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Research Paper

Relationship between brain dominance and social media addiction

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ABSTRACT

Internet is a developing technology that has become inevitable in everyone's life. Social media are computer-mediated technologies to interact with an individual or group that facilitate the sharing or creation of information. Brain dominance refers that an individual has a natural preference for processing information on one side of the brain. The main objective of this research is to find out the relationship between brain dominance and social media addiction. 100 sample (50 males and 50 females) were in the age range of 20 to 25 were selected through purposive sampling method. The sample was taken from various departments of Government Arts College, Coimbatore. Tools used were Brain dominance questionnaire by Luciano Mariani, 1996 and Social media addiction scale- SF by Cenzig Sahin, 2018. The findings revealed that majority of the social media addicts belong to right side brain dominance and there is no significant gender difference in the level of social media addiction.

Keywords: *Brain Dominance, Social Media, Gender Difference.*

"We don't have a choice on whether we do social media, the question is how well we do it".

-Erik Qualman

The brain dominance refers that a brain is composed by hemispheres, quadrants or parts, which is not equals, but functions are specialized and asymmetrical and one part of the brain is dominant than other. As like most of the body parts, brain also consider as two. Each hemisphere of the brain has specific skills and functions which are connected to the other body parts. The left hemisphere deals with data processing in sequential and logical way. In contrast, the right hemisphere deals with processing information in nonlinearly and holistically way (Torrance, 1982).

Social media addiction is defined as compulsive and excessive use of social media (Facebook, Twitter, Instagram and Snapchat) even when use of those platforms is taking over your life and having a negative effect on your 'real life' and relationships. The symptoms are

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including, checking phone constantly, spending more time in broadcasting daily activities on social media and feeling low when someone do not have access to social media.

According to the study by Hardvard University, self-disclosure on social networking sites lights up the same part of the brain that also ignites when taking an addictive substance. The reward area in the brain and its chemical messenger pathways affect decisions and sensations. When someone experiences something rewarding, or uses an addictive substance, neurons in the principal dopamine-producing areas in the brain are activated, causing dopamine levels to rise. Therefore, the brain receives a "reward" and associates the drug or activity with positive reinforcement. Social media addictive affects both physically and psychologically.

Social media have both positive and negative aspects in their life. The major advantages of social media are sharing and receiving information among other people easily. It also has many disadvantages like frequent checking, instant updates their daily routines, etc.

REVIEW OF LITERATURE

Rafi, Malek, Thamer, Kilani and Ahmed (2019), conducted a study on, "**Gender variations in social media usage and academic performance among the students of University of Sharjah". It was a cross sectional study with the sample of 328 medical students. Tool used was** Social Media and Academic Performance of Students Questionnaire (SMAAPOS) to assess the social media usage among students and Chi- square test was used to analysed data. The results showed that males were more addictive than females and academic performance of females had influenced by social media than females.

Qinghua He, Ofir Turel and Antoine Bechara (2017), conducted a study on, "Brain anatomy alterations associated with Social Networking Site (SNS) addiction", to investigate alterations in the grey matter, excessive behaviour and components that govern social network addiction. A sample of 20 social network users, they assessed the degree of SNS addiction by using voxel based morphometry (VBM) applied to structural Magnetic Resonance Imaging (MRI) scans. The results showed that social network addictions were associated with impulsive brain system. Additionally, this study found that, there was a positive correlation between grey matter volume and one level of social network site addiction.

RESEARCH METHODOLOGY

Objectives of the study

This study has two major objectives: first, to find the relationship between brain dominance and social media addiction. And second, to find the gender differences among brain dominance and social media addiction.

Hypotheses

1. There is a gender difference in the level of social media addiction.
2. There is a significant difference between internet addiction and domicile.
3. There is a significant difference between right and left brain dominance in social media addiction.
4. There is a gender difference in right brain dominance and social media addiction.
5. There is a gender difference in left brain dominance and social media addiction.

Sample

The total number of 100 sample (50 males and 50 females) were selected in the age range of 20 to 25. The sample was college students and it was selected through purposive sampling method taken from various departments of Government Arts College, Coimbatore.

Tools

Tools used were Brain dominance questionnaire by Luciano Mariani (1996), which consists of 15 statements with three various options and there is no negative statements in this scale. Another tool was Social media addiction scale- SF by CenzigSahin (2018), it is 5-point Likert type scale which consists of 29 items with the construct validity of .70 and Spearmen Brown reliability of .91, all the dimensions have reliable results.

Procedure

Out of 100 sample (50 males and 50 females), Brain dominance questionnaire by Luciano Mariani (1996) and Social media addiction scale- SF by CenzigSahin (2018) were administered to the entire sample. The instructions were explained which was given in the questionnaire. There was no time limit to complete the questionnaire and doubts were verified. The data were collected and statistically analysed.

Analyses of data

1. Mean
2. Standard deviation
3. ANOVA

RESULT AND DISCUSSION

Table I: The gender difference among internet addiction.

Gender	N	Mean	Standard deviation	f- value	P
Males	50	91.14	31.95		
Females	50	89.86	27.2	0.047	0.83

*p>.05

The mean values of males (N=50) are 91.14 and females (N=50) are 89.86. The standard deviations of males are 31.95 and females are27.2. It shows that there is no gender difference among social media addiction (f=0.047, p>0.047). Hence this is not significant, the hypothesis is not accepted.

Table II: The relationship between internet addiction and domicile.

Domicile	N	Mean	Standard deviation	f- value	P
Rural	33	89.30	29.46	0.080	0.778
Urban	67	91.09	29.77		

*****p>.05

The mean value of the rural (N=33) are 89.30 and the urban (N=67) are 91.09. The standard deviations of rural are 29.46 and the urban are 29.77. It shows that, there is no significant difference of social media addiction on the basis of place of living (f=0.77, p>0.05). Hence it is not significant, the hypothesis is not accepted.

Table III: The relationship between right brain dominance and left brain dominance in social media addiction.

Variable	N	Mean	Standard deviation	f- value	P
Right Brain dominance	69	95.83	26.72	7.730	0.007
Left Brain dominance	31	78.65	32.38		

*p<0.05

The mean value of right brain dominance (N=69) are 95.83 and the females (N=31) are 78.65. The standard deviations of right brain dominance are 26.72 and left brain dominance are 32.38. This result shows that, there is a significant difference between right brain dominance and left brain dominance among social media addiction (f=7.73,p<0.05). Hence it is significant, the hypothesis is accepted.

Table IV: The gender difference in right brain dominance and social media addiction.

Gender	N	Mean	Standard deviation	f- value	P
Male	35	98.26	27.23	0.584	0.447
Female	34	93.32	26.36		

*p>0.05

The mean value of males (N=35) are 98.26 and the females (N=34) are 93.32. The standard deviations of males are 27.23 and the females are 26.36. The result shows that, there is no gender difference of right brain dominance among social media addiction (f=0.548, p>0.05). Hence it is not significant, the hypothesis is accepted.

Table V: The gender difference in left brain dominance and social media addiction.

Gender	N	Mean	SD	F-value	P
Male	15	74.53	36.72	0.460	0.503
Female	16	82.50	28.39		

*p>0.05

The mean value of the males (N=15) are 74.53 and the females (N=16) are 82.50. The standard deviations of the males are 36.72 and the females are 28.39. This result shows that, there is no gender difference of left brain dominance among social media addiction (f=0.46, p>0.05). Hence the hypothesis is not accepted.

CONCLUSION

1. There is no gender difference in social media addiction. The hypothesis, 'There is a gender difference in the level of social media addiction' is not accepted.
2. There is no significant difference in social media addiction and domicile. The hypothesis, 'There is a significant difference between social media addiction and domicile' is not accepted.
3. There is a significant difference between right brain dominance and left brain dominance in social media addiction. So the hypothesis, 'There is a significant difference between right and left brain dominance in social media addiction' is accepted.
4. Majority of the social media addiction belongs to right brain dominance.

5. There is no gender difference in right brain dominance and social media addiction. The hypothesis, 'There is a gender difference between right brain dominance and social media addiction' is not accepted.
6. There is no gender difference in left brain dominance and social media addiction. The hypothesis, There is a gender difference in left brain dominance and social media addiction' is not accepted.

Limitations

1. The total numbers of sample were 100 (50 males and 50 females), it was selected through purposive sampling method from the various departments of Government Arts College, Coimbatore.
2. Tools used were Brain dominance questionnaire by Luciano Mariani (1996) and Social media addiction scale- SF by CenzigSahin (2018) and it was administered to the entire sample for the study.

Implications

1. Psychologist should be appointed in colleges in order to make the students to overcome social media addiction.
2. Training can be given to enhance the functioning of left and right brain efficiently.

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Conflict of Interest

The author declared no conflict of interest.

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