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INTERNET ADDICTORS AND THEIR PSYCHOLOGICAL WELL-BEING, SLEEP QUALITY AND SELF ESTEEM

Ritu Raj

Research Scholar, Department of Psychology, Faculty of Social Sciences, Dayalbagh Educational Institute, Deemed University, Dayalbagh, Agra, India.

Email ID: riturajksp123@gmail.com

Abstract: The purpose of this investigation is to compare internet addictors and non-addictors for psychological well being, sleep disturbance, and self esteem. The total sample of 100 students with an equal number of both male and female were selected, out of which 50 internet addictors and 50 non-addictors between 25 to 30 years college students from Dayalbagh Educational Institute, Dayalbagh, Agra, and Radhe Hari Degree College, Kashipur, Uttrakhand have been taken purposively. The Ryff's Psychological Well Being (1989) given by Ryff has been used to measure the psychological well being of adults. The The Pittsburgh Sleep Quality Index (2012) given by Pittsburgh to measure the sleep quality of adults. The Coopersmith Self-Esteem Inventory Adult Form (1969) given by Stenley Coopersmith in 1969 to measure the self esteem of adults. The data was analyzed by using the Mann-Whitney U test. The results indicated that there is a significant difference between internet addictors and non-addictors on psychological well being ($Zu=4.91$, $p<0.01$). The results for sleep disturbance reveals that there is a significant difference between internet addictors and non-addictors on sleep disturbance ($Zu=4.68$, $p<0.01$). Finally there is a significant difference between internet addictors and non-addictors on self esteem ($Zu=4.19$, $p<0.01$). The present investigation has implication that internet addiction affects the psychological well being, sleep quality and self esteem of adults.

***Index Terms*- Internet Addiction, Psychological well being, sleep disturbance, self esteem.**

INTROUCTION

Ivan Goldberg in **1995** described the internet addiction as a disorder. The internet addiction disorder is not embrace in the Diagnostic Manual of Mental Disorder (DSM 5). According to **Block (2008),** "internet addiction disorder should be included as a disorder in DSM 5. Because of the complicated diagnosis the internet addiction disorder has not been included in DSM-5." Around 86% people reveal the symptoms that also found in other health disorder. Studies show that there are high prevalence rate of internet addictors among college students rather than in general population.

Now a day the Cybersexual addiction is more popular among adults. Most of the adult and teenagers are more addicted to the cyber- relationship to develop new relationship. In Western culture people are more involve in pornography, **(Carroll et al, 2008).** It has been seen that emotional problem like anxiety related disorder and depression are common in internet addictors and they try to escape from the stressful and unpleasant feeling by using the fantasy world of the internet **(Young, 1999).** A research reveals that there is a similarity between internet addicted and chemically addicted when researchers examined their brain structural changes **(Zhou et al., 2009).**

PSYCHOLOGICAL WELL BEING

Well being is a term used to describe the psychological, medical, economical, social and spiritual state of an individual. The high level of well being indicated positive feeling in an individual where as low level of well being is associated with negative feelings.

According to **McNulty (2012),** "positive psychology at the subjective level is about valued subjective experiences".

Well being is an important determinant of subjective experience where there is a gratification of an individual with his or her past, a kind of hope and expectations for the future and the happiness in the current state. People experience positivity with their life when they take things as good whether it is a matter of present or past experience. If an individual concentrate only on negative experience of his/her life then the brain will assess the negative, because negatives are more memorable. The positive experiences are smaller event and experience that brain takes more efforts to remember the positive experience. **McNulty (2012)** examines this idea and argues that, "well-being is not determined solely by people's psychological characteristics but instead is determined jointly by the interplay between those characteristics and qualities of people's social environments".

The term well being is equivalent to the feeling like pleasure and merely presence of pain. Well being is also determined by people's purpose in life and the social relationship with others **(Tamir and BrettFord, 2012).** An individual who experiences less psychological well being is suppose to feel better being. The psychological well being can be predicted by the emotions.

According to **Ryff and Keyes, (1995)** there are some aspect of well being, they are as follows: Autonomy, Environmental Mastery, Personal Growth, Positive relation with others, Purpose in Life, Self Acceptance. So it can be said that well being includes one's evaluation, good and bad experience to one's life **(Busseri and Sadava, 2011).**

SLEEP DSTURBANCE

Sleep is a vital motivation for all organisms. Sleep is a as expected reoccurring condition of mind which involves altered phase of consciousness, prohibited all the voluntary muscles, sensory action and reduced the interaction with the surroundings. In other word during sleep, activity of any organism reduced to react to the stimuli. There are two kind of sleep, one is called as REM which stands for rapid eye movement, and another one is non-REM that stands for non-rapid eye movement. Sleep works as a cure for all mammalians.

A research has found that there may be high risk of death from cardiovascular disease because of lack of sleep whereas too much of sleep may also be link to the death from many other factors **(Ferrie, 2007).** ***Patel*** **(2004)** in his study show that "sleeping more than 7 to 8 hours per day has been consistently associated with increased mortality," even though this study also suggest that such factors like depression and socioeconomic status are the factors which can correlate statistically. In the case of children, sleeping hours differentiate. As children need more hours of sleeping in comparison to elders to develop and function properly. The given chart of sleep explains the best sleeping hours for different age people.

When an individual reacts to the video game, internet, watching television and all kinds of social media make the individual's body tense. The individual get stressed, the body may react or respond to the fight and flight response and as a result the hormone called cortisol produced by the adrenal gland, is released, which create a condition that is hardly helpful to take a nap. The electronics devices produce a glow (screen light) which work against the quality shut eye. The little amount of light produced by these devices pass through the retina to the area of brain known as hypothalamus (the area which controls several sleep activities) and delay the release of sleep inducing hormone, melatonin. A two-year study by **Hirshkowitz*, et al. (2015)***, in the National Sleep Foundation in the US has suggested newly revised recommendations as shown in the table below.

Age	Sleep Needs
Newborns (0–3 months)	14 to 17 hours
Infants (4–11 months)	12 to 15 hours
Toddlers (1–2 years)	11 to 14 hours
Preschoolers (3–5 years)	10 to 13 hours
School-age children (6–13 years)	9 to 11 hours
Teenagers (14–17 years)	8 to 10 hours
Adults (18–64 years)	7 to 9 hours
Older Adults (65 years and over)	7 to 8 hours

Most people face sleeps trouble at one time and another because of lack of sleep and it may interfere with daily life. The sleep disturbance may have the negative impact on people's life like reduced energy, emotional balance and health. Researchers have suggested that due to lack of sleep people suffer from chronic and long term sleep

disorders. The sleep disorders can lead to many physical and psychological problems such as accidents, impaired job performance, weight gain, relationship strain and poor health. So all these causes makes the individual restless at night which indicates that individual is sleeping less and less.

SELF ESTEEM

In general self esteem indicates an individual's subjective emotional evaluation of his or her own value. It is an attitude about oneself as well as judgment. Self esteem includes attitude (I am worthy) and emotions like pride, misery and embarrassment, **(Hewitt, and John, 2009).**

Smith and Mackie (2007) defined self esteem by saying "The self concept is what we think about the self, self-esteem is the positive or negative evaluations of the self, as in how we feel about it". **James (1892)** was the first who identify the self concept as a distinct psychological build. In the 1960s, sociologist Rosenberg define self concept as "a feeling of self worth". Rosenberg developed a self esteem scale named as Rosenberg Self Esteem Scale (RSES), which is now most popular measurement to measure self esteem in the field of social sciences, **(Baumeister, et.al., 1996).**

Hamachek (1971) has talked about some of the features which people with high level of self esteem usually have:

- Individuals consider some values and ideology and are always ready to support them, even if the beliefs are in opposition. They feel secure and change them in the light of experience.
- Individual response according to their taste, they trust their own decision and judgment. They do not care what others think about their preferences.
- They do not take tension about their past life and they always try to ask others for their help whenever they need it.
- They have an idea or estimate that how they are interesting people for others as well as for their friends.
- Individual with high self esteem do not take initiatives to change the things. They enjoy their day activities and accept and admit their internal feelings and drives. They reflect their drives when it is needed.
- Generally they understand other's thoughts and have a respect for the rules of the societies.
- They agree to the challenges and try to find the answer of their problems.

The genetic factors, physical or outer shell, socioeconomic status, mental health, and peer pressure are the some of the cause of low self esteem, **(Jones, 2003).**

Gill (1980) has given some of the features which describe the people with low self esteem, they are as follows:-

- People with low self esteem have a high self-criticism and dissatisfaction.
- Individual with low self esteem have hypersensitivity to criticism against critics and feelings of being attacked.
- Chronic indecision and exaggerated fear of mistakes.
- Excessive will to please and unwillingness to displease any petitioner.
- Their perfectionism, which can lead to frustration when perfection is not achieved.
- Have neurotic guilt, dwelling on or exaggerating the magnitude of past mistakes.
- They float hostility and general defensiveness and irritability without any proximate cause.
- Individual have pessimism and a general negative outlook.
- Sees temporary setbacks as permanent, intolerable conditions.

Individuals with low self-esteem tend to be critical for themselves. Some depend on the approval and praise of others when evaluating self-worth. Others may measure their likability in terms of successes: others will accept them if they succeed but will not if they fail, **(Baldwin, and Sinclair, 1996).**

So it can be said that the degree of self esteem may differ from individual to individual. People with high self esteem are better than the people with low self esteem.

RESEARCH METHODOLOGY

Population and Sample

In the present study 100 subjects, 50 internet addictors and 50 non-addictors between 25 to 30 years with an equal number of male and female college students have been selected purposively from Dayalbagh Educational Institute, Dayalbagh, Agra and Radhe Hari Degree college, kashipur, Uttrakhand. Both the groups were matched on the basis of socio economic status, age and type of work on internet. Matched group design was used.

THEORETICAL FRAMEWORK

Objectives

1. To compare the psychological well being of internet addictors and non-addictors.
2. To compare the sleep disturbance of internet addictors and non-addictors.
3. To compare the self esteem of internet addictors and non-addictors.

Hypothesis

- Psychological well being, quality of sleep and self esteem would be deteriorate among internet addictors as compared to non-addictors.

Variables

Independent variable:

- Internet use

Dependent variables:

- Psychological well being
- Sleep disturbance
- Self Esteem

Tools description

- **Internet Addiction Test (IAT) by Young (1996):** Internet addiction test comprises 20 items rated in a five point Likert scale. On the basis of the total score obtained on the test, the individual is placed into one of three categories: Mild (from 20 to 39), Moderate (from 40 to 69) and severe (from 70 to 100) internet addictor.
- **Ryff Scales of Psychological Well-Being (1989)** designed to measure six theoretically motivated constructs of psychological well being, which are: autonomy, environmental mastery, personal growth, positive relation with others, purpose in life, self acceptance.
- **The Pittsburgh Sleep Quality Index (2012)**: The Pittsburgh Sleep Quality Index (PSQI) is an effective instrument used to measure the quality and patterns of sleep in adults.
- **Coopersmith Self-Esteem Inventory Adult Form (1969)** designed to assess self-esteem that means a personal judgment of worthiness that is expressed in the attitudes the individual holds toward himself. Mann-Whitney U test was used for comparing the psychological well being, sleep disturbance and self esteem of internet addictors and non-addictors.

ANALYSIS AND INTERPRETATION

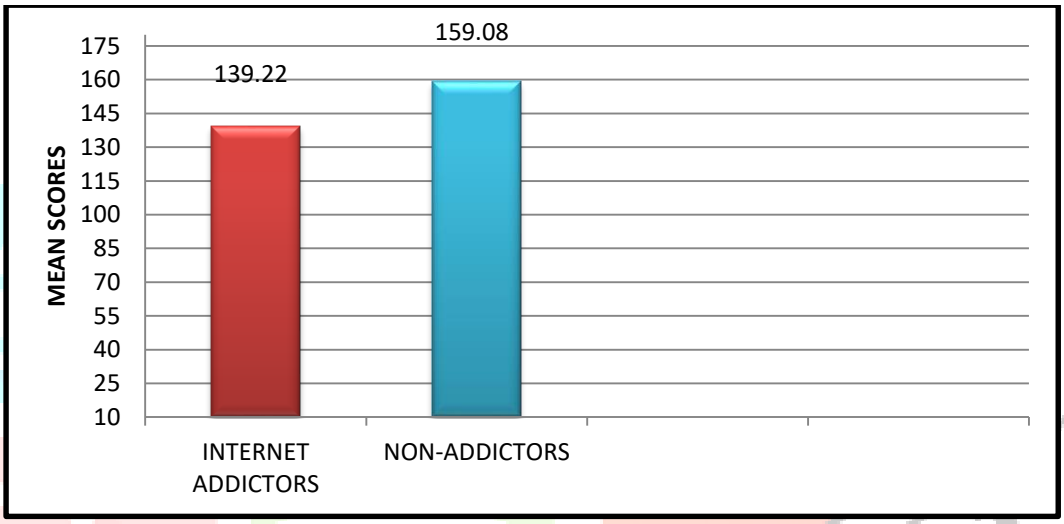
Analysis and interpretation of data is the necessary step in the research processes as it aims to find meaning of the raw data. The present research is aimed to study the comparison of psychological well being, sleep disturbance and self esteem of internet addictors and non-addictors.

RESULT TABLE NO-1 MEAN, SD AND ZU VALUE OF INTERNET ADDICTORS AND NON-ADDICTORS FOR PSYCHOLOGICAL WELL BEING.

GROUPS	N	MEAN	SD	ZU	LEVEL OF SIGNIFICANCE
INTERNET ADDICTORS	50	139.22	9.74	4.91	P<0.01
NON-ADDICTORS	50	159.08	22.53		

In the table no 1, results show that the mean value of psychological well being of internet addictors (M=139.22) is lower than the mean value of non-addictors (M=159.08). The obtained Zu value (Zu = 4.91) is significant at 0.01 level of significance, which suggest that there is a significance difference between internet addictors and non-addictors.

FIGURE NO -1. MEAN SCORES FOR PSYCHOLOGICAL WELL BEING OF INTERNET ADDICTORS AND NON-ADDICTORS.



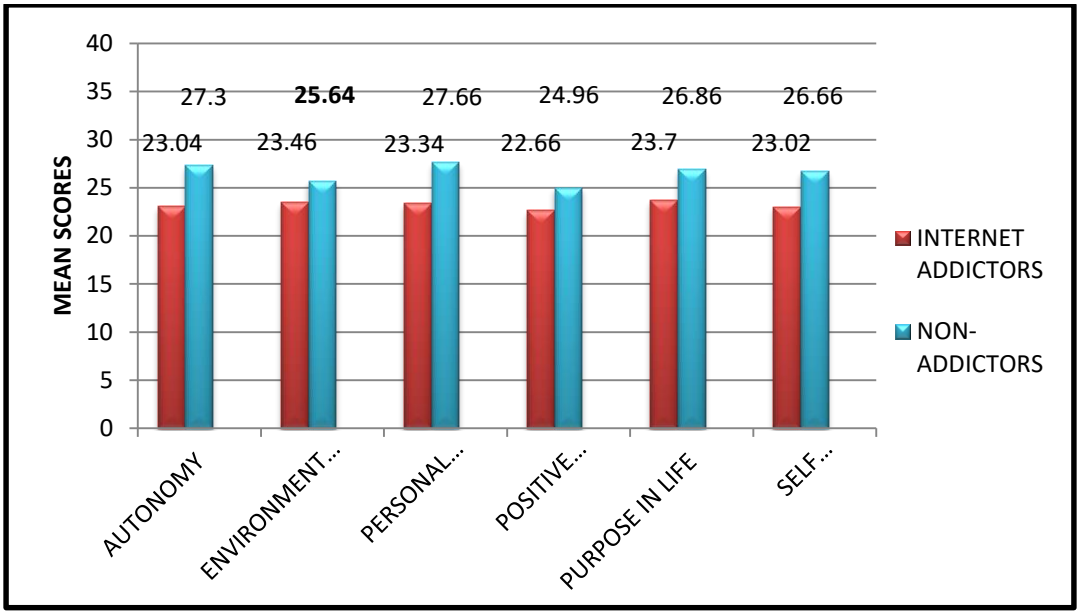
The figure no. 1, also confirmed these results. As internet addicted group scored lower mean value as compared to non-addicted group. A study done by **Qi et al. (2013)** supports these results. They found that younger students of china having a high level of stress and depression and are also low on psychological well being. The sample of 170 Chinese international students has been taken. The results were analyzed by the bivariate correlation analyses and multiple regression analysis.

Study by **American Life Project (2001)** indicates most of the Americans teenagers' uses internet andimmediate messaging is a primemean of being in making contact withfriends and relatives. The teenagers are more likely to have a poor and low psychological well being.

RESULT TABLE NO-2 MEAN, SD AND ZU VALUE OF INTERNET ADDICTORS AND NON-ADDICTORS FOR SIX ASPECTS OF PSYCHOLOGICAL WELL BEING

GROUP 1	GROUP 2	N	MEAN	SD	Zu	LEVEL OF SIGNIFICANCE
AUTONOMY	Internet addictors	50	23.04	4.05	3.41	P<0.01
	Non-addictors	50	27.30	6.09		
ENVIRONMENTAL MASTERY	Internet addictors	50	23.46	3.29	2.55	P<0.01
	Non-addictors	50	25.64	4.98		
PERSONAL GROWTH	Internet addictors	50	23.34	3.50	3.860	P<0.01
	Non-addictors	50	27.66	5.89		
POSITIVE RELATION	Internet addictors	50	22.66	3.02	1.88	p>0.05
	Non-addictors	50	24.96	5.23		
PURPOSE IN LIFE	Internet addictors	50	23.70	4.65	2.61	P<0.01
	Non-addictors	50	26.86	5.57		
SELF ACCEPTANCE	Internet addictors	50	23.02	3.80	3.49	P<0.01
	Non-addictors	50	26.66	5.05		

FIGURE-1. MEAN SCORES FOR SIX ASPECTS OF PSYCHOLOGICAL WELL BEING OF INTERNET ADDICTORS AND NON-ADDICTORS.



The result table no 2 indicates that mean of six aspects of psychological well being of addictors and non-addictors differ with each other. The mean value for autonomy of internet addictors (M=23.04) is lower than the mean value of non-addictors (M=27.30). The obtained Zu value (Zu=3.41) is significant at 0.01, which indicates that autonomy is affected by the use of internet.

The mean value for environmental mastery of internet addictors (M=23.46) is lower than the mean value of non-addictors (M=25.64). The Zu value (Zu=2.55) is found significant at 0.01 level of significance that indicates that internet use affects the environmental mastery of adults.

The value of mean for personal growth of internet addictors (M=23.34) is lower than the mean value of non-addictors (M=27.66). The value of Zu (Zu=3.860) is found significant at 0.01 level which suggeststhat excessive use of internet affect the personal growth of people.

Obtained mean value for positive relation of internet addictors (M=22.66) is found lower in comparison to the mean value of non-addictors (M=24.96). The Zu value (Zu=1.88) of positive relation of internet addictors is not significant even at 0.05 level of significance. It reveals that positive relation of people does not affected by the heavy use of internet use.

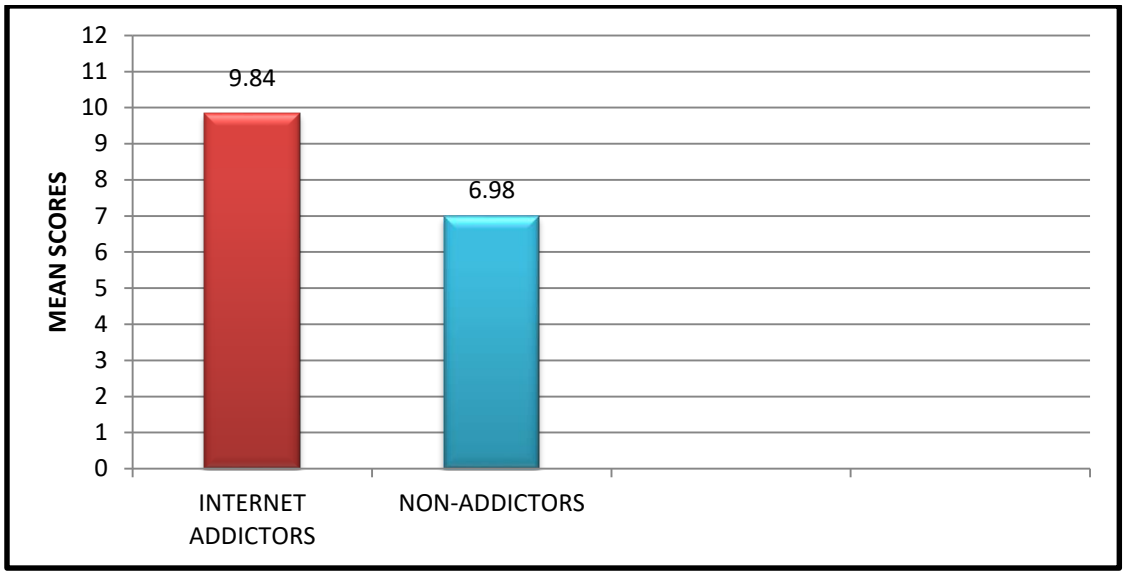
The value of mean for purpose in life of internet addictors (M=23.70) is lower than the mean value of non-addictors (M=26.86). The Zu value (Zu=2.61) is significant at 0.01 level of significance which suggest that the high use of internetis affectedby purpose in life of adults.

The mean value is obtaining for self acceptance of internet addictors (M=23.02) is lower in comparison to mean value of non-addictors (M=26.66). The value of Zu (Zu=3.49) is significant at 0.01 level which indicate that internet use affect the self acceptance of adults.

RESULT TABLE NO-3 MEAN, SD AND ZU VALUE OF INTERNET ADDICTORS AND NON-ADDICTORS FOR SLEEP DISTURBANCE

GROUPS	N	MEAN	SD	Zu	LEVEL OF SIGNIFICANCE
INTERNET ADDICTORS	50	9.84	2.19	4.68	P<0.01
NON-ADDICTORS	50	6.98	2.48		

FIGURE NO -3. MEAN SCORES FOR SLEEP DISTURBANCE OF INTERNET ADDICTORS AND NON-ADDICTORS.



Result table no. 3 indicates the internet addicted group scored higher mean value on sleep problem (M=**9.84**) as compared to the mean value of non-addicted group (M=**6.98**). Table no. 3 indicates that the Zu value (Zu=**4.68)** is significant at 0.01 level of significance. Which shows a significant difference between the two groups, which indicates that overuse of internet affect the sleep quality of adults. Figure no. 3 also indicating a significant difference between the two groups on the basis of mean value.

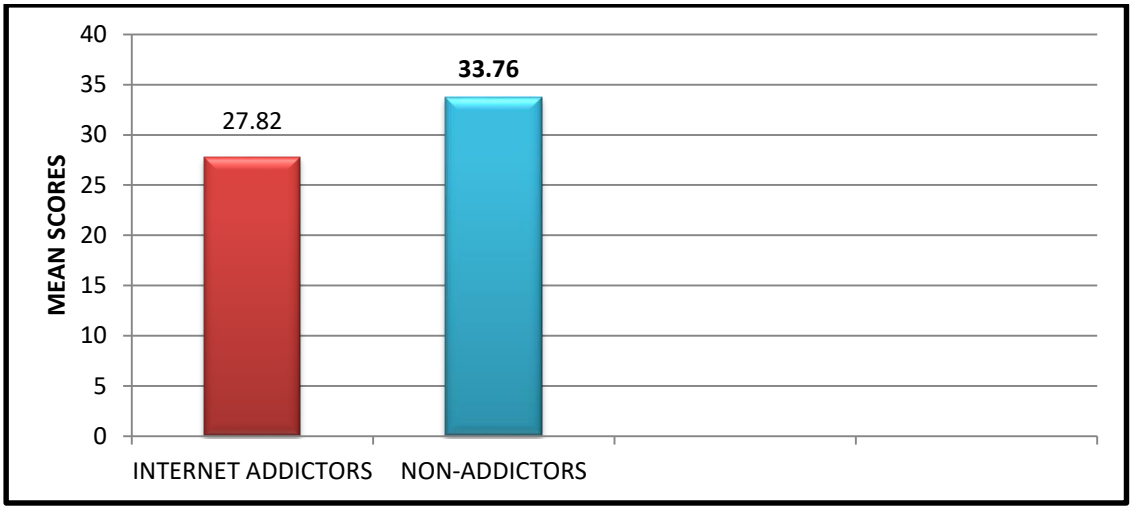
Lam (2014) studied a link between internet gaming addiction and melancholymediated by sleep difficulties. The sleep difficulties including sleeplessnessand poor sleep quality. The results found that there is a link between internet gaming like multiplayer online role playing games and sleep problem including poor sleep quality and subjective insomnia.

Another study done by **Thomee (2012)** has taken 4163 young adults the ages of 20 to 24 years old to investigate that the high computer use is a high risk factor for developing mental health problems and sleep difficulties. Low computer use group and high computer use group were compares and it has been found that high email and chat was negatively link to sleep problems and the poor sleep is a cause of psychological health of young adults.

RESULT TABLE NO-4 MEAN, SD AND ZU VALUE OF INTERNET ADDICTORS AND NON-ADDICTORS FOR SELF ESTEEM

GROUPS	N	MEAN	SD	Zu	LEVEL OF SIGNIFICANCE
INTERNET ADDICTION	**50**	**27.82**	**5.40**	**4.19**	**P<0.01**
NON-ADDICTION	**50**	**33.76**	**7.49**		

FIGURE NO -4. MEAN SCORES FOR SELF ESTEEM OF INTERNET ADDICTORS AND NON-ADDICTORS.



The result in table no 4 indicates that the mean value for self esteem of internet addictors (M=27.82) is lower than the mean value of non-addictors (M=33.76). The value of Zu (Zu=4.19) is found significant at 0.01 level of significance, which indicate that there is a significant relation between the two groups. The figure no 4 also conform these results.

The studies support above results. A study done by **Johnson (2011)** has investigated 38 children aged 6 to 8 years old. They found that 21% of the difference in school children self esteem. The children have reported that their directchat and messages has decreased the self esteem.

In a study, personalitycharacter, self-worthand other psychiatric disorders were shown to be related with internet addiction **(Niemz, 2005).**

Thus it can be concluded that the overuse of internet can affect the psychological well being, increases sleep disturbance and lower the self esteem of the adults. As in the other words the internet addictors have low psychological well being, more sleep problem and decreases self esteem. As in the above results suggested.

Findings & Discussion

The primary purpose of this research work is to find out the psychological well being, sleep disturbance and self esteem among internet addictors and non-addictors.

After the analysis of the present investigation, the following conclusions were drawn:

1. There is a significant difference between internet addictors and non-addictors on psychological well being scale (Zu=4.91, p<0.01). Thus it can be concluded that psychological well being is deteriorated among internet addictors as compared to non-addictors.
2. There is a significance difference among internet addictors and non-addictors on five aspects of psychological well being including autonomy (Zu=3.41, p<0.01), environmental mastery (Zu=2.55, p<0.01), personal growth (Zu=3.86, p<0.01), purpose in life (Zu=2.61, p<0.01) and self acceptance (Zu=3.49, p<0.01).
3. There is no significance difference between internet addictors and non-addictors on one aspect of psychological well being including positive relation (Zu=1.88, p>0.05).
4. There is marked significant difference between internet addictors and non-addictors on sleep quality of adults (Zu=4.68,p<0.01). Therefore the sleeps quality of internet addictors is lower than the non-addictors.
5. There is a significant difference between internet addictors and non-addictors on self esteem of adults (Zu=4.19, p<0.01). Therefore the self esteem of internet addictors is deteriorated as compared to non-addictors.

According to **Martin and Schumacher (2000)**, 8 to 10% of college students are suffering from internet addiction.

According to **Becker (2000)** internet uses is increasing rapidly among teenagers, and affecting the psychological well being of teenagers as well as adults.**Turow**(**1999)** suggested that over 1000 of U.S population is losing their relationship and has become isolated because of heavy internet use and 40 % people who are internet addictors developing a kind of antisocial behavior.

Kraut et al. (1998) suggestedthat internet addictors people using internet as 3 hours weekly develop depression and they reduce social relation with close one and families. The results reveals that teenagers are the more addicted to the internet.

Sleep is an important motive in a human's life and for mental health if children, adults and also for older adults. The sleep habits in adolescents differ with the age. According to **Van den (2004)**online playing game is link with sleep difficulty such as delay sleep, excessive daytime sleepiness irregular sleeping patterns. It has been seen that sleep disturbance increases the risk for developing depression for the people who are internet addictors.

Adolescents' beliefs and perceptions about themselves reflect in their behavior characteristics when using the internet. According to **Burger (2006)** self esteem is an evaluation of the individual about himself or herself.

Many studies revealed that there is association between internet addiction and decrease self esteem of individuals. **Griffiths (2000)** suggested that internet addiction is a kind of technology addiction where people. People, who use social network, dating site, gaming site and social media, appear different from what they are in reality.

In these studies it is found that the different levels of self esteem leads to self-distrust, sense of loss of control, addicted personality, and sense of failure. Therefore, it can be said that individuals' self-esteem levels may be a major determinant of internet addiction.

CONCLUSION

Thus, it can be concluded that internet give people many opportunities to expend their knowledge but instead of this internet is harmful too for every aged person. This technology is increasing day by day. In the DSM5 internet addiction has been included as a disorder. By using this technology people are suffering from many problems like physical and psychological problems. Thus on the basis of above findings it can be concluded that internet affect psychological well being, sleep quality and self esteem of adults. Internet also reduced the quality of life, academic performance, physical dysfunction, and work productivity and also produced other negative outcomes such as depression, anxiety, etc.

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