

A STUDY ON MOBILE INTERNET USE BY RURAL AND URBAN EMPLOYED PERSONS IN ERODE DISTRICT

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Abstract

The study was conducted to compare the use of internet by the rural and urban employed persons and to identify the problems faced by them while searching the internet. The study was confined to a sample of 70 employed persons selected from Elavamalai (rural) and Chithode (Urban) villages in Erode district of Tamil Nadu. The study found that out of the 70 sample employed persons selected for the study, the majority of them are male used mobile internet, belonged to the age group of 26-30 years old. The educational qualifications of the sample employed persons was post graduated and their monthly income group of 10001-15000. The three components extracted accounted for the total cumulative variance of 64.348%. The study concluded that prevalence of "Internet addiction" among the urban employed and was found to be higher as compared to rural employed persons. Mobile internet will be perceived as something for the urban employed persons as long as it is driven by social media, digital entertainment, social communication service, digital payments and online purchase of goods.

Keywords: Internet, Rural and Urban Employed, Factor Analysis

1. Introduction

In the 21st century, a mobile phone is an integral part of everyday life, only strange when it is absent. "The proliferation of mobile phones affects the lives and relationships of people and affects the way people interact with each other or, more likely, increasingly encounter a mobile phone, as people increasingly use a mobile phone as a participant in what else they encounter. The purpose of this article is to find out how working people use mobile phones over the Internet in their daily lives. This is considered interesting and relevant, since mobile penetration in India is more than 100% and consists of a wide range of mobile phones, from entry-level phones to smartphones (International Telecommunication Union, 2013). The study examines the main reasons for using a mobile phone on the Internet: for social networks, for sending mail, paying bills, cashless transactions, collecting knowledge, trading stocks and online purchases. Thus, this paper is conducted to compare the use of the Internet among rural and urban employed persons, which is a step forward in the study.

2. Objectives

The study was conducted to compare the use of internet by the rural and urban employed persons and to identify the problems faced by them while searching the internet.

3. Methodology

The study was confined to a sample of 70 employed persons selected from Elavamalai (rural) and Chithode (Urban) villages in Erode district of Tamil Nadu. A simple percentage analysis and factor analysis methods were employed to identify the socio economic characteristics and to identify the problems faced by them using the mobile internet.

4. Results and Discussion

The findings of this study are presented in two main parts viz., (i) socio-economic characteristics of the sample employed persons and (ii) Problems faced by the employed persons in Elavamalai (rural) and Chithode (Urban) villages in Erode district.

4.1. Socio-Economic Characteristics of the Sample Employed Persons

This part is mainly devoted for the study of the socio-economic characteristics of the selected from 70 sample employed persons in Elavamalai (rural) and Chithode (Urban) villages in Erode district.

Table-1: Socio-Economic Characteristics of the Sample Employed Persons

Socio-Economic Characteristics		Domicile status		Total
		Rural	Urban	
Gender	Male	26 74.29%	25 71.43%	51 72.86%
	Female	9 25.71%	10 28.57%	19 27.14%
Age	20 - 25 years	7 20.00%	15 42.86%	22 31.43%
	26 – 30 years	15 42.86%	16 45.71%	31 44.29%
	31 – 40 years	9 25.71%	3 8.57%	12 17.14%
	41 & above	4 11.43%	1 2.86%	5 7.14%
Educational Qualifications	School education	7 20.00%	8 22.86%	15 21.43%
	Under graduation	8 22.86%	12 34.29%	20 28.57%
	Post-graduation	11 31.43%	10 28.57%	21 30.00%
	Diploma	9 25.71%	5 14.29%	14 20.00%
Monthly Salary	Below 10,000	10 28.57%	7 20.00%	17 24.29%
	10,001 – 15,000	13 37.14%	11 31.43%	24 34.29%
	15,001 – 25,000	5 14.29%	12 34.29%	17 24.29%
	25,001 – 40,000	6 17.14%	2 5.71%	8 11.43%
	Above 40,001	1 2.86%	3 8.57%	4 5.71%
Total		35 100.00%	35 100.00%	70 100.00%

Source: Primary data

Table-1 shows that of the 70 selected employed persons selected for the study, most of them are male using the mobile Internet, belonging to the age group of 26-30 years. The educational qualification of the sample of workers did PG, and their monthly income was Rs.10001-15000.

4.2. Problems faced by mobile internet user

This section discusses the problems faced by the 70 employed persons selected from the villages of Elavamalai (rural) and Chithode (city) in Erode district using factor analysis. A list of 20 applications was prepared and data from 70 selected employed persons was collected. The method of aggregate ratings on a five-point Likert scale was applied to determine the aggregate level of respondents' agreement. Accordingly, if the respondent fully agrees with the statement, a scale value of 5 is assigned; the value of scale 4 is assigned if the answer is consistent, the value of scale 3, if it is neither agreeable nor dissent, the value of scale 2, if the respondent disagrees, and the value of scale 1 if the respondent strongly disagrees. The total score for each respondent out of all 20 statements is calculated using the above assessment procedure. Answer points range from 20 to 100. It is used to resolve a large set of statements of measurable variables in terms of relatively new categories known as factors. Measuring the adequacy of the sample in the KMO is an indicator used to test the possibility of factor analysis. High values (from 0.5 to 1.0) indicate the feasibility of factor analysis. Details of the findings are shown in Table-2.

Table-2: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.882
Bartlett's Test of Sphericity	Approx. Chi-Square	967.798
	df	190
	Sig.	.000

Note: Significant at 1% level ($P < 0.01$)

From Table-2 it can be seen that the measured value of the adequacy of the sample according to the method of Kaiser-Meyer-Olkin is 0.882. Since it exceeds 0.50, it was decided to apply Factor Analysis to study the problems of respondents associated with the use of the mobile Internet. Community table 3 shows the initial and extraction values.

Table-3: Communalities

Variable No.	Variables	Initial	Extraction
1	Phishing mails	1.000	.726
2	Problems of hackers	1.000	.619
3	Intrusion attacks	1.000	.791
4	Virus/ malware problems	1.000	.669
5	Software issues	1.000	.610
6	Line tapping	1.000	.565
7	Frauds in online transactions	1.000	.814
8	Internet connectivity problems	1.000	.635
9	Addiction on social network	1.000	.728
10	Physical and mental health problems	1.000	.653
11	Disturbing my concentration	1.000	.683
12	Detracted face-to-face interactions	1.000	.529
13	Tagging of unwanted posts in social media	1.000	.551
14	Anonymity	1.000	.796
15	Cyber bullying	1.000	.758
16	Lack of privacy	1.000	.600
17	No bargaining in online shopping	1.000	.604
18	Poor e-learning practice	1.000	.526
19	Higher recharge rate	1.000	.795
20	Lack of skills in internet	1.000	.518

Note: Extraction Method: Principal Component Analysis

Table 3 shows communality values. The communality can be defined as the proportion of the variance in any of the initial variables, which is determined by the extracted factors. The history of the derived components is presented in the general deviations explained in Table 4.

Table-4: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Phishing mails	10.174	50.871	50.871	10.174	50.871	50.871	5.929	29.644	29.644
Problems of hackers	1.399	6.997	57.868	1.399	6.997	57.868	4.078	20.390	50.034
Intrusion attacks	1.296	6.479	64.348	1.296	6.479	64.348	2.863	14.313	64.348
Virus/ malware problems	.954	4.772	69.120						
Software issues	.932	4.660	73.780						
Line tapping	.825	4.126	77.905						
Frauds in online transactions	.672	3.362	81.267						
Internet connectivity problems	.627	3.133	84.400						
Addiction on social network	.512	2.562	86.962						
Physical and mental health problems	.487	2.434	89.396						
Disturbing my concentration	.401	2.007	91.402						
Detracted face-to-face interactions	.315	1.573	92.975						
Tagging of unwanted posts in social media	.296	1.479	94.454						
Anonymity	.242	1.211	95.665						
Cyber bullying	.220	1.099	96.764						
Lack of privacy	.172	.862	97.626						
No bargaining in online shopping	.158	.790	98.416						
Poor e-learning practice	.130	.651	99.067						
Higher recharge rate	.104	.518	99.584						
Lack of skills in internet	.083	.416	100.000						

Extraction Method: Principal Component Analysis

From the Table-4, it was observed that the labeled “Initial Eigen values” gives the Eigen values. The Eigen value for a factor indicates the “Total Variance” attributed to the factor. From the extraction sum of squared loadings, it was learnt that the first factor accounted for a variance 10.174 which was 50.871 %; the second factor accounted for the variance 1.399 which was 6.997%; and the third factor accounted for the variance 1.296 which was 6.479%. The eight components extracted accounted for the total cumulative variance of 64.348%.

In this approach, only the factors with Eigen values greater than 1.0 are maintained, the other factors are not included in the model. Since, there are three factors possessing Eigen value which are greater than 1.0 i.e., out of 20 factors loaded in the factor analysis, only 3 factors said to be extracted from the total 20 factors.

Table-5: Component Matrix

Variables	Component		
	1	2	3
Phishing mails	.714	-.431	.171
Problems of hackers	.774	.012	.142
Intrusion attacks	.812	-.363	.025
Virus/ malware problems	.711	-.354	-.196
Software issues	.598	-.147	-.480
Line tapping	.632	-.245	.069

Frauds in online transactions	.885	-.161	-.065
Internet connectivity problems	.791	-.043	-.087
Addiction on social network	.780	.308	.158
Physical and mental health problems	.679	.367	-.239
Disturbing my concentration	.754	.239	.238
Detracted face-to-face interactions	.346	.296	.470
Tagging of unwanted posts in social media	.735	.041	-.096
Anonymity	.860	-.127	.200
Cyber bullying	.811	.242	-.204
Lack of privacy	.735	-.068	.235
No bargaining in online shopping	.690	.043	-.354
Poor e-learning practice	.651	-.033	-.018
Higher recharge rate	.594	.614	-.258
Lack of skills in internet	.494	.106	.513

Extraction Method: Principal Component Analysis.

The matrix of rotated components shown in Table-5 is the result of the VARIMAX factor rotation procedure. Interpretation is facilitated by identifying variables that have large loads on the same factor. Therefore, those factors with high factor loadings in each component were selected, that is, values greater than 0.5.

Table-6: Statement Loadings of Satisfaction for the Rotated Component Matrix

Factors	Variables	Component		
		1	2	3
Factor-I	Intrusion attacks	0.833	0.211	0.229
	Phishing mails	0.802	0.034	0.285
	Virus/ malware problems	0.768	0.282	0.006
	Frauds in online transactions	0.752	0.427	0.258
	Anonymity	0.695	0.288	0.480
	Line tapping	0.620	0.161	0.233
	Internet connectivity problems	0.603	0.461	0.243
	Lack of privacy	0.561	0.237	0.478
	Software issues	0.560	0.505	-0.203
	Problems of hackers	0.539	0.360	0.446
	Tagging of unwanted posts in social media	0.506	0.487	0.242
Factor-II	Higher recharge rate	0.016	0.854	0.256
	Physical and mental health problems	0.247	0.738	0.219
	Cyber bullying	0.427	0.714	0.257
	No bargaining in online shopping	0.487	0.606	0.010
	Poor e-learning practice	0.492	0.551	0.246
Factor-III	Lack of skills in internet	0.252	0.058	0.672
	Detracted face-to-face interactions	0.016	0.118	0.644
	Disturbing my concentration	0.362	0.437	0.601
	Addiction on social network	0.338	0.539	0.569

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization

The selected factors were highlighted in table-6 shows that the variables like Intrusion attacks, Phishing mails, Virus/ malware problems, Frauds in online transactions, Anonymity, Line tapping, Internet connectivity problems, Lack of privacy, Software issues, Problems of hackers and Tagging of unwanted posts in social media were grouped together as factor 1 and accounted for 50.871% of the total variance. The variables like Higher recharge rate, Physical and mental health problems, Cyber bullying, No bargaining in online shopping and Poor e-learning practice were grouped together as factor 2 and accounted for 6.997% of the total variance. The variables like Lack of skills in internet, Detracted face-to-face interactions, Disturbing my concentration and Addiction on social network were grouped together as factor 3 and accounted for 6.479% of the total variance. Thus, the factor analysis condensed and simplified the 20 variables and grouped them into 3 factors explaining 64.348% of the variability of all the variables.

5. Summary and Conclusion

The study found that out of the 70 sample employed persons selected for the study, the majority of them are male used mobile internet, belonged to the age group of 26-30 years old. The educational qualifications of the sample employed persons was post graduated and their monthly income group of 10001-15000. The extraction sum of squared loadings, it was learnt that the first factor accounted for a variance 10.174 which was 50.871 %; the second factor accounted for the variance 1.399 which was 6.997%; and the third factor accounted for the variance 1.296 which was 6.479%. The three components extracted accounted for the total cumulative variance of 64.348%. The study concluded that prevalence of “Internet addiction” among the urban employed and was found to be higher as compared to rural employed persons. Mobile internet will be perceived as something for the urban employed persons as long as it is driven by social media, digital entertainment, social communication service, digital payments and online purchase of goods.

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