Characteristics of Women WhatsApp Users and Use Pattern

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Authors' contributions

This work was part of the research work carried out by the first author as part of master's degree programme under the guidance of second author. The manuscript was prepared jointly by first and second author. The statistical analysis for the last table was carried on by the third author along with typing and proof reading of the paper.

Original Research Article

ABSTRACT

There has been an increasing trend globally to use internet based services through smart mobile phone applications for seeking information. In this context, the study was planned in Punjab State of India to analyse the personal and socio-economic profile of 30 WhatsApp women users belonging to rural, urban and peri-urban areas each in relation to their use of WhatsApp. An interview schedule was developed to collect the data. Majority of respondents in all the three areas were young, belonging to general caste with high educational status but having low income as majority were housewives or students. They belonged to nuclear and small sized families. Very few variations were observed except that peri-urban areas had more respondents engaged in private sector for their earning and rural areas had more unmarried respondents and there were no extended family reported from rural areas. Beside, WhatsApp, Facebook was the most used application. Majority accessed internet through their touch smart phones with pre-paid internet connections and were using WhatsApp for more than 20 months. It was used mainly for personal chatting with nearly half of them reporting its use for more than 5 hours per day. It can therefore be used to disseminate

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> information and knowledge to them. This can be very useful for quick dissemination of information which need to be acted upon urgently particularly among the young women who can act as the source of information for their families.

Keywords: WhatsApp; personal profile; socio-economic; usage.

1. INTRODUCTION

Advent of globalization has led to information explosion in all walks of life. Electronic gadgets make access to information convenient and quick. Only few years back information was retrieved from books and then through desktops, either at work place, homes or libraries. But now the scenario has undergone a complete change. Mobile phones are increasingly being used for obtaining information [1]. It is like information is in the hands.

Cheap handheld mobile sets and reduction in internet data charges due to increase in competition among service providers have further led to higher percentage of users accessing internet through mobile devices rather than expensive laptops or the desktop computers. Further, it is information in hand even when on move. Business Standard [2] quoted internet technology company Google's vice president (South east Asia and India), " India is now adding close to 10 million daily active internet users every month, the highest rate of addition to the internet community anywhere in the world."

TRAI [3] report estimated that state of Punjab state in India has third largest mobile subscribers (125.81 million) in the country as on July 31, 2018. This rapid growth of mobile telephony and the introduction more service and information providers can help to further improve information dissemination across different geographical areas. As mobile penetration continued to increase among both rural and urban areas, the scope exists for a much greater productivity impact in the future.

Mobile phones particularly the smart phones are used for various purposes such as social networking, e-mailing, entertainment and academic purposes beside many more. Apps are used for wide range of purposes in area of entertainment, health, education, personality development, economic activities, and household activities etc. There is number of categories of mobile phone applications that are available for access to the users, such as business, education, personalization, shopping, sports, finance, house and home, news, parenting, books, photography, games etc. These applications (apps) have been used for disseminating information [4].

There arenumber of social networking applications available which people use according to their preference. According to the data accessed from statista.com projecting the report of eMarketer "Number of mobile phone messaging app users worldwide from 2016 to 2021 [5] (in billions), "revealed that 1.58 billion mobile phone users accessed over-the-top messaging apps to communicate in 2016 and this figure was projected to grow to 2.48 billion users in 2021. Facebook, YouTube and WhatsApp are popular amongst the people [6].

WhatsApp application one such application, which is not only used for chatting but also other very convenient functions. WhatsApp got famous worldwide with no age boundaries.. The growth story can be well gauzed from the statistics given by Constine [7] in an article ,'WhatsApp hits 1.5 billion monthly users. $19B? Not so bad,' on his blog @joshconstine in which he highlighted the rise of WhatsApp from 450 million monthly active users and 315 million daily active users in 2014 to 1.3 billion monthly users and 1 billion daily active users in July 2017 .WhatsApp can be a good tool for consciousness-raising since it supports multiple media sharing to illustrate and explain the words. It is also very easy to use and since it is text-based, it provides a good corpus of language [8].

Advancements in technologies/ practices need to be disseminated at a fast pace as they keep changing. Women also need to cope with societal changes. Mobile learning could empower them to engage in lifelong learning at a very fast pace. The opportunities have increased even more significantly in the past few years due to improved software and improved hardware and increased use of internet based social networking applications. Therefore disseminating information/ knowledge through mobile can be instrumental in reaching the rural/urban masses and empowering them for better life. The

continuous increase of personal smartphones with advanced web browsers has created an incredible opportunity that cannot be ignored. It is now possible to deliver content across many platforms using the mobile browser [9]. However, it is important to study the characteristics of the women users from diverse backgrounds in light of the planning of varied gender specific, profile specific and area specific strategies.

In this context the present study was planned with the following objectives:

1.1 Objectives

1. To analyse the personal and socio-economic profile of WhatsApp women users
2. To study the usage pattern of social networking applications by women users.
3. To study the relationship between the characteristics of the WhatsApp women users and use pattern of social networking applications

2. METHODOLOGY

The study was conducted in Ludhiana district of Punjab. The sample was drawn from three areas. Three urban colonies represented the urban area, a village in the peri-urban area represented the peri-urban population and the rural area was represented by a village.

Thirty women between 20-40 years, from each area i.e. urban, peri-urban and rural area were selected who met the following criteria:

- Access to an android or any other more advanced hand set with internet availability.
- Regular users of WhatsApp.
- Willingness to become part of the study

An interview schedule was developed to collect the data. The first part consisted of different items which were used to profile the socio-personal and economic characteristics of the respondent and their family. The second part contained questions pertaining to phone usage, connection usage, WhatsApp usage and social media applications being used by the respondents. Interview schedule was pre tested on a sample of 5 respondents in each area i.e. rural, urban and peri-urban. The reliability and validity was determined. The desired changes were made before collecting the data.

3. RESULTS AND DISCUSSION

3.1 Personal and Socio-economic Profile

The information regarding personal and socio-economic profile of the respondents included age, caste, educational status, marital status, occupation, annual income, family type, family size, age of family members and family annual income has been presented in Table 1 which reveal that majority of respondents (52.2%) were young belonging to general caste category(80.00%). Percentage of young respondents was high in case of rural (66.7%) followed by peri-urban (50.00%) and urban (40%) areas. General category respondents were also found in majority in rural (76.6%), peri-urban (76.6%) and urban (86.6%) respectively.

Majority of respondents were having high educational status (14-20 years of education). As was the case individually in three areas (urban 86.6%, peri-urban 63.3% and rural 73.3%). More than half of the respondents were married (53.3%) as were also found among urban (63.3%) and peri-urban (60.00%) areas. But in rural areas, majority of respondents (63.3%) were unmarried.

A large percentage of respondents (52.2%) were either students or housewives and 30.0 percent were earning their living by working in the private sector. Individually, majority from urban (56.6%) and rural (60%) areas also fell in this category. In peri-urban areas, 53.2 percent were working in the private sector. Majority of respondents (98.9%) reported very low annual income.

Data revealed that majority of respondents belonged to nuclear family. Further it was found that percentage of nuclear families was also high among urban (73.5%), peri-urban (76.5%) and rural (73.3%) area. The family size of the majority (61.1%) was small (2-4 members). (66.7%) of respondents belonging to small sized families. Percentage of medium sized families was highest (43.3%) in rural area. Only 4.4 per cent were having 8-10 members (large families).

Hence, it can be concluded that majority of respondents in all the three areas were young, belonging to general caste with high educational status but having low income as very few were engaged in productive occupation. They belonged to nuclear and small sized families. Very few variations were observed except that peri-urban areas had more respondents

engaged in private sector for their earning and rural areas had more unmarried respondents and there were no extended family reported from rural areas. This clearly implies that irrespective of the area, small nuclear families are the reality for future which in majority will have higher population of youngsters using mobile devices for accessing internet.

3.2 Phone and Connection Usage

Data presented in Table 2 revealed that majority (94.4%) of respondents were using touch smart phone with very few users of basic phone (5.6

5). It was observed that usage of touch smart phones was higher in the urban and rural area with equal percentage (96.6%) with peri-urban slightly lower at 90.0 percent.

More than half of the respondents (62.2%) were using prepaid connection while 14.4 per cent accessed internet through prepaid and Wi-Fi connection, although the same percentage was taking the benefit of post paid and Wi-Fi connection. It was found that 6.7 per cent were post paid connection users and 1.1 per cent respondents were using post paid with Wi-Fi connection service.

Table 1. Distribution of respondents according to their socio-economic profile

Variables	Categorization	Urban (n=30)		Peri-urban (n=30)		Rural (n=30)		Total(n=90)	
		f	%	f	%	f	%	f	%
Age	Young (21-28)	12	40.00	15	50.0	20	66.7	47	52.2
	Middle (29-36)	8	26.6	9	30.0	3	10	20	22.2
	Old (37-44)	10	33.4	6	20.0	7	23.3	23	25.6
Caste	General	26	86.6	23	76.6	23	76.6	72	80.0
	BC	0	0	3	10.0	3	10	6	6.7
	SC	4	13.3	4	13.3	4	13.3	12	13.3
Educational status	Low (0-6)	0	0	3	10.0	0	0	3	3.3
	Medium (7-13)	4	13.4	8	26.6	8	26.6	20	22.2
	High (14-20)	26	86.6	19	63.3	22	73.3	67	74.4
Marital status	Married	19	63.3	18	60.0	11	36.7	48	53.3
	Unmarried	11	36.7	12	40.0	19	63.3	42	46.7
Occupation	No occupation (Student+ House wife)	17	56.6	12	40.0	18.00	60.00	47.00	52.2
	Wage earner	1	3.4	0	0	0	0	1	1.1
	Business	2	6.6	1	3.4	4	13.4	7	7.8
	Private employer	6	20	16	53.2	5	16.6	27	30.0
	Government employer	4	13.3	1	3.4	3	10	8	8.9
Annual income of the respondent (In rupees)	Low (0-500000)	29	96.6	30	100	30	100	89	98.9
	Medium (500001-1000000)	0	0	0	0	0	0	0	0.0
	High (1000001-15000000)	1	3.4	0	0	0	0	1	1.1
Family type	Nuclear	22	73.5	23	76.5	22	73.3	67	74.4
	Joint	6	20	5	16	8	26.6	19	21.1
	Extended	2	6.5	2	6.5	0	0	4	4.4
Family size	Small (2-4)	20	66.7	19	63.3	16	53.3	55	61.1
	Medium (5-7)	8	26.6	10	33.3	13	43.3	31	34.4
	Large (8-10)	2	6.7	1	3.4	1	3.4	4	4.4
	High (26,70334-40,00000)	1	3.4	0	0	0	0	1	1.1
Family annual income (In rupees)	Low (11,000-13,40666)	28	93.4	30	100	29	96.6	87	96.7
	Medium (13,40667-26,70333)	1	3.4	0	0	1	3.4	2	2.22
	High (26,70334-40,00000)	1	3.4	0	0	0	0	1	1.1

Table 2. Distribution of respondents according to phone and connection usage

Categorization according to phone and connection usage		Urban (n=30)		Peri-urban (n=30)		Rural (n=30)		Total (n=90)	
		f	%	f	%	f	%	f	%
Type of mobile phone	Basic phone	1	3.4	3	10.0	1	3.4	5	5.6
	Touch smart phone	29	96.6	27	90.0	29	96.6	85	94.4
Connection for internet	Prepaid	13	43.3	24	80.0	19	63.3	56	62.2
	Postpaid	2	6.6	3	10	1	3.3	6	6.7
	Wi-Fi	9	30.0	2	6.6	2	6.6	13	14.4
	Prepaid + Wi-Fi	4	13.3	1	3.3	8	26.6	13	14.4
	Postpaid + Wi-Fi	1	3.3	0	0	0	0	1	1.1
	Prepaid + Postpaid + Wi-Fi	1	3.3	0	0	0	0	1	1.1

Area wise variation was observed with 80.0 percent peri-urban respondents using prepaid connection to access internet as compared to 43.3 percent in urban and 63.3 percent in urban areas. Wi-Fi users were more (30.0%) in urban as compared peri-urban and rural areas (6.6% each). Similarly, the users of prepaid + Wi-Fi connection were more in rural areas (26.6%) as compared to urban (13.3%) and peri urban users (3.3%).

This shows that pre-paid data plans are more popular implying that finances and everchanging plans of the companies make pre-paid choice more affordable and easier for customers. It also restricts the users who is all the time scared of overuse or overcharged in a post-paid connection.

3.3 Use of Social Networking Applications

Data in Table.3 illustrates the use of different social networking applications other than WhatsApp. It was found that large percentage (65.6%) of respondents were also using Facebook while only 1.1 percent were Snapchat users. Instagram was used by 45.6 percent of the respondents along with WhatsApp. Even IMO was used by 21.1 percent but only 6.7 percent reported the use of Twitter.

Area wise, comparison show that majority of urban (60%), peri-urban (73.3%) and rural area respondents were using Facebook. There was no variation in percentage of Twitter users across areas. Interestingly, the users of Instagram were highest in rural (56.6%) and least in peri-urban areas and none of the respondents from rural and peri-urban area reported the use of Snapchat application for

social networking. Very few users of IMO application (In My Opinion) were found in rural areas (10.0%) against 26.6 percent each in urban and peri-urban areas.

This shows that beside Whatsapp, other social media applications are being used in all the areas with very high percentage of Facebook and Instagram users. Contrary to general perception, the users of Facebook and Instagram applications were more in rural areas. Hence, the other social media applications can also be used to access large percentage of women for dissemination of useful information.

3.4 WhatsApp Usage

The data on experience of using WhatsApp as shown in table reveal that 43.9 per cent of the users were using WhatsApp since more than three years. Percentage of users in this category was highest in rural (46.65 %) as compared to urban (43.3 %) and peri-urban areas (40.0 %). Frequency of low use (1-4 hours) was found among 37.8 percent as compared to high use (more than 8 hours) by 13.3 percent and the remaining nearly half of the total users (48.9 %) used it for 5-7 hours. Area wise, majority among peri-urban users (66.6%) were using the application for 1-4 hours as compared to 30.0 percent in rural and 16.6 percent in urban areas. Large percentage (70.0 %) of urban users used it for 5-8 hours daily as was also the case among 43.3 percent rural users. Highest percentage (66.6%) in low category belonged to peri-urban areas and highest in high usage category of more than 8 hours (26.6%) surprisingly belonged to rural areas. High usage in rural area was further revealed from the data in 5-8 hours (medium) category (43.3%).

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Personal chatting was preferred by 92.2 percent of the respondents and this percentage was high in all areas. Group chatting was also done by 30.0 percent of the users.

Hence, it can be concluded that majority of the respondents from all areas had been using WhatsApp since more than 20 months. Very high frequency of use was found among more percentage of rural respondents. Although nearly one third of the respondents were engaged in group chatting but in majority of the cases they preferred personal chatting.

This implies that use of WhatsApp is no longer a novelty among women users in all areas. Therefore the social application can be used for dissemination of information without any training required for its use. Its use in groups can be further enhanced by making small need based groups for exchange of information. Further, these groups can disseminate information through personal chatting as it is more preferred by them.

3.5 User Profile and Daily Use of WhatsApp

The personal and socio-economic profile of the users was analysed in relation to the usage of WhatsApp. It was found that age was negatively relate to the use of WhatsApp . However, this relationship was non-significant. Education, however was found to be positively and significantly related to the amount of time spent on use of WhatsApp. Similarly the average family age, education and income were significantly related to use of WhatsApp. Interestingly, income of the respondent and the size revealed positive but non-significant relationship. This shows that income of the family and not the individual income is related to the time spent. This may be because of the expenditure on use of internet for using the WhatsApp. In case of non-earning women, the income of the family effects the expenditure to be incurred.

Data clearly point towards more time spent on WhatsApp use among younger women users but the time spend by even the older women was also high. Hence, the use of WhatsApp can be made by categorizing women into age and need based groups and messages /strategies for dissemination planned accordingly. It is also important to strategize the media packages to be disseminated through WhatsApp according to the time they can spend on using the internet and amount they can pay on its use particularly in terms of their family income.

Table 3. Distribution of respondents according to use of social networking applications

Social networking applications	Urban (n=30)		Peri-urban (n=30)		Rural (n=30)		Total(n=90)	
	f	%	f	%	f	%	f	%
Facebook	18	60.0	22	73.3	19	63.3	59	65.6
Twitter	2	6.6	2	6.6	2	6.6	6	6.7
Instagram	14	46.6	10	33.3	17	56.6	41	45.6
IMO	8	26.6	8	26.6	3	10.0	19	21.1
Snapchat	1	3.3	0	0	0	0	1	1.1
Any other	3	10	4	13.3	3	10	10	11.1

Multiple responses

Table 4. Distribution of respondents according to their Whatsapp usage

Categorization according to their WhatsApp usage		Urban (n=30)		Peri-urban (n=30)		Rural (n=30)		Total (n=90)	
		f	%	f	%	f	%	f	%
Experience of using WhatsApp (in months)	>20 months	7	23.3	8	26.6	3	10	18	20.0
	20-40 months	10	33.3	10	33.3	13	43.3	33	36.7
	< 40 months	13	43.3	12	40.0	14	46.6	39	43.3
Frequency of WhatsApp usage (in hours)	Low (1-4 hours)	5	16.6	20	66.6	9	30	34	37.8
	Medium (5-8 hours)	21	70	10	33.3	13	43.3	44	48.9
	High (< 8 hours)	4	13.3	0	0	8	26.6	12	13.3
Type of chat they prefer on WhatsApp*	Personal chat	28	93.3	26	86.6	29	96.6	83	92.2
	Group chat	9	30	9	30	9	30	27	30.0

Multiple responses

Table 5. Relationship of respondent profile and daily use of whatsapp

Variables	Total
Age	-0.24 NS
Education	0.32**
Annual income of the respondent	0.17
Family size	0.005
Average family age	0.26*
Average family education	0.29**
Family income	0.29**

4. CONCLUSION

WhatsApp and other social networking sites particularly Facebook is being used along with other applications by women across different areas with different personal, social and economic profile. It can therefore be used to disseminate information and knowledge to them. Homemakers and students even though mostly rely on prepaid connections for accessing internet are the active users who can be the targeted for educational purposes. Contrary to the perception, the use of social media applications has been largely observed in rural areas. Hence, it can be widely used to reach the far flung areas. This can also be very useful for quick dissemination of information which need to be acted upon urgently. More of its use among younger group can be leveraged to create an impact. Information dissemination mechanism need to be is aligned by the extension functionaries in view of the results of the study so as to exploit the potential of WhatsApp in reaching the women users in different areas of the state.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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