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AN ANALYTICAL STUDY ON CONSUMER BEHAVIOUR TOWARDS SOCIAL NETWORKING BUSINESS AND CONSUMER PROTECTION IN THE DIGITAL WORLD.

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Abstract

The present generation has come far ahead of basic PC based internet and social networks. Though the fields have not changed, there has been a drastic paradigm shift. With the increasing number of smart phones and tablet users, the appetite for networking and gaming application has certainly ascended. The study reveals the consumer's behaviour towards social networking games and their awareness about their protection in the digital world. Primary data is collected through the structured questionnaire. The smart phone users are the respondents.

Key words: Social Networking Games, Digital world, Consumer's Behaviour, Smartphone, Tablet

Introduction

A social network game is a type of online game that is played through social networks. They typically feature multiplayer game play mechanics. Social network games are most often implemented as browser games, but can also be executed on other platforms such as mobile devices. The first platform "Face book-to-Mobile" social network game was developed in 2011 by a Finnish company Star Arcade. Social network games are amongst the most popular games played in the world, with several products with millions of players. Leading social network game developers have been doing some great business recently and the market seems to stay afresh with a lot of incoming cash

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flow for a long time.

A social network game is often played via a web browser, though they are distinct from browser based games in the way they leverage the player's social graph and individual user data that is hosted on the social network. With the invention of Smartphone devices, social games have now also seen widespread adoption on mobile platforms such as android devices. This is enabled through mobile social networks such as openfeint and through implementations by social networking sites like Facebook which allow applications on mobile devices to access a limited amount of protected user data on those sites.

Review of Literatures

Aleksandra Korolova (2012)¹ In his thesis author concluded that , “he have explored examples of privacy violations, proposed privacy-preserving algorithms, and analyzed the trade-off between utility and privacy when mining and sharing user data for several concrete problems in search and social networks. So he suggested practical algorithms and provided quantitative and actionable analyses of the trade-off for the problems considered”

Janne Paavilainen, Juho Hamari, Jaakko Stenros, and Jani Kinnunen (2013)² Authors said in their study that “Spam they create in the form of notifications, requests, News feed items, and wall posts. Spam was such an issue for some interviewees that they did not want to play games that were considered “spammy.” Spam from games one does not play was found especially irritating and a blanket block of all information generated by such a game was seen as the only solution”.

Objectives

1. To analyze how the social network games influence the customers
2. To study the demographic profile of customers.
3. To determine the customer's satisfaction level in social network gaming.
4. To know how much customers are aware about the privacy and security issues in the digital world.
5. To suggest guidance for customer how to safeguard their privacy and secure in digital world.

Research Methodology:

The research work is empirical in nature. A structured questionnaire is spread to the respondent. Convenience sampling method is used to find out the customer's behavior towards social networking games and their awareness about their protection in this digital world. The study is conducted in Chengalpattu Town. 43 valid samples are considered for the study. Secondary data is constituted from E-Journal and E-Thesis and websites.

Hypothesis

Null Hypothesis 1: There is no significant difference between Age Group with regard to factor Influencing and Affecting, Level of Awareness towards Privacy and Security Issues in the Digital World.

Null Hypothesis 2: There is no significant difference between Gender with regard to factor Influencing and Affecting, Level of Awareness towards Privacy and Security Issues in the Digital World.

Null Hypothesis 3: There is no significant difference between Level of satisfaction in social networking games and factors influencing and Affecting Social Networking games

Null Hypothesis 4 There is no significant difference between Level of satisfaction in social networking games and privacy and security issues in digital world

Statistical Tools Used

Descriptive analysis, T-Test, ANOVA analysis, Correlation, Cronbach's Alpha and KMO Bartlett's Test of Sphericity, Factor analysis.

Questionnaire Design

1-6 questions contains of Personal Profile.

7th question contains of opinion on Social Network games influencing and affecting the customers in 5 point scale it has 17 variables.

8th question contains of opinion about the Level of Satisfaction on Social Network Games in 5 point scale.

9th question contains of opinion about the Level of Awareness towards Privacy and

Security Issues in the Digital World in 5 point scale it has 10 variables.
Scaling Technique: 5 point scale.

Limitations of the study:

1. The sample for the study is restricted to Chengalpattu Town. Hence, findings cannot be generalized.
2. The size of the valid sample is restricted to 43.

Data Analysis and Inferences

Table No: 1
Table showing Demographic profile

Gender of Respondent	Frequency	Percentage
Male	19	44.2
Female	24	55.8
Age of the Respondent	Frequency	Percentage
18 to 20	8	18.6
21 to 40	16	37.2
41 to 60	12	27.9
60 & above	7	16.3
Educational Qualifications	Frequency	Percentage
Higher Secondary	4	9.3
Under graduation	18	41.9
Post-graduation	16	37.2
Others	5	11.6
Occupation of Respondent	Frequency	Percentage
Student	11	25.6

Business	11	25.6
Professional	12	27.9
Others	9	20.9
Annual Income (in Rs.)	Frequency	Percentage
Below 1 lakh	18	41.9
1 lakh to 3 lakhs	13	30.2
3.01 Lakhs to 5 lakhs	6	14.0
5.01 Lakhs & above	6	14.0
Usage of Social Networking Games in a day	Frequency	Percentage
Less than 2 times a day	23	53.5
3-5 times a day	8	18.6
6-10 times a day	9	20.9
More than 10 times a day	3	7.0
Total	43	100.0

Source : Primary Data

It is evident from the above table, that the maximum percentages 55.8% of respondents are Female. Maximum percentages 37.2% of the respondents is in the age group of 21 to 40. 41.9% of respondents are under graduate. 27.9% of respondents are belonging to Professional. Maximum percentages 41.9% of respondents are earning below 1 lakh. Maximum percentages 53.5% of respondents are using social networking games less than 2 times in a day.

Table No: 2 Table showing one way ANOVA test between Age Group and Factor Influencing and Affecting, Level of Awareness towards Privacy and Security Issues in the Digital World The one-way analysis of variance (ANOVA) is used to determine whether there are any statistically significant differences between the means of two or more independent groups.

Table -2

Factors	Age Group Mean				F value	P value
	18 - 20	21-40	41-60	60 Above		
Influencing and affecting the Social Network games consumers.	2.38	2.25	1.58	1.57	4.587	0.008
Level of Awareness towards Privacy and Security Issues in the Digital World	1.88	2.25	1.92	1.71	1.144	0.343

It is inferred from the above table showing the output of the ANOVA analysis and whether there is a statistically significant difference between Independent and dependent factors. Significance value of age group and factor influencing and affecting the social network games is 0.008 (i.e., $p = .008$), which is below the table value 0.05. So null hypothesis is rejected, therefore, there is a statistically significant difference between Age Group and Factor Influencing and affecting the social network games consumers. The significance value of age group and Level of Awareness towards Privacy and Security Issues in the Digital World is 0.343 (i.e., $p = .343$), which is greater than the table value 0.05. So null hypothesis is accepted, therefore, there is no statistically significant difference between age and Level of Awareness towards Privacy and Security Issues in the Digital World.

Table No: 3 Table showing Independent Sample T-test between Gender and Factor Influencing and Affecting, Level of Awareness towards Privacy and Security Issues in the Digital World

The Independent Samples t Test compares the means of two independent groups in order to determine whether there is statistical evidence that the associated population means are significantly different. The Independent Samples t Test is a parametric test.

Table -3

Factors	Gender Mean		t value	P value
	Male	Female		
Influencing and affecting the Social Network games consumers	2.00	1.96	0.190	0.760
Level of Awareness towards Privacy and Security Issues in the Digital World	2.16	1.88	1.283	0.699

It is inferred from the above table that the P value of Influencing and affecting the Social Network games consumers (0.760) and Level of Awareness towards Privacy and Security Issues in the Digital World (0.699) since P values is greater than 0.05, hence there is no significant difference among Gender with respect to Influencing and affecting the Social Network games consumers and Level of Awareness towards Privacy and Security Issues in the Digital World. Therefore null hypotheses are accepted.

Table No: 4 Table showing Correlation Coefficient between Level of Satisfaction, Factors influencing and Affecting and Level of awareness and privacy and security issues in digital world Correlation tells about the relationship between variables. It is used to understand whether the relationship is positive or negative and the strength of relationship. If the value below 0.300 it means low level of positive correlation, 0.300 to 0.500 moderate level of positive correlation, 0.500 and above high level of correlation. If the value is negative it means that relationship between two variables is negatively correlating.

Table -4

Correlation Coefficient between Level of Satisfaction, Factors Influencing and Affecting and Level of awareness and privacy and security issues in digital world		Level of satisfaction in social networking games	Factors Influencing and Affecting Social Networking games	Privacy and security issues in digital world
Spearman's rho	Level of satisfaction in social networking games	1.000	0.616	0.196
	Factors Influencing and Affecting Social Networking games	.616	1.000	.441
	privacy and security issues in digital world	.196	.441	1.000

The above table shows that the coefficient of correlation value. The relationship between Level of satisfaction in social networking games and Factors Influencing and Affecting Social Networking games by the consumers is 0.616. This indicates that there is a high level of positive relationship between these variables in Social networking games. Thus the null hypothesis H_1 is rejected. (There is no significant difference between Level of satisfaction in social networking games and Factors Influencing and Affecting Social Networking games)

The above table shows that the coefficient of correlation value. The relationship between Level of satisfaction in social networking games and privacy and security issues in digital world is 0.196. This indicates that there is a low level of positive relationship between these variables in Social networking games. Thus the null hypothesis H_1 is rejected. (There is no significant difference between Level of satisfaction in social networking games and privacy and security issues in digital world)

Table No: 5. Cronbach's Alpha and KMO, Bartlett's Test of Sphericity

The Reliability and Validity test was done on the 28 variables that are believed to influence the Consumer's Behaviour towards Social Network Gaming Business and Consumer Protection in the Digital World. Exploratory factor analysis was conducted and the results of sampling adequacy showed the following results.

Table -5

Cronbach's Alpha and KMO Bartlett's Test of Sphericity		
Cronbach's Alpha / No of Item	0.911	28
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.675	
Bartlett's Test of Sphericity	Approx. Chi-Square	893.161
	df	378
	Sig.	0.001

Above table reveals the Cronbach's Alpha and KMO Bartlett's Test of Sphericity of 28 variables based on 7 major factors (i.e) Benefits of social network gaming, Privacy Concerns, Learning, Threats, Emotional oriented, Skill oriented, Controlling power. The calculated Cronbach's Alpha Score is 0.91 which is higher than the standard score 0.70, Hence the reliability of questionnaire is accepted. And the KMO count is 0.67 which is accepted as satisfactory count. So there is a scope for further study.

Table No: 6 Rotated Component Matrix, Eigen Value and Extraction

Factor Analysis is a useful tool for investigating variable relationships for complex concepts. It allows us to investigate concepts that are not easily measured directly by collapsing a large number of variables into a few interpretable underlying factors.

Table -6

Factor	Problem faced by the Customer	Factor Loading	Eigen Value	% of Variance	Cumulative %
Benefits of Social Network Gaming					
I	Pleasure to play	0.570	5.247	18.741	18.741
	Feel very relaxed	0.798			
	It is Exciting	0.772			
	Challenge Oriented	0.752			
	Leisure Time	0.744			
	It Relieve from Stress	0.731			
	Curiosity to play	0.773			
	Fantasy	0.710			
	Level of satisfaction in social networking games	0.646			

Table -7

Privacy Concerns					
II	Information Shared	0.740	5.223	18.655	37.396
	Lack of Firewall- Software and Hardware	0.841			
	Pop up Ad Virus	0.815			
	Lack of Security Technology Development	0.839			
	Infected Gaming	0.821			
	Deleting the data and account	0.802			
	Revealing Location	0.692			
Learning					
III	Increases Creativity	0.724	3.331	11.896	49.292
	Increases Team Work Ability	0.793			
	Increases Critical thinking	0.681			
	Increases Leadership Skill	0.642			
Threats					
IV	To avoid Other Activities	0.677	2.731	9.752	59.044
	Hacking	0.778			
	Controversies	0.703			

The Results the factor analysis of 28 variables based on 7 major factors. (i.e) Benefits of social network gaming, Privacy Concerns, Learning, Threats, Emotional oriented, Skill oriented, Controlling power. It shows the cumulative percentage of variance, its value is 75.844 percent. And the Rotated component matrix shows factor-I with eigen value of 5.247 and its extraction from percentage of variance is 18.741. This shows that the factor-I is combination of 9 variables. Factor-II with eigen value of 5.223 and its extraction from percentage of variance is 18.655. This shows that the factor-II is combination of 7 variables. Factor-III with eigen value of 3.331 and its extraction from percentage of variance is 11.896. This shows that the factor-III is combination of 4 variables. Factor-IV with eigen value of 2.731 and its extraction from percentage of variance is 9.752. This shows that the factor-IV is combination of 4 variables. Factor-V with eigen value of 1.862 and its extraction from percentage of variance is 6.650. This

shows that the factor-V is combination of 2 variables. Factor-VI with eigen value of 1.519 and its extraction from percentage of variance is 5.427. This shows that the factor-VI has single variable. Factor-VII with eigen value of 1.323 and its extraction from percentage of variance is 4.723. This shows that the factor-VII has single variable.

Findings:

1. The maximum percentages of respondents are Female.
2. A maximum percentage of the respondents are in the age group of 21 to 40.
3. Maximum percentages of respondents are under graduate. 27.9% of respondents are belonging to Professional.
4. Maximum percentages of respondents are earning below 1 lakh.
5. Maximum percentages of respondents are using social networking games less than 2 times in a day.
6. The Null hypothesis is rejected, therefore, there is a statistically significant difference between Age Group and Factor Influencing and affecting the social network games consumers.
7. The null hypothesis is accepted, therefore, there is no statistically significant difference between age and Level of Awareness towards Privacy and Security Issues in the Digital World.
8. There is no significant difference among Gender with respect to Influencing and affecting the Social Network games consumers and Level of Awareness towards Privacy and Security Issues in the Digital World. Therefore null hypotheses are accepted.
9. There is a high level of positive relationship between Level of satisfaction in social networking games and Factors Influencing and Affecting Social Networking games by the consumers.
10. There is a low level of positive relationship between Level of satisfaction in social networking games and privacy and security issues in digital world.
11. The reliability and validity of the study is highly satisfactory.

Suggestions and conclusion:

Social Network Gaming is an entertaining factor for both Male and Female consumers. Respondents have neutral opinion on Consumers are Influencing and affecting by the Social Network games and Level of their Awareness towards Privacy and Security Issues in the Digital World. Relationship between Level of satisfaction and Factor Influencing and Affecting have a positive sign, it reveals customer have both influencing and affecting attitude. And the respondents are not satisfied with privacy and security issues in digital world, since it shows low positive relationship. Especially Young respondents are aware of Privacy and security issues which threatening the respondents from using Social network gaming in Digital world. The findings suggest that the Social network gaming web portals should resolve their privacy issues immediately and have to aware of newly updating firewalls.

Reference

Aleksandra Korolova August 2012¹ “Protecting Privacy When Mining and Sharing user Data –A Dissertation” submitted to the department of computer science and the committee on graduate study of Stanford university in partial fulfillment of the requirement for the degree of Doctor of Philosophy pg no 129.

Janne Paavilainen, Juho Hamari, Jaakko Stenros, and Jani Kinnunen (2013)² Simulation & Gaming 44(6) Social Network Games: Players' Perspectives Simulation & Gaming 44(6) 794 –820 © 2013 SAGE Publications Reprints and permissions: sagepub.com/journalsPermissions.nav DOI:10.1177/1046878113514808 sag.sagepub.com pg no: 804.