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#### **Characteristics of WhatsApp users and use pattern**

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#### ABSTRACT

4 Punjab has the third largest mobile subscribers at 125.81 million in country as on July 31, 2018 5 (Anonymous 2018).

Anonymous (2018) Telecom Regulatory Authority of India Report. Retrieved from:
 https://trai.gov.in/release-publication/reports/telecom-subscriptions-reports on 26 September, 2018.

8 There has been an increasing trend globally to use internet based services through smart mobile 9 phones for seeking information. In this context, the study was planned in Punjab State of India 10 to analyse the personal and socio-economic profile of 90 WhatsApp women users belonging to 11 rural, urban and peri-urban areas in relation to their use of Whatsapp. An interview schedule was 12 developed to collect the data. Majority of respondents in all the three areas were young, 13 belonging to general caste with high educational status but having low income as majority were 14 housewives or students. They belonged to nuclear and small sized families. Very few variations 15 were observed except that peri-urban areas had more respondents engaged in private sector for 16 their earning and rural areas had more unmarried respondents and there were no extended family 17 reported from rural areas. Beside, Whatsapp, Facebook was the most used application. Majority 18 accessed internet through their touch smart phones with pre-paid internet connections and were 19 using WhatsApp for more than 20 months. It was used mainly for personal chatting with nearly 20 half of them reporting its use for more than 5 hours per day. It can therefore be used to 21 disseminate information and knowledge to them. This can be very useful for quick dissemination 22 of information which need to be acted upon urgently particularly among the younger who can act 23 as the source of information for their families.

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#### **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 (Toteja and Kumar 2012). It is like information is in the hands.

Mobile phone is a revolutionary step in the field of telecommunication. In 2017, India had 331.77 million internet users. This figure is projected to grow to 511.89 million in 2022. Despite the untapped potential, India already is the second-largest online market worldwide. The majority of India's internet users are mobile phone internet users, who take advantage of cheap alternatives to expensive landline connections that require desktop PCs and infrastructure. As of 2016, India had 320.57 million mobile phone internet users and forecasts estimate 492.68 million Indian mobile phone internet users by 2022 (Anonymous 2018).

40 Punjab has the third largest mobile subscribers at 125.81 million in country as on July 31, 2018 41 (Anonymous 2018 b). Rapid growth of mobile telephony and the introduction of mobile-enabled 42 information services can pave way to improve information dissemination to the knowledge 43 intensive sectors and also help to overcome geographical barriers. As mobile penetration 44 continued to increase among both rural and urban areas, the scope exists for a much greater 45 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. Facebook, YouTube and What's app are popular amongst the people (Patil and Sawale 2011). There are number of social networking applications available which people use according to their preference, In 2016, 1.58 billion mobile phone users accessed over-the-top messaging apps to communicate. This figure is projected to grow to 2.48 billion users in 2021.

52 WhatsApp application is one of them, an application which has not only function of 53 chatting but also other very convenient functions. WhatsApp got famous worldwide with no age 54 boundaries. Driven by improved software, improved hardware, and evolving habits of mobile 55 device users, the opportunities have increased even more significantly in the past few years. 56 WhatsApp can be a good tool for consciousness-raising since it supports multiple media sharing 57 to illustrate and explain the words. It is also very easy to use and since it is text-based, it provides 58 a good corpus of language. (Chuah K M 2014). As of December 2017, the mobile messaging 59 app announced more than 1.5 billion monthly active users, up from over 1 billion MAU in 60 February 2016. The service is one of the most popular mobile apps worldwide.

61 Advancements in technologies/ practices need to be disseminated at a fast pace as they 62 keep changing. Women also need to cope with societal changes. Mobile learning could empower 63 them to engage in lifelong learning at a very fast pace. Therefore disseminating information/ 64 knowledge through mobile can be instrumental in reaching the rural/urban masses and 65 empowering them for better life. The continuous increase of personal smartphones with 66 advanced web browsers has created an incredible opportunity that cannot be ignored. It is now 67 possible to deliver content across many platforms using the mobile browser (Maniar & Modi 68 2014).

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

#### 70 **Objectives**

1. To analyse the personal and socio-economic profile of Whatsapp women users

72 73 2. To study the usage pattern of social networking applications of women users.

METHODOLOGY

74 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.

- 80 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.

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## **RESULTS AND DISCUSSION**

91 **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). Only 4.4 per cent were having 8-10 members (large families). Urban area had highest percentage (66.7%) of respondents belonging to small sized families. Percentage of medium sized families was highest (43.3%) in rural area.

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#### 117 **Table 1 Distribution of respondents according to their socio-economic profile**

Variables	Categorization	Urban (n=30)		Peri-	urban	Ru	ral	Total	
				(n=30)		(n=30)		(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	Low (0-6)	0	0	3	10.0	0	0	3	3.3
status	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	Married	19	63.3	18	60.0	11	36.7	48	53.3
status	Unmarried	11	36.7	12	40.0	19	63.3	42	46.7
Occupation	No occupation (Student+	17	56.6	12	40.0	18.00	60.00	47.00	52.2
	House wife)			P	$\langle \rangle$				
	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		3.4	3	10	8	8.9
Annual	Low (0-500000)	29	96.6	30	100	30	100	89	98.9
income	Medium (500001-	0	0	0	0	0	0	0	0.0
	100000)	$\mathbf{N}$							
	High (1000001-	1	3.4	0	0	0	0	1	1.1
	15000000	r							
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
$\langle \rangle$	Large (8-10)	2	6.7	1	3.4	1	3.4	4	4.4
	High (26,70334-	1	3.4	0	0	0	0	1	1.1
	40,00000)								

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119 Hence, it can be concluded that majority of respondents in all the three areas were young,

120 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.

#### 125 **Phone and connection usage**

Data presented in Table 2 reveal 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 had prepaid with Wi-Fi connection, although the same percentage was taking the benefit of post paid with 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.

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%).

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140	Table 2 Distribution of	f respondents	according to p	hone and	connection usage
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Categorization acco	ording to phone and	U	rban	Peri-urban		Rural		Total	
connection usage		(n	=30)	(n	=30)	0) (n=30)		(n=90)	
		f	%	f	%	f	%	f	%
Type of mobile	Basic phone	1	3.4	3	10.0	1	3.4	5	5.6
phone	Touch smart phone	29	96.6	27	90.0	29	96.6	85	94.4
Connection for	Prepaid	13	43.3	24	80.0	19	63.3	56	62.2
internet	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 +	1	3.3	0	0	0	0	1	1.1
	Wi-Fi								

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#### 142 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 periurban 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.

Social networking applications	Urba	n (n=30)	Peri-Ur	ban	Rural	Rural (n=30)		l(n=90)
	(n=30)							
	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

154 **Table 3 Distribution of respondents according to use of social networking applications** 

155 \*Multiple responses

156 This shows that beside Whatsapp, other social media applications are being used in all the areas 157 with very high percentage of Facebook and Instagram users. Contrary to general perception, the

158 users of Facebook and Instagram applications were more in rural areas.

#### 159 Whatsapp usage

160 The data on experience of using WhatsApp as shown in table reveal that 43.9 per cent of the

161 users were using WhatsApp since more than three years . Percentage of users in this category

162 was highest in rural (46.65 %) as compared to urban (43.3 %) and peri-urban areas (40.0 %) .

163 Frequency of low use (1-4 hours) was found among 37.8 percent as compared to high use (more 164 than 8 hours) by 13.3 percent and the remaining nearly half of the total users (48.9 %) used it for 165 5-7 hours Area wise, majority among peri-urban users (66.6%) were using the application for 166 1-4 hours as compared to 30.0 percent in rural and 16.6 percent in urban areas. Large percentage 167 (70.0 %) of urban users used it for 5-8 hours daily as was also the case among 43.3 percent rural 168 users. Highest percentage (66.6%) in low category belonged to peri-urban areas and highest in 169 high usage category of more than 8 hours (26.6%) surprisingly belonged to rural areas. High 170 usage in rural area was further revealed from the data in 5-8 hours (medium) category (43.3%).

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

172 Table 4. Distribution of respondents according to their Whatsapp usage

173 \*Multiple responses

Personal chatting was preferred by 92.2 percent of the respondents and this percentagewas 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
Whats app 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.

## 180 User profile and daily use of WhatsApp

The personal and socio-economic profile of the users was analysed in relation usage of WhatsApp and 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 nonearning women, the income of the family effects the expenditure to be incurred .

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Variables	Total	4
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**	

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

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193 Whatsapp and other social networking sites particularly Facebook is being used along with other 194 applications by women across different areas with different personal, social and economic 195 profile . It can therefore be used to disseminate information and knowledge to them. 196 Homemakers and students even though mostly rely on prepaid connections for accessing internet 197 are the active users who can be the targeted for educational purposes. Contrary to the perception, 198 the use of social media applications has been largely observed in rural areas. Hence, it can be 199 widely used to reach the far flung areas. This can also be very useful for quick dissemination of 200 information which need to be acted upon urgently. More of its use among younger group can be 201 leveraged to create an impact.

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