

Effects of Social Network Sites (SNS) on the Psychological Health of College Students
in Khyber Pakhtunkhwa (KP), Pakistan

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Abstract

The increasing trend of technological development and its acceptance by the users is a hallmark of this age. The proliferation of the most innovative technologies and its consequent convenience of information and communication via internet have malformed the center and the fringe almost in the same manner. The social network sites (SNSs) are also attracting individuals because of their affordance and reach. The SNSs helped connecting people, groups and communities, with shared interest on Facebook, Whatsapp, Twitter and Snap chat, etc. Heavy exposure to the SNS among the youth has now become 'virtual addiction' that at times brings about psychological health issues. Researchers have observed a correlation between stress, depression, low self-esteem, loneliness and social network addiction and emphasized that such dependence affects the health and psychological status of a person. This paper is also an attempt to identify such correlations by conducting a study examining varying degrees of effects on heavy and light users both male and female in academic institutes of Khyber Pakhtunkhwa (KP), Pakistan. The result showed significant difference between heavy and light users for the stress levels. Female also experienced more stress than their male counterpart. It was found that female respondents were feeling more loneliness and their self-esteem got more affected as compared to male by their online activity.

Keywords: SNSs, heavy and light users, psychological health, stress, loneliness

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Introduction

In the past few years, various internet communities have gained popularity. Internet has ultimately served as a medium for people to interact with each other virtually by providing many virtual communities. As the latest internet sensations, the social media have captured the interest of millions of users (Albarran, 2013). It has created a virtual reality for people. Social network sites (SNS) are a popular platform that carries contents to multiple users allowing the message to spread like a virus (Worth, 2015). An ever-increasingly medium its use for society, culture and academic research has grown markedly (Jiyoung, 2013). The massive demand of these mediums has been considered as the most recognized area for scholars. Nowadays, the hype of internet communities has become so high, that almost every internet user is a part of a certain virtual community or the other through portable devices and smart phones. Various SNS have been introduced for better interaction amongst the users and since its inception Facebook, Whatsapp, Twitter, Instagram, Snap chat, etc. have grabbed trillions of people who use these mediums in routines where most of them use these mediums in day to day activities (Boyd, 2007).

These sites cater to diverse users allowing for virtual sharing their ideas after following the contents which are shared on different print and electronic mediums which most of time seem counterfeit. However, most sites support pre-existing social networks, but others help strangers connect on the pretext of common interest, ideology, political view, or activities. Another group unite on the basis of common language or shared racial, sexual, religious or nationality-based identities supporting a range of interests and practices. At the other side, some classes reflect their connections on the basis of same political, social and religious characteristics

for their explicit interests. But often the use of these technologies is not in line anticipated by proponents (Kareem, 2015). The misuse of these mediums can create many psychological and physical predicaments (Salmani, 2016). Human in this age are highly spending their free hours on these mediums which create fretfulness and mental disorder (Dick, 2013) with many negative outcomes, some with long-term consequences (Frazier, 2015).

In particular experts also warn of negative effects of internet and social network addictions among youth. They are being recognized as health and psychological disorders all over the world (Abri, 2016). A campaign 'awareness about risk faced by youth in cyberspace by Sultan Qaboos University (SQU), Oman divulge that the concept of children exploitation is not new especially the age of digitalization have defenselessness effects on them often fall victims to predators prowling in cyberspace who are out to exploit them (Ibrahim, 2016). Specialists stressed that such addiction affects health, and social and psychological status of a person as it detains the individual from a real world with others and destroys his/her social skills (Abri, 2016). Many studies resulted that uncontrolled and fanatical usage of these networking mediums inculcates highly negative effects which cause misery and isolation (kim, 2009). More than fifty one percent teenagers in United States who use these social mediums from which more than thirty one percent lives are highly damaged by using these sites (Dick, 2013). The main causes of stress come by having a large number of Facebook connection by engaging number of users and by spending most of the times on internet (Hampton, 2015). The people who spend most of the time on these mediums can spend little time in regular activities which direct impact on their lives by producing isolation among users (Theobald, 2014). In order to provide remedy for such ailment, in many countries there are internet addiction treatment camps e.g. in China teens

underwent a military training to cure their addiction to internet. Moreover, individuals addicted to internet developed 'text neck' (Abri, 2016).

The current study aims to distinguish the heavy and light SNS users via online and the actions of these users while using these online mediums such as messaging and networking etc. and demonstrate that how the usage of these mediums effect on the psychosomatic status and problematic behavior. Further the data regarding the SNS usage pattern by gender, education etc. wise and needs (cognitive, social interactive, personal integrative, affective and escapist) has also come into the limelight.

Literature Review

Social media has façade alliance with anxiety (Dick, 2013). The social networking mediums play an imperative role on user's lives by changing their actions, consuming time, by highly carrying out on the mental and corporeal fitness of users especially teenagers who prefer to use these mediums most of the time (Hampton, 2015). Literature revealed a strong association between SNS usage and stress. A study (why do social networks increases stress?) found that SNS users are more than fifteen percent who likely to use social media in routines having "somewhat stressful" attitudes as compare to those who use less time (Dick, 2013). Comparing to the association between the SNS users and mental anxiety, another study "Psychological stress and social media use" various questions were asked from the respondent about a well-structured gauge for measuring anxiety which also pronounced as the perceived Stress Scale. The score of this analysis was ten out of thirty on this stress scale and this anxiety was measured between the teenage female and males. It was experienced that women showed higher anxiety and aggression

as contrast to the opposite gender. The score of females was approximately seven which was higher than males (Hampton, 2015).

The social networking mediums nourish the miserable sentiments among high users because of higher anxiety level in these users. These mediums can be helpful in some ways but most of the times these mediums can be worsen when the users facing anxiety (Theobald, 2014). The use of SNS is also associated with negative consequences causing depression (Schumacher, 2000). Many dissertations on this theme imitate that constant and obsessive usage of these social mediums produce worsen effects on users behavior especially isolation (Moody, 2001).

Self-respect of users is also one of the prominent factor while using these social networking. According to a pronounced BBC report, these new mediums have double-edged effects which at one side can be useful but at the other side, these can generate many harmful effects on user's attitudes. With the passage of time, the users of new technology shifting their most of the hours at these systems by avoiding face to face exchanges. Most of the findings on these variables concluded that this type of usage cause high depression, mental and psychosomatic disorder, aggression and anxiety in majority of the users which's reproducing worsen effects on users' thoughts especially loneliness which is the main foundation of all these tribulations (Frazier, 2015).

While pointing out the possible negative outcome of dependence on social media, Dr. Mihalas says in quotes;

"It furthers the vicious cycle of sitting at home being isolated. You become a victim of your own thoughts as you become less attuned to the outside world around you. You might get steered into chat rooms with people who prompt

negative thoughts, feelings, and emotions instead of engaging with people who are living a more positive, healthier lifestyle" (Theobald, 2014).

Theoretical Framework

The theoretical loom for this study is highly stands on the principles of media effects approach of mass communication. However, it will primarily focus on two theories i.e. (1) Cultivation Theory and (2) Uses and Gratification Theory. The Cultivation Theory by George Gerbner classified the television viewers into two groups' i.e. heavy viewers and light viewers. He points out that there is great dissimilarity between the using habits of light and high observers. The high users of SNS spend most of the hours on these mediums where the content of these mediums indirectly dictate the attitudes of these users. This is according to Gerbner—Cultivation. According to his findings television viewers often give answers that are closer to the world depicted on television (Tankard, 1992). Similarly in this particular study heavy users and light viewers of SNS are taken into account. Respondents using the SNS for up to four hours a day will be considered as 'heavy users'. While those using up to one to three hours will be considered as 'moderate users' and less than an hour as 'light users'.

On the other hand Uses and gratification theory focuses on the usage of media and different form of communication with a sole goal of fulfillment of desires and interpersonal needs and wants (Albarran, 2013). Uses and gratification theory debates the practical substitutes of these new mediums for other means. This theory is considered as the most significant theory in recognizing the exercises of these mediums. It debates on the uses contentment while using these mediums in routines (Katz, 1972). This theory demonstrates that the uses of these mediums

highly depend on recipient satisfactions for getting information, pleasures, recreations and amusements (McQuail, 2012).

Psychological Distress Model

Lonely and depressed person is likely to have higher preference for online contact, since they perceive that online communiqué might be the ‘‘Prozac of social communication,’’ relatively less hazardous and easier than face-to-face communication because of anonymity. This model, postulates that the individuals who are lacking self-presentational skills might prefer online communication to face-to-face communication. As they devote more time and attention to their online social interaction, some of them have a hard time regulating their Internet use, which is termed compulsive use (Caplan, 2005). Compulsive use in turn leads to negative life outcomes such as lower academic grades, missing class or work, and missing a social engagement. In addition to models that describe the overall processes of communication, scholars have advanced other models to depict the effects that may result whenever media communication occurs. Both micro- and macro analytical models have been used to describe the different types and levels of media effects, from purely individual effects to influences on groups of people or even society at large.

Individual Effects

Comstock psychological model is highly useful in demonstrating unswerving effects on users of these New Mediums. This model was developed by Comstock and his colleagues in 1978 for illustrating the effects of watching television on the psychological progression (Sultan, 2008). This model describes that the watching television highly effects in behavior changing. The viewer’s learn and perceive many things by watching TV and apply these actions in their lives which not only produce change in the attitudes of viewers but also damage the cultural

values of these viewers. The recognitions of the reality by consuming these programs on TV is an alleviate variable where more the media coverage generate more of the psychological effects on TV viewers which highly change the minds of these mediums users (McQuail, 1993).

There is another example of Thorson's cognitive processing model which debates on individuals psychosomatic consequences. Whenever cognitive dimensions are under consideration, models are sometime rather complex; however, such complexities are necessary to accurately depict the many factors and steps involved in the processing of the mediated information. For example, a foreign student who does not yet have a thorough command of English would have more trouble processing commercials than a native speaker, and would not remember the commercial message as well (Sultan, 2008).

Research Questions

1. What kinds of effects are caused by the SNS usage?
2. What are the emerging patterns of gratification sought from SNS usage?

Objectives

1. To find out the extent of SNS usage and gratification sought.
2. To identify the motivational and psychological need the SNS users derive be receiving and exchanging contents.
3. To know the level of symptomatic effects of psychological health of the respondents.

Hypotheses

1. **Null Hypothesis (H_0):** There is momentous association linking heavy expenditure of social networking and Psychological Health (four dependent effects variables).

2. **Null Hypothesis (H_0):** There is noteworthy connection between gender and Psychological Health (four reliant effects capricious).

Research Variables

The major variables in this research work are below:

Independent variable

In this research the independent variables are:

1. Exposure to the SNS (heavy users and light users)
2. Gender (male and female)

Dependent variables

In this research the dependent variable are the four symptomatic effective. Stress, depression, low-esteem and loneliness of psychological health.

Operational Definitions

- **Effects:** Any Impact on individual psyche after consuming Facebook and WhatsApp contents especially the one from your contact list.
- **Social Network Sites (SNS):** Some online mediums of internet through which the community or users of these mediums try to generate and activate their profiles for exchanging their views and for knowing others (boyd, 2015). For this study SNS refers to Facebook and WhatsApp.
- **Psychological Health:** Any symptomatology effect (not clinical) of stress, depression, low self- esteem and loneliness.
- **Users:** Refers to those individuals who are integrated to SNS having Facebook and WhatsApp accounts and are connected/using it at least once a day.

- **Usage:** SNS usage can be divided into five categories depending on their needs. These possible needs are cognitive, social interactive, personal integration, affective and escapist.
- **Cognitive Needs:** Human requires information for recognizing their surroundings which can be useful for basic needs. These may include; getting education information, learning about events, employment information.
- **Social Interactive Desires:** The desires which remain in connect with relatives and in friends' circles. These may include; communication with distant friends, communicating with local friends, meeting new friends.
- **Personal Integrative Desires:** The desires which are important for empowering reliability, assurance, constancy, and position of human being. These may include; visiting groups, getting personal help, joining a group, language based communication.
- **Affective Desires:** This is considered as the boost in expressions, gratifications or artistic familiarities. This may include; getting hobby information.
- **Escapist Needs:** The things which help you in getting relaxations and tension free. These may include; pastime.
- **Gratification:** This explains the altitude of anticipations which someone receives and which are cultivated by different mediums. Those who use these mediums and the contents of these mediums are gratified at the same level.

Methodology

A convenience sampling was adopted in six districts of KP on the basis of urban and rural background of the district. The questionnaire for this research includes three parts: The inquiries

on the practicing of internet, the demographics and the verdicts of declarations which are measured on a (Likert) scale for understanding the indicative level of indulgence. Various questions asked from the respondents about the usage of these mediums and the daily hour's ratios which they spent on these mediums while using these mediums including the activities while using these mediums. Most of the questions were asked about the effects which they feel that these cause because of the gratifications of these mediums contents. The main reason behind these questions was to understand the collective, instructive and psychosomatic changes in users' attitudes. The answers of the respondents were gathered and examined by using SPSS arithmetical techniques.

Research Instrument

The research instrument for analyzing the respondents' attitudes was a questionnaire and some unceremonious interviews which are asked at the time of survey. While mentioning to some other questions regarding the specific variables, the main questions were focusing on the level of internet usage, assessments and connection of these users in social movements. According to requirements of the study, the researchers were little keen to ask questions regarding the level of usage and the level of engagements in community movements especially, the level of edifications and indulgence which they get while using these forums.

Population and Sample

Five hundred (500) questionnaires were administered to respondents within college and just outside college campuses and cyber cafés in six district of KP i.e. Peshawar, Mardan, Kohat, D.I.Khan, Swabi and Abbottabad. This information congregation progression was selected from the start of 2016 to end of March where N= 455 successfully completed by getting respondents

views where majority of the respondents was male part which was 61.2% approximately. The main sample was the students whose education level was at under or post-graduation stage.

Data Collection

The instrument for the collection of data was a prescribed questionnaire with some unceremonious questions which were asked from the respondents at the time of doing surveys.

A formal questioner was conducted in English for analysing the effects of these mediums on the behaviours of these online medium users. Users were asked questions about the level of usage of these online mediums (WhatsApp/Facebook) in routines and which types of activities they perform on these mediums while spending their hours on these tools. Through that researchers analyzed the types of indulgence of these users. It was measured that how these mediums trying to exploit and damage the attitudinal and psychopathic modifications in users approach.

Data Coding and Analysis

In order for easy recoding of the data into the computer, all the variables were identified and denoted by a numeral value. The data were then put on to the excel spread sheet, this was later fed to SPSS software program for frequencies and statistical analysis. The data gathered were analyzed using SPSS in order to see whether the information collected was adequate for the subject of the study. Chi-Square was applied to test for the independence of the variables and gather the level of significance among the variables that were being tested.

DATA PRESENTATION ANAYSIS AND FINDINGS

Demographic Characteristics

Demographic Profile	Frequency	Percentage

Gender		
1. Male	279	61.2
2. Female	176	38.8
Total	455	100
Residence	Frequency	Percentage
1. Urban	265	58.2
2. Rural	190	41.8
Total	455	100
Level of Study	Frequency	Percentage
1. Undergraduate	329	72.3
2. Post Graduates	122	26.8
3. Other	0.4	0.9
Total	455	100

Males constituted almost two-third of the total sample representing 61.2 percent. Almost three fourth of the respondents were pursuing undergraduate programs in various fields of study such as medicine, law, engineering, arts, commerce etc.

Access to SNS (Facebook and WhatsApp) based on Gender

Access to SNS	Female (176)		Male (279)	
	N	Percent	N	Percent
1. Home	75	42.4	10	3.4
2. Office	10	5.6	153	54.7
3. Home and Office	3	1.4	2	0.5
4. Smart Phone / Internet Café	56	31.7	70	24.9
5. Office and Café	10	5.6	15	5.2
6. College	1	0.1	1	0.1
7. Home and College	20	11.6	19	6.8
8. College and Cafe	2	0.8	5	1.7
9. No access	1	0.2	5	1.7
Total	177	100	278	100

The table above shows that 42 percent of the female respondents had access to SNS at home. Whereas forty two percent of the female accessed SNS through 3G or 4 G network by Smart Phone or internet cafes.

Frequency of Use of SNS among Male and Female respondents

Frequency of Use	Female (176)		Male (279)	
	N	Percent	N	Percent
SNS				
Daily	85	48.2	16	60.1
Weekly	68	38.2	8	26.0

Rarely	13	7.6	24	8.6
Didn't Respond	10	5.9	15	5.2
Total	17	100	27	100
	6		9	

The table above shows an overall picture of the use among students. The daily use of SNS is higher in the case of male respondents.

Time Spent on SNS

Time spent on SNS	Female (176)		Male (279)	
1 Hour	91	51.6	15	55.
			4	3
2 Hours	43	24.4	64	22.
				8
3 Hours	15	8.5	23	8.3
4 Hours and more	16	9.1	23	8.3
Did Not Respond	11	6.5	15	5.4
Total	176	100	27	100
			9	

The data on daily time spent show that by and large number of respondents spent around one to two hours on the SNS. There is no significance difference on the time spent between males and females.

Usage of SNS

Depending on the needs, usage can be divided into five categories. These needs are cognitive, social interaction, personal integration, affective and escapist.

Representing Usage Patterns of SNS based on Gender

Usage Pattern	Female (176)		Male (279)		Mean Scores	
	F	%	F	%	Female	Male
Cognitive						
Getting education information	154	87.3	231	82.9	3.8214	3.9091
Learning about events	68	38.2	67	24.1	3.1333	3.2090
Employment information	116	65.7	157	56.4	3.5776	3.2898
Social Interactive						
Communicating with distant friends	141	79.6	219	55.5	3.9217	3.8330
Communicating with local friends	133	75.4	155	55.5	3.5451	3.2524
Meeting new friends	127	71.7	149	53.5	3.5178	3.3289
Personal Integrative						
Visiting Groups	130	73.7	148	53.0	3.2462	2.9254
Getting personal help	129	73.1	165	59.2	3.2326	2.9909
Joining a group	143	81.0	204	73.1	3.3951	3.2162
Language-based Communication	107	60.3	137	49.2	3.4225	3.3248
Affective						
Getting hobby information	126	71.1	185	66.2	3.5896	3.4797
Escapist						

Pastime	146	82.7	229	82.0	3.8801	4.1466
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The data show that there is not much difference in the use among males and females.

Although in categories like social interactive and personal integrative uses were the prominent categories that female respondents felt important as a communication tool. The table above clearly shows that there is very little difference in use irrespective of gender. Social Interaction and Personal integrative use has a higher percentage of use in females with an average of almost 72 percent

Expectations from the SNS

SNS Expectations	Female (176)		Male (279)		Mean Scores	
	N	%	N	%	Female	Male
Provide all information whenever needed	168	94.8	264	94.8	1.4595	1.3875
Store information which otherwise not easily available	159	89.4	249	89.2	1.8076	1.6722
Social Interactive						
Connect me to my family & friends constantly	146	82.6	248	88.9	2.0118	1.7172
Help me in social interaction	148	82.7	236	84.6	2.1366	2.0646
Personal Integrative						
All access to free stuff	152	84.9	238	85.5	2.1599	2.0931
Opportunities to do things that I want to do for myself	142	80.4	231	82.9	2.2815	2.2142

Gives me more confidence	153	86.6	219	78.6	2.0554	2.3123
Affective						
Advise me on issues I have problems with	150	84.6	214	76.9	2.0351	2.2811
Escapist						
Meet all pastime needs	120	67.6	168	60.1	2.6959	2.9888

Inferences from the above table show that both males and females have almost same expectations from internet. Percentage wise cognitive and personal integrative expectations were more than the other categories.

Variations of effects between heavy and light consumers over exposure to SNS (Facebook, WhatsApp)

Effects	Heavy Consumers		Light Consumers		t-value	Sig.
	N	%	N	%		
Stress	164	92.9	240	86	4.547	0.000
Depression	139	78.5	225	80.8	-.052	0.958
Low-Self esteem	124	70.2	196	70.3	.459	0.647
Loneliness	152	85.8	246	88.2	-.673	0.501

From the above table it is evident that, there exists a noteworthy dissimilarity between the stress echelons practiced by profound consumers versus light consumers of social networking platforms via Facebook and WhatsApp. No significant inferences can be drawn regarding feeling of depression, low self-esteem and loneliness experienced by the respondents with deference to the level of occasion exhausted on online social platforms. Thus it can be safely inferred that though time spent on online platforms may neither be attributed to be solely the result of feeling of depression, low self-esteem or loneliness nor can be the lone cause. But heavy exposure and consumption of online social platform definitely causes and effects heightening of stress level among respondents.

Variations of effects between male and female population over exposure to SNS (Facebook, WhatsApp)

Effects	Male		Female		t-value	Sig.
	F	%	F	%		
Stress	248	88.8	146	82.6	3.751	0.000
Depression	229	82.0	120	68.0	1.999	0.046
Low-Self esteem	219	55.5	141	79.6	.797	0.425
Loneliness	155	55.5	233	75.4	2.347	0.019

The above table establishes beyond any doubt the females experience more stress as compared to their male counterparts so far as use of online social platforms are concerned. It can safely be inferred to a great level of significance that the exposure to these platforms as an alternative to loneliness is more prevalent among females as compared to males. The data also indicate that females’ self-esteem gets more affected by their online social activities as compared to their male counterparts.

Hypotheses Wise Findings

Following two hypotheses were constructed for this study i.e. (1) There is a significant relationship between heavy consumption of SNS and Psychological Health (four dependent effects variables) and (2) There is a significant relationship between the gender and Psychological Health (four dependent effects variables). Both the hypotheses were partly accepted as stress level as a part of psychological health was significant. Those heavily exposed to the SNE and the female as a gender experienced stress as a symptomatic psychological health issue. Loneliness is more prevalent among females. Moreover, females' self-esteem gets more affected than male by such encounters.

Conclusion

According to the analysis the relationship between heavy/light consumers and male/female has been significantly high as the chi-square value stood at $\chi^2=0.000$ for the stress level. Female also experience more stress than their male counterpart when it comes to gender comparison as the chi-square value is $\chi^2=0.000$. Female feel loneliness and their self-esteem get more affected as compared to male in their online activity. The chi-square values are not significant as it stands at $\chi^2=0.019$ and $\chi^2=0.425$ respectively.

Time spent of SNS is also quite similar among both the gender of students at KP. The data on time spent show that by and large number of respondents spent around one to two hours on the SNS (Table 4). Usage of the SNS amongst the target group can be divided into five groups which mostly focusing on communal communication, cognitive, individual incorporation, emotional and getaways. It was found that there is nothing a huge disparity between both genders. Although in categories like social interactive and personal integrative uses were the

prominent categories that female respondents felt important as a communication tool. The table above clearly shows that there is very little difference in use irrespective of gender. Social Interaction and Personal integrative use has a higher percentage of use in females with an average of almost 72 percent. Regarding the expectations from SNS it is concluded that by and large number of scholars at graduate level has parallel anticipations. It was also noted that both genders have parallel indulgences by using these social mediums. An overwhelming more than 90 percent of the respondents from both the modes provide all information whenever needed.

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