

Chapter 4

Data Analysis and Interpretation

CHAPTER-4

DATA ANALYSIS AND INTERPRETATION

4.0.0 Introduction

The previous chapters in the study deal with the conceptual and theoretical aspects of the study, detailed review of literature, and methodology in the following chapter. After that, the objectives and hypotheses of the research are collected, followed by scoring and tabulation of the data, the analysis and finally the interpretation is done. The present study focuses mainly on the analysis and interpretation of the data that were collected for the study.

4.0.1 Analysis of the Data

Data is a collected form of facts for extracting factual information from the set of raw data. Analysis of data in a structured and systematic procedure of categorizing, arranging, ordering, and summarizing the data to discover facts and for getting answers related to the research purpose. The basic purpose of data analysis is to reduce data into a simple and interpretable form so that inferences may be drawn from it (Kothari, 2004). Analysis and interpretation of data are helpful in knowing the relationship between the variables and drawing appropriate conclusions. Data analysis is the process of breaking the data into smaller parts to extract useful information for forecasting the outcomes. Careful analysis with the help of appropriate statistical techniques leads to better prediction and accurate assessment. Therefore, data analysis is an important step that involves a whole composite procedure for assessing data utilizing appropriate descriptive and inferential statistics.

4.0.2 Objective-wise Analysis, Interpretation and Discussion of Results

To facilitate and bring clarity, the entire analysis is presented and the results based on it are discussed under the following sections –

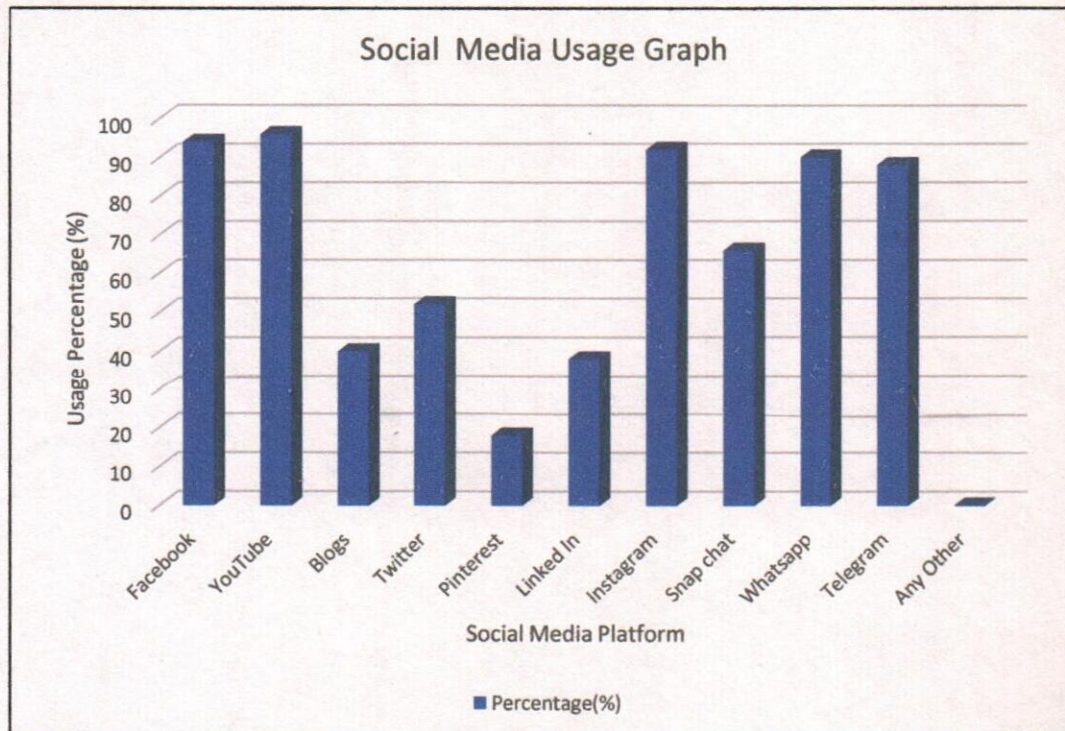
OBJECTIVE-1 To study the types of social media platforms used by the senior secondary students.

Table 4.1

social media platforms used

SL.NO	SOCIAL MEDIA PLATFORMS	FREQUENCY	PERCENTAGE
1.	Facebook	47	94%
2.	YouTube	48	96%
3.	Blogs	20	40%
4.	Twitter	26	52%
5.	Pinterest	9	18%
6.	Linked In	19	38%
7.	Instagram	46	92%
8.	Snap chat	33	66%
9.	What's app	45	90%
10.	Telegram	44	88%
11.	Any other	0	0%

Figure 4.1: bar graph showing the social media platform used by senior secondary students



From the Table 4.1, it is revealed that most of the students use social media platforms such as You Tube (96%), Face book (94%), WhatsApp (90%), Instagram (92%), and telegram (88%) and the social media platforms such as Blogs (40%), Twitter (52%), Linked In (38%), Snapchat (66%), and Pinterest (18%) were used in lowest number by the senior secondary students respectively.

Shao and Seif (2014) showed that many social media applications such as Facebook, Twitter, Google+, Blogs and Wikis were frequently used by the responded students

Table 4.2

social media usage time

SL.NO	SOCIAL MEDIA USAGE TIME	FREQUENCY	PERCENTAGE
1.	Up to 1 hour	12	24%
2.	1-2 hours	13	26%
3.	2-3 hours	8	16%
4.	3-4 hours	11	22%
5.	As needed	6	12%

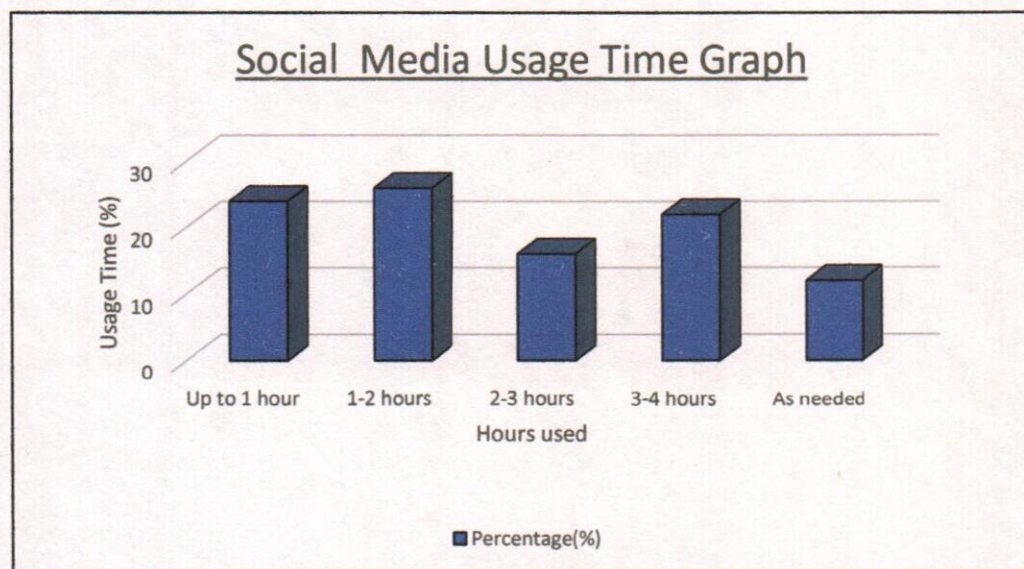


Figure 4.2: Bar graph showing the social media usage time by senior secondary students

From table 4.2, it was observed that the senior secondary students used social media for, up to 1 hour (24%), 1-2 hours (26%), 2-3 hours (16%), 3-4 hours (22%) and as needed (12%).

Table 4.3

social media usage purpose

	Purpose	Frequency	Percentage
1.	Due to peer pressure	10	20%
2.	for entertainment	43	86%
3.	For communication	44	88%
4.	For media creation	29	58%
5.	For self-presentation	32	64%
6.	For academic needs	45	90%
7.	For meeting new people	33	66%
8.	For maintaining existing relationship	35	70%
9.	For general information	40	80%
10.	Just to see what others do	25	50%
11.	Any other	7	14%

From table-4.3 it is seen that the more number of students used social media for Academic needs (90%), for communication (88%), for Entertainment (86%), for General information (80%) and moderate number of students used social media for-for maintain existing relationships (70%), for meeting new people (66%), for self-presentation (64%), for media creation (58%), for updating profile (58%) and few number of students used social media Due to peer pressure (20%), Just to see what others do (50%) and others (14%).

Shah (2001) opines informative use of internet has a positive effect, while using as recreational usage of internet, they have drastic impact on them.

Oghogho Uyi Osazee (2015) results depicted social media use for socialising, relationship building through which social capital of bonding and bridging social relationships, with significant resource benefits to respondents.

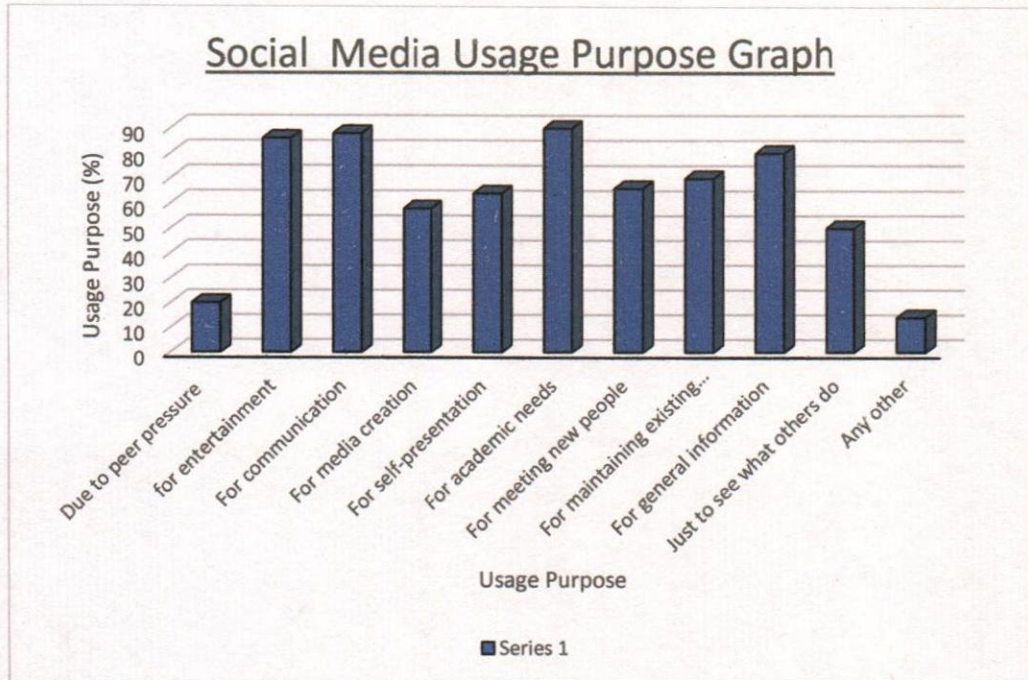


Figure 4.3: Bar graph showing the social media usage purpose by students

Table 4.4

Social media usage purpose for academic needs

Academic needs	Yes	No	May be
Percentage	88%	4%	8%
Frequency	44	2	4

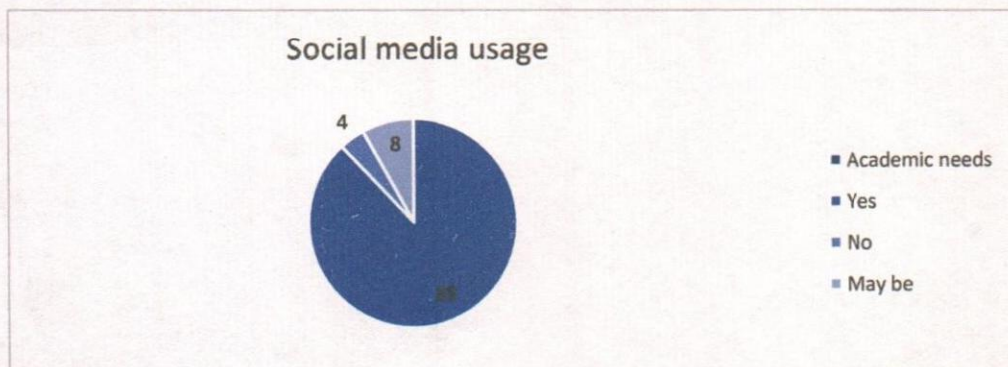


Figure 4.4: Showing the social media used for academic needs

From table 4.4 it is observed that the maximum percentage (88%) of students used social media for their academic needs, where as 8% did not confirm about the social media uses as well as 4% students did not use social media for academic needs.

OBJECTIVE-2 –

2.1-To compare the mean scores of academic achievements of senior secondary students.

2.2- To compare the mean scores of academic achievements of senior secondary male and female students.

Hypothesis-2: - There is no significant difference in the mean scores of academic achievements of male and female senior secondary students.

To find the mean score independent t-test was applied and required value were obtained, the calculated value is represented in table form in table 4.5

Table 4.5

Gender wise M, N, SD and t-value of academic achievement of senior secondary students

GENDER	N	MEAN	SD	t- VALUE
FEMALE	30	75.45	13.63	3.01
MALE	20	64.39	11.16	

*Significant

From the table, it is revealed that the obtained t' value is 3.01, which is greater than the table value (2) at 0.05 level of significance. Hence, there exist a significant difference between female and male students with reference to their academic achievement.

Therefore, the null hypothesis is rejected and there is significant difference in the mean scores of academic achievements of male (64.39) and female (75.45) senior secondary students. Here, female students have higher achievement (75.45) in comparison to their counterparts.

The 't' test result reveals the existence of significant difference between male and female senior secondary school students in their academic achievement, here female have a higher academic achievement than their counterparts, this shows that female students

take up their academic activities assigned by their teachers with more attention and care from time to time.

OBJECTIVE-3- To compare the mean scores of social media usage of senior secondary students.

Hypothesis-3: - There is no significant difference in the mean scores of social media usage of male and female senior secondary students.

To find the mean score, independent t- test was applied and the required values were obtained. The calculated values are represented in tabular form in table 4.6.

Table 4.6

Gender wise M, N, SD and t-value of social media score of Senior Secondary Students

GENDER	N	MEAN	SD	t-VALUE
FEMALE	30	26.57	4.083	2.12
MALE	20	28.95	3.591	

*Significant

From the table, it is revealed that the obtained t' value is 2.12, which is greater than the table value (2) at 0.05 level of significance. Hence, there exist a significant difference between female and male students with reference to their social media score.

Therefore, the null hypothesis is rejected and there is significant difference in the mean score of social media of male (28.95) and female (26.57) senior secondary school students. Here, male students have higher social media score (28.95) in comparison to their counterparts.

The 't' test result reveals the existence of significant difference between male and female senior secondary school students in their social media usage. male students are higher in their social media usage than the female students. it implies the fact that the female senior secondary students have better understood their social media usage sites than their own counter parts. The reason may be that the female students take up their academic activities assigned by their teachers with more attention and care from time to time, this habit of doing the academic activities with more sincerity and care might have helped them to understand their limitation to the usage of social media, they used the network media only to supporting their learning environment.

OBJECTIVE-4- To study the relationship of academic achievement with social media usage of senior secondary students.

Hypothesis-4: - There is no significant relationship between academic achievement with social media usage of senior secondary students.

To find the relationship between the independent and dependent variable, Pearson's Product moment correlation was applied and the value of correlation was obtained. The calculated value is represented in table 4.7.

Table 4.7
correlation between dependent and independent variable.

Predictive variable Achievement)	Criterion variable (Academic Total sample (N=50)
Social media	- 0.357

**Correlation is significant at 0.05 level (2-tailed)*

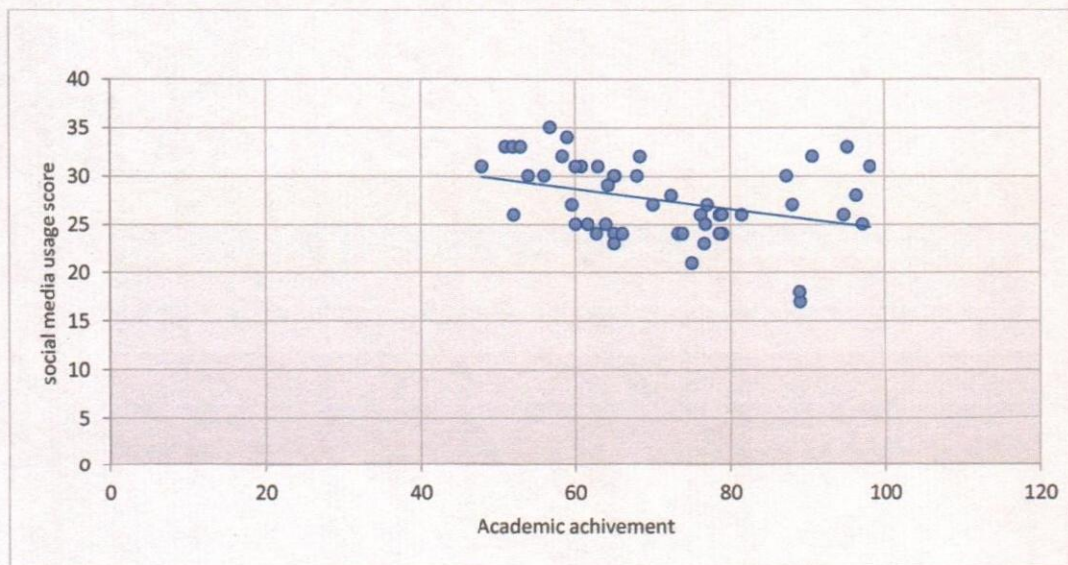


Figure 4.5: *The scatter plot of correlation between academic achievement and social media of senior secondary students*

A low negative correlation is seen between the social media and academic achievement of senior secondary students. i.e. $r = -0.357$, $p < 0.05$ is significant at 0.05 level of significance. Moreover, as per Cohen's (1998) guidelines for the effect size, the value

of Pearson's correlation coefficient ($r = -0.357$) indicates a low strength of correlation between social media usage and academic achievement. As the data points on the scatter plots closely resembles an inverse relationship as predictor variable i.e., academic achievement and criterion variable i.e., social media usage, line is in downward direction that shows that they both move in the opposite direction. It can be interpreted that changes in predictor variable i.e., social media usage is associated with opposite changes in criterion variable i.e., academic achievement. This shows that social media usage is low and negatively related to the criterion variable i.e., academic achievement. The results lead to conclude that higher social media scores of senior secondary school students, the lower will be their academic achievement and vice-versa

There is low negative correlation between social media usage and academic achievement of Senior Secondary Student, as during the covid-19 outbreak there are online classes and students were mostly utilising social media platforms such as WhatsApp, telegram, and many more for chatting and connecting with friends and teachers and for academic activities also, but too much engaging in the social media effects the academic achievement of the students negatively. However, the social media now becomes a part of the student's day to day life, therefore though the correlation is negative but low.

The findings of the study collaborated with Habes Mohammed, Alghizzawi Mahmoud, Khalaf Rifat, Salloum A. Said and Ghani Abd. Mazuri (2018) examined the student's performance in the higher educational universities. It was found that high involvement in social networks that make students lose focus on academic responsibilities and negatively affect their academic result and Kavita, (2015) had conducted a study on "The influence of social media on Indian students and teenagers". This paper presents impact of social media on Indian students and impact on teenager's life. The results found that more than 85% of college students and teenagers use social media networks. Social networking websites expect a very negative effect of every people such as teenagers, young adults.

However, contradictory finding is reported by Zahid Amin and Ahmad Mansoor et.al (2016) investigated the impact of social media of Student's Academic Performance. It was found that the social media sites like Facebook, twitter, Google+ and Skype capture the student's attention for study and affecting positively their academic Grade points

and Harshit Lad (2017) analysis of positive and negative effect of social media on education. The study recommended the use of social media has many positive aspects but it should be used in a limited way.

Thus, the variable (social media usage) is negatively related to the criterion variable i.e., academic achievement of total sample of senior secondary students. It shows increase or decrease in social media use causes inverse alteration in the academic achievement of students. Therefore, the null hypothesis i.e., 'there is no significant relationship of academic achievement with social media usage of senior secondary students' is rejected.