A Systematic Review of Literature on Effect of Internet Addiction in Adolescents

Garima Gangwar*1, Dr. Suvidha²

1,2 Deparment of Home Science, Banasthali University, Newai, Rajasthan, India

ABSTRACT

More than twenty five online studies were reviewed and it was identified that psychological, educational, social, interpersonal, daily habits, routines of daily life, sleeping pattern, eating habits, study habits and living pattern effect by the internet. In last few year use of internet is excessive because the internet is easily available. Internet is most important for life because it's beneficial for every person. Adolescents are the age group 13 to 18 years is very influenced by internet. Internet addiction is the major problem in adolescents. Addicted show some physical problems and emotional and personal problems.

Keywords : Internet Addiction, Adolescents, Life Style.

I.   INTRODUCTION

The internet is global linking of computers that allows information transfer. The term **"INTERNET ADDICTION"** was proposed by **Dr. Ivan Goldberg in 1996** for pathological compulsive internet use. Internet addiction is very serious problem in today's time. Internet influences the life style of adolescents. Internet influenced daily life, sleeping pattern, eating habits, living of standard, also influenced social relationship, interpersonal relationship, communication problems. Internet addiction causes the problems in adolescent's life.

According to young et.al (2000) define the five subtypes of internet addiction. Internet addiction is wide term and wide variety of behaviour.

Cybersex addiction- cybersex addiction is defined as adolescents are watching pornography video and downloading this type of video.

Cyber-relationship addiction– In cyber-relationship online friend is more important as compare to family and friends. No Face to face interaction in cyber-relationship. Addicts are busy in social networking, chat room, messaging et.al.

Net compulsion- Internet is necessary for every person. Every type of work is done by internet like online shopping, reservation, online movies, songs, Net banking and gambling.

Information overload- Internet is most important for life. Collecting information and gaining new knowledge by the internet.

Computer Addiction- computer addiction is defined as playing game all the time on the other hand busy in computer.

Lei and Zhao (2005) investigated that quality is better than quantity. Technology has very important role in adolescent's life just because of that achievement come out. Internet may affect the academic life of adolescents and academic achievement level low because of internet use. Study found that internet and academic performance are correlated to each other. High school students reported that there is no control between use of internet and their academic achievement effected.

Karpinski (2010) Heavy internet use effect the academic achievement of adolescent and negative effects. When compare about Facebook users and Non Facebook users found that Facebook users CGPA is lower than Non Facebook users. Because Facebook users spend lots of time in Facebook and every day they used Facebook. Heavy use of internet is a part of daily life. Significant heavy use of internet result come out academic achievement is influenced. When same time two other type of work is doing than effect may be amplified or attenuated. Behaviour dependency on

internet or internet addiction at all events which ever it knows as a Mental Retardation, Behaviour Disorder, and social problem is a chronic, recurrent and pandemic phenomenon. A physical, financial, familial, social and mental loss is associated with internet.

American Psychiatric Association has defined the different symptoms of internet addicts. Internet addicts have some symptoms are like as unpleasant and dysfunction. There are seven criteria for diagnosis internet addiction. Patience, Withdrawal Symptoms, all person use internet more than expected time, constant desire to control the behaviour, disburse significant time for topic allied to the internet, excessive use of internet reducing social, occupational, recreational activities of adolescents. Every person knows that internet is also bad and wide area but still they use. There are large number of people are using internet for pornography and gambling. Excessive use of internet has negative impact on life. Excessive use of internet creates some problematic behaviour. Person who use excessive internet showed psychological symptoms attention deficit hyperactivity disorder, depression, self-esteem and isolation. Internet addict showed some personality characteristics and traits like as impulsivity sensation and novelty seeking and aggression behaviour. When compared to internet addict and non-addict. Addicts had problematic behaviour or psychological problem. It is observed that overuse of internet provoke anxiety and displaying problematic gambling behaviour. Person those are internet addicted there are some psychological symptoms such as attention deficit hyperactivity disorder, depression, low self-esteem and social isolation. There are many characteristics showed by the internet addicts like as aggressive behaviour and sensation and novelty seeking, impulsivity.

There are following symptoms associated with internet addiction. physical symptoms in teen sleepiness, carpal tunnel syndrome, skipping the food, headaches, eye problem, back pain, neck pain, weight gain or loss et,al. addicted teen avoiding the work and focusing on internet. Internet addiction is serious Problem for adolescents. Adolescents are physically affected by internet. **Dargahi and Razavi (2007)** suggested that there are three factors which are affected by internet addiction factor are psychological social factor, personal factor and factor related to internet. Communication gap with family is the main reason psychological social factor. Relationship are week because lack of communication. The personal factors are like as bargain-basement, self-dependence, automatic behaviour, instant tendency, introverted characteristics and lack of communication skill. Factor related to internet because availability of internet is very easily. Every work doing by internet like as news, education, reservation, entrainment, social networking sites et.al. All these factors play a very important role in internet addiction.

Objective of the study

The study was conducted to find out the following objective.
1 To review and analyse the published literature on effect of internet addiction on adolescents.
2 To study internet influence on the life style of adolescents.

II. METHODS AND MATERIAL

The study covered researches published in online and offline journals which were related to internet addiction of adolescents in India and abroad.

REVIEW OF LITERATURE

Weiser (2004) "studied that males use the Internet mainly for purposes related to entertainment and leisure, whereas women use it primarily for interpersonal communication and educational assistance. However, additional analyses showed that several gender differences were mediated by differences in age and Internet experience".

Nalwa and Anand (2004) "among school children 16-18 years old in India. Two groups were identified-dependents and non-independents. Significant behavioural and functional usage differences were revealed between the two groups. Dependents were found to delay other work to spent time online, lose sleep due to late night logons and feel life would be boring without internet by dependents were greater than those of non-dependants. On the loneliness measure, significant differences were found between the two groups, with the dependents scoring higher than the non-dependants."

Jung, et al. (2005) "in their study found internet connectedness in three spheres of social environment: the general social support measured by how easy it is to get help when adolescents encounter problems in using

the internet; the parents, where we examine parents' socioeconomic status and their internet use; and the peer group, where we look into the proportion of friends who connect to the internet. The results from a survey of 1303 adolescents in Seoul, Singapore and Taipei support our major hypothesis that among the internet-using adolescents, their internet connectedness patterns differ by the nature of their social environments."

Liau, et al.(2005) "the study was conducted with 1,124 youths aged 12–17, to explore the issue of risk on the Internet. Researcher investigated factors that influence adolescents' engagement in risky Internet behavior, in particular, meeting face-to-face someone they first encountered online. The adolescents ranged from ages 12 to 17, with a mean of 14.32 (SD = 1.37); 49.6% of the adolescents were girls. Results indicated that 16% of adolescent Internet users in Singapore have had a face-to-face meeting with someone first encountered online."

Chandra, et.al (2005) "reported that the number of Internet users in India has grown five-fold since 2005. Mobile Internet usage is growing at the rate of nearly 85% per annum, where video and music streaming are major growth activities. The understanding that the Internet use can be a disorder is still in its initial stages in India. There are limited numbers of studies estimating how common the issue of Internet addiction is in India."

Lo, et al. (2005) "investigated that 174 Taiwanese college-age online players to collect data on the potential effects of online games on the quality of interpersonal relationships and levels of social anxiety. According to the results, the quality of interpersonal relationships decreased and the amount of social anxiety increased as the amount of time spent playing online games increased."

Çam&Nur (2005) "the study was conducted with 1175 high school students from three high schools in Giresun City were surveyed using Internet Addiction Test, Dukes Health Profile. Of the 1,175 adolescents who took part in the study, 588 (50.0%) were female and 587 (50.0%) were males. The mean age of adolescents was 15.72 ± 1.14 years. The prevalence rate of problematic internet use was 7.1% among adolescent internet users. Those with excessive use internet had high scores on anxiety, depression, and anxiety depression."

Fleming, et al. (2006) "the study was conducted with 692 Australian 13- to 16 year- old to examine aspects of their internet use and, in particular, their exposure to inappropriate material and behaviours online and their online safety practices. Significant differences were found in the amount of exposure to inappropriate material or behaviours online according to sex and frequency of usage, with males and more frequent internet users showing greater exposure. No differences were found according to whether blocking or filtering software was installed. Significant differences in online safety practices were also found, with younger participant (13- to14-year-olds) and those participants whose parents had discussed internet safety with being less safety conscious."

Long & Chen (2007) "This study examines the impact of Internet usage on the self-identity development in 10 students between the ages of 12 and 18. Using Erickson's Ego Identity Theory, the computer mediated communication (CMC) practices of students from private and public schools are evaluated through in-depth interviews. All students are frequent users of instant relay chat (IRC) and have a minimum of one year of experience with Instant Messenger. Identity development is examined using questions generated from a modified form of the Objective Measure of Ego-Identity Status developed by Adams and Ryan (2000). The four dimensions of Identity Development examined here are avoidance decision-making, identity formation, self-reflection and ego strength or fidelity. Results indicate Internet usage impacts each of these dimensions in the adolescents studied."

Caplan (2007) "examined the extent to which social anxiety explains results previously attributed to loneliness as a predictor of preference for online social interaction and problematic Internet use. The results support the hypothesis that the relationship between loneliness and preference for online social interaction is spurious, and that social anxiety is the confounding variable."

Lee &Chae (2007) "in their study found that 222 fourth-, fifth-, and sixth-grade Korean children to examine whether children's Internet use influences declines in family time and family communication and how parental mediation techniques are related to

children's online activities. According to the findings, total time using the Internet was related to perceived declines in family time but not related to family communication. The influence of the Internet on family time and family communication differed by the type of children's online activities. The analysis of the relationship between parental mediation techniques and children's online activities indicated that parents' recommendation of useful Web sites and co-using were positively related to frequency of children's educational online activities. However, parental restrictions on time and Web sites did not alter children's actual Internet usage."

Barker (2009) "This study assessed motives for social network site (SNS) use, group belonging, collective self-esteem, and gender effects among older adolescents. Communication with peer group members was the most important motivation for SNS use. Participants high in positive collective self-esteem were strongly motivated to communicate with peer group via SNS. Females were more likely to report high positive collective self-esteem, greater overall use, and SNS use to communicate with peers. Females also posted higher means for group-in-self, passing time, and entertainment. Negative collective self-esteem correlated with social compensation, suggesting that those who felt negatively about their social group used SNS as an alternative to communicating with other group members. Males were more likely than females to report negative collective self-esteem and SNS use for social compensation and social identity gratifications."

Young & Rogers (2009) "the study was conducted that 312 surveys were collected with 259 valid profiles from addicted users, which again supported significant levels of depression to be associated with pathological Internet use. This article discussed how a treatment protocol should emphasis the primary psychiatric condition if related to a subsequent impulse control problem such as pathological Internet use. Effective management of psychiatric symptoms may indirectly correct pathological Internet use."

Kuss, et al. (2010)."Conducted that 3,105 adolescents in the Netherlands filled out a self-report questionnaire including the Compulsive Internet Use Scale and the Quick Big Five Scale. Results indicate that 3.7% of the samples were classified as potentially being addicted to the Internet. The use of online gaming and social applications (online social networking sites and Twitter) increased the risk for Internet addiction, whereas agreeableness and resourcefulness appeared as protective factors in high frequency online gamers. The findings support the inclusion of 'Internet addiction' in the DSM-V. Vulnerability and resilience appear as significant aspects that require consideration in further studies."

Swinarski, et al. (2010) this study investigates the differences between adolescent males and females in the perceived amount of knowledge regarding internet usage provided by various socialization agents (i.e. parents, school, media, and peers). Further, it examines whether there is a significant difference in the amount of knowledge regarding internet usage provided by various socialization agents within gender. The study takes a social learning perspective to examine the gender differences.

Cain &Gradisar (2010) "consise and complete the data of investigated the relationship between sleep and electronic media in school-aged children and adolescents, including television viewing, use of computers, electronic gaming, and/or the internet, mobile telephones, and music. Many variables have been investigated across these studies, although delayed bedtime and shorter total sleep time have been found to be most consistently related to media use."

Kim (2011) "conducted that six hundred and nine adolescents (10th and 11th graders) and their parents were recruited from five high schools in Seoul, Korea. Findings indicated that Korean boys and girls differed in the ways that they used the Internet. Girls were more likely to use the Internet to watch online education classes and blog more frequently and longer than boys, whereas boys were more likely to use the Internet for playing Internet games than girls. Results indicated that Internet use for educational purposes was associated with adolescent academic achievement. Social and recreational-Internet use of the Internet was associated with lower academic achievement. The pathways did not vary for boys and girls. Parent-child relationships (closeness and conflict) were found to be vital to youth adjustment and played a significant role in the association between adolescent Internet use and academic and behavioral outcomes."

Bélanger, et al. (2011) "the study was conducted with 3906 adolescent boys and 3305 girls were categorized

into 4 groups according to their intensity of Internet use: heavy Internet users (HIUs; >2 hours/day), regular Internet users (RIUs; several days per week and ≤2 hours/day), occasional users (≤1 hour/week), and non-Internet users (NIUs; no use in the previous month). Health factors examined were perceived health, depression, overweight, headaches and back pain, and insufficient sleep. In controlled multivariate analysis, using RIUs as a reference, HIUs of both genders were more likely to report higher depressive scores, whereas only male users were found at increased risk of overweight and female users at increased risk of insufficient sleep. Male NIUs and female NIUs and occasional users also were found at increased risk of higher depressive scores. Back-pain complaints were found predominantly among male NIUs."

Yeh et al. (2012) "Conducted the study on university students who use the Internet, not users who already show dependent symptoms. Sample consisted of 708 university students recruited in 2009 (Time 1), researcher tested the factor structure of LC-PIU and determined the concurrent and cross-year predictive utilities with the same participants in 2010 (Time 2). The calibration and validation results, along with convergent and discriminant tests, confirmed that the LC-PIU is composed of five distinct subscales: problematic Internet use, physical activity change, social activity change, dietary pattern change, and sleep pattern change. All Time-1 LC-PIU subscores were positively correlated with depression, loneliness, and weekly Internet use at Time 1 and Time 2. Only a negative correlation was found between gender and social activity change at Time 1 and Time 2."

Kodvanji, et.al. (2014) investigated the impact of internet use on lifestyle of undergraduate medical students in India. Their cross-sectional study involved 90 (18-20years) undergraduate medical students. The two groups addictive and non-addictive were compared for environmental stressors and lifestyle factors such as sleep, dietary pattern, physical activities and hobbies. The addictive internet user group had a statistically significant impairment of sleep and excessive day time sleepiness and presence of environmental stressors when compared to the non-addictive internet user group.

Lajwanti and Sharma (2013) "Explored the effect of internet use on study habits and adjustment of higher secondary students. The sample consisted 480 (240 boys and 240 girls) studying in various secondary schools of Agra city in India were selected by using purposive sampling method. Self developed S.H.I.C.S. was used to know the study habits of higher secondary students. Through this tool study habits of students from eight areas were studied: Comprehension, Concentration, Task-Orientation and Sets, Interaction, Drilling, Writing, Supports and Recording and. The results revealed that the means of study habits and adjustment scores of internet users and non-users differ significantly."

Anwar (2014) "in their study found that 300 male and female students. It was found that internet usage among secondary school students has been rising, though it is controlled today but it might have a rising trend abruptly in future. The result has also shown that internet usage pattern of male students is quite higher than the female students. It was found that average to high use of internet positively influenced the academic achievements while no use and extremely high usage had a negative impact on academic achievements of the students."

Sharma et al. (2014) "The study was conducted 391 out of 400 questionnaire forms were analysed. Of the 391 students 55% were male. Mean age of students was 19.02(±1.450) years. Males were more addicted to the internet than female. The mean time spent on internet was 1.29(±1.251) hours per day. The internet addiction test scoring revealed that 57.3% as normal users, 35.0% as case of mild, 7.4% as moderate and 0.3% as severely addicted to Internet."

Chathoth, et al. (2014) "Conducted a cross-sectional study which involved 90 (18-20 years) undergraduate medical students. The two groups addictive internet users (score ≥ 50) and non-addictive internet users (score < 50) were compared for environmental stressors and lifestyle factors such as sleep, dietary pattern, physical activity and hobbies. Results revealed that the addictive internet user group had a statistically significant impairment of sleep (94.11% Vs 45.2%) and excessive daytime sleepiness (88.23% Vs 39.72%) and presence of environmental stressors (76.47% Vs 36.98%) as compared to non-addictive internet users."

Min, et al. (2014) "examine the 13,588 users (7,878 males, 5,710 females), out of 20 million from a major portal site in Korea, participated in this study. Among the sample, 3.5% had been diagnosed as internet addicts (IA), while 18.4% of them were classified as possible

internet addicts (PA).The Internet Addiction Scale showed a strong relationship with dysfunctional social behaviors. More IA tried to escape from reality than PA and Non-addicts (NA). When they got stressed out by work or were just depressed, IA showed a high tendency to access the internet. The IA group also reported the highest degree of loneliness, depressed mood, and compulsivity compared to the other groups. The IA group seemed to be more vulnerable to interpersonal dangers than others, showing an unusually close feeling for strangers"

Taqavi, et al.(2014) "examine the 379 university students were selected by multi-phase clustery sampling method. Problematic Internet Use Questionnaire and Schaefer Parenting Style as the measures and ANOVA as the statistical method were used. In the examined parenting styles, the Permissive and Authoritative styles had the least and the Authoritarian style had the most effect on Problematic Internet Use. Impact of Kindness was negative whereas of Control was neutral. So people from warm family were unlikely addicted to internet and kindness was a preventive factor for Problematic Internet Use."

Chacko et al.(2015) "investigated that the majority (67%) of the sample had moderately adequate knowledge regarding ill effects of internet addiction. Majority (77%) of the sample showed favorable attitude towards ill effects of internet addiction. In the study there was a significant association between knowledge and selected demographic variables and the attitude and the selected demographic variables. There was also a significant correlation between the knowledge and attitude of the nursing students regarding ill effects of internet addiction.The study concluded that the nursing students have moderately adequate knowledge and favourable attitude towards ill effects of internet addiction."

Rae, et al.(2012)"aimed to give a preferably brief overview of research on IAD and theoretical considerations from a practical perspective based on years of daily work with clients suffering from Internet addiction. Result indicated that Internet Addiction Disorder (IAD) ruins lives by causing neurological complications, psychological disturbances, and social problems. Surveys in the United States and Europe have indicated alarming prevalence rates between 1.5 and 8.2%."

Kim and Park (2015) "explored that AMOS 20.0 analysis was used to determine the influence of internet game addiction and to identify its correlation with SNS addiction tendencies. The overall fitness indices hypothetical model was good: ($X2= 78.981$, $p<.001$), $X2//df =3.43$, CFI= .962, TLI=.941, RMSEA=.080. Out of 5 paths, 5 were statistically significant. SNS addiction had the greatest impact on Internet game addiction among the male middle school students in this model."

YE & LIN (2015) "result shows that Locus of control was positively related to Loneliness and Preference for online social interaction, but negatively related to Subjective well-being; Loneliness (positively) and Subjective well-being (negatively) were related to Preference for online social interaction; and Loneliness and Subjective well-being had a full mediating effect between the relationships of Locus of control and Preference for online social interaction. It was also found that more lonely, unhappy, and externally controlled students were more likely to be engaged in online social interaction."

III. DISCUSSION AND CONCLUSION

The internet has positive and negative effects. Internet is beneficial in everyday life. Internet is useful for entrainment purpose, providing knowledge, reservation, big source of information, online shopping, online newspaper and scholarship and every details provided by internet. Internet is beneficial but excessive use of internet creates problem in life. The adolescents are the age group where they get fascinated by the internet and along with the use they tend to misuse it. Chance of internet addiction is high because the availability of internet on the mobile and computer/laptop is very easy. As a result, it is difficult to determine the causes of internet addiction but excessive use of internet showed some type of problem like behaviour problem, familiar problem, academics problem, psychological problem. Studies found that the major group of excessive use of internet is adolescent's age group 13 to 19 year old.

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