Gokhale Education Society's

H.P.T. Arts & R.Y.K. Science college, Nashik-422005

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DEPARTMENT OF STATISTICS

CERTIFICATE

This is to certify that the project work entitled **"EFFECT OF SOCIAL MEDIA ON HUMAN LIFE"** is a bonafide work carried out by

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With partial fulfilment for the statistics project of the Savitribai Phule Pune University during the year 2019-20. The project report has been approved as it satisfies the academic requirements in respect of Project Work prescribed for the said degree.

Guide		Head of department
Mr. U. R. Yeole	External Examinar	Prof .Mrs.V. S. Joshi

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We would like to extend the special thanks to our respondents who gave us fruitful information to analyse the effect of social media.

And finally the students of our college, friends and family for their support without which the project could not have been a successful one.

Heartfelt gratitude to all of you.

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INTRODUCTION

Let us begin with " WHY WAS SOCIAL MEDIA INVENTED ? ". Our mesmerizing globe that is the Earth is so huge that it is practically impossible to connect yourself with a far located dear one. So, several modes were invented to cater this shortage :-

1. Postal service in 550 bc
2. Telegraph in 1792
3. Pneumatic post in 1865
4. Telephone in 1890
5. Radio in1891
6. Supercomputers in 1940
7. And finally, Internet realy charts in 1990 .

So vividly we can observe that, Social media was primarily invented for "CONNECTIVITY AND EFFECTIVE COMMUNICATION"

Now let us see what is the current purpose of social media handlers. There is a very thin line between Need and Greed and it hardly takes anything to erase it off for personal gains. Such was the condition and mindset of businessmen and inventors when they got to know about "CRAZE" of social media among people. What was required were just few more attractive sites and they soon got discovered :-

1. Six degrees in 1997
2. MySpace and LinkedIn in 2000's
3. Photobucket and flickr in 2005 and 2004 respectively
4. Youtube in 2005
5. FB and Twitter in 2006

We now present our topic of study " EFFECT OF SOCIAL MEDIA ON HUMAN LIFE". Not just the reason we're on the verge of passing out our Degree Programme but also the reason that social media has greatly affected the world made us select this topic.

Now, why do we need to study this topic ? In the entire world the youth has been the backbone of progress in every nation. We being Indians have the largest proportion of youth in our nation India i.e. 34.33%.

You would never like to think of your father getting ill and stop working that fears you of starvation. Such is the condition with a country,it will never want its youth to be misleaded and engrossed in venial tasks wasting their and country's valuable resources .

Now, What are we trying to test in our project ? " ALL STUDY AND NO PLAY MAKES JACK A DULL BOY". But what if jack is interested only in playing virtual games like PUBG,COC,Pokemon Go,etc. Several researchers find it most prominent reason of depression and major suicide cases amongst youth around the globe.

Moreover, the age old good habit of reading your best friends i.e. THE BOOKS, has been giving the nation flabbergasting thinkers who brought about a revolution in several fields of progress for the nation. In comparison to them, what are the youth of today having stored in their most unique god's gift, Yes we are talking about BRAINS. They have in their minds:- Gaming, online surfing, likes and dislikes to the posted articles and finally a small amount of educational thought as it will earn them bread and butter.

So, following aspects need to be tested:-

1. How does the youth uses the social media?
2. What are the health impacts of social media on humans?

3.How much time is adequate to be spent on social media and with family?
4.Can online business be flourished on social media ?

5.Are people becoming victim of terror activities through social media?

6.Is the performance in studies benefited by social media?

7.How is the psychology of users affected by social media ?

After the project we will be able to conclude over the following factors :-

1. What is the overall impact of social media on Human life?
2. Can working age group consider social media as a stress reliever ?
3. Should students prefer online tutorial?
4. Which age group should be careful about getting terror trapped?
5. Which gender says Digital Marketing is good option ?

How will our project benefit future users, could be evident from our conclusions. We will also provide the essential opinions of our repliers so that, the one who refers or evaluates our project gets an idea of present scenario to be safe and lead a happy and healthy life.

OBJECTIVES

- To study the effect of Social Media on Educational Performance.
- To study the effect of Social Media on health of people.
- To study the effect of Social Media on preference to Digital Marketing using Social Media.
- To study whether various Social Media platforms could be used for educating Rural Students.
- To study the effect of time varying use of Social Media on Family Relations.
- To study the Overall Impact of Social Media on Human Life.
- To study whether which age group needs to be careful from various Terror Agendas.
- To study whether Social Media acts as a stress reliever for working people.

QUESTIONNAIRE

1. **What is your name?**

2. **What is your gender?**
   a) **Male**
   b) **Female**
3. **Your age?**
   a) **15-35**
   b) **35-55**
   c) **55 and above**
4. **Do you use social media?**
   a) **Yes**
   b) **No**

5. **What is your purpose of using social media?**
   a) **Entertainment**
   b) **Social awareness**
   c) **Employment**
   d) **Educational purpose**
   e) **All of the above**
6. **How do you use social media to entertain your self?**
   a) **Online surfing (What's app,Facebook,Instagram)**
   b) **Web series**
   c) **Gaming (Pubg,call of duty,coc,etc.)**
   d) **Movies**
   e) **All of the above**
7. **Do you think that social media is good platform to express your thoughts?**
   a) **Yes**
   b) **No**
8. **Have you met all your social friends in real life?**
   a) **Yes**
   b) **No**
9. **If yes, do you spend quality time with them ?**
   a) **Yes**
   b) **No**
10. **How much time do you spend on social media?**
    a) **Less than 1 hr.**
    b) **1hr – 2 hr.**
    c) **2hr – 3 hr.**
    d) **More than 3 hr.**

11. What type of information do you share on social media?

a) Educational
b) Job related
c) socially helpful
d) Any other

12. Do you use social media for educational purpose?

a) Yes
b) No

13. Which site/app do you follow?

a) Byju's
b) Unacademy
c) Youtube
d) 2 and 3

14. Do you prefer online tutorials to offline tutorials?

a) Yes
b) No

15. To what amount they are helpful to you?

a) Satisfactory
b) Moderate
c) Good

16. Do you think that online tutorials has improved your performance?

a) Yes
b) No

17. Can online tutorials be used for educating rural students?

a) Yes
b) No

18. From the time you are using social media do you think your performance in exams has degraded?

a) Yes b) No

19. Are students getting sufficient help from various social platforms?

a) Yes

b) No

20. Do you get job related information on social media?

a) Yes

b) No

21. Which web/app have referred for job related information?

a) Linkedin

b) Indeed

c) Sarakarinaukari.com

d) Joinindianarmy.nic.in

e) Upsc.gov.in

22. Have you applied for any job online but didn't get any reply for appointment?

a) Yes

b) No

23. In your opinion how social media can be further used for creating job opportunities?

---

24. Do you use social media as an income source?

a) Yes

b) No

25. If yes, then in what way?

a) Youtube

b) Playing apps

c) Digital marketing

d) others

26. If you do digital marketing have you been benefited by it?

a) Yes

b) No

27. Do you think, having youtube channels benefits you economically and socially?

a) Yes

b) No

28. If you are working after coming home do you spend time with your family or social media?

a) Social media

b) Family

29. If social media, then how much time do you spend with your family?

a) Less than 1 hour

b) 1 hour

c) 2 hour

d) More than 2 hours

30. If less than 1 hour then do you think it spoils your family relations?

a) Yes

b) No

31. If yes ,then in your opinion what could be done for improvement?

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32. Do you think due to smartphones outdoor gaming interest has reduced?

a) Yes

b) No

33. To what extent/limit smartphones have affected your psychological behaviour?

a) Less

b) Moderate

c) Excessive

34. Do you think social media acts as stress reliever for working people?

a) Yes

b) No

35. Have you heard/ observed person who has been affected with disease like cance, tumor,etc. due to over use of mobile?

a) Yes

b) No

36. In your opinion, use of smartphones has which type of effect on human health on the basis of social, economical, psychological,physical factors?

a) Positive

b) Negative

37. Do you think , social media is used as weapon for terror activities?

a) Yes

b) No

38. If yes, then which age group is most affected?

a) 15-35

b) 35-55

c) 55 and above

39. Why do you think your selected age group in previous question is most affected?

DATA

CODINGS FOR ANALYSIS OF DATA

1. Your Gender?	Coding
a) Male	1
b) Female	0

2. What is your age?	Coding
a) 15-35	1
b) 35-55	2
c) 55&above	3

3. Do you use social media???	Coding
a) Yes	1
b) No	0

4. what is your purpose of using the social media?	Coding
a) Entertainment	1
b) Social awareness	2
c) employment	3
d) educational purpose	4
e) all of the above	5

5. How do you use social media to entertain your self?	Coding
a) Online surfing	1
b) Web series	2
c) Gaming	3
d) Movies	4
e) All of the above	5

6. Do you think that Social media is a good platform to express your thoughts?	Coding
a) Yes	1
b) No	0

7. Have you met all your social friends in real life?	Coding
a) Yes	1
b) No	0

8. If yes,Do you spend quality time with them?	Coding
a) Yes	1
b) No	0
c) No answer	2

9. How much time do you spend on social media?	Coding
a) Less then 1 hr.	1
b) 1 hr.-2 hr.	2
c) 2 hr.-3 hr.	3
d) More then 3 hr.	4

10. What type of information do you share on social media?	Coding
a) Educational	1
b) Job related	2
c) Socially helpful	3
d) Any other	4

11. Do you use social media for educational purpose?	Coding
a) Yes	1
b) No	0

12. Which educational sites / app do you follow?	Coding
a) Byju’s	1
b) Unacademy	2
c) Youtube	3
d) 2&3	4
e) No answer	5

13.. Do you prefer online tutorials instead of offline tutorials?	Coding
a) Yes	1
b) No	0

14.To what amount are they helpful to you?	Coding
a) Satisfactory	1
b) Moderate	2
c) Good	3
d) No answer	4

15. Do you think that Online tutorials has improved your performance?	Coding
a) Yes	1
b) No	0

16. Can online tutorials be used for educating rural students?	Coding
a) Yes	1
b) No	0

17. From the time you are using Social media do you think your performance in exams has degraded?	Coding
a) Yes	1
b) No	0
c) No answer	2

18. Are students getting sufficient educational help from various social platforms?	Coding
a) Yes	1
b) No	0

19. Do you get job related information on social media?	Coding
a) Yes	1
b) No	0

20. Which web/ app have you referred for job related information?	Coding
a) Linkedin	1
b) Indeed	2
c) Sarkarinaukari.com	3
d) Joinindian army.com	4
e) Upsc.gov.in	5
f) No answer	6

21. Have you applied for any job online but didn't get any reply for appointment?	Coding
a) Yes	1
b) No	0
c) No answer	2

23. Do you use social media as an income source?	Coding
a) Yes	1
b) No	0

24. If yes, then in what way?	Coding
a) Youtube channels	1
b) Playing apps	2
c) Digital marketing	3
d) Other	4
e) No answer	5

25. If you do digital marketing have you been benefited by it?	Coding
a) Yes	1
b) No	0
c) No answer	2

26. Do you think, having YouTube channels benefits you economically and socially?	Coding
a) Yes	1
b) No	0

27. If you are working , after returning home do you spend time with your family or with social media?	Coding
a) Yes	1
b) No	0
c) No Answer	2

28. If you are giving time to social media,then how much time do you spend with your family?	Coding
a) less than 1 hr.	1
b) 1hr.	2
c) 2hr.	3
d) More then 2 hr.	4
e) No answer	5

29. If less than 1 hour then do you think it spoils your family relations?	Coding
a) Yes	1
b) No	0
c) No Answer	2

31. Do you think due to smartphones outdoor gaming interest has reduced?	Coding
a) Yes	1
b) No	0

32.To what extent/limit smartphones have affected your psychological behaviour?	Coding
a) Less	1
b) Moderate	2
c) Excessive	3

33. Do you think social media acts as stress reliever for working people?	Coding
a) Yes	1
b) No	0

34. Have you heard / observed about any person who has been affected with disease like cancer , tumor ,etc. due to over use of Mobile?	Coding
a) Yes	1
b) No	0

35. In your opinion, use of smartphones has which type of effect on human health on the basis of social, economical, psychological, physical factors?	Coding
a) Positive	1
c) Negative	0

36. Do you think, social media is used as weapon for terror activities?	Coding
a) Yes	1
b) No	0

37. If yes, then which age group is most affected?	Coding
a) 15-35	1
b) 35-55	2
c) 55 and above	3
d) No answer	0

STATISTICAL TOOLS

1. Diagrammatic and graphical representation:-
   a) Bar graphs.
   b) Multiple Bar graphs.
   c) Pie chart.
2. Chi-square test for independence of two attributes.
3. Proportion test.
4. Logistic regression.
5. Statistical software used:-
   a) Ms-Excel.
   b) R Software.

GRAPHICAL REPRESENTATIONS

Graphical Representation is a visual display of data and statistical results. It is often more effective than presenting the data in tabular form. There are many different types of graphical representations which is used depending upon the nature of data and type of the statistical results. It is very effective way to serve the purpose of comparison at a glance and revealing the patters in the data. Graphs and diagrams are easy to understand and create an effect. Graphs and charts are often used to easy understanding of large quantities of data and relationships between parts of the data. Graphs can usually read more quickly than the raw data that they are produced form. They are used in wide variety of fields and can be created by hands often on graphs papers or by computer using a chart application. Therefore, Graphs and Charts believed to be powerful tools to convey information.

• Bar Diagram

Bar graph is used frequently in practice for the comparative study of two or more items or values of single variable or a single classification or category of data. Bar diagrams are one of the easiest and the most commonly used devices of presenting most of the business and economic data. These are especially satisfactory for categorical data or series.

• Pie Chart

It is a special type of diagram used to represent the whole quantity by a circle and the Subdivision of the whole quantity is shown by the sectors of that circle. This diagram is a two dimensional diagram.

• Multiple Bar Diagram

A multiple bar diagram is used for two or three-dimensional comparison. For comparison of magnitudes of one variable in two or three aspects or comparison of magnitudes of two or three variables, rectangles in a group are placed side by side. The R-commands are similar to those used for subdivided bar plot. Only we change the default value of argument beside to true. We illustrate the construction of multiple bar plot using the following data.

• CHI-SQUARE (X^2) Test for independence of attributes:

Suppose that the given data are classified into r levels of attribute A denoted as A_1…..A_r and s levels of attribute B represented by B_1,…..B_s.

Then different class frequencies can be represented in the following tabular form:

B / A	B_1	B_2	….	B_j	….	B_s	TOTAL
A_1	O_{11}	O_{12}	….	O_{1j}	….	O_{1s}	(A_1)
A_2	O_{21}	O_{22}	….	O_{2j}	….	O_{2S}	(A_2)
….	….	….	….	….	….	….	….
A_i	O_{j1}	O_{j2}	….	O_{ij}	….	O_{is}	(A_i)
….	….	….	….	….	….	….	….
A_r	O_{r1}	O_{r2}	….	O_{rj}	….	O_{rs}	(A_r)
TOTAL	(B_1)	(B_2)	….	(B_j)	….	(B_s)	N

This table is as (r x s) contingency table.

$N=\sum\sum O_{ij}$=Total observed frequency

$(A_i)=\sum O_{ij}$=Total of observed frequencies in i^{th} row; i=1,2,….,r.

$(B_j)=\sum O_{ij}$=Total of observed frequencies in j^{th} column; j=1,2,…,s.

Here, Hypothesis under consideration is,

H_0: Two attributes A and B are independent.

v/s

H_1: Two attributes A and B are not independent.

$e_{ij} = (A_i)(B_j)/N$; i=1,2,….,r; j=1,2,….,s.

The test statistic under H_0 is,

$\chi^2=\sum\sum (O_{ij}-e_{ij})/e_{ij} =\sum\sum(O_{ij}^2/e_{ij})-N$

Criteria: We reject H_0 at α% l.o.s. if $\chi^2_{r-s-1} \geq \chi^2_{(r-s-1),\alpha}$, Otherwise accept it.

Testing Equality of Two Populations Proportions (P1=P2):

• Testing Equality of Two Populations Proportions (P1=P2):

Suppose, a sample is drawn from each of the populations. However, the test statistic is based on both the samples. Suppose these samples give proportions of specific items as p1 and p2 respectively. One may be interested in knowing that the populations proportions from which these samples are chosen are same. In other words, we want to know whether difference between two sample proportions is negligible and it has arisen merely due to sampling variations.

Let, n1=Size of sample drawn from the first population.

n2= Size of sample drawn from the second populations.

x1=Number of items of specific type in first in sample.

x2= Number of items of specific type in second in sample.

p1=x1/ n1 = Proportion of specific items in a first sample.

p2=x2/n2 = Proportion of specific items in a second sample.

P1= Proportion of specific items in a first populations.

P2= Proportion of specific items in a second populations.

The Hypothesis for such problems will be:

Ho: P1=P2 versus H1:P1 ≠ P2

Here, X1→ B (n1, P1) and X2→ B (n2, P2)

Under Ho: P1=P2 = P, we get

$Z= p1- p2 / \sqrt{PQ (1/n1 + 1/n2)} \rightarrow N (0,1)$ for large n1, n2

Criteria: - If P-value= P (|N (0,1)| > |Zcal|) is less than level of significance, reject H0, accept otherwise. (for two sided H1)

Logistic Regression Model:

Consider a situation which involves a dichotomous variable Y and a single regressor X. As conditional distribution of response variable is Bernoulli with probability given by $\pi(X)$. We write a regression model as

$$Y = E(Y|X) + \varepsilon$$

$$= \pi(X) + \varepsilon$$

Where the error term ε is Bernoulli random variable with $E(\varepsilon) = 0$ and $Var(\varepsilon) = \pi(x)\ (1-\pi(x))$. The model obtained by using logistic distribution function is called logistic regression model and is given by,

$$\pi(x) = \ln [\pi(x)/1-\pi(x)]$$

or. $$Y = [e^{(\beta o + \beta 1x)} /1 + e^{(\beta o + \beta 1x)}] + \varepsilon$$

where, βo and $\beta 1$ are regression coefficients.

A transformation of $\pi(x)$ that is useful in our study or logistic regression is the logit transformation. It is defined as follows

$$h(x) = \ln [\pi(x)/1 - \pi(x)]$$

$$= \ln [(e^{(\beta o + \beta 1x)}/(1+e^{(\beta o + \beta 1x)}) * (1 + e^{(\beta 1o + \beta 1x)})/1]$$

$$= \beta o + \beta 1x$$

The method of maximum likelihood can be used to estimate parameters in logistic regression. This method gives the values of unknown parameters which maximizes the likelihood or probability of obtaining the observed set of data.

Logistic regression with a dichotomous regressor coded as 0 and 1, relationship between the odds ratio and the regression coefficient is,

$$\Psi = e^{\beta 1}$$

Logistic regression is a powerful analytical research tool due to this relationship. The odds ratio is a measurement of association between Y and X.

Note that $\beta 1 = 0 = \Psi = 1$ (no association), $\beta 1 > 0 = \Psi > 1$ (positive association) and $\beta 1 < 0 = \Psi < 1$ (negative association)

Testing Significance of the Model:

After estimating the vector parameter β, we wish to test significance of the regressors in the model. The likelihood ratio test for overall significance of p coefficients of regressors in the model is performed in the same way as in single regressor case.

We wish to test: H_o: $\beta_1 = \beta_2 = \ldots\ldots = \beta_p = 0$ against H_1 = At least one β_1 is non-zero
j= 0,1,2, ...p.

The statistic used is

G = D [Model that excludes the regressors] - D [Model that includes the regressors]

where, D is the deviation function defined earlier.

Hence, $G = -2\ln\left[\frac{\text{(Likelihood of the model without the regressor)}}{\text{(Likelihood of the model with the regressors)}}\right]$

Note that in calculations of G, fitted values π hat (Xi) under the model are based on vector containing p+1 parameters, β hat.

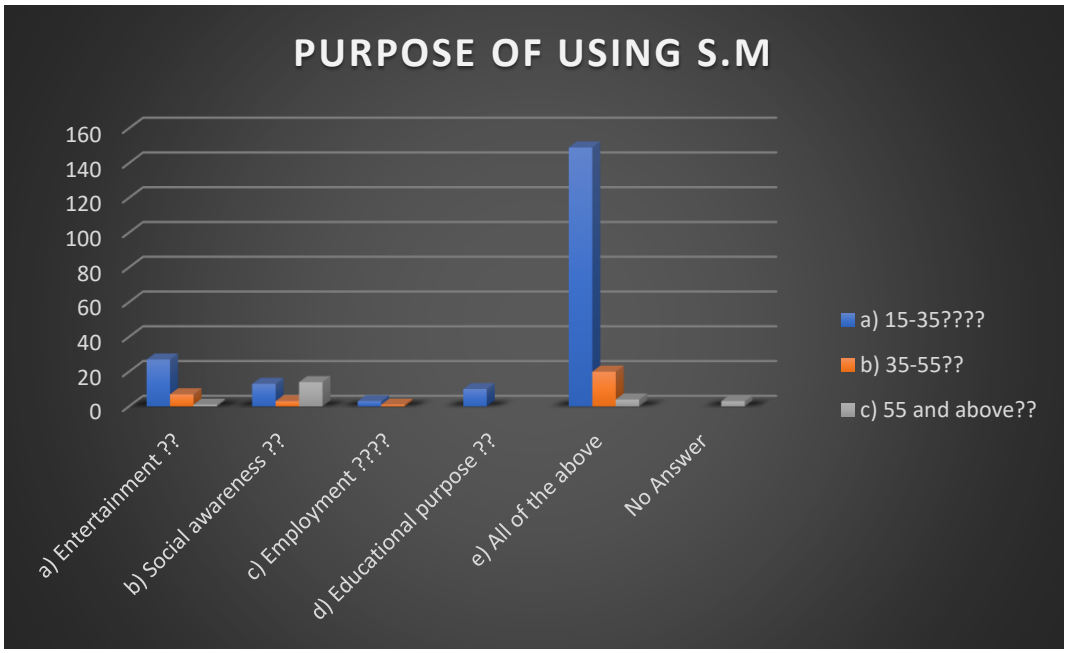
Criteria: Under H_0 G has chisquare distribution with p degrees of freedom. We reject null hypothesis at α% l.o.s. if calculated value of G exceeds $\chi^2_{p,\alpha}$.

ANALYSIS

Tabulation and diagramatic representation of responses collected through survey

1.Purpose of use of social media.

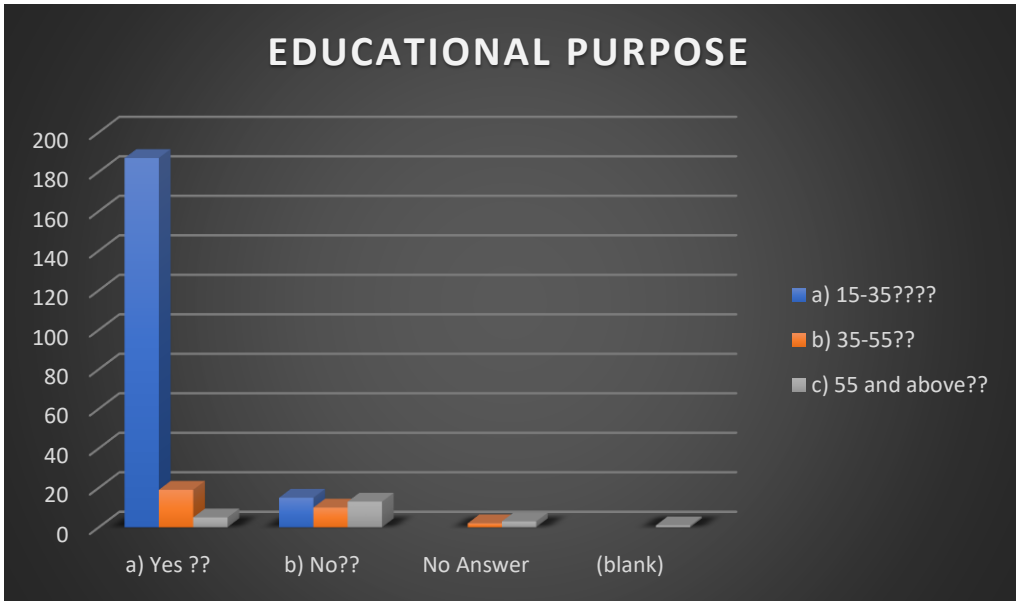
Purpose	a) 15-35	b) 35-55	c) 55 and above	Grand Total
a) Entertainment	27	7	1	35
b) Social awareness	13	3	14	30
c) Employment	3	1		4
d) Educational purpose	10			10
e) All of the above	149	20	4	173
No Answer			3	3
Grand Total	**202**	**31**	**22**	**255**



Interpretation: It can be interpreted that people of age group 15-35 mostly use social media for all the options**.**

2.Usage of social media for educational purpose

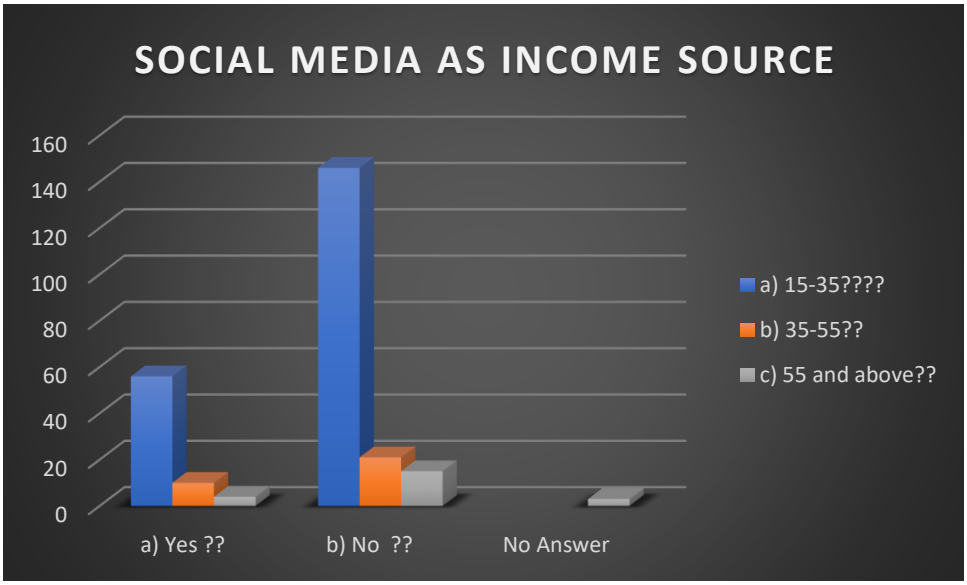
EDUCATION	a) 15-35	b) 35-55	c) 55 and above	Grand Total
a) Yes	187	19	5	211
b) No	15	10	13	38
No Answer		2	3	5
(blank)			1	1
Grand Total	**202**	**31**	**22**	**255**



Interpretation: It can be interpreted that age group 15-35 mostly use social media for their educational purpose.

3.Social media as income source

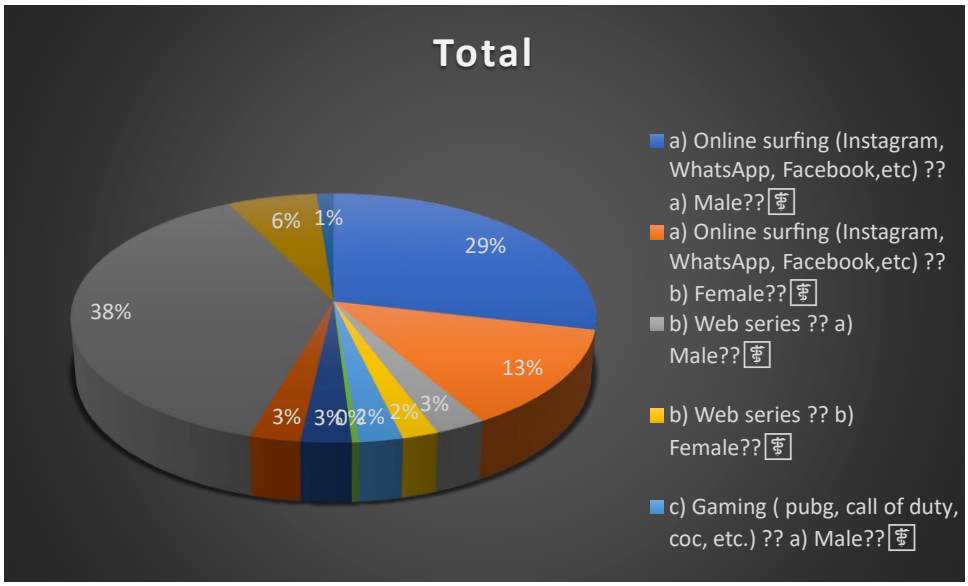
INCOME SOURCE	a) 15-35	b) 35-55	c) 55 and above	Grand Total
a) Yes	56	10	4	70
b) No	146	21	15	182
No Answer			3	3
Grand Total	**202**	**31**	**22**	**255**



Interpretation : It can be seen that age group 15-35 does not use social media as an income source.

4. Modes of entertainment by using social media

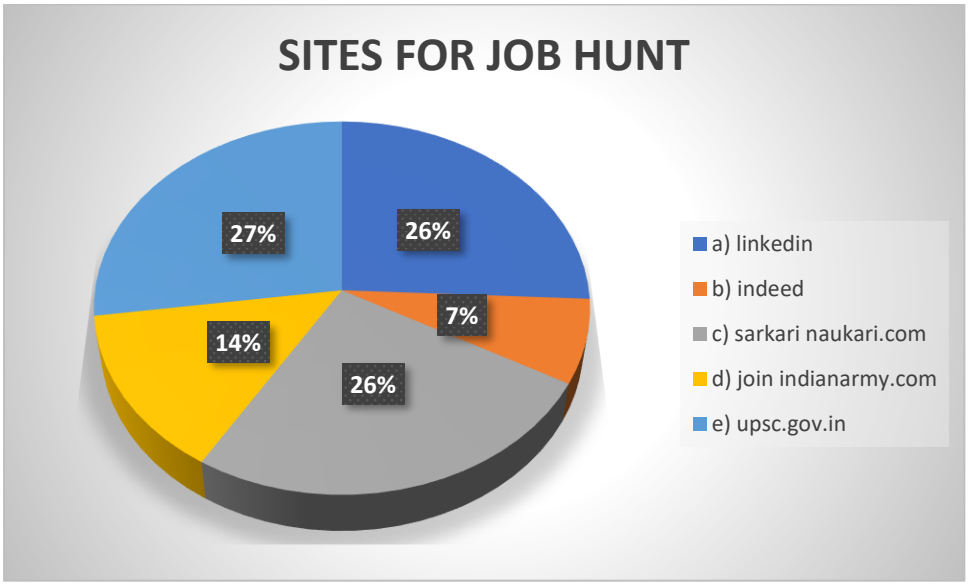
ENTERTAINMENT	a) Male	b) Female	Grand Total
a) Online surfing (Instagram, WhatsApp, Facebook,etc)	73	33	106
b) Web series	7	5	12
c) Gaming (pubg, call of duty, coc, etc.)	6	1	7
d) Movies	7	7	14
e) All of the above	97	16	113
No Answer	3		3
Grand Total	**193**	**62**	**255**



Interpretation: It can be concluded that males keep themselves entertained by watching web series on social media while females do it by online surfing on social media.

5. Sites for job hunt using social media

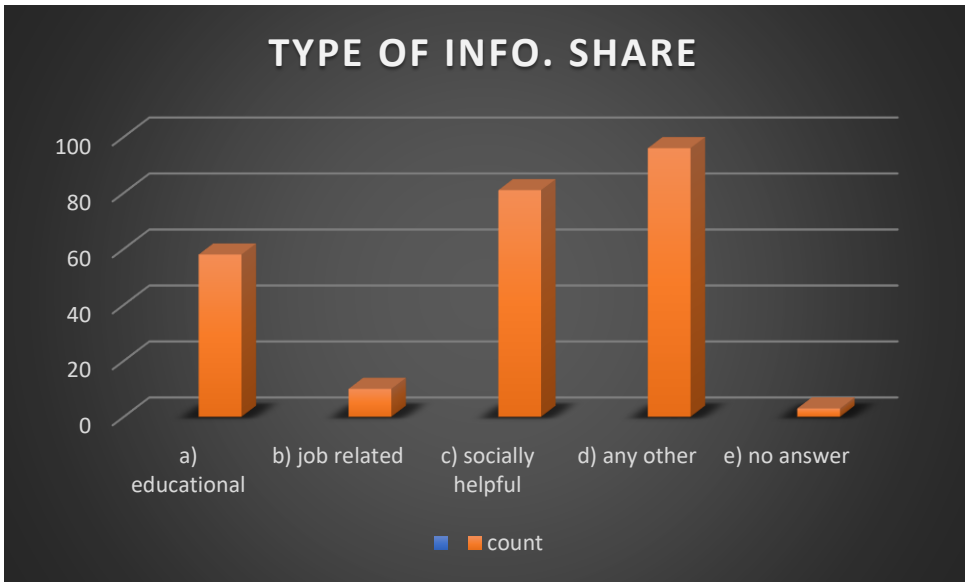
Options	Male (%)	Female(%)
a) linkedin	25.73	25.73
b) indeed	7.28	7.28
c) sarkari naukari.com	25.73	25.73
d) join indianarmy.com	14.08	14.08
e) upsc.gov.in	27.18	27.18



Interpretation: It can be seen that upsc.gov.in has been the most frequently visited site for job hunts site for job purpose**.**

6. Information shared on social media

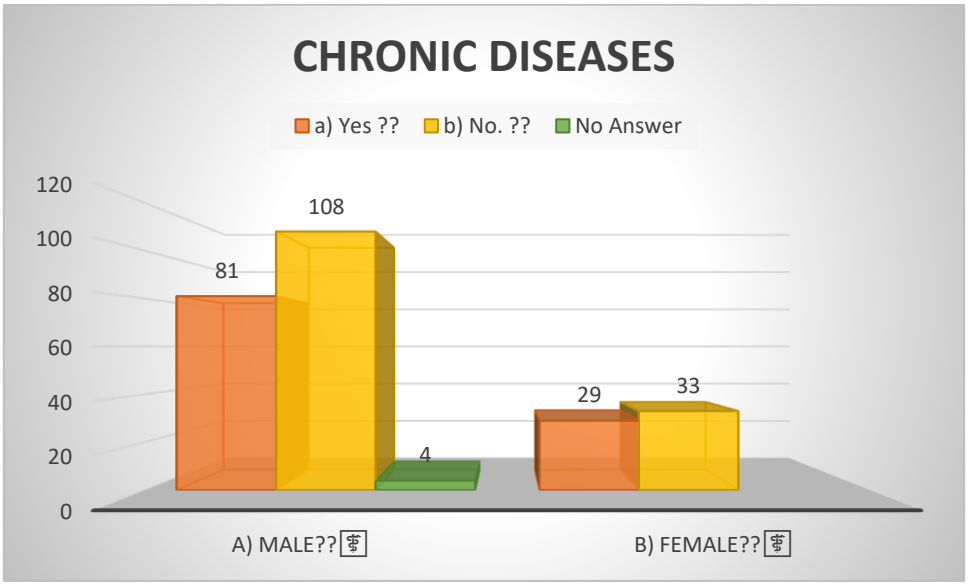
Row Labels	Count of 11. What type of information do you share on social media?
a) Educational	59
b) Job related	11
c) Socially helpful	84
d) Any other	98
No Answer	3
Grand Total	**255**



Interpretation: It can be concluded from the graph that people are less interested in sharing educational, job related and socially helpful type of information on social media.

7. Chronic diseases due to use of social media

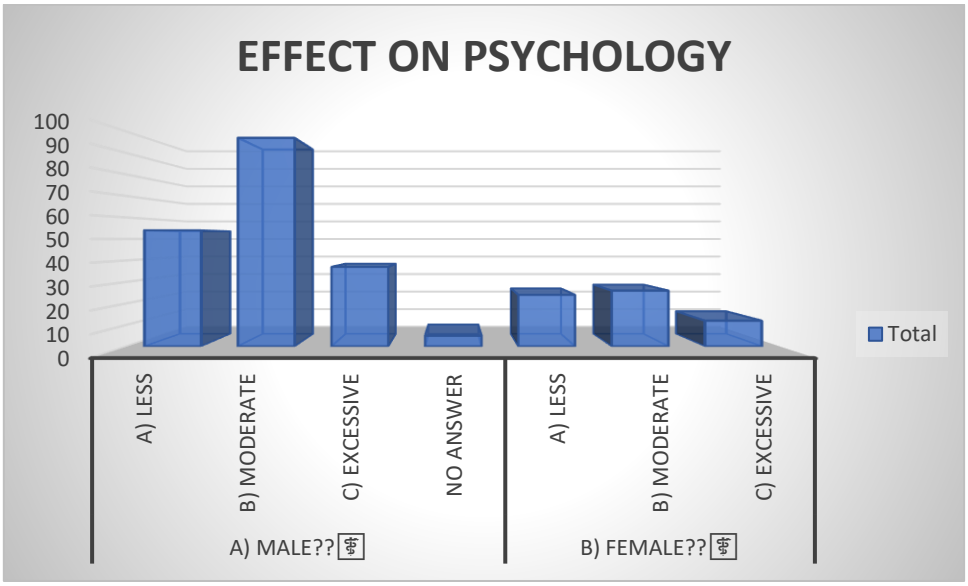
RESPONSES / GENDER	a) Yes	b) No	No Answer	Grand Total
a) Male	81	108	4	193
b) Female	29	33		62
Grand Total	**110**	**141**	**4**	**255**



Interpretation: It can be concluded that both males and females say that there are less cases of chronic diseases due to social media.

8. Psychological Effects Due to Social Media

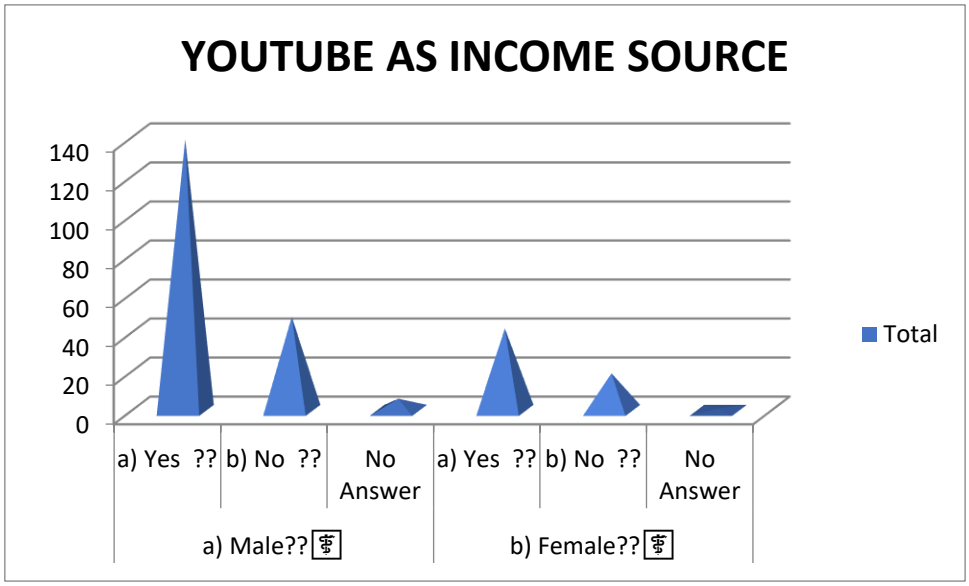
OPINION	Count of S.NO
a) Male	**193**
a) Less	54
b) Moderate	97
c) Excessive	37
No Answer	5
b) Female	**62**
a) Less	24
b) Moderate	26
c) Excessive	12
Grand Total	**255**



Interpretation: It can be concluded that both males and females say that there is moderate effect on psychological behaviour since they have started using social media.

9. Use Of Youtube As A Source Of Income

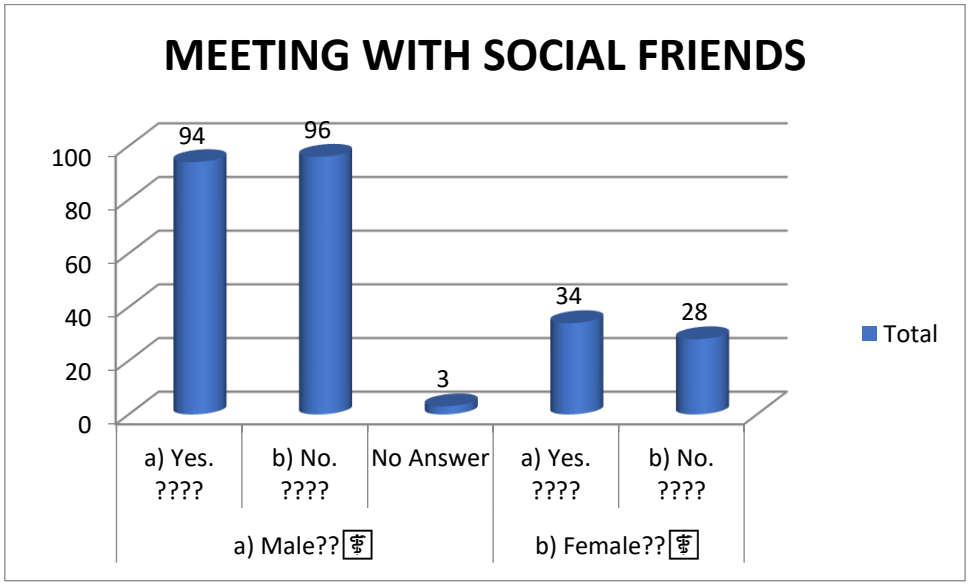
Youtube	Count of S.NO
a) Male	**193**
a) Yes	139
b) No	48
No Answer	6
b) Female	**62**
a) Yes	42
b) No	19
No Answer	1
Grand Total	**255**



Interpretation: It can be concluded that majority of both males and females say that Youtube can be used as a source for income.

10. Meeting Of Social Media Friends In Real Life

ANSWER	Count of S.NO
a) Male	**193**
a) Yes	94
b) No	96
No Answer	3
b) Female	**62**
a) Yes	34
b) No	28
Grand Total	**255**



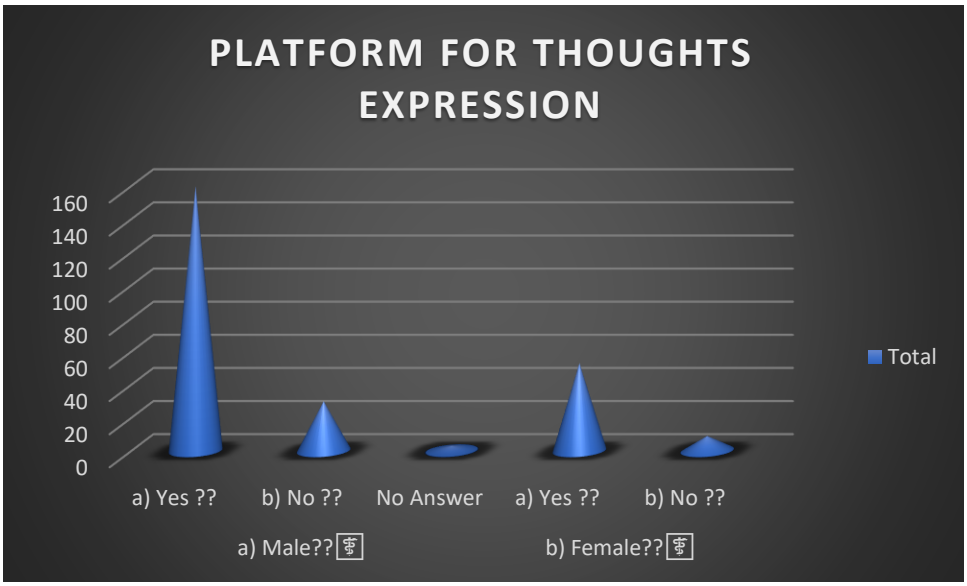
Interpretation: It can be concluded that:

a) 50% of males have met their social friends in real life.

b) 60% of females have met their social friends in real life.

11.Social Media As A Platform For Expressing Thoughts

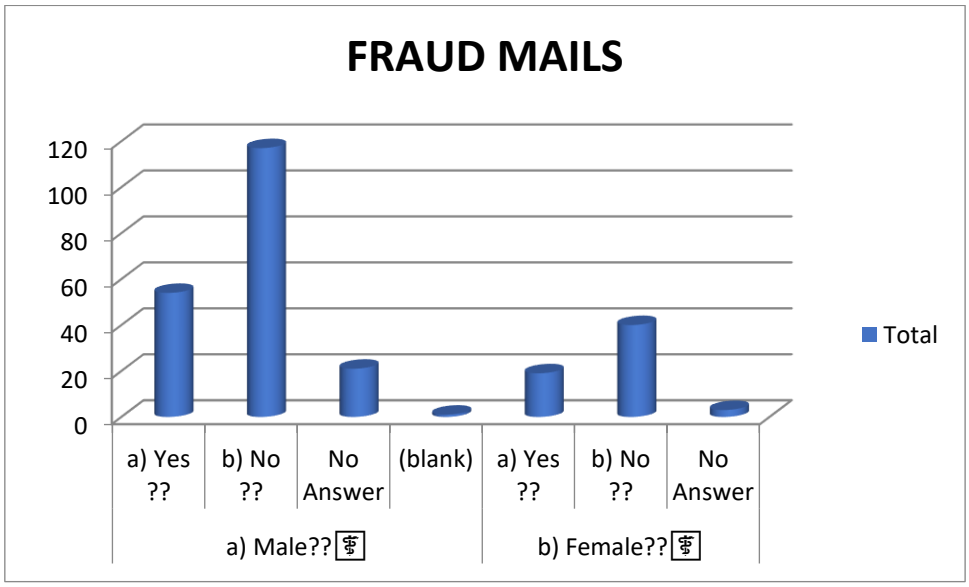
SM as good platform	Count of S.NO
a) Male	**193**
a) Yes	160
b) No	30
No Answer	3
b) Female	**62**
a) Yes	53
b) No	9
Grand Total	**255**



Interpretation: It can be concluded that both males and females say that social media is a good platform for expression of thoughts.

12. Response Of People On Fraud Mails

Fraud Mails	Count of S.NO
a) Male	**193**
a) Yes	54
b) No	117
No Answer	21
(blank)	1
b) Female	**62**
a) Yes	19
b) No	40
No Answer	3
Grand Total	**255**



Interpretation: It can be concluded that majority of both males and females haven't got cheated by fraud mails.

Statistical Analysis

1. To test independency of time spent on Social Media and Age Group

TIME SPENT	a) 15-35????	b) 35-55??	c) 55 and above??	Grand Total
a) Less than 1 hour.	46	10	7	63
b) 1 hr.- 2 hr.	79	15	7	101
c) 2 hr.- 3 hr.	42	2	3	47
d) More than 3 hour	35	4	2	41
e) No Answer			3	3
Grand Total	**202**	**31**	**22**	**255**

Here, X= Time spent on social media

Here we want to test,

H_0 : Time spent on Social media is independent of Age group

v/s

H_1: Time spent on Social media is dependent of Age group

```
> x=c(46,10,7,79,15,7,42,2,3,35,4,2)
> y=matrix(x,nrow=4,byrow=T)
> y
     [,1] [,2] [,3]
[1,]   46   10    7
[2,]   79   15    7
[3,]   42    2    3
[4,]   35    4    2
> rownames(y)<-c("r1","r2","r3","r4")
> rownames(y)
[1] "r1" "r2" "r3" "r4"
> colnames(y)<-c("15-35","35-55","55&above")
> colnames(y)
[1] "c1" "c2" "c3"
> y
```

```
     15-35   35-55   55&above
r1    46      10        7
r2    79      15        7
r3    42       2        3
r4    35       4        2
> chisq.test(y)

        Pearson's Chi-squared test

data:  y
X-squared = 6.5444, df = 6, p-value = 0.365
```

Decision : Here P-value=0.365 > l.o.s=0.05

Hence we may accept H_o at 5% l.o.s.

Conclusion: Time spend on social media is not restricted by age group.

2. Performance After Online Tutorial

PERFORMANCE AFTER ONLINE TUTORIAL	a) Male	b) Female	Grand Total
a) 15-35	**157**	**45**	**202**
a) Yes	128	36	164
b) No	28	9	37
No Answer	1		1
b) 35-55	**19**	**12**	**31**
a) Yes	11	8	19
b) No	3	3	6
No Answer	5	1	6
c) 55 and above	**17**	**5**	**22**
a) Yes	1	1	2
b) No	6	4	10
No Answer	9		9
(blank)	1		1
Grand Total	**193**	**62**	**255**

X = People preferring online tutorials for study purpose

Here we want to test ;

H_0: Preference of online tutorial has no effect of educational performance.

Vs

H_1: Preference of online tutorial affects educational performance.

```
> #Matrix
> x=c(164,19,2,37,6,10,1,6,9)
> y=matrix(x,nrow=3,byrow=T)
> y      [,1] [,2] [,3]
[1,]  164   19    2
[2,]   37    6   10
[3,]    1    6    9
> rownames(y)<-c("Yes","No","No Answer")
> rownames(y)
[1] Yes  No  No Answer
> colnames(y)<-c(15-35,35-55,55&above)
> colnames(y)
[1] 15-35 35-55 55&above
> y
```

	15-35	35-55	55&above
Yes	164	19	2
No	37	6	10
No Answer	1	6	9

```
> chisq.test(y)
```

Pearson's Chi-squared test

data: y

X-squared = 85.672, df = 4, p-value =2.2e-16

Decision: Here P-value < l.o.s(5%)

Hence we may reject H_0 at 5% l.o.s.

Conclusion: Preferring online tutorials affects educational performance positively.

3. Effect on family relations

FAMILY RELATIONS	a) 15-35	b) 35-55	c) 55 and above	Grand Total
a) Yes	69	19	8	96
b) No	48	3	6	57
No Answer	85	9	8	102
Grand Total	**202**	**31**	**22**	**255**

Here we want to test :

H_0 : Spending less than 1 hr. with family does not affect family relations .

Vs

H_1 : Spending less than 1 hr. with family affects family relations .

```
> #Matrix
> x=c(69,9,18,48,3,6,85,9,8)
> y=matrix(x,nrow=3,byrow=T)
> y
     [,1] [,2] [,3]
[1,]   69    9   18
[2,]   48    3    6
[3,]   85    9    8
> rownames(y)<-c("Yes", "No", "No Answer")
> rownames(y)
[1] Yes   No   No Answer
> colnames(y)<-c(15-35,35-55,55&above)
> colnames(y)
[1] 15-35  35-55  55&above
> y
                15-35   35-55   55&above
Yes               69       9         18
No                48       3          6
No Answer         85       9          8
```

> chisq.test(y)

Pearson's Chi-squared test

data: y

X-squared = 6.784, df = 4, p-value =0.1478

Decision: Here P-value > l.o.s(5%)

Hence we may accept H_0 at 5% l.o.s.

Conclusion: Family relations are independent of time spent with them.

PROPORTION TEST

1. Proportion test to check whether Social Media is a stress reliever.

x=people who consider SM as stress reliever.

Here we want to test;

H_0: P=0.5(50% people say that Social Media is a stress reliever.)

v/s

H_1: P>0.5(More than 50% people say that Social Media is a stress reliever.)

```
> x=19
> n= total responses
> n=20
> prop.test(x,n,.5,alt="g")

1-sample proportions test with continuity
correction
data:  x out of n, null probability 0.5
X-squared = 14.45, df = 1, p-value = 7.196e-05
alternative hypothesis: true p is greater than 0.5
95 percent confidence interval:
0.7702849 1.0000000
sample estimates:
p
0.95
```

Decision: Here p-value = 7.196e-05 < l.o.s(5%)

Hence we may reject H_0 at 5% l.o.s

Conclusion : More than 50% population say that Social Media acts as stress reliever.

2. Proportion test for checking mostly terror trapped

H_0: P=0.5(50% people say that 15-35 age group is mostly terror trapped.)

v/s

H_1: P>0.5(More than 50% people say that 15-35 age group is mostly terror trapped.)

> x=No. of people who think 15-35 is mostly terror trap.

> x=202

> n=Total no. of responses.

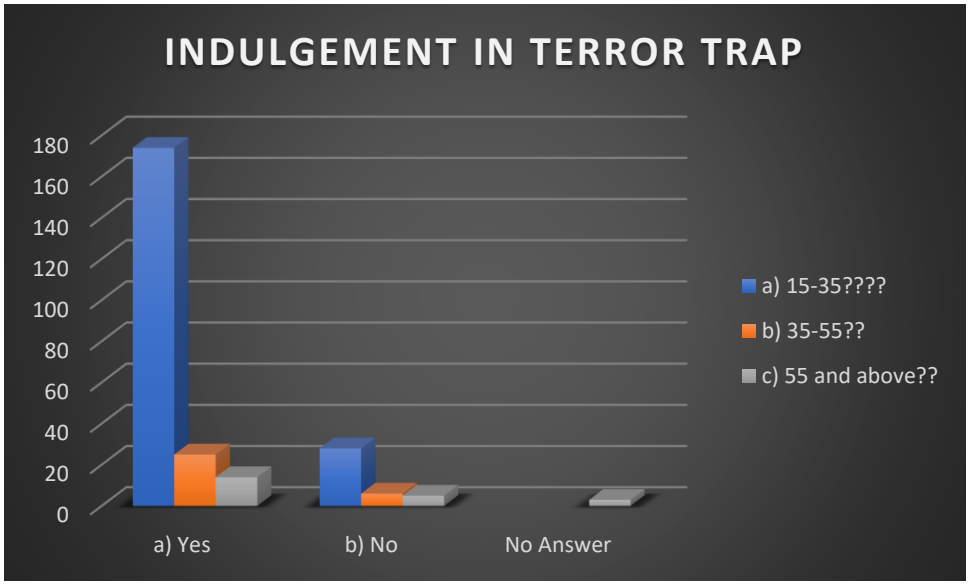
> n= 256

> prop.test(x,n,0.5,alt="g")

1-sample proportions test with continuity
correction

data: x out of n, null probability 0.5
X-squared = 84.41, df = 1, p-value = 2.2e-16
alternative hypothesis: true p is greater than 0.5
95 percent confidence interval:
0.7421372 1.0000000
sample estimates:
p
0.7890625

Bar diagram showing terror trapped age group



Decision: Here p-value = 2.2e-16< l.o.s(5%)

Hence we may reject H_0 at 5% l.o.s

Conclusion: Age group 15-35 is mostly terror trapped**.**

---

3. Proportion test for impact of Social Media

H_0:P1=P2(Proportion of males and females who think that Social Media has positive impact on human is equal.)

v/s

H_1:P1≠P2(Proportion of males and females who think that Social Media has positive impact on human is not equal.)

> X1 = No. of males who think SM overall has positive impact on human life.

> X2 = No. of females who think SM overall has positive impact on human life.

> X1 = 103

> X2 = 30

> X=c(103,30)

> n=c(193,62)

> prop.test(X,n,conf.level=.95)

2-sample test for equality of proportions with continuity correction

data: X out of n

X-squared = 0.28827, df = 1, p-value = 0.5913

alternative hypothesis: two sided

95 percent confidence interval:

-0.1037706 0.2033862

sample estimates:

prop 1 prop 2

0.5336788 0.4838710

Decision : Here p-value = 0.5913> l.o.s(5%)

Hence we may accept H_0 at 5% l.o.s.

Conclusion : Both gender equally say that Social Media overall has positive impact on their life.

---

4. Proportion test for checking students using social media for educational Purpose

x=No. of responses of students using social media for educational purpose.

H_0: p=0.5(50% people say that they use Social Media for educational purpose.)

v/s

H_1: p>0.5(More than 50% people say that they use Social Media for educational purpose.)

> x=202

> cat ("n=Total no of responses\n")

n=Total no of responses

> n=254

> prop.test(x,n,alt="g")

1-sample proportions test with continuity correction

data: x out of n, null probability 0.5

X-squared = 87.406, df = 1, p-value = 2.2e-16

alternative hypothesis: true p is greater than 0.5

95 percent confidence interval:

0.7485298 1.0000000

sample estimates:

p

0.7952756

Decision: Here , p-value = 2.2e-16 < l.o.s(5%)

Hence we may reject H_0 at 5% l.o.s.

Conclusion: It can be concluded that most of the students use social media for educational purpose.

---

5. Test for Digital Marketing responses

H_o: Proportion of male and female is equal in responses about use of social media for digital marketing .

vs

H_1: Proportion of male and female is not equal in responses about use of social media for digital marketing .

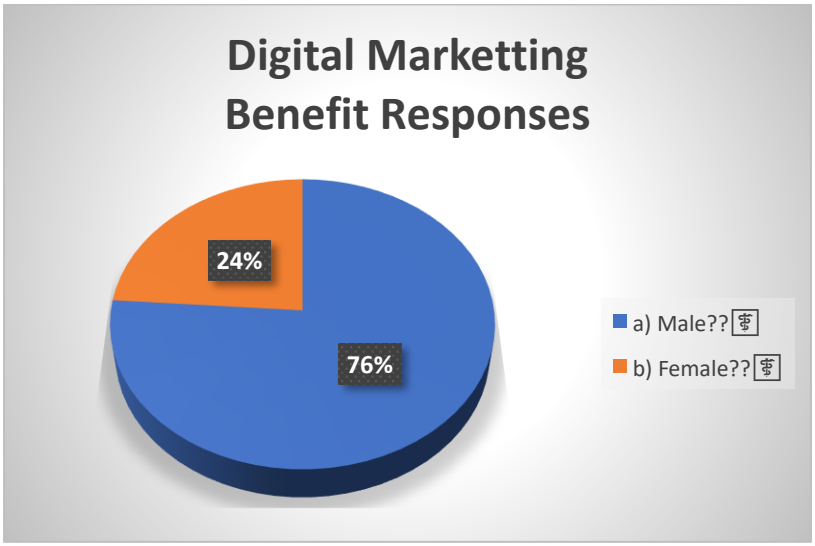
```
> x=c(67,21)
> n=c(193,62)
> prop.test(x,n,alternative="g")
2-sample test for equality of proportions with continuity correction
data:  x out of n
X-squared = 1.4422e-30, df = 1, p-value = 0.5
alternative hypothesis: greater
95 percent confidence interval:
-0.1138038  1.0000000
sample estimates:
prop 1    prop 2
0.3471503 0.3387097
```

Decision : Here P-value=0.5> 0.05=l.o.s

Hence we may accept H_o at 5% l.o.s

Conclusion: It can be concluded that proportion of males and females is equal.

Pie chart of male and female responses on digital marketing



Conclusion: It can be concluded that males respondents in large proportion say that digital marketing using social media is beneficial.

LOGISTIC REGRESSION

To check whether online tutorial can be use for educating rural students

y = No. of responses about use of online tutorials for educating rural students.

x1 = No. of responses about increase in performance after referring online tutorials.

x2 = No. of responses about sufficiency of educational help from various social platforms.

```
> y=scan("clipboard")
Read 255 items
> x1=scan("clipboard")
Read 255 items
> x2=scan("clipboard")
Read 255 items
> lfit=glm(y~(x1+x2),family=binomial)
> summary(lfit)

Call:
glm(formula = y ~ (x1 + x2), family = binomial)

Deviance Residuals:
    Min       1Q   Median       3Q      Max
-2.2992   0.3842   0.3842   0.5572   1.2579

Coefficients:
            Estimate Std. Error z value Pr(>|z|)
(Intercept)  -0.1872     0.3690  -0.507    0.612
x1            1.9715     0.3652   5.399 6.71e-08 ***
x2            0.7850     0.3841   2.043    0.041 *
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

(Dispersion parameter for binomial family taken to be 1)

    Null deviance: 231.39  on 254  degrees of freedom
Residual deviance: 196.21  on 252  degrees of freedom
```

AIC: 202.21

Number of Fisher Scoring iterations: 5

Testing significance of regression

H_0: Regressor x1 is insignificant.

H_1: Regressor x2 is significant.

Here, p-value for β_1=6.71e-08

Decision: Here p-value< l.o.s

Hence we may reject H_0 at 5% l.o.s.

Conclusion: Regressor x1 is significant.

p-value for β_2=0.041

Decision: Here p-value < l.o.s

Hence we may reject H_0 at 5% l.o.s.

Conclusion: Regressor x2 is significant.

Conclusion: It can be concluded that online tutorials can be used for educating rural students.

CONCLUSION

1) Most of the people think that, use of social media deteriorates the health of users i.e. they suffer with chronic diseases ,but from our data we may conclude that, most of the people gave opinion that there is no drastic effect on health due to use of social media.
2) Use of social media in education has proven to be a boon for students and this is evident from our analysis part. Majority of the repliers especially, the age group 15-35 use social media as online tutoring source for educational purpose and are being benefited by it. Hence, we may conclude that, "Use of social media in education has proven to be a great help when it comes about helping the underprivileged rural students by aid of social media which adds to the motive of our project in the view of cumulative progress of the nation.
3) Adequate parenting is one of the crucial concerns looking at the current scenario of the deteriorating moral values and ethos generally expected from the younger generation. Any void in this duty of parents can impact their children's future on a massive scale. From the analysis we derived that parents are expected to constantly look over what their kids are intending to do on social media. This would avoid the frauds and the chances of being misleaded to the life terminating path of terrorism, onus of which makes the parents regret lifetime about their pampering habits for their children.

MAJOR FINDINGS

1) More is the amount of time that you spend with your family lesser it seems. But from our project a rare finding is that spending less than 1 hr. doesn't affect family relationships.
2) One of the cons of using Social Media which people often dread about is of getting prone to any chronic disease, but from our project we get to see that there are very few cases of chronic diseases often heard by both males and females.
3) Educating rural students is a major question in front of our government today. Education system in rural areas of our country are not really sufficient for creating quality resource out of rural students. Social media has proved to be a blessing in disguise for them. Our project reveals that social media can effectively be used for educating rural students.
4) Cybercrime is in vogue these days. Hackers keeping their evil eyes on our e-data constantly to utilize our vulnerable goods. In the midst of this scenario the people who accept friend request without knowing the person ahead generally get prone to be terror trapped.
5) As we all know, a coin has two faces similarly, social media also has two aspects i.e. positive and negative. One rare positive aspect of social media is that the number of online frauds is less in both the cases of males and females.
6) One of the huge attractions amongst the younger generation today is to get fame very fast. One of the fastest routes is having YouTube channels. Our project gives a valid proof for the fact that having a YouTube channel is a better way to get fame in today's world. Also, many responders say that it also acts as a good income source for them or their friends who have YouTube channels.

LIMITATIONS

1) Since data is mostly responded by age group 15-35 hence the conclusion “spending less than one hour with family does not affect family relationships” is not universal .

2) Since there are very few responses of females on Digital Marketing using social media hence we cannot conclude anything about actual preferences of females regarding Digital Marketing.

OPINIONS OF RESPONDENTS.

Q.1 In your opinion how social media can be further used for creating more job opportunities?

● It's a better platform to advertise your business. It reaches most corners of society.

●Create a data base where people with similar passion can find their recruiters.

●I don't think that job opportunity will increase.

●by using social media in job one can increase visibility of professional performance world wide

●Yes, social media is use for creating jobs. In the field like digital marketing , blog writing.

●One who is looking forward for his own business , so he can collect people sharing same mind set.

●If we have to do business then social media is useful for business growth thus we create jobs .

●By the direct involvement of government agencies which are related with job providing information.

●Before one decade ago all information are available in paper but time is change all available online.

●Common portal for jobs throughout India, Where all types of recruitment happens.

●By providing job vacancy notifications on Facebook what's app etc.

●Maintaining a social media platform requires a team,Job awareness can be spread easily and rapidly.

●Social media should keep on trending page ; the various small scale businesses which would help

●Job network on social media is big-To get lot of job for employer.

●People use effective social media so definitely create more jobs.

●YouTube can be a good source of earning ,Hence startups should be supported .

●I think there is no more opportunities to improve in this field.

Q.2 **Why do you think your selected age group in previous question is most affected?**

●They are a bit immature and less experienced.

●Because this age group include young group in which they are much closer to social media .

●People in this age group are the ones who use social media platforms most of the time.

●From 15 to 32 ,most people use social media in wrong way that will affecting on relations .

●Because this age group people use smart phones more than other groups.

●Because of less mind stability and less decision making power.

●Because they're using to much Mobile phone and social media and giving More importance to social media.

●People between these age groups aren't equipped with knowledge to use social media efficiently!

●That age is immature and sensitive age anyone can divert the mind.

●The age group of Teenagers and adults get easily influenced . So they caught in such acts easily.

●Because this age group people are more and more active on social media .

●Because persons belong to age group 15-20 are Immature.

●They are most vulnerable to social media they can be brainwashed easily.

●Because in this age group girls/boys are addicted towards social media.

●Cause they are youngsters and use social media as oxygen.

●Because that age group are highly active on social media & that age group can easily gets brain wash.

●Because it's the sensitive age.

●Because people at this age are struggling with life and they are not stable.

●Negative impacts of social media can't be recognized on time and handled can be risky to the health.

●They are more active over social media and are easily influenced by the terror groups.

●Immature and lack of knowledge of one thing +peer pressure+ poor parenting and bad company.

●Excessive use of instagram , what’s app, watching web series etc

●They are more vulnerable to the contents and this is the age group that uses social media the most.

●Because influencing the youth is easy for the terrorists.

●This age group is not matured enough, can be easily manipulated by some activities.

●They are more easy to be manipulated by Ponzi ideas.

Q.3 How could be family relations improved?

●Don't get much closer to social media. Spend more time with our family.

●we have to use social media only for informative purpose , Need to spend more time with family .

●Spend more time with family.

●Just ignore your mobile phones and social media -Give importance to your family.

●Less use of mobile.

●According to me don’t more waste your more time on social media instead of your family.

●Sharing our experiences and talking to each other in our family will make the relations stronger .

●A good balance of both should be there as of nowadays it's impossible for people to be away from it.

●It is a addiction -Spent less time on it.

●Self control on use of social media.

●You should be definitely giving time to your family as it should be your first priority .

●When people get tired with work the play games or scroll rather than this we can talk with our loved .

●We have to set the priority and time limit of uses of social media.

●Give priority to your family,to your job or to your studies.Spend max 1 hr for social media daily.

●Limited use of social media .

●Strictly keep a fix timing for social media whenever you are at home and keep maximum timing for family.

●We use social media very less & give time to our family.

●Use social media as a entertainment not make as a daily habbit.

●Try to give more hours 2 family and plan for family holiday trip.

●Spend quality time with family by outings.

●Social Media is a tool for development. Maintain the time balance for family and social media.

●Family should get more time than social media and phone should be kept sideway or switched off.

●Not to use social media more then 1 hr in day . Give time to family.

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