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IMPACT OF ADVERTISEMENTS IN SOCIAL MEDIA ON PURCHASING BEHAVIOUR OF ASSOCIATE STUDENTS

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Abstract
With the widespread use of smart phones, immediate access to information, rapid communication and social media with it, has led to changes in consumer shopping habits. Individuals are now questioning their purchasing decisions through social media, discussing within their communities or forming their preferences by advertising and campaigns of companies in social media. Companies which are aware of this, are making efforts to use the social media in a most effective way. In this study, impact of advertisements of companies in social media, also commonly used by university students, on purchasing behaviour of consumers in this group was investigated. According to the results, in social media, students do research on products, gather preliminary information by following advertisements, are affected by the comments, and evaluate the recommendations. It was also observed that the positive effect on the purchasing behaviour answered by company officials to students' questions or comments for any products.

Keywords: Social media, shopping, advertisements, associate students, purchasing behaviour.

INTRODUCTION

After 2000s, social media has become definitely the most popular communication channel for everyone especially among young people. The existence of Internet-based social media has made it potential for one person to communicate with hundreds or thousands or even millions of other people about products and the

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firms that deliver them. Hence, the impact of consumer-to-consumer communications has been greatly magnified in the market. Mangold and Faulds proposed that the managers must learn to shape consumer discussions in a manner that is consistent with the organization's mission and performance goals (Mangold, Faulds; 2009). To success this, they should use some methods such as, providing consumers with networking platforms, and using blogs, social media tools, and promotional tools to engage customers. They also determined that social media encompasses a wide range of online, including blogs, company sponsored discussion boards, conversation rooms, consumer-to-consumer e-mail, customer product or service ratings websites, forums, sharing sites containing digital audio, images, movies, or photographs, and social networking websites, etc. Crittenden et. al have offered a systematic way of understanding and conceptualizing social media, as an environment of related components involving both digital and traditional media (Hanna, Rohm, Crittenden; 2011). According to them, as companies develop social media strategies, platforms such as YouTube, Facebook, and Twitter are too often treated as stand-alone elements rather than part of an integrated system. Therefore, they have highlighted a best-practice case study of an organization's successful efforts to control social media in reaching young consumers. Then, they concluded with several perceptions and instructions related to the strategic integration of social media into a company's marketing communications strategy.

A clinical report for investigating the effect of social media on children, adolescents, and families has been proposed five years ago. In report, benefits and risks of children and adolescents using social media, influence of advertisements on buying -deal with our study-, and the role of paediatricians were detailed (O'Keeffe, Clarke-Pearson,2011). Today, many social media sites display multiple advertisements such as banner ads, behaviour ads (ads on the basis of Web-browsing actions of consumers), and demographic-based ads (ads on the basis of a specific factor such as age, gender, education, marital status, professional status, etc.) that influence the buying tendencies of preadolescents, adolescents and families.

The transition from traditional media to social media has been accelerated in the past decade. Because, the difference of the impact on public relations of social media and traditional media is remarkable. The important reasons of the advantages of social media over traditional media can be determined as follows. Rapid share-ability, measuring, evaluating, and correcting the responses, absence of any geographical limitations in communication, and numerical superiority in the audience reached (Canlı, 2015).

In this paper, we aimed to observe the impact of advertisements in social media on purchasing/buying behaviour of associate students. To do this, we conducted a survey on 322 students. At first, demographic based questions such as age and gender were asked to participants. The frequencies of using social media and internet were observed. Then, before and after purchasing behaviours were measured using statements in accordance with Likert scale (Likert, 1932).

Using open-source and powerful statistical programming language R (R Core Team, 2016) and its related packages for this study (Wickham, Francois; 2016 & Revelle, 2016), reliability tests and other statistical tests were implemented and evaluated. R is an integrated suite of software facilities for exploratory and statistical data analysis and also powerful graphical display. It includes

- an effective data handling and storage capability,
- a large, coherent, integrated collection of intermediate tools for data analysis,
- graphical facilities for data analysis, and
- a well-developed, simple and effective programming language which includes conditionals, loops, user-defined recursive functions and input and output facilities.

METHOD

As data acquisition tool the survey consists of demographic-based and behaviour-based questions. All behaviour based expressions are in accordance with Likert scale and related to before and after purchasing behaviours. Likert items are used to measure respondents' attitudes to a certain question or statement. To analyse the data we coded as 1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

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Following behavioural statements -tabulated as Table 1 and Table 2- are asked to the associate students for evaluation of their buying behaviour. General statements of questionnaire containing before purchasing behaviour are listed in Table 1.

Table 1: Questionnaire for evaluation of students' behaviour before purchasing.

General Statements
Q1. Research on social media for target product.
Q2. Believe to gather reliable information for target product in social media.
Q3. Rely on comments to target product from other customers in social media.
Q4. Rely on materials for target product from seller in social media.
Q5. Rely on comments to target product from his/her friends in social media.
Q6. Prefer to buy products of firms/companies in social media which is followed by the consumer.
Q7. Positive impact of the companies which directly communicate with customers in social media.
Q8. Social media sites are suitable medium for communication between customers and sellers.
Q9. Attend to campaigns of social media companies.
Q10. Refer more resources for the target product.
Q11. Rely on all comments to target product in social media.

When the statements in Table 1 are examined, it is seen that they are based on confidence of customers in general. This confidence attitude is effected positively or negatively by the comments of other customers for same product, reliability of companies, friends, and alike. Therefore, we want to measure the power of these parameters and also attitudes of respondents before purchasing.

General statements of questionnaire containing after purchasing behaviour are listed in Table 2. After purchasing, individuals' attitudes strongly effect the sales of the companies. Due to the nature of social media, this process will be accelerated. Therefore, like customers, companies also take into consideration the use of social media and comments on it.

Table 2: Questionnaire for evaluation of students' behaviour after purchasing.

General Statements
Q12. Share in social media if he/she satisfies with the product he/she bought.
Q13. Share in the companies' pages in social media if he/she satisfies with the product he/she bought.
Q14. Share in social media if he/she does not satisfy with the product he/she bought.
Q15. Share in the companies' pages in social media if he/she does not satisfy with the product he/she bought.
Q16. Advise other social media users to buy it if he/she satisfies with the product he/she bought.
Q17. Do not advise other social media users to buy it if he/she does not satisfy with the product he/she bought.
Q18. Increase his/her satisfaction if the company in social media notice him/her with the satisfied products of it.
Q19. Change his/her decision if the company in social media notice and call him/her even he/she does not satisfy with the product he/she bought.
Q20. Increase his/her dissatisfaction if the company in social media does not notice him/her with the dissatisfied products of it.

FINDINGS

Demographic results of the survey in terms of gender are 120 male (37%) and 202 female (63%). Results of the survey in terms of age, 32 (10%) students in the range of 16 and 18, 150 (47%) students in the range of 19 and 21, 114 (35%) students in the range of 22 and 24, and 26 (8%) students in the range of 25 and over are attended.

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Table 3: Demographic structure of the respondents.

Age (in range)	Gender	Number of respondents
16 – 18	Male	12
	Female	20
19 – 21	Male	48
	Female	102
22 – 24	Male	46
	Female	68
25 – over	Male	14
	Female	12

To test the applicability of the scales of the study, Cronbach's alpha reliability coefficients are calculated as 0.90 for both before and after purchasing behaviours. This means that the statements of the survey are strongly suitable for evaluating the behavioural items. Both first and second scales have 5 points as mentioned before. Table 4 tells us what percentage of people gave each response to each of the items (i.e., for Q1, 2% of participants answered as "1 = strongly disagree", 10% answered as "2 = disagree", 9% answered as "3 = neutral", 53% answered as "4 = agree", and 26% answered as "5 = strongly agree". This is the same for other statements.). According to the analysis, except Q5 and Q9, the other nine statements decreases the reliability coefficient to 0.89 if they will be dropped. Nonetheless, the first scale is more reliable and suitable for evaluation, but they should not be dropped.

Table 4: Response frequency for each item at first scale

	Frequency				
Questions/Responses	**1**	**2**	**3**	**4**	**5**
Q1	0.02	0.10	0.09	0.53	0.26
Q2	0.03	0.18	0.23	0.40	0.16
Q3	0.01	0.12	0.26	0.43	0.17
Q4	0.03	0.21	0.26	0.35	0.14
Q5	0.03	0.05	0.11	0.57	0.24
Q6	0.02	0.07	0.19	0.52	0.20
Q7	0.02	0.09	0.15	0.57	0.17
Q8	0.02	0.11	0.11	0.57	0.19
Q9	0.08	0.25	0.10	0.39	0.18
Q10	0.02	0.13	0.11	0.53	0.21
Q11	0.02	0.11	0.11	0.54	0.22

Table 5: Response frequency for each item at second scale

	Frequency For Each Item				
Questions/Responses	**1**	**2**	**3**	**4**	**5**
Q12	0.05	0.19	0.11	0.49	0.16
Q13	0.06	0.22	0.12	0.47	0.14
Q14	0.04	0.17	0.14	0.51	0.14
Q15	0.03	0.19	0.14	0.46	0.18
Q16	0.03	0.12	0.13	0.55	0.16
Q17	0.04	0.09	0.14	0.52	0.20
Q18	0.02	0.17	0.11	0.53	0.18
Q19	0.04	0.33	0.11	0.35	0.16
Q20	0.06	0.32	0.13	0.33	0.16

Table 5 presents the results same as Table 4. Histograms are used to show results of each categories. To evaluate the results statistically, Wilcoxon rank sum test and Kruskal-Wallis rank sum test are implemented. To observe the effect of gender, we used Wilcoxon rank sum test. According to the results, there is a strong

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evidence that the gender of participants significantly effects both Q19 (p-value = 0.009379<0.05) and Q20 (p-value = 0.004411<0.05) statements. As Table 5 is carefully examined, frequency of "disagree" and "agree" items are approximately equal to each other for statements Q19 and Q20. The gender factor has led to emerge these statements in this way. To evaluate the effect of age, Kruskal-Wallis rank sum test was used. As a result, there is a strong evidence that Q1 (p-value = 0.001612), Q9 (p-value = 0.0165), Q11 (p-value = 0.03092<0.05), and Q15 (p-value = 0.04466<0.05) statements are effected by the age of respondents.

After demographic questions, descriptive questions are important parts of surveys or researches before direction to participants. These questions are useful to identify and classify the audiences. Here to identify and classify the participants some extra special questions were directed to them. These questions are listed in Table 6 and the results of questions are shown in Figure 1 to 7, respectively.

Table 6: Descriptive questions directed to participants.

Descriptive Questions
1. How many hours in average do you spend when you go on the Internet?
2. Connecting to the Internet, which device do you use most?
3. How much time do you spend on social networking sites when using the Internet?
4. How many months or years do you use the social network sites on behalf of social communication?
5. Did you check first your social networks when you connect to the Internet?
6. What is your visiting frequency of your social network site/s actively used?
7. How many hours in average are you spending time on social networks daily?

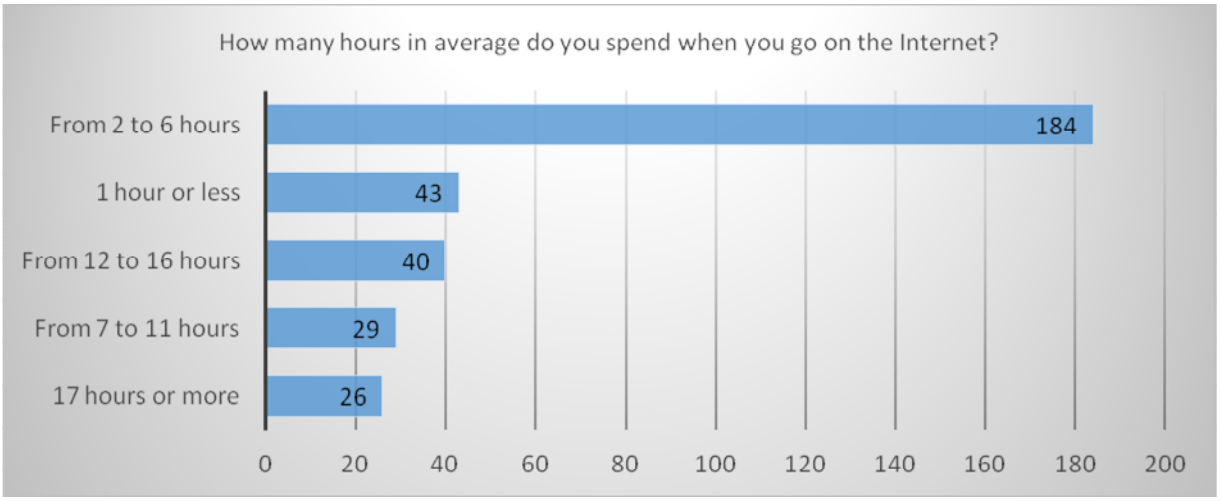

Figure 1: Spending time on the Internet

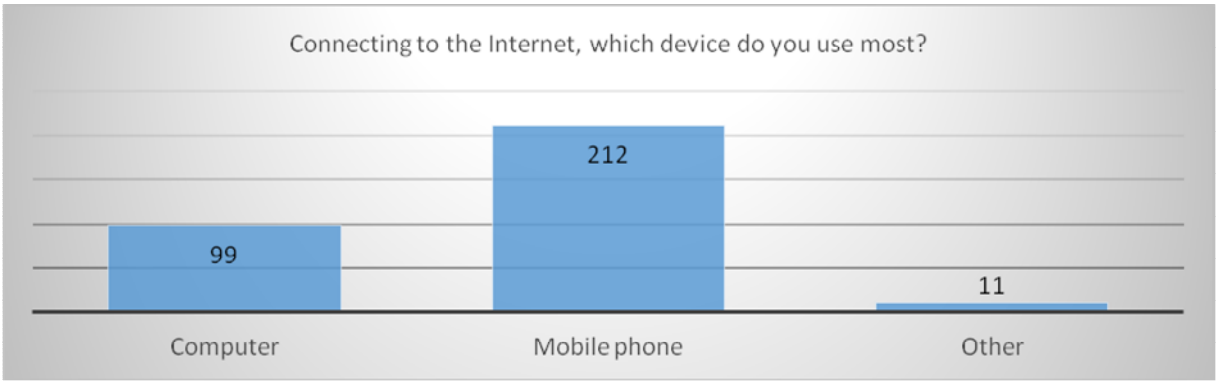

Figure 2: Distribution of kind of devices to connect to the Internet.

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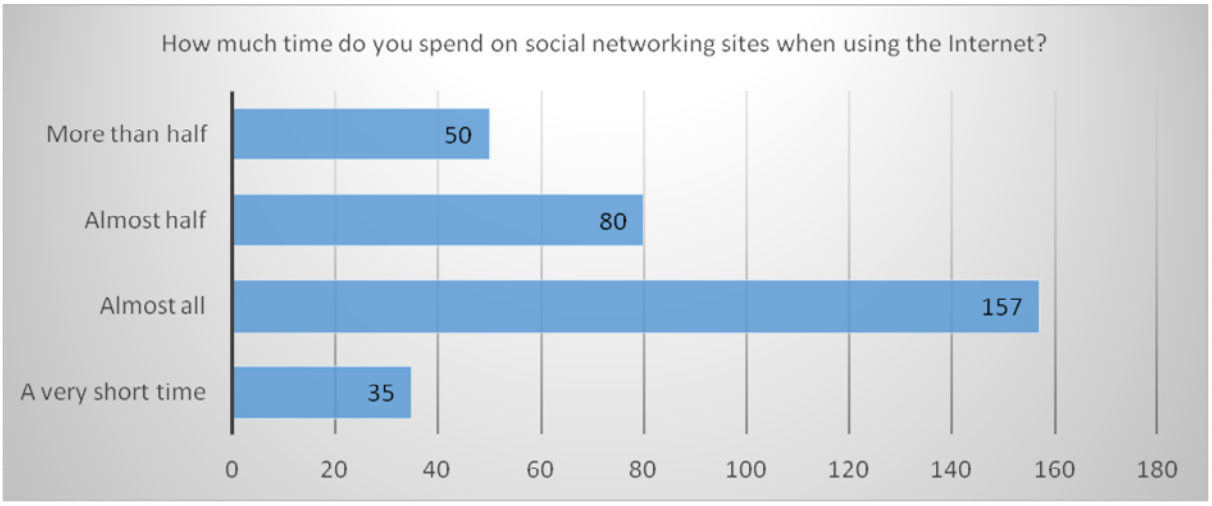

Figure 3: Spending time for social network when using on the Internet.

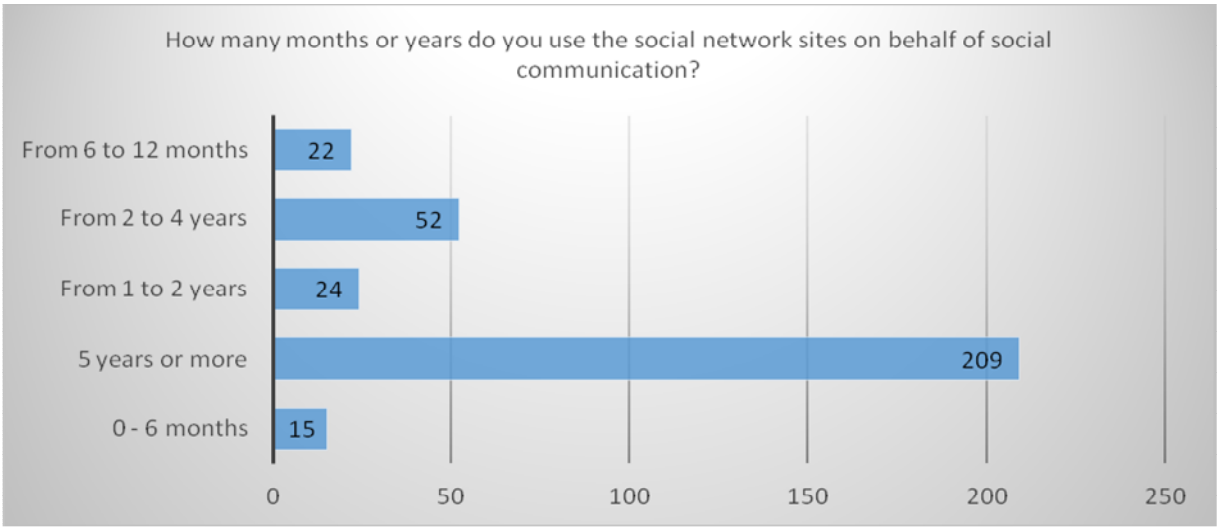

Figure 4: Distribution of time to use social network sites from beginning.

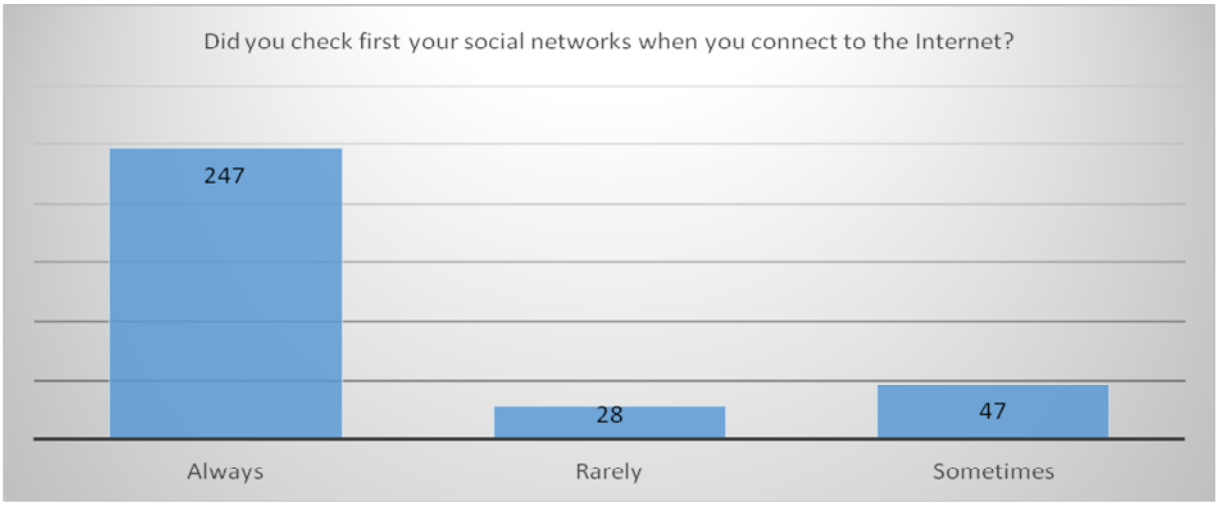

Figure 5: Frequency of first checking social network sites when connecting to the Internet.

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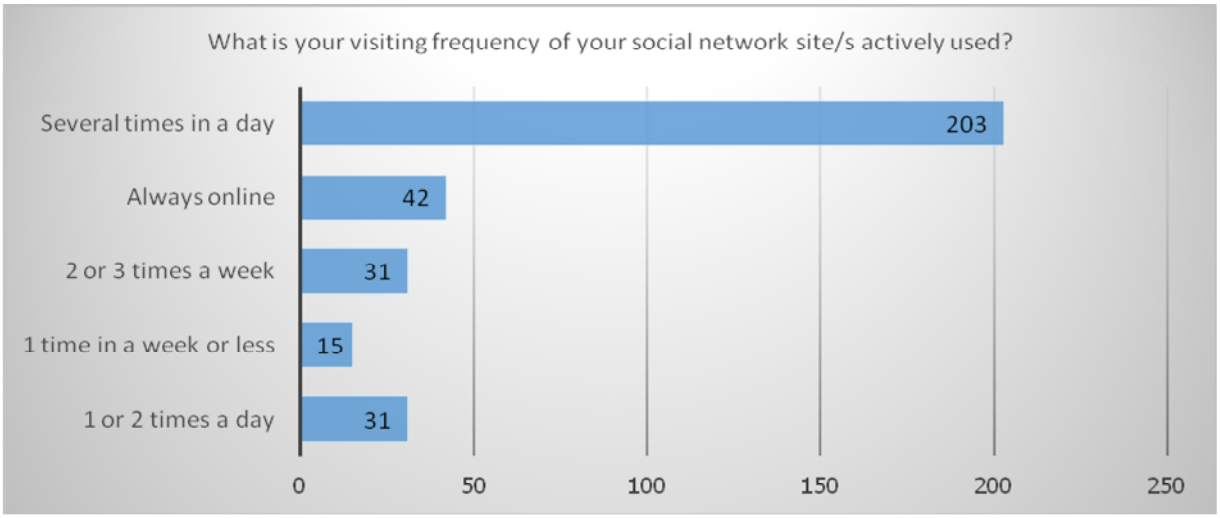

Figure 6: Distribution of visiting frequency.

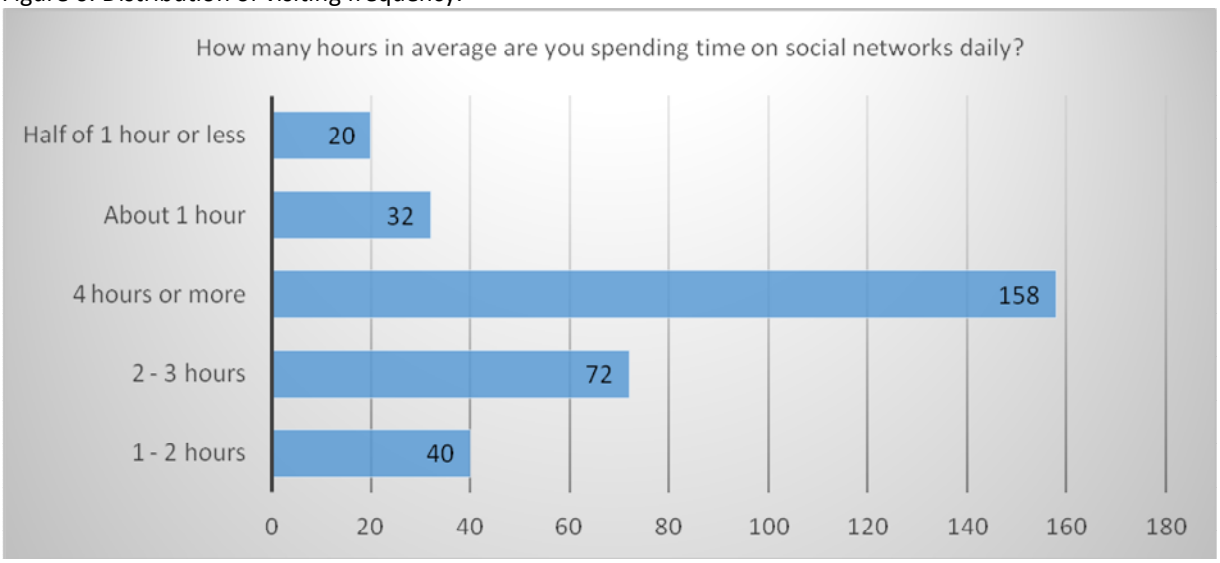

Figure 7: Spending time on social networks daily.

DISCUSSION AND CONCLUSION

Two different scales in accordance with Likert scale (containing 5 points/levels) were implemented and their results were evaluated using some statistical tests in R. Degree of participants of this study were associate students. As seen in Findings section, age and gender factors were found to be effective for measurement of behavioural statements. 87% of respondents spend their time on the Internet at least 2 hours. This means that individuals face with advertisements during surfing on the Internet. 66% of respondents use mobile phones. This means that they can use the Internet and social media without any restriction of time and placement. 89% of respondents use social media tools at least half of spending time for the Internet. Considering this case, companies' advertisements can reach numerous audience. 65% of respondents use social media more than 5 years. This means that companies should use effectively social media for advertisements hereafter. 77% of respondents firstly control their social media tools as soon as connect to the Internet. This case is an indicator of individuals' habit for the use of social networking. 63% of respondents actively use social network sites several times in a day. In addition, half of the respondents spend 4 hours or more for the use of social networking in a day. All these results show that advertisements can reach all audiences who actively use social networking.

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