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Personal, Socio-economic, Communicational and Psychological Characteristics of Orange Growers

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

Maharashtra is the one of the largest producer of orange in the country. There is growing interest and awareness among the orange growers for adoption of latest technologies for commercial cultivation of citrus hence the research objective was formulated to study the personal, socio-economic, communicational and psychological characteristics of orange growers in Amravati and Nagpur district in Vidarbha region of Maharashtra state. An ex-post facto research design of social research was used for present investigation. The study was conducted in Amravati and Nagpur district in month of December, January and February, 2021, with 300 orange growers. The findings revealed that, more than one third of the respondents (34.00%) had education up to higher secondary school. More than two fifth of the respondents (44.00%) had medium family size. More than one third (38.67%) of the respondents were engaged in agriculture+ horticulture+ allied occupation as their main occupation in earning. Nearly half (46.33%) of the respondents had semi medium land holding (2.01 to 4.00 ha). More than half (60.67%) of the respondents were having small size of orchard. More than one third (37.33%) of the respondents had medium experience in orange cultivation (15.36 to 26.66 years). more than half (57.33%) of the respondents were belonged to medium level of social participation. Nearly half (45.67%) of the respondents were having annual income up to Rs. 7,96,000/-. Majority of the social media user respondents (88.00%) had high availability of social media. More than half (55.67%) of the respondents were having

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medium sources of information. More than half (59.67%) of the respondents were having medium innovativeness. More than half (56.67%) of the respondents were having medium risk orientation. Majority (63.33%) of the respondents were having medium market orientation. Overall 70.00 Percent of the social media user orange growers were having high utilization pattern index. It is suggested that, efforts should made by authorities to involve and retain the interest of innovative orange growers in adopting modern agricultural practices.

Keywords: Personal; socio-economic; social media; profile; oange growers; aailability of social media.

1. INTRODUCTION

Social media are interactive computer-mediated technologies that facilitate the creation or sharing of information, ideas, career interests and other forms of expression via virtual communities and networks. Recent developments in the mobile, computing and networking technologies provide new ways of technology transfer have been used for disseminating agricultural information on larger proportion since last few years. With the abilities of reaching large number of people individually and simultaneously, Social media are assuming a greater role in the extension work. There is still a large gap persisting between the delivering and accessing of social media application in agriculture by the farmers. The basic requirements for successful implementation of social media applications in agriculture are electricity, hardware, appropriate software, telephony, network connectivity and policy guidelines. Observers have noted a wide range of positive and negative impacts of social media use. Social media can help to improve an individual's sense of connected-ness with real or online communities and can be an effective communication (or marketing) tool for corporations, entrepreneurs, non-profit organizations, advocacy groups, political parties, and governments.

India is the largest producer of fruits in the world and is known as fruit basket of world. Citrus industry in India is the third larger fruit industry of the country after mango and banana. The most important citrus species in India are mandarin (*citrus reticulate),* sweet orange *(citrus sinesis)* and lime *(citrus aurantifolia*) [1]. The mandarin is locally knows as “Nagpuri santra” has reputation and it is the best of its kind grown in India. The production trend during 1961-62(823.7 Thousand tonnes) to 2010-11(7463.6 Thousand tons) clearly established increased production of citrus fruits more than nine fold during last 50 years. The citrus yield is projected to be 20.59 million tonnes with productivity of 15-16 tonnes/ ha by 2050. Maharashtra is the one of the largest producer of orange in the country. Amravati and Nagpur district contributes about 84 per cent of total area under orange orchards in Maharashtra state [2]. There is growing interest and awareness among the orange growers for adoption of latest technologies for commercial cultivation of citrus.

Maharashtra is a second largest producer of citrus and contributes 15.8 per cent of citrus to the total production of citrus in the country. Vidarbha region is known to the entire world for its awesome quality of oranges. Social media is yet another ICT based tool, which once used purely for entertainment, has great potential to be used for knowledge sharing and collaboration even in agriculture [3]. These ICT tools are relatively easier to use and are gaining popularity in agriculture sector [4]. Through these tools farming community can learn and share information in multiple ways in form of texts, photos, pictures, audio, audio-visuals and web links [5].

This study is essential to know attitude and impact of social media on orange growers as the orange is the major fruit crop which is the main source of income in the study area hence need to give special emphasis on for it’s better quality production and available service provision. This study would be helpful to the extension worker to solve the problems regarding use of social media uses in agriculture.

2. METHODOLOGY

2.1 Research Design

An ex-post-facto research design of social research was used for present investigation. It’s a quasi-experimental study which explores how an independent variable, present earlier to the study in the participants, influence a dependent variable.

2.2 Sampling Procedure

2.2.1 Locale of study

The present research investigation was carried out in Amravati and Nagpur districts of Vidarbha region of Maharashtra state. From Vidarbha region Amravati and Nagpur district were selected purposively having maximum area under orange cultivation.

2.2.2 Selection of talukas

In Amravati district there were total 14 talukas, out of these; three talukas were selected purposively, namely Warud, Morshi and Achalpur talukas on the basis of talukas having maximum area under orange cultivation. Similarly, from Nagpur district, out of 13 talukas, three talukas were selected purposively namely Narkhed, Katol and Kalmeshwar, as these talukas having maximum area under orange cultivation.

2.2.3 Selection of villages

The five villages from each taluka were selected purposively, on the basis of villages having maximum number of orange growers for the purpose of study. Total 30 villages will be selected purposively for study from selected six talukas of two districts.

2.2.4 Selection of respondents

From each selected village, five orange growers who were taking benefits of social media for agriculture i. e. social media users and five social media non user orange growers were selected having same orchard size more than 1 acre purposively by simple random sampling method and they were considered as respondents in the present study.

In the present study, 75 social media user and 75 social media non user orange growers were selected from each district. Thus, for the proposed study 150 orange growers from Amravati district and 150 orange growers from Nagpur district were selected. Total 300 orange growers were selected from 30 villages of six selected talukas of two districts of Vidarbha region by simple random sampling method. These 300 orange growers were considered as respondents in the present study.

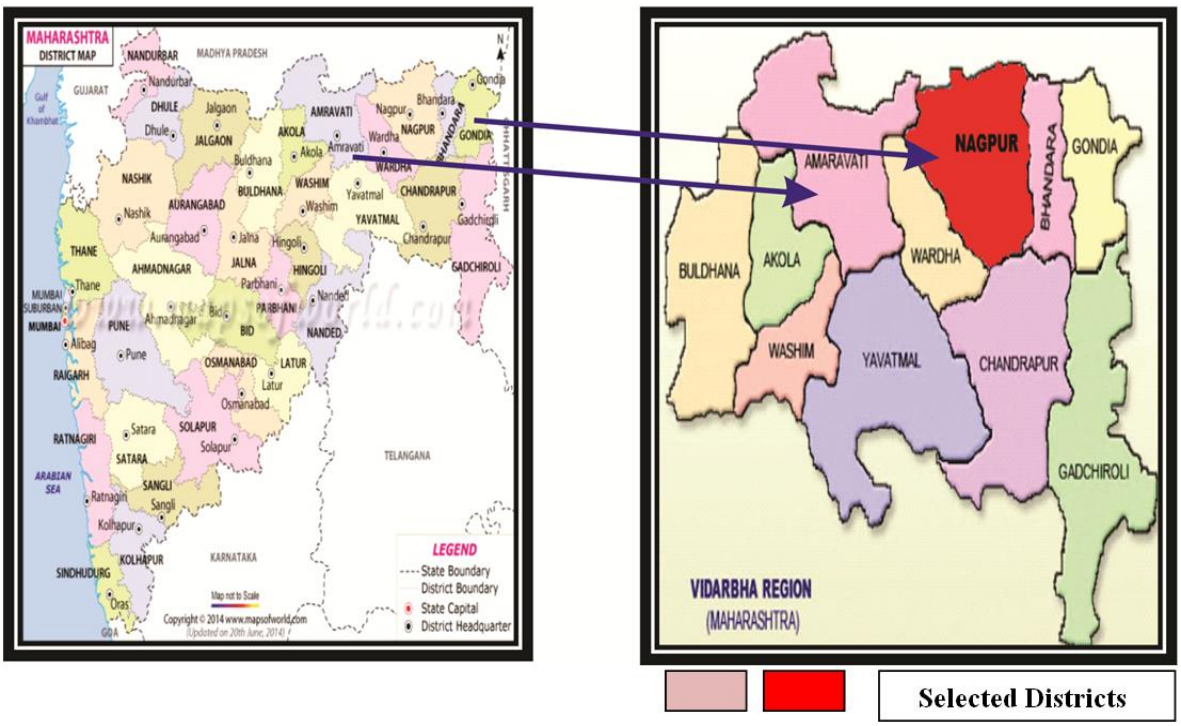

Fig. 1. Map of Maharashtra indicating Vidarbha region with selected Amravati and Nagpur district

2.2.5 Selection of variables

The aim of the study was to study personal, socio-economic, communicational and psychological characteristics of the orange growers. Thus, the variables of the present study were selected on the basis of review of literature related to orange growers and after through consultation with research guide and experts. These variables included education, family size, occupation, land holding, size of orchard, farming experience, social participation, annual income, availability of social media, sources of information, innovativeness, risk orientation, market orientation and utilization pattern of social media

2.3 Statistical Tools and Techniques Used

The data were collected with the help of pre-tested, well structured interview schedule. The data were filled in excel and basic statistical tools like frequency, percentage, mean and standard deviation were used for data analysis. The final categories were made on the basis of mean ±standard deviation and equal interval method.

3. RESULT AND DISCUSSION

3.1 Education

Education brings desirable changes in human behaviours such as knowledge, attitude and skills. The data presented in Table 1 reported that, higher proportion of the respondents (34.00%) were educated up to higher secondary school education (11th to 12th std.). As much as 32.00 per cent of the respondents were having under graduate degree level education, followed by 15.34 per cent of the respondents were having education up to secondary school(8thto 10th std), followed by 5.33 per cent of the respondents were having middle school education(5th to 7th std.), followed by 5.00 per cent of the respondents were having education up to post graduate degrees in different courses, followed by 4.00 per cent of the respondents were having diploma or technical education, Also a small fraction of the respondents (2.33%) were illiterate and meager per cent of the respondents (2.00) were having education up to primary school level (1st to 4th std.) respectively. It is clearly indicated that, overall educational status of the respondents has been seen to be better.

There are so many online training programmes organized by the facilitators about orange cultivation and other farming related topics for farmers. Since post independence era government has launched various educational campaigns to make people literate. Many efforts have been taken to provide educational facilities at reach of rural people with good institutional arrangements. Impartial level of awareness among respondents through social media about importance of education and thereby opportunities for benefits in adoption of farming practices and business deals might be the reason behind this result. Similar results have been reported by Tekale [6] and Kumar [7] that higher proportion of the respondents had education up to higher secondary school.

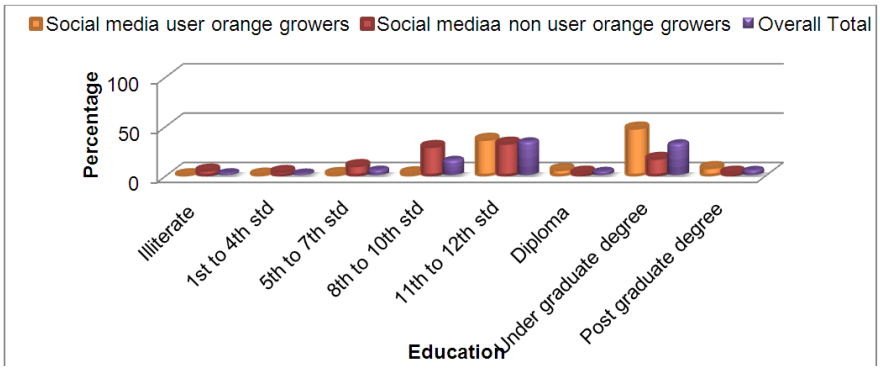

Fig. 2. Distribution of respondents according to education

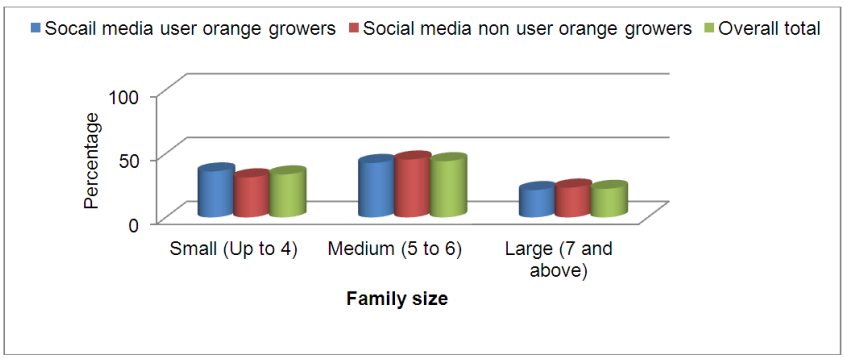

Fig. 3. Distribution of respondents according to family size

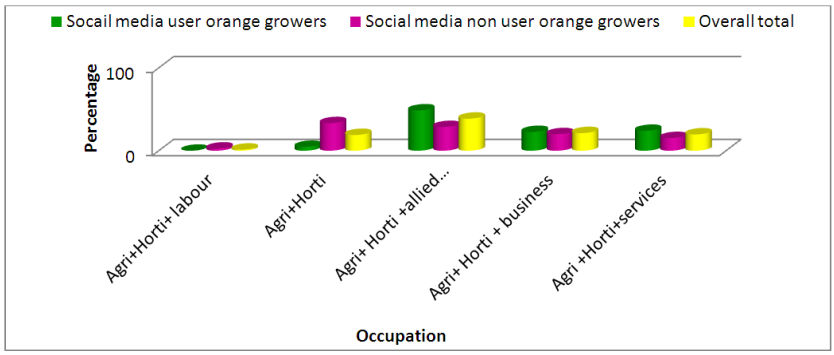

Fig. 4. Distribution of respondents according to Occupation

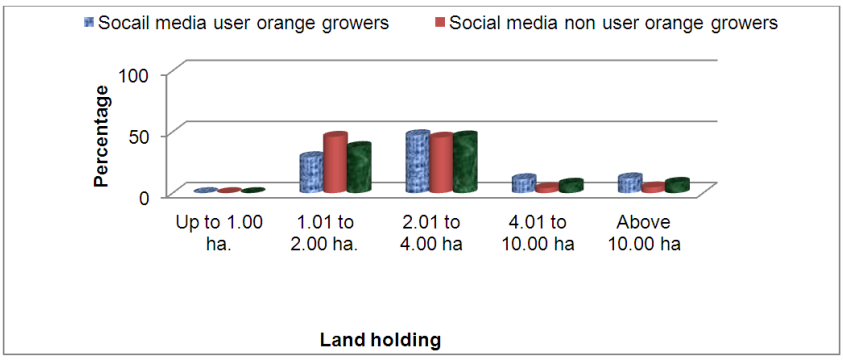

Fig. 5. Distribution of respondents according to land holding

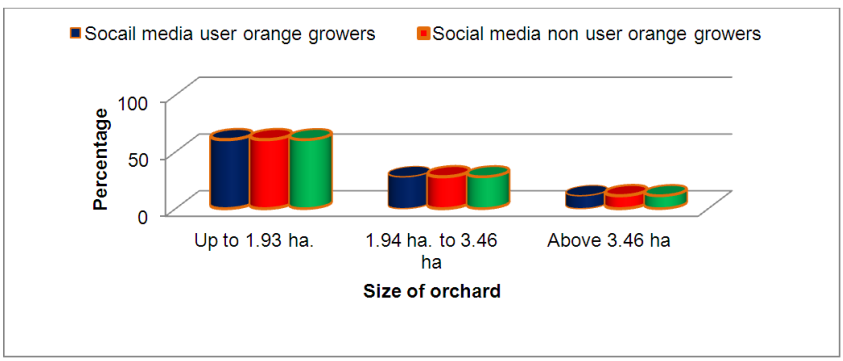

Fig. 6. Distribution of respondents according to size of orchard

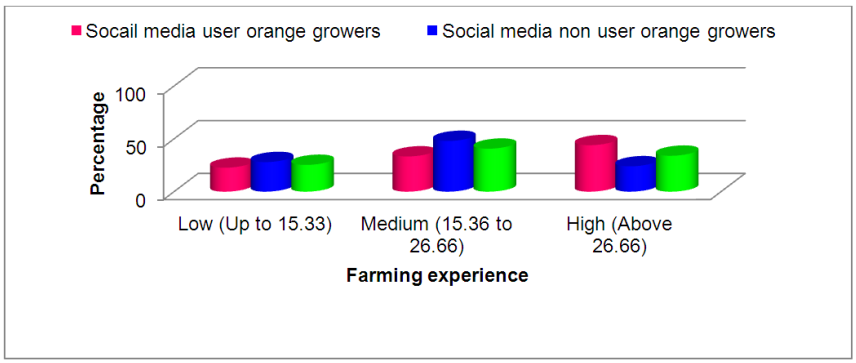

Fig. 7. Distribution of respondents according to farming experience

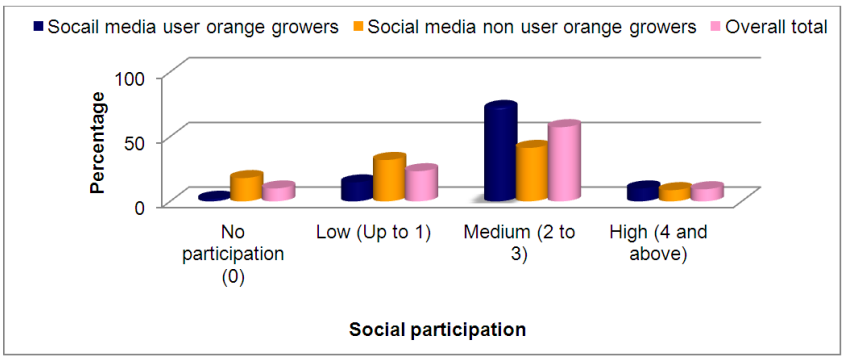

Fig. 8. Distribution of respondents according to social participation

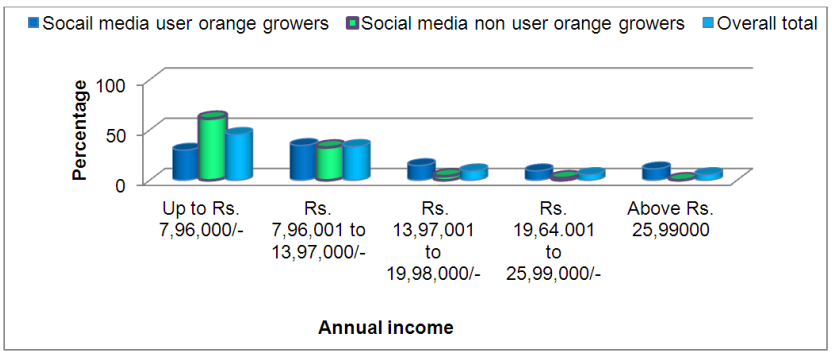

Fig. 9. Distribution of respondents according to annual income

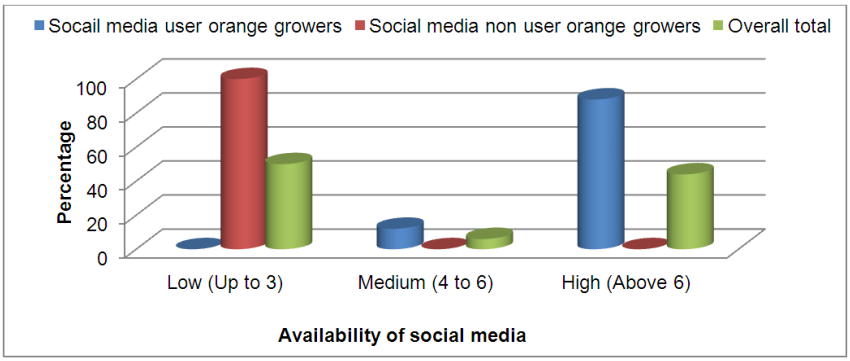

Fig. 10. Distribution of respondents according to availability of social media

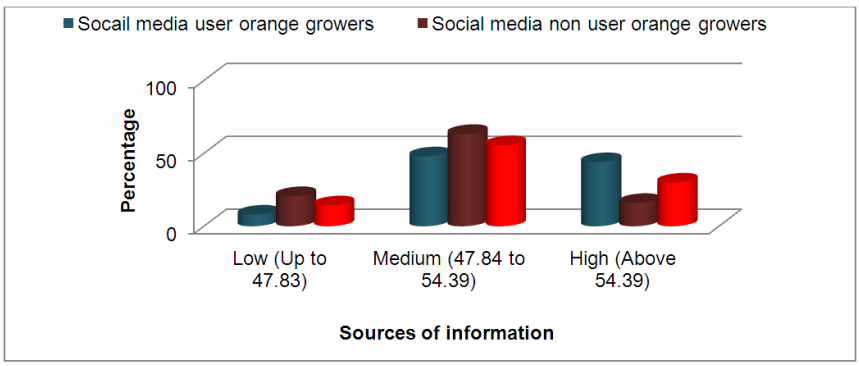

Fig. 11. Distribution of respondents according to source of information

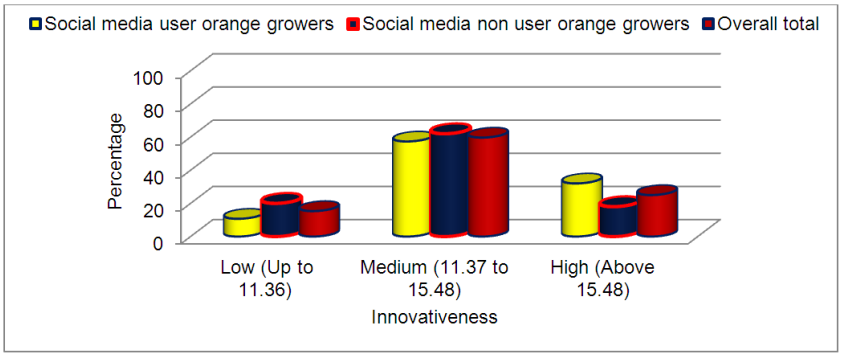

Fig. 12. Distribution of respondents according to innovativeness

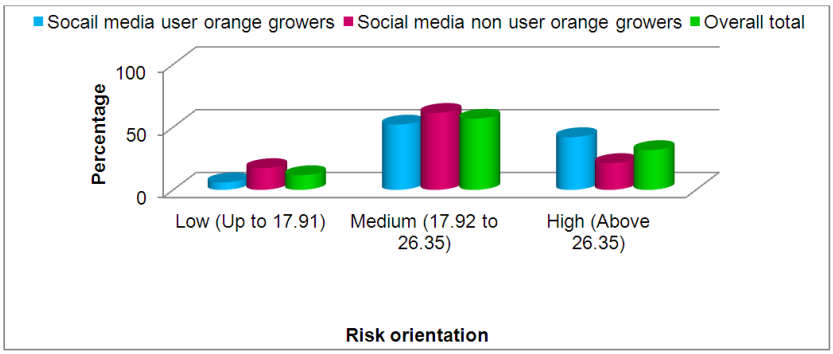

Fig. 13. Distribution of respondents according to risk orientation

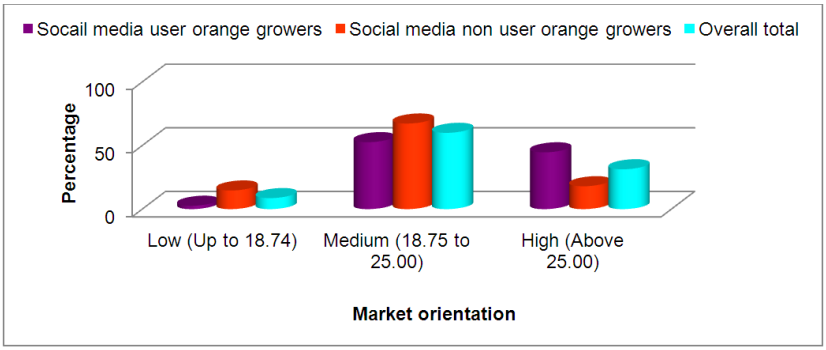

Fig. 14. Distribution of respondents according to market orientation

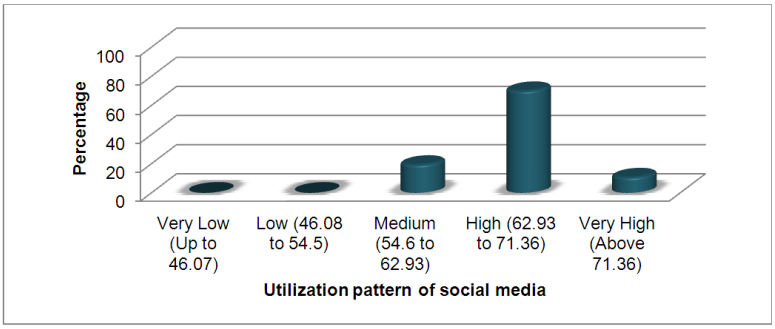

Fig. 15. Distribution of respondents according to utilization pattern of social media

3.2 Family Size

Family size plays important role in availability of household labour in farming. The data presented in Table 1 reported that nearly half (44.00%) of the respondents had medium family size, followed by 33.67 per cent of the respondents had small family size and 22.33 per cent of the respondents had large family size respectively.

Having medium families would help to maintain a good quality of life. Children get better access to education. Minimize expenses and increases saving. Importance of medium families among the respondents might be the reason behind having less number of members in family.

Kumar et al [8], Sonal Gupta [9] and Tekale [10] observed similar result as majority of the respondents had medium family size.

3.3 Occupation

The occupational pattern reveals the source of livelihoods of the family. From Table 1 it is reported that more than one third (38.67%) of the respondents were engaged in agriculture, horticulture and allied occupation, followed by 21.33 per cent of respondents were engaged in agriculture, horticulture and business as occupation, followed by 19.67 per cent of respondents were having agriculture and horticulture with services as occupation, followed by 19.00 percent of respondents were engaged in agriculture and horticulture and 1.33 per cent of respondents were engaged in agriculture and labour as occupation respectively.

Subsidiary occupation in collaboration with agriculture and horticulture minimizes the risk of earning benefit from crop production due to natural calamities. Hence most of the orange growers may be gaining profit from allied occupation related to agriculture itself like plant nursery, orange processing units, dairy business and krishi seva kendra etc., therefore majority of the orange growers were under the category of agriculture+horticulture+allied occupation.

Similar findings were reported by Darshan [11].

3.4 Land Holding

Land holding is observed as an important variable of the farming occupation. Farmers with larger land holdings possess good source of capital than marginal and small farmers. The bird eye view of Table 1 shows that less than half (46.33%) of the respondents were having semi medium land holding, followed by 37.67 per cent of the respondents were having small land holding, 8.33 per cent of the respondents were having large land holding and 7.67 per cent of them had medium land holding respectively.

Land is the inherited property. In each family when new members added by marriage or birth the land gets sub divided making land holdings smaller after every generation by fragmentation. In the present study majority of the respondents concentrated into medium to small size of family i.e. having nuclear family after separation from joint family. Gradual decrease in size of land holdings after separation might be the reason behind these results. Henceforth it can be concluded that most of the orange growing farmers were having semi medium land holdings.

Similar findings were reported by Ghadge [12], Singh et al. [13], Wankhede et al. [14], Dhumale [15], Kadu [16] and Tekale [17] recpectively.

3.5 Size of Orchard

The size of orchard was assumed as an important variable that influence impact of social

media on orange growers. Actual land in hectares put by the individual orange grower for orange crop was considered as score. Table 1 reveals that near about three fourth (60.67%) of the respondents were having small size of orchard, followed by 28.00 per cent of the respondents were having medium size of orchard and 11.33 per cent of the respondents were having large size of orchard respectively.

In the study area orchard size depends on the land holdings of the orange growers and it is in proportion according to size of total land possessed by the individual orange growers. Therefore it can be concluded that majority of the orange growers were having only orange orchard as a main crop on their lands due to suitability of land for better management of orchard and earning maximum profit.

These findings are in consistent with the findings of Ghadge [12], Wankhede et al. [14], Dhumale [15] and Kadu [16].

3.6 Farming Experience

Higher the farming experience less is the adoption of new technology. Farmer develops feeling that they knows everything and reluctant to acquire latest technology. They don't have enough confidence in taking decisions. The Table 1 clearly showed that more than one third (40.67%) of the respondents were having medium experience in orange cultivation, followed by 34.00 per cent of the respondents were having high experience in orange cultivation and 25.33 per cent of the respondents were having low experience in orange cultivation respectively.

Agriculture+horticulture+allied occupation were a main occupation for livelihood of majority of the respondents from study area. They were practicing orange cultivation and farming from generation to generation by taking opinions from their forefather they are modifying the old cultivation practices. Majority of the respondents were belonged to young age categories and it is concluded that, nearly half of the orange growers were having medium experience (15 to 26 years) in orange cultivation. The finding of the study concluded that, the respondent orange growers were moderately experienced orange growers.

The present findings are in consonance with findings reported by Anushree Baruach [18], Kumar et al. [8], Kachave [19] and Pranali Thakare [20].

3.7 Social Participation

The voluntary participation of farmers in person or group as member or office bearer in social organizations has many social benefits beyond household benefits. The data depicted in Table 1 indicated that more than half (57.33%) of the respondents were having medium level of social participation, followed by 23.33 per cent of the respondents were having low level of social participation, followed by 10.00 per cent of the respondents were having no social participation and 9.33 per cent of the respondents were having high level of social participation respectively.

The majority of the respondents from study area were engaged in agriculture + agriculture related business like orchard nursery, orange processing units, dairy business and agriculture service centers etc. To acquire information about orange cultivation and related practices and advertising and marketing of their business produce, orange growers many had joined farming groups, as well as considerable amount of orange growers had participation in shetakari sanghatana and cooperatives. This might be the probable reason behind result.

Similar results were found by Tekale [21], Mano [22], Trupti Rathod [23] and Pranali Thakare [20].

3.8 Annual Income

Annual income provides the availability of the capital for farming. from Table 1 it can be concluded that nearly half (45.67%) of the respondents were having annual income up to Rs. 7,96,000/-, followed by 33.66 per cent of the respondents were having annual income between Rs. 7,96,001 to 13,97,000/-, followed by 9.33 per cent of the respondents were having annual income between Rs. 13,97,001 to 19,98,000/-, followed by 5.67 per cent of the respondents were having annual income between Rs. 19,64.001 to 25,99,000/- and 5.67 per cent of the respondents were having annual income above Rs. 25,99000 respectively.

In the present study, Morshi, Warud and Achalpur tahsils in Amravati district and Katol, Narkhed and Kalmeshwar tahsils in Nagpur district popularly known as orange growing tract. Orange growers from these areas possessed

orange orchard on large area. It was yearlong practice of orange cultivation. Oranges from these areas fetches remunerative prices because of its unique quality parameters and reaches upto desired price getting areas through social media in the form of virtual network. Also majority of the orange growers from the study area were having allied occupation with agriculture and horticulture as their main occupation. This might be the probable reason that majority of the respondents had better annual income.

The above findings are in conformity with the observation of previous researcher Sorate [24].

3. 9 Availability of Social Media

It refers to number of social media's like Whatsapp, YouTube, Kisan SMS portal, Facebook, Twitter, Telegram, Snapchat, etc. are available to orange grower on his own device or from other sources.

It is concluded from Table 1 that 54.00 per of orange growers were having availability of Whatsapp followed by 51.33 per of the orange growers were having availability of Youtube, 37.66 per of orange growers were having availability of Facebook, 34.66 per of orange growers were having availability of Telegram, 29.66 per of orange growers were having availability of Kisan SMS portal, 24.00 per of orange growers were having availability of Snapchat, 22.00 per cent of the orange growers were having availability of other agriculture related social media applications and 12.66 per of orange growers were having availability of various search engines.

Table 1 revealed that 88 per cent of social media users were having high availability of social media followed by 12.00 per cent of social media users were having medium availability of social media while 100.00 per cent of social media non users were having low availability of social media. Thus, it could be concluded that less than half (44%) of the respondents were having high availability of social media followed by 50.00 per cent low availability of social media & 6.00 per cent of respondents were having medium availability of social media.

In today's era, the social media became one of the essential need of everyone due to changing lifestyle of the people. Therefore, it may be concluded that the orange growers who were utilizing social media for orange production and also up to somewhat percent who are not using it for orange cultivation only they all are having social media with them for their other uses. This might be the reason behind the result.

The finding of the study is nearly similar to the findings of Darshan [11] and Kumar et al. [25].

3.10 Source of Information

Sources of information are important in case of orange growers to derive information related to Social Media. It is revealed from Table 1 that more than half (55.67%) of the respondents were having medium sources of information followed by 30.00 per cent of the respondents were having high sources of information and 14.33 per cent of the respondents were having low sources of information, respectively.

As a whole, predominantly individual beings consider and keep more trust on personnel from his social system. Friends, relatives and neighbours are easily available at call, dynamatically solved problems of each other, and shared information or experience about new technologies, schemes. On the contrary, officers who are working at ground level have major role in taking the new technology up to farmers by effective way. Localite leaders, progressive farmers and Agriculture assistant have good rapport with villagers because of their regular communication with them either in person or virtually. Modernization in mass media brought people more closely in information world. Social media, television and newspaper are easily available at efficient rates. Related authorities take advantage of it for diffusion of new information and mainstream education. This might be the probable reason as majority of the respondents using medium level of sources of information regularly which are easily available at their social system.

The finding of present study is similar with findings reported by the researcher Ghadge [12] and Singh et al. [13].

3.11 Innovativeness

Innovative farmers are always earlier in adopting promising technologies. It is concluded from Table 1 that near about more than half (59.67%) of the respondents were having medium innovativeness, followed by 25.00 per cent of the respondents were having high innovativeness

and 15.33 per cent of the respondents were having low innovativeness respectively.

The presumed reason for medium innovativeness might be had significant amount of knowledge about innovative agricultural practices through social media, as a result they might have shown enthusiasm in adopting activities earlier and bring maximum benefits through orange production.

The above findings are in conformity with the observation of previous researcher Ghadge [12], Jijina [26] and Kadu [16].

3.12 Risk Orientation

Risk orientation ability guides orange grower in making decisions in the farm management process. It is apparent from Table 1 that more than half (56.67%) of the respondents were having medium risk orientation, followed by 31.66 per cent of the respondents were having high risk orientation and 11.67 per cent of the respondents were having low risk orientation respectively.

Risk taking ability of an individual depends upon personal, socio- economic communicational and psychological circumstances of orange growers. The individual with higher education with knowledge, higher farming experience, better social participation, medium to large land holding and sound economic background implement medium to high risk orientation. In addition to this the reason may be that, confidence of the respondents about innovative practices they adopt and assurance of good production, and annual income. This might be the reason behind medium to high risk orientation of the respondents.

The findings favours the findings of Ghadge [5], Kadu [10] and Tekale [26].

3.13 Market Orientation

Though orange growers depend mostly on local resources, they have to have knowledge on market to sell their products. So, marketing orientation is an important component for sustained progress. It can be predicted from Table 1 that more than half (60.00%) of the respondents were having medium market orientation, followed by 31.33 per cent of the respondents were having high market orientation and 8.67 per cent of the respondents were having low market orientation respectively.

Many progressive farmers are able to sell their products directly to the retailers and consumers by using preferred social media platforms. The reason for the result may be the orange grower from study area had a higher urge to increase his orchard cultivation and management efficiency by reducing inputs cost and deriving biggest profits. The orange growers who had higher availability of social media and highest extent of sources of information were motivated towards getting quality with higher yield and profit through marketing their produce at different geographical area where orange is not produced by available technologies.

Findings were nearly matched with findings of Ghadge [12] and Naik [27].

3.14 Utilization Pattern of Social Media by Orange Growers

In the present study, the extent of utilization was referred as the degree to which social media services were utilized by the orange growers. An index of extent of utilization was developed for this purpose. It is depicted from Table 1 that majority of the social media user respondents (70.00%) were having high index of utilization pattern of social media followed by 19.33 per cent were having medium index of utilization pattern, 10.67 per cent of them were having very high index of utilization pattern while none of them were having very low and low index of utilization pattern respectively.

High level of utilization may be due to provision of agro based advisories in addition to other services as per their mandates and medium level of extent of utilization of social media by the orange growers could be due to the fact that their limitation in potential use of social media such as call back facilities (which involves cost on part of the individuals), help line facilities and quiz programmes provided by the social media applications which limits the extent of utilization of social media.

The findings are supported by the results reported by Sonal Gupta [9], Meshram [28] and Naik [27].

Table 1. Distribution of respondents according to their personal, socio-economic, communicational and psychological characteristics (n=300)

Characteristics	Categories	Social media user frequency (n=150)	Social media non user frequency (n=150)	Overall total (n=300)
Education	Illiterate	00	07	07
	Primary school	01	05	06
	Middle school	02	14	16
	Secondary school	03	43	46
	Higher secondary school/ Junior college	54	48	102
	Diploma or technical education	08	04	12
	Under graduate degree	71	25	96
	Post graduate degree	11	04	15
Family size	Small	54	47	101
	Medium	64	68	132
	Large	32	35	67
Occupation	Agriculture+Horticulture+ labour	00	04	04
	Agriculture+Horticulture	07	50	57
	Agriculture+ Horticulture +allied occupation	73	43	116
	Agriculture+ Horticulture + business	34	30	64
	Agriculture +Horticulture+services	36	23	59
Land holding	Marginal (Up to 1.00 ha.)	00	00	00
	Small (1.01 to 2.00 ha.)	44	69	113
	Semi-medium (2.01 to 4.00 ha)	71	68	139
	Medium (4.01 to 10.00 ha)	17	06	23
	Large (Above 10.00 ha)	18	07	25
Size of orchard	Small (Up to 1.93)	91	91	182
	Medium (1.94 to 3.46)	42	42	84
	Large (Above 3.46)	17	17	34
Farming experience	Low (Up to 15.33)	34	42	76
	Medium (15.36 to 26.66)	50	72	122
	High (Above 26.66)	66	36	102
Social participation	No participation (0)	03	27	30
	Low (Up to 1)	22	48	70
	Medium (2 to 3)	110	62	172
	High (4 and above)	15	13	28
Annual income	Up to Rs. 7,96,000/-	45	92	137
	Rs. 7,96,001 to 13,97,000/-	52	49	101
	Rs. 13,97,001 to 19,98,000/-	22	06	28
	Rs. 19,64.001 to 25,99,000/-	14	03	17
	Above Rs. 25,99000	17	00	17
Availability of	WhatsApp	146	16	162

Characteristics	Categories	Social media user frequency (n=150)	Social media non user frequency (n=150)	Overall total (n=300)
social media				
	YouTube	136	18	154
	Search engines	33	5	38
	Kisan SMS portal	89	00	89
	Facebook	112	01	113
	Twitter	36	00	36
	Telegram	104	00	104
	Snapchat	72	00	72
	Other	66	00	66
Availability of social media	Low (Up to 3)	00	150	150
	Medium (4 to 6)	18	00	18
	High (Above 6)	132	00	132
Source of information	Low (Up to 47.83)	12	31	43
	Medium (47.84 to 54.39)	72	95	167
	High (Above 54.39)	66	24	90
Innovativeness	Low (Up to 11.36)	16	30	46
	Medium (11.37 to 15.48)	86	93	179
	High (Above 15.48)	48	27	75
Risk orientation	Low (Up to 17.91)	09	26	35
	Medium (17.92 to 26.35)	78	92	170
	High (Above 26.35)	63	32	95
Market orientation	Low (Up to 18.74)	04	22	26
	Medium (18.75 to 25.00)	79	101	180
	High (Above 25.00)	67	27	94
Utilization pattern	Very Low (Up to 46.07)	00	-	00
	Low (46.08 to 54.5)	00	-	00
	Medium (54.6 to 62.93)	29	-	29
	High (62.93 to 71.36)	105	-	105
	Very High (Above 71.36)	16	-	16

4. CONCLUSION

From the observations of personal, socio-economic, psychological and communicational profile of social media user and social media non user orange growers, it is concluded that overall orange growers had sound educational background, financial background and awareness about importance of small family. Maximum orange growers had agriculture + horticulture + allied occupation as a main occupation with semi medium land holdings. Majority of the orange growers had small size of orchard with medium to higher farming experience. Almost more than half of the orange growers had medium social participation and sources of information. They were received information from personal of their social system as well as modern mass media sources. Social media user orange growers had highest availability of social media whereas social media non users having social media availability up to somewhat extent which is not used by them for farming purpose and they only used it for their personal work like making phone calls. Majority of the orange growers were innovative having better market orientation and taken moderate risk for profit maximization. Social media user orange growers had higher to medium utilization of social media.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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