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Factors Triggering Usage of Social Networks: An Empirical Study in West Bengal

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Abstract

The paper is a study on Social Networks (SN) currently being used regularly by hundreds of millions of people worldwide–its usage patterns with respect to demographic characteristics, emotive issues and other functional factors such as health, politics, education, Business, work place and Cybercrime. Usage of SN has analyzed ***between three emotive factors e.g.*** *loneliness, happiness, interpersonal with respect to functional factors viz.,* ***Health, Politics, Education, Business, Workplace and cybercrime****. Also investigations have been done on differential impacts of social media usages on both demographic profiles and personality traits with respect to all nine attributes. Respondents of the study are mostly urban, young adults, single, belonging to nuclear families, gender wise more or less evenly divided, educationally graduate or postgraduate, mostly students or in service, with a majority earning up to Rs 20,000, though a significant 22.4% of them have incomes above Rs.100,000 pm. A majority of the respondents use social media between 2-4 hours, mostly between 9pm-12 midnight and mostly resort to smart phone for social media usage. Descriptive Statistics indicate that among the respondents loneliness factor and promoting interpersonal relationships are not so much important for using SN, while SN usage helps enhance their happiness, obtain education, health related information, expand their business, their workplace related activities, remain politically engaged and finally, help remain appraised on cybercrimes.*

Keywords: *Social Networks, Personality Traits, Descriptive Statistics, Dependency and Social Networks Usage Factors.*

Introduction

The advent of Social Network Sites (SNS) is rapidly changing human interaction (Saini et al., 2020). In the past, it was sufficient to merely have a website in order to get information, but today there are Social Networks *(henceforth denoted as SN)* like Facebook, Twitter, linked in etc. through which people interact and connect with one another. These sites allow their users to exchange ideas, share news, participate in events and share their interests. Not only do social media connect people but it also a way of keeping updated on news and letting them contribute to various forums or debates. Social media is also fast becoming a way of looking for information where users will search for advices on certain topics by looking at what others are sharing on social media. Social networks connect with people (Foreman, 2017) in ten ways: **Media sharing networks**—Share photos, videos, and other media, **Discussion forums**—Share news and ideas, **Bookmarking and content curtain networks**—Discover, save and share new content, **Consumer review networks**—Find and review businesses, **Blogging and publishing networks**—Publish content online, **Interest-based networks**—Share interests and hobbies, **Social shopping networks**—Shop online, **Sharing economy**

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networks—Trade goods and services, **Anonymous social networks**—Communicate anonymously. There has been a significant transformation in human behavior with the rise in internet, social media and the electronic gadgets supporting those changes. People are always on their smart phones or gadgets checking on their social media accounts that they often mistake virtual reality for real life (Thomason; October 7, 2016).

People in the social media usually show only the positive face of their lives to the public (Jazayeri, blog not dated). There are problems and challenges in life that come our way but we often bottle them up to give others the perception that our life is perfect. In that way, social media affects human behavior negatively. The key here is to use it in moderation. Even too much of a good thing can still be bad for us.

The society is constituted by individuals and their interconnections. Mathematically speaking, it can be represented by a graph, or network, (Hanneman & Riddle, 20050) in which the individuals are the nodes and the relationships are the links, or ties. Each connection, being it a friendship or other type of social relations, is the result of a human decision process in which the individuals select with whom they want to interact. In this decision process, actors might act fully or partially rationally, yet they are driven by a number of sociological and psychological factors, which depends on the personality of the individuals: some might be more keen in gathering influence in social media, some others might prefer fostering friendships within particular communities, some might be willing to use network connections to advance their career (Pagan, 2019).

Social media refers to the means of interactions among people in which they create, share and/or exchange information and ideas in virtual communities and networks. The usage of social media has grown considerably and many users access their social media through their mobile phones. This has increased the need for mobile broadband data and has increased the subscriptions for this service by extraordinarily (https://communications.tufts.edu/marketing-and-branding/social-media-overview/)

In the context of extensive use of social media, researchers find it socially relevant to study the social media usages and its pattern in the society of west Bengal. Use of social media in this geographical area relatively unexplored and hence this research is significant.

Review of Literature

The study undertakes a thematic review of selected research papers in the existing literature, woven around themes of the different dimensions or conduits through which social media impacts on human behavior in particular and society in general viz., Personality, Loneliness, Happiness, Interpersonal Relationships, Education, Health, Business, Workplace, Politics and Cybercrimes.

Personality is a stable psychological feature that is related to a broad range of behaviors and attitudes. In the past two decades, the field of psychology has developed a framework called the Big Five-Factor Model *(Goldberg, 1990; McCrae & Costa, 1997; John & Srivastava, 1999)*, which structures most of the current studies of personality. This broad and hierarchical approach asserts that personality traits can be categorized and reliably measured in five domains: extraversion, emotional stability (also called neuroticism, its reverse), and openness to new experiences, agreeableness and conscientiousness. Each factor is bipolar (e.g., extraversion vs. introversion) and includes specific aspects (e.g., sociability), which in turn encompass more detailed traits (e.g., talkative, outgoing). Therefore,

personality differences cannot be reduced to the Big Five traits. Rather, they represent personality at the broadest level of abstraction *(John & Srivastava, 1999)*.

The literature suggests that these five traits are rooted in genetics *(Bouchard, 2003)*. *Hamburger et al. (2000)* and *Amichai-Hamburger (2002)* note that personality has been found to be a leading factor in understanding why people behave the way they do on the Internet. *Zywica and Danowski, (2008)* have examined the link between personality and social networking. Their results are that three dimensions of personality are consistently related to social media use: extraversion, neuroticism, and openness to experience. If social media makes you lonely and depressed, it is like asking "if eating makes you fat". The answer is yes, but not always, not in everyone, and not forever. Social media use is fine in moderation, according to *Amatenstein (2019)*; studies suggest a link between times spent in social media and loneliness. His study finds while there is evidence of more loneliness among heavy social media users, there is also evidence suggesting social media use decreases loneliness among highly social people. *Marsden (2018)* talks about the existence of a happiness paradox, "You're probably less happy than your friends on social media. And it's a paradox simply because the same is probably true of your friends". *Suciu (2019)* in his studies has suggested that tuning out from social media can have a positive impact on one's life. New studies suggest that quitting social media may not make people happier. *Bevin (2019)* says "living alone, far away from your friends and family can make you depressed now and then. You can always use social networking sites to stay in touch with your friends and family". Social network sites have become an important social milieu that enables interpersonal relationships by allowing users to share and create information. *McKenna et al. (2002)* finds that after being connected through SNS, the relationships could go stronger, deeper and longer than those made possible through face-to-face methods. *Ross et al. (2009)* finds that many relationships first are formed online resulted in real-world contacts. *Nosko et al. (2010)* say such online interactions also generated more self-disclosures and fostered deeper personal questions than did face-to-face conversations. *The Asian School, Dehradun, India, (Jul 24, 2019)* in a study discerns that generally students use social media to share and get instant quick information, reviews and solutions to their problems. *Cain (2011)* discusses that Social Media applications have been rapidly adopted by users of all ages, forcing us to change how we think about communication in general and Health-System Pharmacy in particular.

Korda et al. (2013) mention that rapid and creative developments in participatory Internet communications, known as "social media" provide motivation and encouragement to practice proper health behavior. Social Media Marketing Industry report has shown that social media enables businesses to get exposure, traffic and gain market insights. *Smith (2019)* notes that with such amazing growth, every business today needs to leverage social media channels in the best possible way. *Casselbury (2018)* writes that the use of social media, like face book, twitter in the workplace toes a fine line. While it can certainly be a boon to company marketing efforts when used appropriately, social media use can also be a drain on employees' productivity (*Shillie et al. 2020)*. Therefore, when it comes to creating a social media policy for the workplace, ones need to take a good look at the pros and cons of its use. Social media or more specifically news media plays an important role in democratic societies because they allow for participation among citizens. Younger generations are more involved in politics due to the increase of political news posted on various types

of social media. *Gainous and Wagner (2013)* stated that online social media are changing the face of politics in the United States. The growing use of social media, now estimated to be more than three billion users worldwide, provides fertile ground for hackers looking to commit cybercrime. *Wall (2008)* in his article takes a critical look at the way that public perceptions of cybercrime are shaped and insecurities about it are generated.

The literature reviewed above also indicates that social media performs different roles depending on the user and the type of social media he or she subscribes to. In addition, the literature indicates the split views held by people regarding whether social media has a negative or positive influence on human behavior and society. Social media and its usage pattern as well as its influence are varied. This is a most modern area of research and continuously changing its influence. Thus researchers find it both socially and academically useful to study this in the state of West Bengal, India.

Objectives

The main purpose of the study is to examine the differential responses of social media creating through various dimensions or conduits (both emotive and functional) and personality traits of respondents. Thus we will investigate be done in following sequences:

1. The different forms and ways of social networks usages.
2. The demographic characteristics playing differential responses through social networks.
3. The various conduits or dimensions and personality traits having differential responses of usages of social media.

Research Methodology

To address the research questions, an appropriate research instrument, that is, a set of questionnaires have been constructed, - the inputs into the questionnaires collected in part from the existing works evident in the review of literature.

The target population comprised young adults, adults to senior persons covering a wide range of occupations, incomes, residences, family structures, among other attributes. A cross-sectional study of responses from such respondents from different parts of the state of West Bengal is undertaken. Most of the respondents have been either contacted directly or through mail. A total of 900 respondents from different urban and semi-urban areas of West Bengal, which include districts of Kolkata, Howrah, Hoogly, Burdwan, North and South 24 Parganas, some district towns of Midnapore, Birbhum, Malda and Darjeeling, are approached; of the responses received, 620 responses is found to be complete and thus considered for the purpose of this study. Efforts have been made to have respondent's representation from different parts of the state and as such convenience sampling is resorted to and data collected through structured questionnaires. The responses of the respondents are depicted using a Likert Scale (5 point) where 1 represents the respondent's strong disagreement, 2 represents disagreement, 3 represents neutral, 4 represents agreement and 5 represents strong agreement to the various parameters considered for this study.

Again to know the real scenario, ten attributes are considered for each of the factors or constructs. Collection of data was done over almost a year from January, 2019 to December, 2019.

The SPSS is used to analyze all attributes and constructs in the instrument. The data is analysed by descriptive statistics. Further, correlations analysis and ANOVA for different sets of categorical variables have also been undertaken. Data transformation is undertaken to transform

personality traits into categorical variables.

Data Analysis and Findings

The research undertakes an empirical analysis of cross-sectional responses from respondents from different parts of the state of West Bengal with proportional representation from different parts of the state and, as such, convenience sampling is resorted and data is collected through organized questionnaires on human behavior as well as human society.

Demographic Profile:

The demographic features, observed across young adults, adults to senior persons and covering a wide range of occupations, incomes, residences, family structures, among other attributes, affect the ways of social media use and certainly play a role in the different dimensions impacting human behavior in particular and society in general.

Table 1: Demographic Profile of the Respondents

Demographic Characteristics	No. of Class	%
Locality	Rural	7.30
	Semi-Urban	12.70
	Urban	80.00
		100.00
Gender	Male	53.40
	Female	46.60
		100.00
Age	16-20	6.60
	21-25	58.40
	26-30	16.00
	31-35	8.70
	36-40	6.60
	41-50	1.10
	51-60	2.60
		100.00
Educational Qualification	10th level	0.60
	10th + 2 level	3.20
	Graduate	36.60
	Post Graduate	48.40
	M.Phil/Ph.D	11.20
		100.00
Occupation	Student	62.80
	Service	28.50
	Business	2.30
	Professional	1.80
	Self Employed	2.10
	Home Maker	1.50
	Not Working	1.00
		100.00
Income	Upto 10,000	46.60
	10001- 20000	10.80
	20001- 30000	6.10
	30001- 40000	4.20
	40001- 60000	6.50
	60001- 100000	3.40
	Above 100000	22.40
		100.00
Marital Status	Single	80.30
	Married	18.70
	Divorced/ Separated	1.00
		100.00
No of Children	0	81.30
	1	11.00
	2 or more	7.70
		100.00
Type of Family	Nuclear	62.60
	Joint	30.60
	Extended	6.80
		100.00

That a predominance of the respondents – 80% of them are urban; gender wise respondents are more or less evenly divided – 53.4% are males; a majority of the respondents are young adults – 58.4% are in the 21-25 age group; 85% of them are either graduate

or postgraduate degree holders; as the respondents are mostly young adults, occupation-wise most of them are either students (62.9%) or are in service (28.5%); 57.4% of the respondents have incomes below Rs.20,000 pm, while a significant 22.4% of them have incomes above Rs.10000 pm. As young adults, expectedly most of them - 80.3% are single and have no children (76%) and 62.6% belong to nuclear families.

Social Networks Usage Pattern:

Modern time witnesses a trend where majority people are prone to socially engaging themselves over digital platforms rather than forming meaningful bonds outside of the same. As a result people are hooked to their gadgets to access their social media for a considerably huge time span all through their days. Following are the social media usage pattern of the chosen by 620 respondents for this study:

Table 2: The Social Networks Usage Pattern of the Respondents

Social Networks Use	Range	%
Main SN used regularly	Facebook	26.05
	Whatsapp	33.06
	Twiter	4.36
	Instagram	16.00
	Others	20.53
		100
Time spent on SN usage	less than 2 hrs	39.20
	2-4 hrs	36.00
	4-6 hrs	16.30
	6-8 hrs	3.70
	8-10 hrs	4.80
		100
Most frequently used time-slot	6-9 am	1.80
	9am - 12 Noon	4.40
	12pm-3pm	8.10
	3-6 pm	8.50
	6-9 pm	11.30
	9pm-12midnight	57.60
	12am-3am	8.40
		100
Gadgets use for SN	Desktop	2.45
	Smart Phone	83.42
	Laptop	12.64
	Tab	1.49
		100
SN use for	Family Relationship	19.35
	Social Relationship	40.78
	Personal Relationship	22.02
	Professional Relationship	17.85
		100
Main reason making one follow SN	Videos	25.14
	Pictures	8.70
	Articles	23.90
	Comments	5.50
	Liking	22.17
	Blogs	13.92
	Share	0.67
		100
Type of organisations	Public	23.90
	Private	33.70
	Foreign	1.00
	Others	41.50
		100
People are mainly interested in SN for	Products	12.70
	Services	12.37
	Support	3.50
	Promotions & offers	7.87
	General Chat	14.60
	Writing Social Message	10.11
	News	7.70
	General Knowledge	14.48
	Social issue related topic	16.67
		100

75.2% of the respondents use social media for less than 2 hours or between 2-4 hours, and 57.6% of

them use social media between 9pm-12 midnight, and 83.42% of the respondents resort to smart phone for social media usage.

Personality: A Factor for SN Usage

Every individual is different and as a result exhibits different traits and personalities. Naturally, their preferences and choices are also different based on how they are as a person, the same hold true for the intensity of social networks usage of different people. Thus, to analyze the various responses of the respondents regarding SN usage, it becomes necessary to have knowledge about their personalities in order to draw meaningful conclusions accordingly. Ten attributes have been considered for the analysis and the result of which are shown below:

Table 3: Big-five Personality Factors of Respondents

Level of Agreement	Big-five Personality									
	Extraversion		Agreeableness		Conscientiousness		Neuroticism		Openness	
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Strong Disagreement	292	47.1	332	53.5	147	23.7	346	55.8	33	5.3
Disagreement	278	44.8	212	34.2	308	49.7	245	39.5	227	36.6
Agreement	42	6.8	51	8.2	116	18.7	18	2.9	285	46.0
Strong Agreement	8	1.3	25	4.0	49	7.9	11	1.8	75	12.1
Total	**620**	**100**	**620**	**100**	**620**	**100**	**620**	**100**	**620**	**100**

As per the frequency distribution table, 47.1% of respondents strongly disagree and an overwhelming 91.9% of respondents disagree that they are extroverted in accordance to the Big-five personality model. As for the next trait, that is, Agreeableness, 33.2% of respondents strongly disagree and i.e. 54.4% of respondents disagree that they possess the agreeableness trait. Further, 23.7% of the respondents strongly disagree and 73.4% disagree that they are of Conscientious Type. 55.8% of respondents strongly disagree and that is, an overwhelming 95.3% disagree that they are of a Neurotic sort, meaning they want to say they are emotionally stable. However, while 36.6% of respondents disagree that they are open, 12.1% strongly agree and 58.1% agree that they are open, that is, may embrace new things easily.

Loneliness: A Factor for SN Usage

The fast moving modern world and the busy schedules has left many with a sense of loneliness at the end of the day. This can prove to be one of the probable triggering factors that induce people to find solace in the social media bonds over digital platforms. Thus to know the real scenario for the loneliness construct, containing ten attributes, and the results of how many respondents consider loneliness as a contributing factor in the wake of social media usage are shown below of the same:

Table 4: Loneliness as a Factor of Social Network Use of Respondents

Factor	Level of Agreement	Frequency	%
Loneliness	Strong Disagreement	329	53.1
	Disagreement	151	24.4
	Agreement	105	16.9
	Strong Agreement	35	5.6
	Total	**620**	**100**

As per the frequency distribution Table, 53.1 % of the respondents **relatively strongly disagree** that people are using social network for feeling lonely. And a large number of people 77.5% of the respondents disagree loneliness is the reason for taking refuge of social media.

Happiness: A Factor for SN Usage

It is highly probable that social network provides a great sense of happiness and joy to many people which can also be a claimed as a contributing factor that might justify people's addiction to the same. The different mechanisms offered by social media platforms also provide a sense of recognition and appreciation to the users and this social validation can generate a sense of self worth and happiness to the people at large who are actively using the social media. For happiness construct as well, containing ten attributes, based on which a clear idea can be generated as to whether SN usage provides the chosen respondents with great happiness and joy.

Table 5: Happiness as a Factor of Social Network use of Respondents

Factor	Level of Agreement	Frequency	%
Happiness	Strong Disagreement	23	3.7
	Disagreement	129	20.8
	Agreement	351	56.6
	Strong Agreement	117	18.9
	Total	**620**	**100**

The frequency distribution in Table shows that 56.6 % of the respondents agree and 75.5% **relatively strongly agree** with the fact that people are using social network for enhancing happiness.

Relationship: A Factor for SN Usage

Human beings are social beings and always look for establishing meaningful social bonds to lead a good life. In today's busy world we witness a similar scenario where people are more engaged in their social media and the bonds created over it. However digital platforms are not just used for this very purpose and thus we attempt to find out the clear picture by analyzing the responses of the respondents for this factor, containing ten attributes, with the help of the tabular representation made below.

Table 6: Relationship as a Factor of Social Network use of Respondents

Factor	Level of Agreement	Frequency	%
Relationship	Strong Disagreement	204	32.9
	Disagreement	351	56.6
	Agreement	61	9.8
	Strong Agreement	4	0.6
	Total	**620**	**100**

As per the frequency distribution Table, 32.9% of respondents strongly disagree and i.e., an overwhelming 89.5 % of respondents **disagree** with the fact that people are using social network for building interpersonal relationship only.

Education: A Factor for SN Usage

All things have its pros and cons, so does the social media. It serves as a platform for updated news, both global and national, knowledge and learning if used with the right intent. This construct consists of ten attributes and the analysis is done with the motive to conclude whether the chosen respondents consider the social network as a dependable source of information.

Table 7: Education as a Factor of Social Network use of Respondents

Factor	Level of Agreement	Frequency	%
Education	Strong Disagreement	50	8.1
	Disagreement	80	12.9
	Agreement	262	42.3
	Strong Agreement	228	36.8
	Total	**620**	**100**

The frequency distribution Table shows that the 42.3 % of respondent **agree** and i.e. an overwhelming 79.10% relatively strongly agree with the fact that people are using social network for education purposes.

Health: A Factor for SN Usage

Constant usage of social media means constant usage of digital gadgets at all times. This might have an adverse effect on the health of the users, both mentally and physically. At the same time, it cannot be denied that we also get much valuable and relevant information relating to our fitness and health issues by using the same platforms. Therefore ten attributes constituting this factor has been analyzed and the results are displayed accordingly.

Table 8: Health as a Factor of Social Network use of Respondents

Factor	Level of Agreement	Frequency	%
Health	Strong Disagreement	59	9.5
	Disagreement	252	40.6
	Agreement	246	39.7
	Strong Agreement	63	10.2
	Total	**620**	**100**

As per the frequency distribution Table, we see a split almost right down the middle - the 50.10% of the respondents relatively strongly disagree or disagree, while 49.9 % of them agree or relatively strongly agree with the fact that people are using social network for Health Information and related purposes.

Business: A Factor for SN Usage

Modern days represent modern techniques as well. This is true for the business world as well. Using the digital platform and social network as a virtual business place has become a common sight off late. Digital platform has facilitated round the clock business services and beyond doubt people with business intentions are utilizing this facility to make a career out of it. To understand the situation better the responses of the respondents over ten attributes of this factor have been taken into consideration and accordingly analyzed, results of which are shown below.

Table 9: Business as a Factor of Social Network use of Respondents

Factor	Level of Agreement	Frequency	%
Business	Strong Disagreement	32	5.2
	Disagreement	146	23.5
	Agreement	278	44.8
	Strong Agreement	164	26.5
	Total	**620**	**100**

The frequency distribution Table shows that 44.8% of respondents agree and 71.3% of respondents relatively strongly agree with the fact that the people are using social network for their Business related purposes.

Work Place: A Factor for SN Usage

Virtual medium serves to be great platform for valuable information regarding work related opportunities. At the same time, it is a great platform for healthy communication between employees

and keeps up to date with relevant information as well. This construct considers ten attributes and the results are represented in the table below:

Table 10: Work Place as a Factor of Social Network use of Respondents

Factor	Level of Agreement	Frequency	%
Work Place	Strong Disagreement	43	6.9
	Disagreement	153	24.7
	Agreement	348	56.1
	Strong Agreement	76	12.3
	Total	**620**	**100**

As per the frequency distribution Table, 56.1 % of respondent agree and 68.3% of the respondents relatively strongly agree with the fact that the people are using social network for workplace related matter.

Politics: A Factor for SN Usage

Updated news about everything, politics included, can be procured from digital platform within seconds after the happening of some event. This creates awareness among people which is extremely necessary in today's time. Therefore to know how the respondents react to this factor, ten attributes have been considered and analyzed to have a better understanding of the same.

Table 11: Politics as a Factor of Social Network use of Respondents

Factor	Level of Agreement	Frequency	%
Politics	Strong Disagreement	31	5.0
	Disagreement	134	21.6
	Agreement	304	49.0
	Strong Agreement	151	24.4
	Total	**620**	**100**

As per the above frequency table, 49 % of the respondents agree and 73.4% of the respondents relatively strongly agree with the fact that the people are using social network for political awareness and preparedness.

Cyber Crime: A Factor for SN Usage

Right information helps spread awareness; social network does the same for cases of cyber crimes. People nowadays use the social network for being aware of the possible threats posed from cyber criminals and for also having ample knowledge about how to combat it if one faces with a problem of similar kind. However, the digital platforms are also used for carrying out several cyber attacks so one must always be alert and have proper awareness to face such problems heads on. Therefore, after analyzing the ten attributes of this factor, the following results have been arrived at:

Table 12: Cybercrime as a Factor of Social Network Use of Respondents

Factor	Level of Agreement	Frequency	%
Cybercrime	Strong Disagreement	25	4.0
	Disagreement	85	13.7
	Agreement	221	35.6
	Strong Agreement	289	46.6
	Total	**620**	**100**

According to frequency distribution table, 46.6% of the respondents strongly agree and an overwhelming 82.2% of the respondents relatively agree with the fact that the people who are using social networks may be victims of cybercrimes at any point of time.

Dependency of Social Network Usage on Demographic Characteristics:

Following table-13 shows differential usage impacts of SN with respect to the different dimensional variables to demographic characteristics.

Table 13: Use of SN on Residence, Gender & Age of the Rrespondents

Factor	Residence		Gender		Age	
	F-value	p-value	F-value	p-value	F-value	p-value
Loneliness	5.65	0.01	0.53	0.47	5.89	0.00
Happiness	0.83	0.44	2.43	0.12	3.97	0.01
Relationship	6.41	0.01	1.44	0.23	4.60	0.00
Education	2.71	0.07	26.96	0.00	2.31	0.03
Health	3.52	0.03	13.76	0.00	2.83	0.01
Business	6.48	0.01	6.06	0.01	3.55	0.01
Work place	2.77	0.06	4.12	0.04	3.77	0.00
Politics	0.80	0.45	0.51	0.48	4.06	0.01
Cybercrime	4.24	0.02	51.41	0.00	6.68	0.00

** Indicates significant at 0.05 level*

In terms of the different dimensions or conduits through which social media impacts on human behavior in particular and society in general, - namely, loneliness, happiness, interpersonal relationships, Education, Health, Business, workplace, Politics and Cybercrime, demographic factor age is significant across all of them, implying that irrespective of the age of the respondent, social media does have an impact through all of these dimensions or conduits. Residence variable also is significant with respect to loneliness, interpersonal relationships, Education, Health, Business, and Cybercrime; while gender variable is significant only for Education, Health, Business, workplace and Cybercrime.

Table 14 : Use of SN on Education, Occupation and Income of Rrespondents

Factor	Education level		Occupation		Income	
	F-value	p-value	F-value	p-value	F-value	p-value
Loneliness	1.16	0.33	4.89	0.00	2.67	0.02
Happiness	6.03	0.00	9.78	0.00	6.81	0.00
Relationship	3.32	0.01	2.96	0.01	4.15	0.00
Education	3.01	0.02	4.91	0.00	7.72	0.00
Health	1.65	0.16	1.78	0.10	3.53	0.01
Business	1.41	0.23	4.29	0.00	3.23	0.01
Workplace	0.95	0.44	7.07	0.00	8.13	0.00
Politics	1.88	0.11	4.83	0.00	4.44	0.00
Cybercrime	2.92	0.02	10.15	0.00	8.96	0.00

* Indicates significant at 0.05 level

Demographic factors occupation and income are significant across all of the dimensions, namely, Personality, loneliness, happiness, interpersonal relationships, Education level, Health, Business, workplace, Politics

and Cybercrime, implying that irrespective of the occupation or income of the respondent, social media does have an impact through all of these dimensions or conduits. However, when it comes to education of the respondent, social media use occurs through interpersonal relationships, educational usage and tracking cybercrime.

Table 15 : Use of SN on Marital Status, No of children and Type of Family of Rrespondents

Factor	Marital Status		No of Children		Type of Family	
	F-value	p-value	F-value	p-value	F-value	p-value
Loneliness	1.76	0.14	4.44	0.00	1.96	0.12
Happiness	7.18	0.00	2.48	0.02	10.66	0.00
Relationship	14.80	0.00	1.96	0.07	0.77	0.51
Education	3.26	0.01	5.28	0.00	9.97	0.00
Health	7.90	0.00	3.74	0.01	5.02	0.01
Business	7.01	0.00	5.44	0.00	12.06	0.00
Workplace	2.01	0.09	0.88	0.51	14.32	0.00
Politics	5.49	0.00	2.71	0.01	8.42	0.00
Cybercrime	6.65	0.00	2.29	0.03	12.97	0.00

* Indicates significant at 0.05 level

Demographic factor such as marital status of the respondent is significant across, happiness, interpersonal relationships, Education, Health, Business, Politics and but not loneliness; demographic factor No of children is significant across, loneliness, happiness, Education, Health, Business, Politics and Cybercrime and for demographic factor Type of family, social media use impacts through happiness, Education, Health, Business, workplace, Politics and Cybercrime.

Table-16 depicts the responsiveness of respondents in the matter of social network usage on the basis of their different social media usage patterns and big-5 personality types and measures any discrepancies thereof.

Table 16: Use of SN on Time Spent, Time of Day and Type of Organization of Respondents

Factor	Time Spent		Time of Day		Type of Organization	
	F-value	p-value	F-value	p-value	F-value	p-value
Loneliness	1.757	0.136	4.444	0.000	1.962	0.119
Happiness	7.183	0.000	2.478	0.022	10.659	0.000
Relationship	14.801	0.000	1.961	0.069	0.769	0.512
Education	3.258	0.012	5.276	0.000	9.969	0.000
Health	7.893	0.000	3.738	0.001	5.027	0.002
Business	7.010	0.000	5.442	0.000	12.060	0.000
Work Place	2.010	0.092	0.882	0.508	14.316	0.000
Politics	5.492	0.000	2.713	0.013	8.415	0.000
Cyber Crime	6.649	0.000	2.287	0.034	12.969	0.000

F-values and p-values in the table show that Time Spent on Social Media usage significantly affects how among the 10 attributes/dimensions, except loneliness and workplace, happiness, interpersonal relationships, Education while Health, Business, Politics and Cybercrime impact respondents' use of time in social media.

F-values and p-values in the table show that type of Organization respondent belongs to significantly affects how among the 10 attributes/dimensions, except loneliness and interpersonal relationships while Personality, happiness, Education, Health, Business, workplace, Politics and Cybercrime impact respondents' use of social media.

Table 17: Use of SN Based on Big-5 Personality Type

Factors	Extraversion		Agreeableness		Conscientiousness		Neuroticism		Openness	
	F-Value	p-value	F-Value	p-value	F-Value	p-value	F-Value	p-value	F-Value	p-value
Loneliness	11.428	.000	6.339	.000	23.507	.000	9.023	.000	12.919	.000
Happiness	8.917	.000	17.276	.000	4.954	.002	8.856	.000	2.453	.062
Relationship	7.765	.000	.973	.405	4.409	.004	2.988	.031	7.977	.000
Education	17.132	.000	17.963	.000	11.594	.000	21.087	.000	4.312	.005
Health	7.716	.000	6.046	.000	3.014	.030	3.694	.012	7.961	.000
Business	7.535	.000	18.663	.000	13.931	.000	19.742	.000	2.545	.055
Work Place	4.253	.005	26.110	.000	4.886	.002	7.876	.000	.976	.404
Politics	11.310	.000	9.275	.000	7.480	.000	25.027	.000	9.422	.000
Cyber Crime	35.775	.000	16.423	.000	4.376	.005	33.441	.000	8.117	.000

In order to find how Personality traits have differential influence for use of SN, responses on these traits variables are transformed into categorical variables with appropriate transformational technique and Then ANOVA is run. In the table-17, F-values are Significant at 5% level and hence Extrovert type of Personality have significantly influence of all eight attributes such as Loneliness, happiness, Interpersonal Relationships, Education, Health, Business, Workplace, Politics and Cybercrime impact respondents' use of social media. Agreeable type of Personality significantly again have significant differential impacts by attributes/dimensions, namely, Loneliness, Happiness, Education, Health, Business, Workplace, Politics and Cybercrime impact respondents' use of social media, except Interpersonal Relationship. Influences of SN on Conscientiousness category of Personality significantly are different, except health, the other attributes/dimensions Neurotic Personality has significantly differential effects of all attributes of social media except Interpersonal Relationships & Health. Openness category of Personality are significantly differently affect how Loneliness, Interpersonal Relationships, Education, Health, Politics and Cybercrime impact respondents' use of social media, while attributes Happiness, Business & Work-place are not significant in this respect.

Degree of Association between Various Constructs of Social Network Usage:

Following tabular representations depicts the degree of association between the different constructs of social networks usage and the big-5 personality traits with the ten dimensional variables.

Table 18: Correlation between Big-5 Personality and Different Factors of Social Networks

Factors		Loneliness	Happiness	Relationship	Education	Health	Business	Work Place	Politics	Cyber crime
Extraversion	Correlation	-.204**	.052	-.259**	-.118**	-.190**	-.059	-.198**	-.360**	.098*
	Sig. (2-tailed)	.000	.193	.000	.003	.000	.142	.000	.000	.015
Agreeableness	Correlation	-.217**	.084*	-.255**	-.111**	-.256**	-.240**	-.196**	-.213**	.105**
	Sig. (2-tailed)	.000	.037	.000	.006	.000	.000	.000	.000	.009
Conscientiousness	Correlation	-.087*	.152**	-.122**	-.061	-.234**	-.119**	-.216**	-.057	.318**
	Sig. (2-tailed)	.030	.000	.002	.127	.000	.003	.000	.158	.000
Neuroticism	Correlation	-.207**	.030	-.347**	-.140**	-.326**	-.206**	-.314**	-.357**	.120**
	Sig. (2-tailed)	.000	.455	.000	.000	.000	.000	.000	.000	.003
Openness	Correlation	-.063	-.158**	-.017	-.146**	.040	-.028	-.113**	.023	-.222**
	Sig. (2-tailed)	.115	.000	.674	.000	.320	.491	.005	.567	.000
**. Correlation is significant at the 0.01 level (2-tailed).										
*. Correlation is significant at the 0.05 level (2-tailed).										

Pearson Correlation analysis is done on extent of correlation between 5 personality traits and the 9 attribute variables in order to know the nature of associations among them.

Some of the significant correlations, which are worth mentioning, are that the personality trait Extraversion is significantly but positively related to cybercrime, while it is significantly but negatively related to loneliness, interpersonal relationships, education, health, workplace and politics; happiness and business are insignificant in their relationship to Extraversion. The personality traits Agreeableness and Conscientiousness are significantly but positively related to personality, happiness and cybercrime, while it is significantly but negatively related to the other 7 variables, namely, loneliness, interpersonal relationships, education, health, business, workplace and politics. The personality trait Neuroticism is significantly but positively related to personality and cybercrime, while it is significantly but negatively related to the other 7 variables, namely, loneliness, interpersonal relationships, education, health, business, workplace and politics; happiness dimension is insignificant in its relationship with Neuroticism. The personality trait Openness to experience is significantly but negatively related to personality, happiness, education, workplace and cybercrimes; the other dimensions, namely, loneliness, interpersonal relationships, health, business and politics are insignificant in their relationship with Openness to experience.

Table 19: Correlations between Different Factors of Social Networks Usage

Factors		Loneliness	Happiness	Relationship	Education	Health	Business	Work Place	Politics	Cyber crime
Loneliness	Correlation	1	.101*	.499**	.032	.293**	-.044	-.114**	.039	.013
	Sig. (2-tailed)		.012	.000	.433	.000	.279	.004	.334	.746
Happiness	Correlation	.101*	1	.379**	.500**	.490**	.489**	.493**	.375**	.359**
	Sig. (2-tailed)	.012		.000	.000	.000	.000	.000	.000	.000
Relationship	Correlation	.499**	.379**	1	.311**	.459**	.175**	.198**	.120**	.044
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.003	.271
Education	Correlation	.032	.500**	.311**	1	.547**	.582**	.570**	.505**	.583**
	Sig. (2-tailed)	.433	.000	.000		.000	.000	.000	.000	.000
Health	Correlation	.293**	.490**	.459**	.547**	1	.529**	.430**	.439**	.374**
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000	.000
Business	Correlation	-.044	.489**	.175**	.582**	.529**	1	.652**	.551**	.494**
	Sig. (2-tailed)	.279	.000	.000	.000	.000		.000	.000	.000
Work Place	Correlation	-.114**	.493**	.198**	.570**	.430**	.652**	1	.404**	.345**
	Sig. (2-tailed)	.004	.000	.000	.000	.000	.000		.000	.000
Politics	Correlation	.039	.375**	.120**	.505**	.439**	.551**	.404**	1	.572**
	Sig. (2-tailed)	.334	.000	.003	.000	.000	.000	.000		.000
Cyber Crime	Correlation	.013	.359**	.044	.583**	.374**	.494**	.345**	.572**	1
	Sig. (2-tailed)	.746	.000	.271	.000	.000	.000	.000	.000	
Total N		**620**	**620**	**620**	**620**	**620**	**620**	**620**	**620**	**620**

Pearson Correlation Analysis is done on the 10 attributes and dimension variables in order to know the nature of influence of the variables over one another in so much as these impact social media use.

Summary of Statistical Results:

Some of the significant correlations, which are worth mentioning, are that Personality is relatively highly and positively related to all the other attributes and dimensions. Loneliness is significantly related positively to only personality, happiness, relationship and health and negatively to workplace. Happiness is however significantly and positively related to all the other attributes and dimensions. Relationship is significantly and positively related to all the other attributes and dimensions, except cybercrime. Education is significantly and positively related to all the other attributes and dimensions, except loneliness. Health is however significantly and positively related to all the other attributes and dimensions. Business is significantly and positively related to all the other attributes and dimensions, except loneliness. Work

Place is significantly positively related to all the other attributes and dimensions, except loneliness to which it is negatively related. Politics similarly significantly and positively related to all the other attributes and dimensions, except loneliness. And finally, Cyber Crime is significantly and positively related to all the other attributes and dimensions, except loneliness and relationship.

The study drew samples of 620 majorly from urban and semi urban areas; gender wise sample was more or less evenly distributed. Sample was collected from facebook, whatapp, instagram and twitter users. More than 70% of the respondents used SN between 2-4 hours on an average. Most of the respondents used all SN sights for Social Relations, while they also used for Family Relationship, Personal Relationship and Professional Relationship. Among five categories of personalities, (Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness), most of the people perceived themselves to have openness; Conscientiousness and Agreeableness among people ranked second. Most of the respondents disagreed to be extravert and neurotic. In the sample, minority of respondents were drawn to SN due to loneliness. Sample respondents were in social media to share and enjoy happiness (more than 75%). Only 10.04% respondents used SN for social relationships.79.5% used social media for education purpose; 49.9 percent used for health related issues. Respondents overwhelm used social media for business purpose (80.4 %), 67.4 % used social media at work place.73.4% agreed to use social media for politics. ANOVA of three groups classified on the basis of age, gender and residence run on nine attributes were significant and hence implied that they were impacted by social media use (table-13) except gender variables which was only influenced by Education, Health, Business, workplace and Cybercrime. In table-14, again results of ANOVA run on three groups classifies by education level, income and occupation and nine attributes were significant showing that these groups were all influenced by SN expect that loneliness, business, work place and politics did not have influences on all categories of education levels. In table-15, ANOVA were run again another set of categorical variables to find influence of SN. Here, all most all groups were influenced by all nine conduit variables except marital status group which was not influenced by loneliness; the group classified as number of children was not influence by loneliness, happiness, Education. In table-16, F values were significant through all attributes except loneliness and workplace, happiness, interpersonal relationships, Education; also type of organization the respondent belonged, had impacts of SN on them through all attributes except loneliness and relationships. In table-17, ANOVA were run on all five personality traits variables and nine attributes and F-values were significant except relationships in the case of agreeableness, health in case of Conscientiousness and business and work place in case of openness personalities, implying that all types of personalities were impacted by all attributes as far as usage of SN were concerned.

In table-18, correlation between attribute variables and 5 personality traits were presented. The trend showed that personality traits and attributes were significantly associated while some were negative and most of them were weakly associated with Extraversion, Agreeableness, Conscientiousness, Neuroticism and were mostly negatively associated except for cybercrime and happiness. Personality traits openness was negatively associated with cybercrime as well as all other attribute variables except health. Again, table-19 presented associations among attribute variables. Happiness was strongly and significantly associated with all other attributes except loneliness; education

was also strongly associated with all other except loneliness; business was also positively associated with all other variables except loneliness.

Conclusion

Among key findings of this empirical research in the geographical area of West Bengal, it was discerned that Personality as a overall factor and most of the individual personality traits determine how all factors viz., Personality traits, Loneliness, Happiness, Interpersonal Relationships, Education, Health, Business, Workplace, Politics and Cybercrime, - determined significant responses of use of social media. Descriptive Statistics of attributes and other dimensions indicated that the factors such as loneliness and promoting interpersonal relationships were not so much important for using SN, while SN usage enhanced happiness, and further helped enhance knowledge and education, obtained useful health related information, expanded scope of their business, built workplace related activities, remained politically aware and finally, remained appraised on cybercrimes. Looking at the demographic profile, it was found that irrespective of the age, occupation or income of the respondent, social media did have an impact through all dimensions or conduits; while the demographic factors, like, Residence, Gender, Education, Marital status, No. of Children, and finally Type of Family affected how social media impacted through a majority of dimensions of attribute variables. For Social Media Usage factors like Time Spent on Social Media, 'Time of Day social media is used, *surprisingly* except for loneliness and interpersonal relationships and sometimes, workplace, the remaining other attributes/ dimensions were significant, implying social media impacted through social media usage variables.

Also overall personality as well as individual personal traits by and large affected or determined the way social media impacts through the various attributes/dimensions, Social Media sites and platforms should become more and more comprehensive to reach out and accommodate people with different personality types. Moreover, since attributes like loneliness or interpersonal relational relationships did not drive people across different demographic or social media usage profile to use social Media, social media may not give priority to these factors while developing their sites. However, as for people across different demographic categories or social media usage profile, social media impacted through most of the attributes/ dimensions, the content and overall reach of these attributes/dimensions in particular should be broad-based and comprehensive and should continually be updated to reflect evolving technology, changing times and shifting preferences. For any study on social media with an ever expanding user base at an accelerating pace, for any generalizations or policy recommendations to make, a very representative sample has to be made. For reasons of effective applications, such samples may separately be drawn from different categories of respondents such as from the exclusive groups of teenagers, young adults, adults in their 30's and 40's, adults in 50's & 60's, and senior citizens, or exclusive groups of students, homemakers, working professionals, business and entrepreneurial groups, or across gender and marital status, across different income earners, since social media usage requirements and patterns will certainly vary across such groups. Observations and findings across such disparate groups may help develop exclusive social media sites or may help make the sites sufficiently broad-based for attracting such users. As we mentioned earlier, with changes in technology and shifts in socio-economic, political and cultural landscape, social media users' requirements and interests will certainly change, paving the path for a researching

with a broader and more comprehensive set of the dimensions/attributes that may ensue.

Major Contributions

The paper is useful to find that social media has been contributing to education, business development, political awareness, for work place related work. While Social media is no more just confined to social, personal and family relations. Its influences have widen and hence business, marketers and educationist should use social medial for creating better work culture, business relations and value based politics. This is a powerful tool which can reach out at the click of button. Hence should be used responsibly for creating better world.

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