No	37	41.11
If not, owned by whom in the family? (N=37)	Husband	26	70.27
	Children	11	29.73
If yes, since how long you are using it?	Recently	12	13.33
	1-2 years	19	21.11
	Long back	59	65.56
What other features of mobile phone do you use?	FM	21	23.33
	SMS	47	52.22
	Camera	16	17.78
	Entertainment	34	37.78

Statement	Responses	F	%
Familiarity with features available on mobile.	Thoroughly familiar	21	23.33
	Partly familiar	47	52.22
	Not familiar	22	24.44
Frequency of using mobiles	Frequently	65	72.22
	Occasionally	20	22.22
	Rarely	05	05.56
	Never	00	00.00
Mobile used for activities like	Group activities	90	100.00
	Veterinary services	41	45.56
	Bank transactions	43	47.78
	Market-related information	21	23.33
	Communication with officers	58	64.44
Use of mobile phone for livestock-based information.	Yes	30	33.33
	No	60	66.67
If yes, with whom: (n=30)	Veterinary assistant surgeon	02	06.67
	Para-veterinarian	18	60.00
	Others	10	33.33

Utility of SMS Feature By WSHG Members

The data from Table 2, shows the utility of the SMS feature of the mobile phone as it has the advisory potential and would help in providing the information to the rural farmers. Among the WSHG members, nearly half of the respondents (47.77%) had operational convenience in using SMS, while 52.23 per cent were not convenient in operation of SMS. Nearly one-third of the women farmers were in the habit of checking SMS daily, 25.56 per cent never check SMS whereas, 24.44 per cent and 13.33 per cent checked SMS rarely and the moment it comes, respectively. Nearly half (51.11%) of the respondents opined that they do not trust the information sent through SMS. More than three-fourths of the respondents (83.33%) preferred evening time for receiving SMS. Nearly two-thirds (67.78%) of the respondents preferred voice SMS than text SMS for receiving information and more than three-fourths (83.33%) of the women farmers were not willing to receive the Multimedia Message Service (MMS) as most (72%) of respondents' handsets were not supporting the MMS feature. However, 28 per cent were not familiar with this feature. WSHG members, though not with much formal education, preferred SMS services as an information dissemination mode, as they can have assistance from family members in accessing information and also among the two modes of SMS, voice SMS was preferred to text SMS to nullify any disadvantage of illiteracy. If the message broadcasted were pre-informed and in the name of any institution then there

will be fewer apprehensions and increases the credibility of the information broadcasted. Thakur and Chander (2017) in their study on the utilization of WhatsApp for sharing livestock-related information among farmers of Himachal Pradesh mentioned that a diverse set of animal husbandry-related queries pertaining to livestock-related problems were shared by the farmers an indicative of information source requirement in the region. Moreover, such types of queries can provide a feedback loop to the research system and also help in establishing functional linkage in the Farmer-Research-Extension interface.

Table 2. Utility of SMS feature by WSHG members

Statement	Responses	F	%
Operational convenience of using SMS	Yes	43	47.77
	No	47	52.23
How often do you check your SMS on your mobile	the moment it comes	12	13.33
	Daily	33	36.67
	Rarely	22	24.44
	Never	23	25.56
Do you trust the messages that are sent through SMS	Yes	44	48.89
	No	46	51.11
Preferred time of receiving SMS	Early morning	05	05.56
	Afternoon	06	06.67
	Evening	75	83.33
	Night	04	04.44
Preferred mode of receiving SMS	Text	29	32.22
	Voice SMS	61	67.78
Are you willing to receive MMS	Yes	15	16.67
	No	75	83.33
If not reasons (n=75)	Handset does not support the MMS	54	72.00
	No familiarity with MMS	21	28.00

Accessibility to Mobile Phones

All WSHG members (100 %) were having access to mobiles always is an indication of mobile penetration to rural areas due to its availability, portability and low-cost handsets and lower tariff. The women farmers also agreed that mobile is one of the channels through which information can be received. However, the majority (77.77%) of the respondents were not sure or undecided whether scientific information in the livestock sector can be accessed through mobile or not. WSHG members need to be made aware of the utility of mobile for accessing information related to livestock farming and other economic activities also, as among various information and Communication Technological

(ICT) tools almost everyone is owning mobile or sharing family members' or neighbour's handset. The mobile phone has the potential to efficiently supplement the efforts of existing extension services and synergize the whole process (Bisht et al., 2011). About 85.56 per cent and 56.66 per cent of respondents were of the opinion that queries can be easily clarified and feedback can be had through mobiles, respectively (Table, 3). Most of the farmers had access to various information sources, but the perceived quality and relevance of the information provided are highly variable (Mittal and Tripathi, 2009). As more and more people gain access to mobile phones, even if they do not own them, companies, government agencies and non-governmental organizations should turn their attention to the delivery of services through mobile phones via SMS and voice calls.

Table 3. Accessibility of the WSHG members to Mobile Phones

Statement	Responses		
	Agree	Undecided	Disagree
Access to mobiles is always available	90 (100.00)	00 (00.00)	00 (00.00)
Mobile/network connectivity is good	70 (77.78)	00 (00.00)	20 (22.22)
Information through mobiles can be easily accessed anywhere because of its portability	90 (100.00)	00 (00.00)	00 (00.00)
Scientific information in livestock sector is easily accessible through mobile	12 (13.33)	70 (77.77)	08 (08.90)
Queries can be clarified through mobile easily all times	77 (85.56)	07 (7.78)	06 (6.66)
Feedback/response can be had through mobile	51 (56.66)	23 (25.56)	16 (17.78)

(Figures in parantheses indicate percentage)

Affordability to Mobile Phones

The affordability of WSHG members represented a combination of responses. Although 100 per cent felt that information should be provided free of cost, more than half (64.40%) of the respondents expressed that it is not difficult to pay for mobile advisory services and more than three-fourths (80%) of the respondents were of the opinion that everyone should be oriented to have worthy information on reasonable payment services for improved production. Almost all the respondents (93%) disagreed that cost of mobile is high. However, nearly half of the respondents felt that it is not economical to have information through mobiles.

Table 4. Affordability of the WSHG members to Mobile Phones

Statement	Responses		
	Agree	Undecided	Disagree
It is good to pay for mobile advisory services which are worth	58 (64.00)	10 (11.00)	22 (24.00)
It is not economical to have information through mobiles	18 (20.00)	19 (21.10)	53 (58.90)
It is better if the information is provided free of cost	90 (100.00)	00 (00.00)	00 (00.00)
All should be oriented to have useful information on a reasonable payment basis, which improves productivity	72 (80.00)	11 (12.20)	07 (07.78)
In these days, it is not difficult to pay for advisory services	58 (64.40)	05 (05.60)	27 (30.00)
Cost of mobile is high	06 (06.70)	00 (00.00)	84 (93.00)

(Figures in parantheses indicate percentage)

Being used to mobile governance to avail the benefits of different schemes of Government from the home itself, the WSHG members might agree that reasonable payment can be made to mobile advisory services. Moreover, there is a saving of time, free from travel burden, if they could access information through mobile telephony to carry out economic activities and also by the idea of sharing, the cost of advisory service among the group may not be a burden at all. All the farmers would like to receive information through mobiles on livestock farming. Thakur and Chander (2017) mentioned that the social media platform has the potential to offer real-time solutions to livestock problems and supports mobile learning among farmers.

CONCLUSION

The study necessitates the need of narrowing the information and knowledge gap of women dairy farmers for improving livestock productivity. Mobile phones can be one of the useful media for rendering extension advisory services to women dairy farmers at their doorstep with all the up-to-date information needed by them. Mobile phones can be tailored as farmer-centric tools towards addressing the needs of the farmers. Accessibility and affordability of women farmers to mobile phones were also promising good and hence different stakeholders in the livestock sector and mobile service providers need to come up together on one platform for effective dissemination of information among the women livestock farmers towards sustainable dairy farming.

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