How Does Social Media Affect Human Interaction - A Survey Among Students

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ABSTRACT: Interactive computer mediated technology helps to create and share ideas and information. Digital devices have made our lives easy with the help of smart phones and its applications. Digital gadgets provide easy connectivity, privacy and security, help to get instant news feed etc. all these advantages have caused a major disadvantage among us, and that is lack of social interaction. This study involves college students in the age group of 17 to 23 years. A well structured questionnaire was prepared comprising 20 questions covering social demographic information, knowledge, attitude, perceptions was framed and administered to the participants through online google forms. A total of 140 responses was collected, out of which 60% was males and 40% was females. Almost 99.29% of the total population used social media. 77.86% of the total population played with their friends rather than to play online games. It may be concluded that even though social media has caused a great impact in our interpersonal communication, people mostly tend to have face-to-face communication rather than through messages. Messages cannot express the emotions of people.

KEY WORDS: Face to face interaction, friends, interpersonal communication, social media.

1. INTRODUCTION:

Everyone rushes to their colleges and schools, where they don't even find time to greet each other. Nowadays, we have reduced interpersonal communication. We rather talk to people on phone or through other social media devices than to visit them and talk face-to-face. The upcoming generation are the victims of digital revolution and the lazy way of life style (Subramanian, 2017). The Internet provides lots of information and also provides enhanced interaction among individuals wherever that person may be (Leiner, Cerf and Clark, 2009).

The relationship which exists between networks of people' can be a better meaning for the word social media (Baldwin, Bedell and Johnson, 1997). People have now started to exchange feelings, pictures, videos and ideas on social media or with the help of social media (Chaudhary and Sahani, 2017). About 73% of the teen population are using social media, and it has been said that it has a high risk of having a

negative impact on the behaviour of teenagers (Brydolf, 2007). However, every day, many students are spending countless hours immersed in social media and games, such as WhatsApp, Instagram, Facebook, Twitter, PUBG, lord mobiles. At first glance this may seem like a waste of time; however it also helps students to develop important knowledge and social skills and be active citizens who create and share content and also try to keep in touch with their friends and relatives who may be far from their place (Chaudhary and Sahani, 2017). However certain cases have been reported that long exposure to the radiations from the mobile phone can cause cancer.

Certain natural compounds may act as adjuvants in cancer (Ke *et al.*, 2019; Wu *et al.*, 2019; Yunhai Ma, Tjiruventhan Karunakaran, Vishnu Priya Veeraraghavan, 2019) . Spending too much time playing online games can also cause obesity, since there is no physical exercise (Shukri *et al.*, 2016) which could lead to fatty liver and complications (Mohan, Veeraraghavan and Jainu, 2015; Priya, Jainu and Mohan, 2018). The aim of the study is to know the effect of social media on human interaction.

2. MATERIALS AND METHODS:

This survey was prospective observational study. The advantages of this study were economical, easy to create, widespread, gather large data and quick interpretation. It involves homogeneous population, response bias and creates survey fatigue were the cons of the study. This study has been approved by the scientific review board, Saveetha dental College, Chennai. The sample size of the survey includes 100 students in the age group of 18 to 23 years.

The sampling method for the survey conducted was simple random sampling. The sample size of this survey was 140 college students with the age group of 18-23 years.

Data collection:

A self structured questionnaire, comprising 18 questions were asked. The questions were validated. The survey was circulated using an online Google form link and the data was collected and represented in the pie chart using SPSS software. Demographic information, social media, human interaction, communication, addiction and social skills are the output variables.

A statistical test was used which is descriptive statistics, pie chart and bar diagram. Age, education, height, sex, neighbour, family, friends and lifestyle modification are the independent variables. Awareness, interaction, knowledge, attitude and perception are the dependent variables.

3. RESULTS AND DISCUSSION:

60% of the total population were males and 40% of the population were female (Figure 1). 99.29% of the population were using social media and 0.71% of the population do not use social media accounts (Figure 2). 20.71% of the population used social media for about 1 to 2 hours, 32.86% used it for 2 to 4 hours, 19.29% used it for 4 to 6 hours and 27.14% used it for more than six hours (Figure 3).

29.29% used it only during free hours, 1.43% used during free time and in college, 4.29% of the population used it during free time, in college, during social occasions, during meal time, any spare time and whenever necessary. 2.14% of the population used it during free time, in college, during social occasions, during meal time and whenever necessary. 2.14% of the population used it during free time, in college, during social occasions, any spare time, whenever necessary. 2.14% of the population used it during free time, in college and during any spare time. 2.14% of the population used it during free time, in college and whenever necessary. 1.43% of the population used it during free time, during social location,

during meal time and whenever necessary. 1.43% of the population used it during free time, during social location, any spare time and whenever necessary. 2.14% of the population used it during free time, during meal time, any spare time and whenever necessary. 1.43% of the population used it during free time, during mealtime and whenever necessary. 2.86% of the population used it during free time and during any spare time. 4.29% of the population used it during free time, any spare time and whenever necessary. 5% of the population used it during free time and whenever necessary. 0.71% of the population used only in college. 0.71% of the population used it in college and during social occasions. 0.71% of the population used it in college, during meal time and any spare time. 0.71% of the population used it in college, any spare time and whenever necessary. 0.71% of the population used only during meal time, 9.29% of the population used only during any spare time, 4.29% of the population used it only in college and 23.57 % of the population used it whenever necessary (Figure 4).

40% of the population preferred having a conversation with family, 53.57% of the population preferred having a chat with their friends on social media, 5.71% of the population preferred talking with neighbours and 0.71% of the population preferred having a chat with strangers on social media (Figure 5). 72.86% of the population talk with your neighbours while 27.14% of the population do not prefer to talk (Figure 6). 48.57% of the population do not read newspapers while 51.43% read newspapers (Figure 7). 63.57% of the population got through social media, 14.29% of the population got through families and friends, 17.86% got from reading newspapers and 4.29% of the population were not interested in current affairs (Figure8).

77.86% of the population preferred to go out and play with your friends while 22.14% of the population preferred playing online games with their friends (Figure 9). 52.86% of the population got frustrated while 47.14% did not get stressed (Figure 10). 73.57% of the population said yes while 26.43% said no, they don't go (Figure 11). 35% preferred social media while 65% liked to interact face-to-face (Figure 12). 83.57% of the population said it was convenient while 16.43% said they don't find it convenient (Figure13).18.57% said they posted very often, 48.47% said they posted seldom and 32.86% of the population said they don't like to post (Figure 14). 50% said they spent less time because of social media and 50% said they don't have any impact with the time spent (Figure 15). 61.43% said they don't get stressed while 38.57% said they got stressed because of social media (Figure 16). 34.29% said they were addicted and 65.71% said they were not addicted (Figure 17).

We have seen the association between gender and usage of social media (Figure18), duration of usage (Figure 19), access to social media (Figure 20), preference of communication (Figure 21), talk to neighbours (Figure 22), habit of reading newspaper (Figure 23), getting current updates from (Figure 24), preference on playing with friends (Figure 25), frustrated or angry when social media server is down or unavailable (Figure 26), interact with people on social media rather than face-to-face (Figure 27), visit social media with no goals or specific purpose in mind (Figure 28). Social media network convenient resource of communication (Figure 29), frequency of posting pictures in social media (Figure30), spend less time with families and friends because of social media (Figure 31), stress due to social media (Figure 32), addiction to social media (Figure 33).

According to previous literature 45% of the population used social media for about 6 to 8 hours, 23% of the population used for about 8 hours, 20% used for about 2 to 4 hours and 12 % used for about 2 hours (Chaudhary and Sahani, 2017). 82% of the participants were daily users of social media or the internet while 18% did not use the internet daily (Rajeev, 2015). 12.8% of the participants posted status in social media very often, 19.8% posted status frequently, 23.3% when neutral, 41.9% posted rarely and 2.1

% didn't post any status (Akakandelwa Akakandelwa And Gabriel Walubita, 2018). In a previous literature majority of the respondents didn't have a healthy relationship or interaction with their neighbours which is controversial to our study (Rajeev, 2015) . 4.8% of the population strongly agreed that they were addicted to social media, 34.4% were neutral, 29.5% disagreed and 13.7% strongly disagreed that they were addicted to social media (Akakandelwa Akakandelwa And Gabriel Walubita, 2018) . 17.2% of the population said they never got stressed because of social media, 26.9% said they rarely got stressed, 27.3% said they sometimes got stressed, 28.6% said they often got stressed and 55.9% were aggregated to that statement (Chaudhary and Sahani, 2017).

Previous studies on cytotoxicity (Menon, V and Gayathri, 2016; Ramya, V and Gayathri, 2018; Rengasamy *et al.*, 2018), apoptotic induction (Gan *et al.*, 2019; Wang *et al.*, 2019; Li *et al.*, 2020), alkaline proteases (Rengasamy *et al.*, 2016), beta-sitosterol (Ponnulakshmi *et al.*, 2019), UVB radiation (Chen *et al.*, 2019), etc, kindled my research passion. However, I was interested in social media interaction since we have a lot of impact in our life due to social media. Increase in sample size and inclusion of more criteria are the limitations of the study.

4. CONCLUSION:

Social media is like two sides of a coin. It has both advantages and disadvantages. Advantages are taking online classes during this quarantine, seeking solutions to any doubts by browsing the internet, getting close to friends who are overseas etc. However, disadvantages are getting distracted from the main reason of browsing, cyber security problems, getting addicted to social media etc. from the survey it is concluded that college students use more time in social media but also they spend equal time with their family and friends. To some degree, it absolutely affects the lives of college students including the grades. This research also indicates that an approach is needed to better balance the relationship between social media and academic study. Therefore, college students should think more about the balancing equation of social media and academics. Self-awareness on usage of social media and cybercrime awareness are the future scopes.

AUTHOR CONTRIBUTION:
Devika. B : Literature search, data collection, analysis
Vishnu Priya. V : Data verification, Manuscript drafting
Gayathri. R : Data verification, Manuscript drafting
Kavitha. S : Data analysis, Manuscript drafting

CONFLICT OF INTEREST: The author declares that there were no conflicts of interest in the present study.

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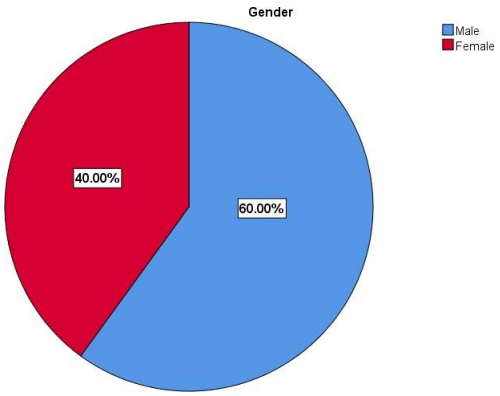

Figure 1 - Pie chart showing percentage distribution of male and female population. 60% - Male (Blue) and 40% - Female (Red). Majority of the participants were males (60%).

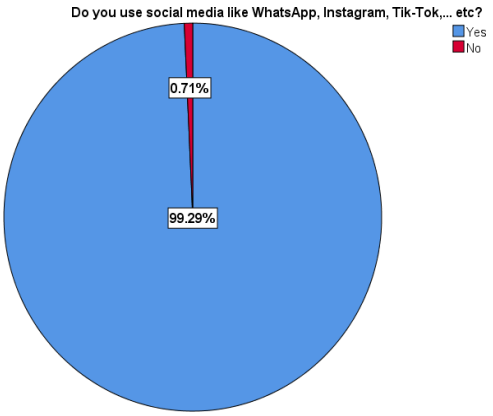

Figure 2 - Pie chart showing percentage distribution of responses for usage of social media. 99.29% - Yes (Blue) and 0.71% - No (Red). Majority of the participants said yes (99.29%).

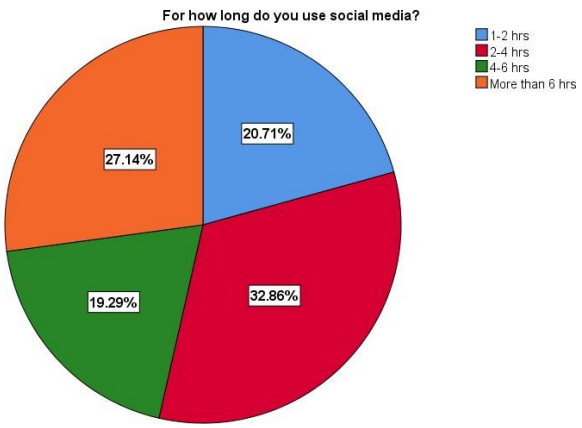

Figure 3 - Pie chart showing percentage distribution of responses for duration of usage of social media. 20.71% - 1-2 hrs (Blue), 32.86% - 2-4 hrs (Red), 19.29% - 4-6 hrs (Green) and 27.14% - 4-6 hrs (Orange). Majority of the participants used 2-4 hrs (32.86%).

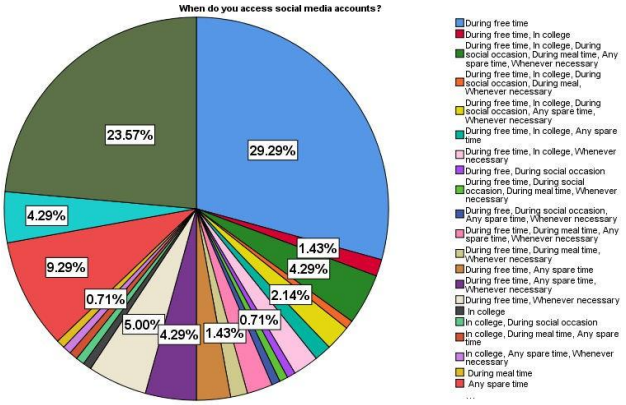

Figure 4 - Pie chart showing percentage distribution of responses for when they use social media. 29.29% - During free time (Blue), 0.71% - In college (Dark green), 0.71% - During meal time (Yellow) and 9.29% -Any spare time (Red). Majority of the participants used during free time (29.29%).

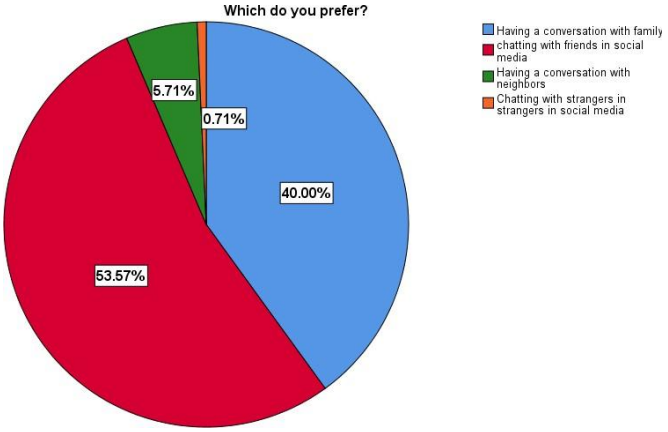

Figure 5 - Pie chart showing percentage distribution of responses for preference of conversation. 40% - having a conversation with family (Blue), 53.57% - chatting with friends on social media (Red), 5.71% - having a conversation with neighbours (Green) and 0.71% -chatting with strangers on social media (Orange). Majority of the participants preferred chatting with friends on social media (53.57%).

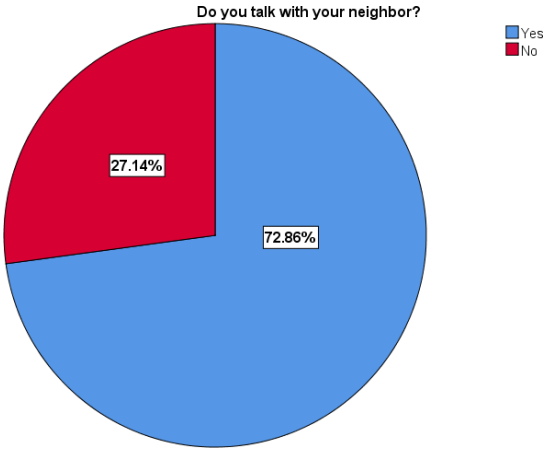

Figure 6 - Pie chart showing percentage distribution of responses for conversation with neighbours. 72.86% - yes (Blue) and 27.14% - no (Red). Majority of the participants said yes (72.86%).

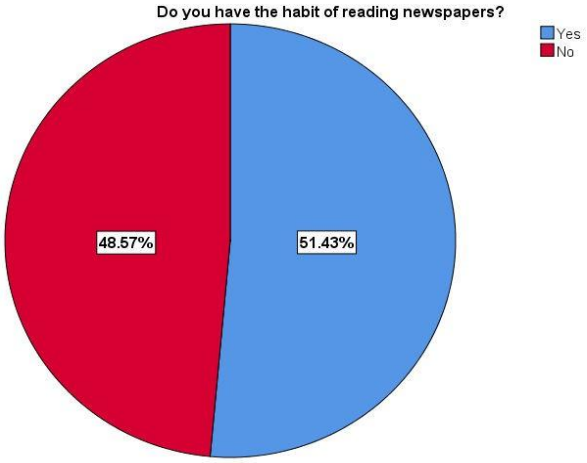

Figure 7 - Pie chart showing percentage distribution of responses for participants having the habit of reading newspapers. 51.43% - yes (Blue) and 48.57% - no (Red). Majority of the participants said yes (51.43%).

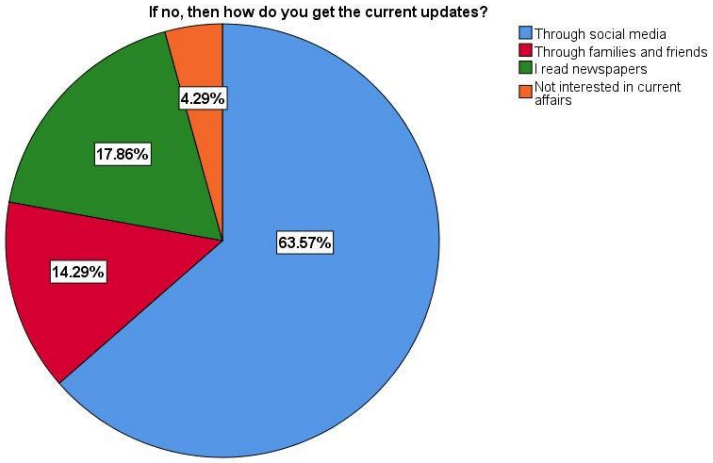

Figure 8 - Pie chart showing percentage distribution of responses for getting current updates. 63.57% - through social media (Blue), 14.29% - through families and friends (Red), 17.86% - through newspaper (Green) and 4.29% - not interested (Orange). Majority of the participants preferred chatting were getting current updates from social media (63.57%).

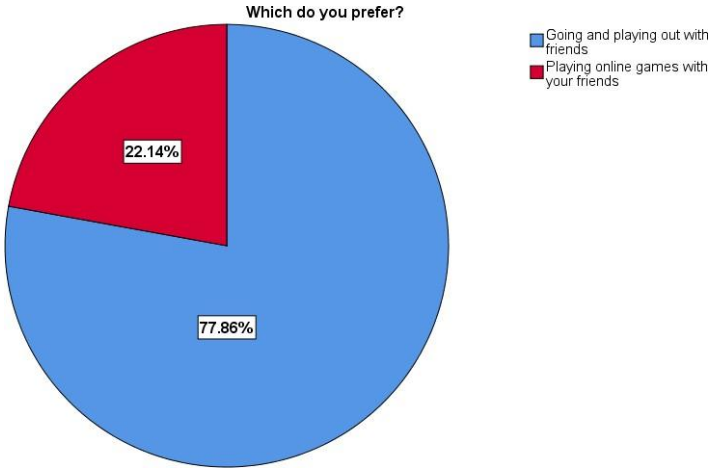

Figure 9 - Pie chart showing percentage distribution of responses for the preferences of playing with friends. 77.86% - going and playing out with friends (Blue) and 22.14% - playing online games with your friends (Red). Majority of the participants preferred going and playing out with friends (77.86%).

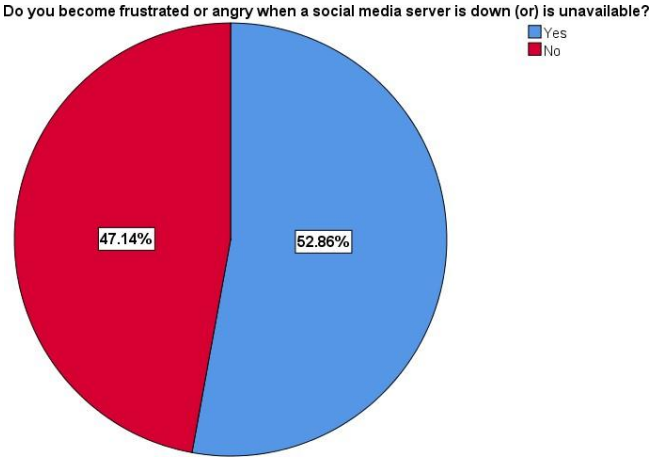

Figure 10 - Pie chart showing percentage distribution of responses for frustration or anger when a social media server is down or unavailable. 52.86% - yes (Blue) and, 47.14% - no (Red). Majority of the participants said yes (52.86%).

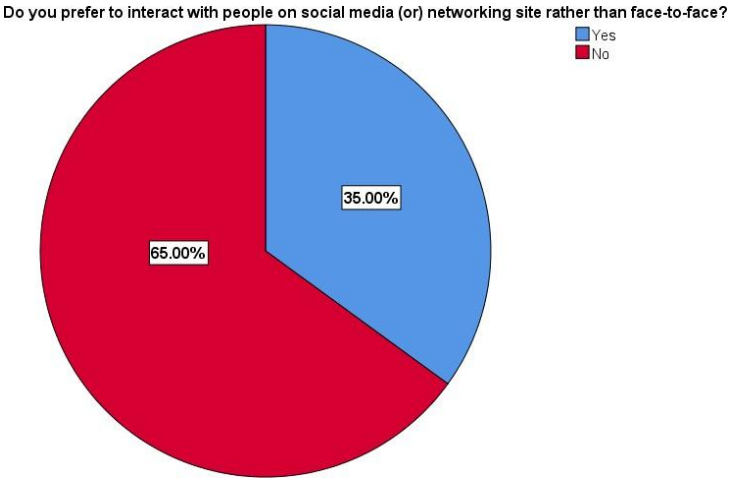

Figure 11 - Pie chart showing percentage distribution of responses for interaction with people on social media or face-to-face. 35% - yes (Blue) and 65% - no (Red). Majority of the participants said no (65%).

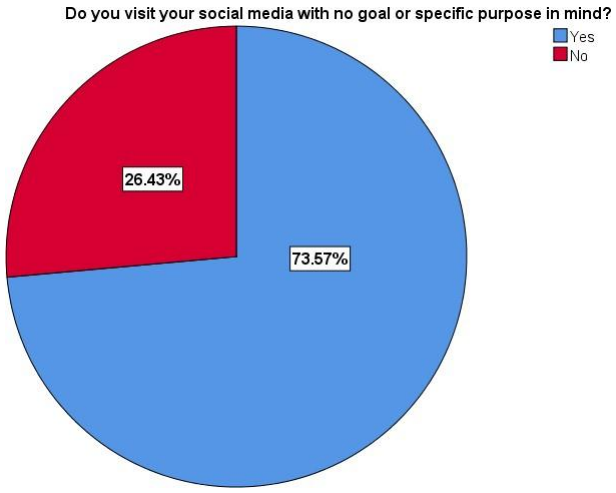

Figure 12 - Pie chart showing percentage distribution of participants who visit social media without any goal. 73.57% - yes (Blue) and 26.43% - no (Red). Majority of the participants said yes (73.57%).

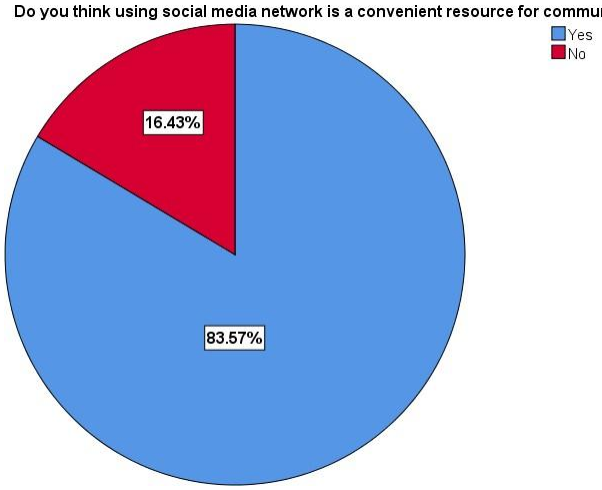

Figure 13 - Pie chart showing percentage distribution of responses for convenient way of communication. 83.57% - yes (Blue) and 16.43% - no (Red). Majority of the participants said yes (83.57%).

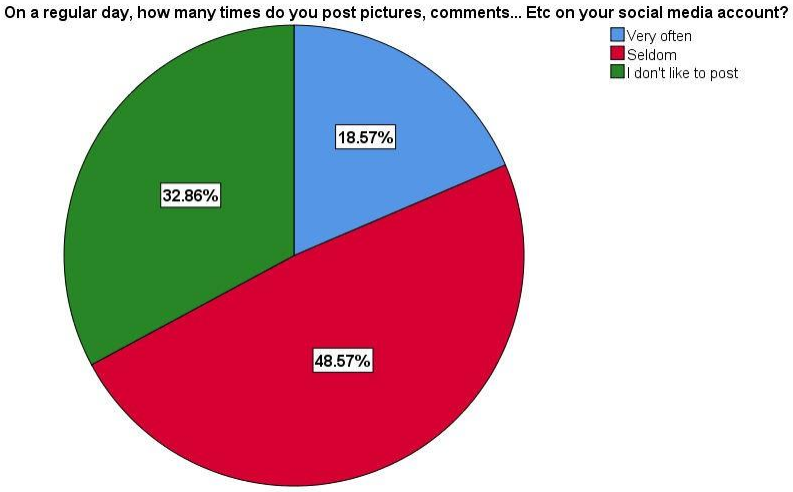

Figure 14 - Pie chart showing percentage distribution of responses for frequency of posting pictures or posts on social media accounts. 18.57% - very often (Blue), 48.57% - seldom (Red) and 32.86% - I don’t

like to post. Majority of the participants seldom posted pictures or posts on social media (48.57%).

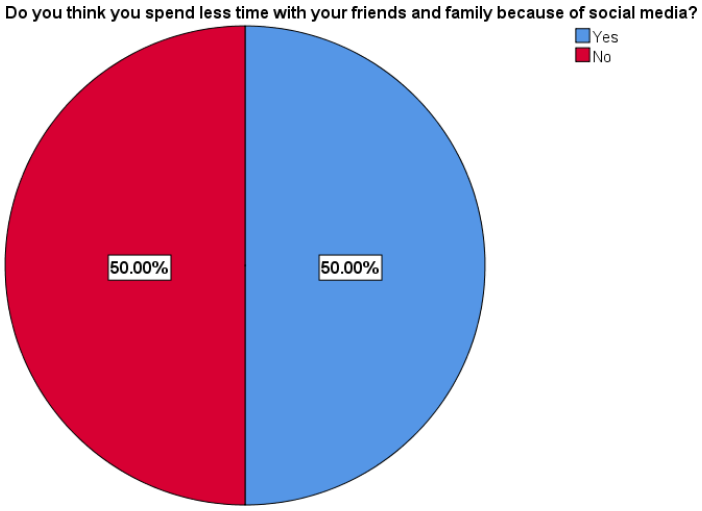

Figure 15 - Pie chart showing percentage distribution of responses for time spent with family and friends because of social media. 50% - yes (Blue) and 50% - no (Red). Equal percentage of the participants said yes (50%) and no (50%).

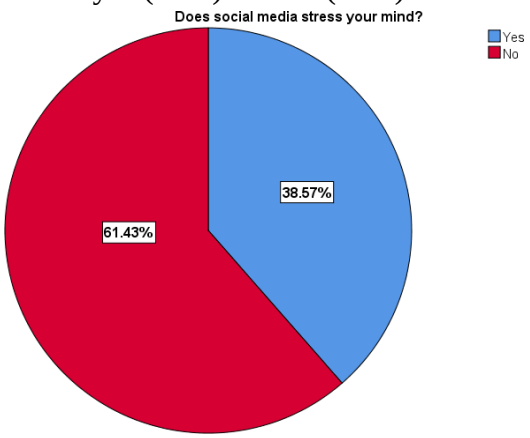

Figure 16 - Pie chart showing percentage distribution of responses for stress because of social media. 38.57% - yes (Blue) and 61.43% - no (Red). Majority of the participants said no (61.43%).

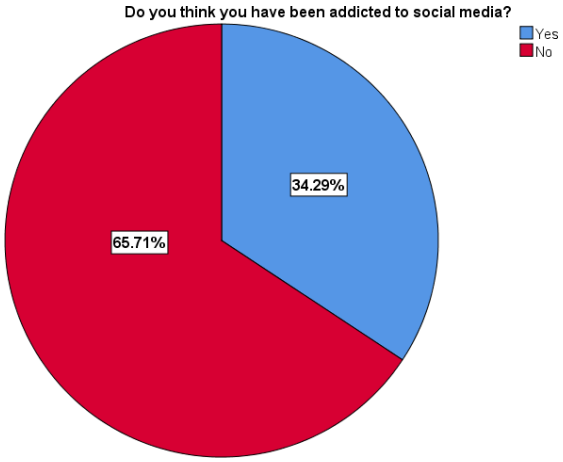

Figure 17 - Pie chart showing percentage distribution of responses for addiction to social media. 34.29% - yes (Blue) and 65.71% - no (Red). Majority of the participants said no (65.71%).

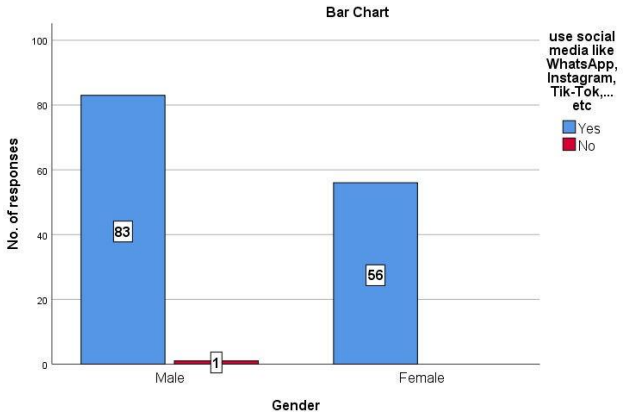

Figure 18 - Bar graph represents association between gender (X axis) and responses to usage of social media (Y axis). 83% of males reported yes and 56% of females reported yes. Blue denotes yes and red denotes no. Majority of both gender groups have answered yes but on analysis there was no statistical significance between genders and usage of social media. Chi square value = 0.671; P value = 0.413 (p>0.05 which is statistically not significant).

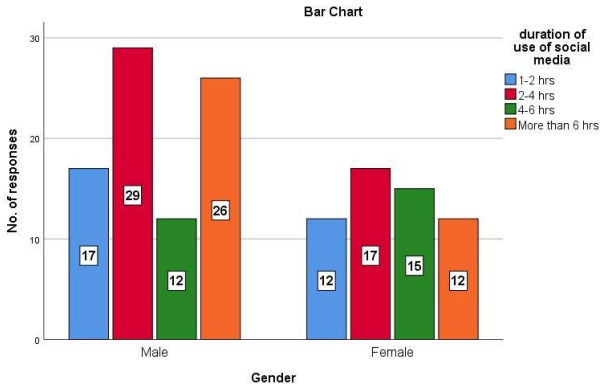

Figure 19 - Bar graph represents association between gender (X axis) and responses to duration of usage of social media (Y axis). 29% of males reported 2-4 hrs and 17% of females reported 2-4 hrs. Blue denotes 1-2 hrs, red denotes 2-4 hrs, green denotes 4-6 hrs and orange denotes more than 6 hrs. Majority of both gender groups have answered 2-4 hrs but on analysis there was no statistical significance between genders and duration of usage. Chi square value = 4.046; P value = 0.257 (p>0.05 which is statistically not significant).

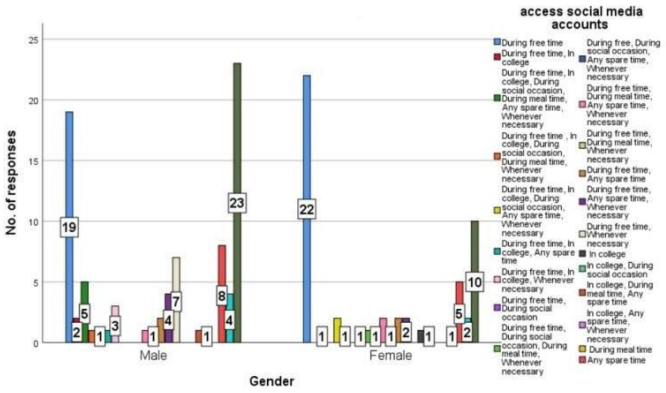

Figure 20 - Bar graph represents association between gender (X axis) and responses to access social media account (Y axis). 23% of males reported whenever necessary and 22% of females reported during free time. Blue denotes during free time, dark green color denotes only in college, yellow color denotes

during meal time and red color denotes during any spare time. Majority of both gender groups have answered during free time but on analysis there was no statistical significance between genders and access to social media accounts. Chi square value = 27.187; P value = 0.204 (p>0.05 which is statistically not significant).

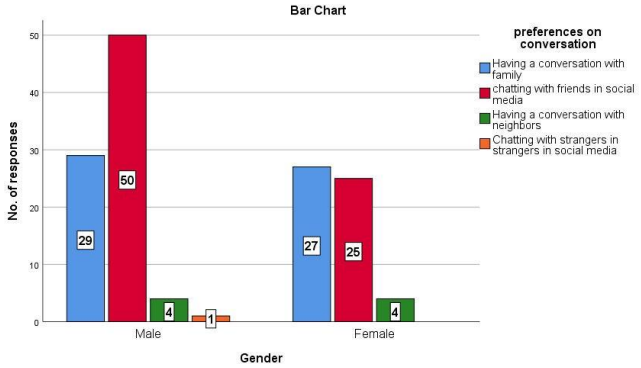

Figure 21 - Bar graph represents the association between gender (X axis) and responses to preferences on conversation in social media (Y axis). 50% of males reported chatting with friends on social media and 27% of females reported having a conversation with family. Blue color denotes having a conversation with family, red denotes chatting with friends in social media, green denotes having a conversation with neighbours and orange denotes chatting with strangers in social media. Majority of both gender groups have answered chatting with friends on social media but on analysis there was no statistical significance between genders and preferences in conversation. Chi square value = 3.963; P value = 0.265 (p>0.05 which is statistically not significant).

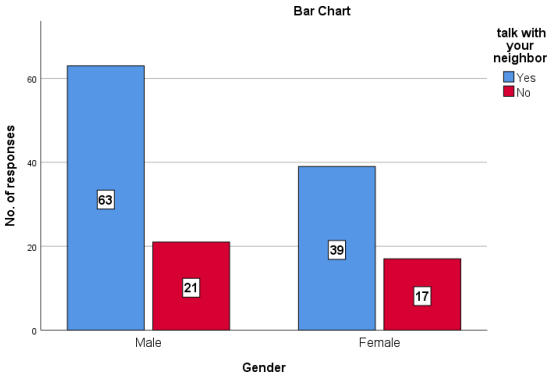

Figure 22 - Bar graph represents the association between gender (X axis) and responses to talk with the neighbour in the social media (Y axis). 63% of males reported yes and 39% of females reported yes. Blue color denotes yes and red denotes no. Majority of both gender groups have answered yes but in analysis there was no statistical significance between genders and talk with the neighbour. Chi square value = 0.488; P value = 0.485 (p>0.05 which is statistically not significant).

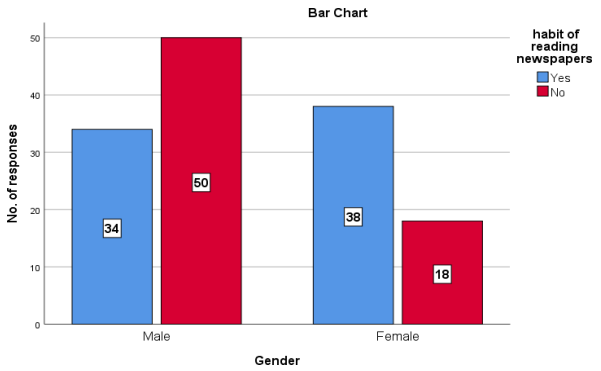

Figure 23 - Bar graph represents the association between gender (X axis) and responses to habit of reading newspapers (Y axis). 50% of males reported no and 38% of females reported yes. Blue color denotes yes and red denotes no. Majority of both gender groups have answered, habit of reading newspapers, which is statistically evident from the graph shown above. Chi square value = 10.084; P value = 0.001 ($p<0.05$ which is statistically significant).

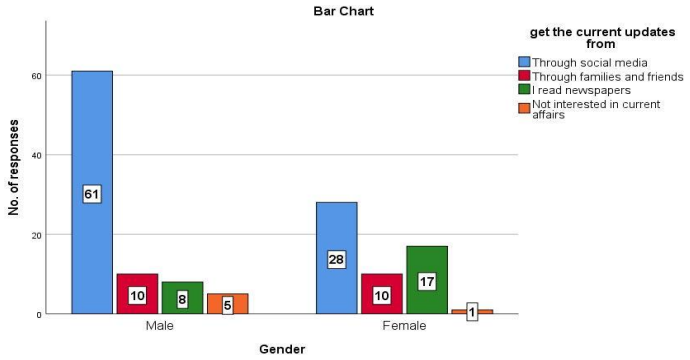

Figure 24 - Bar graph represents the association between gender (X axis) and responses to getting the current updates from social media (Y axis). 61% of males reported through social media and 28% of females reported through social media. Blue color denotes through social media, red denotes through families and friends, green denotes i read newspaper and orange denotes not interested in current affairs. Majority of both gender groups have answered, through social media, which is statistically evident from the graph shown above. Chi square value = 13.065; P value = 0.004 ($p<0.05$ which is statistically significant).

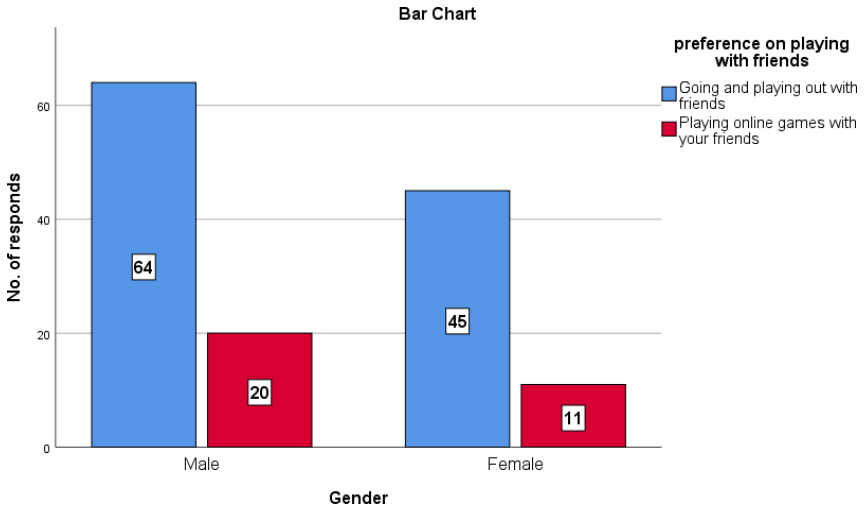

Figure 25 - Bar graph represents the association between gender (X axis) and responses to preferences of playing with friends in social media (Y axis). 64% of males reported going and playing out with friends and 45% of females reported playing out with friends. Blue color denotes going and playing out with friends and red denotes playing online games with your friends. Majority of both gender groups have answered, playing with friends but on analysis there was no statistical significance between genders and preferences of playing with friends. Chi square value = 0.338; P value = 0.561 (p>0.05 which is statistically not significant).

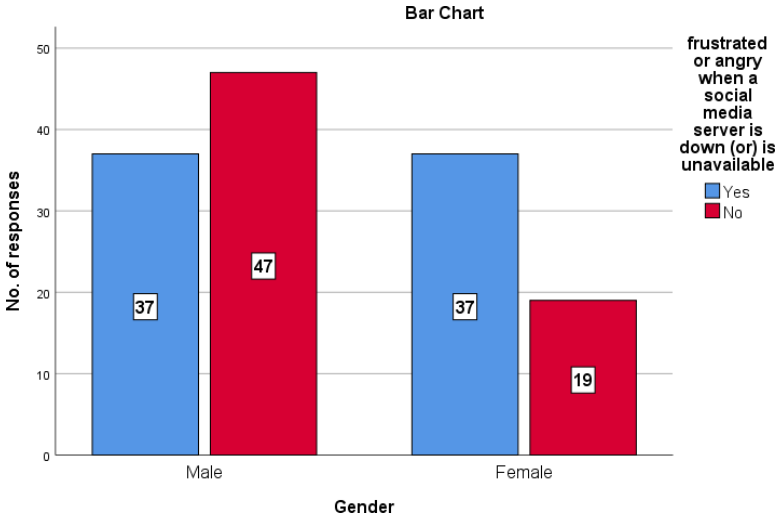

Figure 26 - Bar graph represents the association between gender (X axis) and responses to frustration or anger when a social media server is down or unavailable (Y axis). 47% of males reported no and 37% of females reported yes.blue color denotes yes and red denotes no. Majority of both gender groups have answered, yes but on analysis there was no statistical significance between genders and frustration or anger when a social media server is down or unavailable. Chi square value = 6.540; P value = 0.11 (p>0.05 which is statistically not significant).

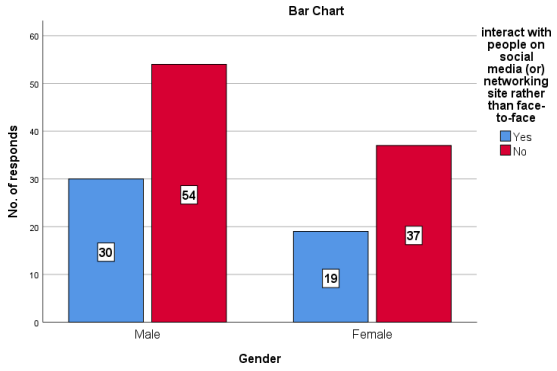

Figure 27 - Bar graph represents the association between gender (X axis) and responses to interaction with people on social media / networking sites over face-to-face (Y axis). 54% of males reported no and 37% of females reported no. Blue color denotes yes and red denotes no. Majority of both gender groups have answered, no but on analysis there was no statistical significance between genders and interaction with people on social media / networking sites over face-to-face. Chi square value = 0.047; P value = 0.828 (p>0.05 which is statistically not significant).

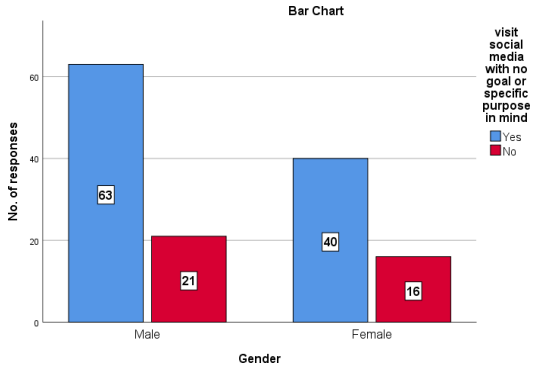

Figure 28 - Bar graph represents the association between gender (X axis) and responses to visiting social media with no goals or purpose in mind (Y axis). 63% of males reported yes and 40% of females reported yes. Blue color denotes yes and red denotes no. Majority of both gender groups have answered, yes but in analysis there was no statistical significance between genders and visiting social media with no goals or purpose in mind. Chi square value = 0.220; P value = 0.639 (p>0.05 which is statistically not significant).

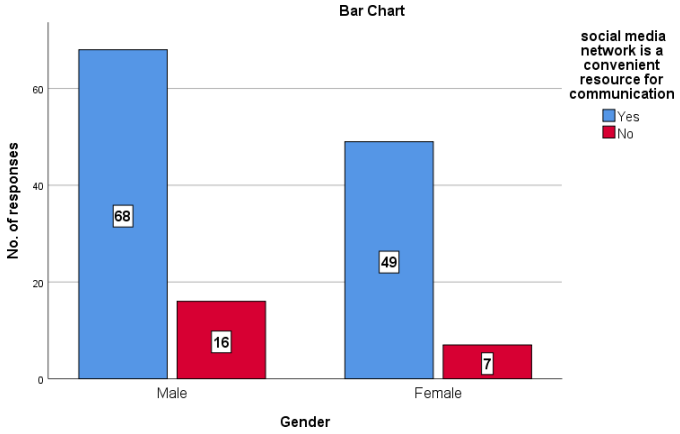

Figure 29 - Bar graph represents the association between gender (X axis) and responses to social media as a convenient mode of communication (Y axis). 68% of males reported yes and 49% of females reported yes. Blue color denotes yes and red denotes no. Majority of both gender groups have answered, yes but in analysis there was no statistical significance between genders and social media as convenient communication. Chi square value = 1.049; P value = 0.306 (p>0.05 which is statistically not significant).

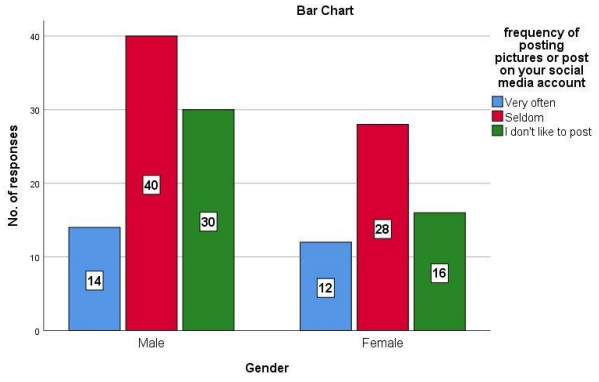

Figure 30 - Bar graph represents the association between gender (X axis) and responses to frequency of posting pictures or posts on social media accounts (Y axis). 40% of males reported seldom and 28% of

females reported seldom. Blue color denotes very often, red denotes seldom and green denotes I don't like to post. Majority of both gender groups have answered, seldom but in analysis there was no statistical significance between genders and frequency of posting pictures or posts on social media accounts. Chi square value = 0.971; P value = 0.615 (p>0.05 which is statistically not significant).

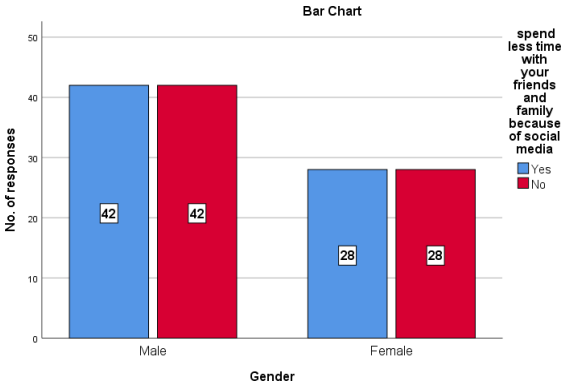

Figure 31 - Bar graph represents the association between gender (X axis) and responses to spending less time with friends and family (Y axis). 42% of males reported yes and 28% of females reported yes. Blue color denotes yes and red denotes no. Both gender groups have answered, equally, yes and no, but on analysis there was no statistical significance between genders and time spent less with friends and family. Chi square value = 0.000; P value = 1.000 (p>0.05 which is statistically not significant).

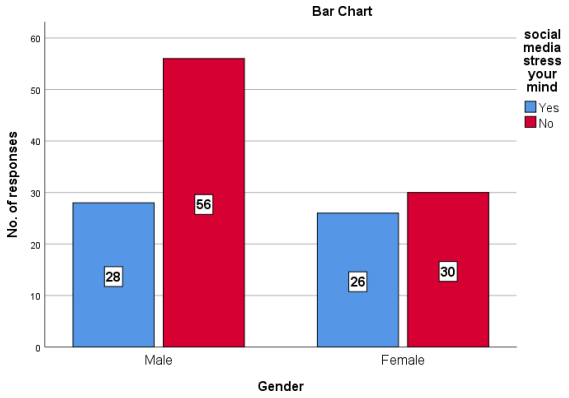

Figure 32 - Bar graph represents the association between gender (X axis) and responses to stress due to social media (Y axis). 56% of males reported yes and 30% of females reported yes.Blue color denotes yes and red color denotes no. Majority of both gender groups have answered, no but on analysis there was no statistical significance between genders and stress due to social media. Chi square value = 2.432; P value = 0.119 (p>0.05 which is statistically not significant).

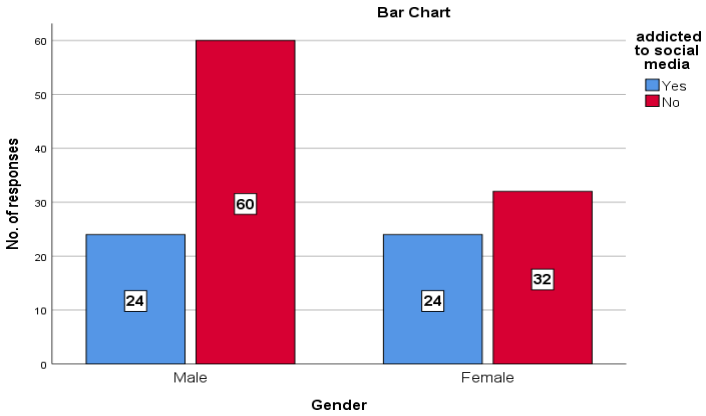

Figure 33 - Bar graph represents the association between gender (X axis) and responses to addiction to social media (Y axis). 60% of males reported no and 32% of females reported no. Blue color denotes yes and red color denotes no. Majority of both gender groups have answered, no but on analysis there was no statistical significance between genders and addiction to social media. Chi square value = 3.043; P value = 0.81 ($p>0.05$ which is statistically not significant).