CHAPTER II
REVIEW OF RELATED LITERATURE

2.1 Review of Related Literature

The review of literature is a written form of previous researches, journals, articles and other documents which describe the past and current state of information related to topic of the present research. A good review of the related literature must contain quantitative as well as qualitative studies. It is necessary for a researcher to conduct a literary review as a necessary step in the research process. So, the review of the related literature is a critical and comprehensive summary of previous knowledge/studies in the concerned area. The literary review is essential for the purpose of theoretical base. The theoretical base helps the researcher to understand and determine the exact nature of the research. The literary review should objectively evaluate, describe, enumerate, summarize, and clarify the previous research. A literary review provides a "landscape" for the reader, giving him/her a better knowledge of the development in the concerned field. It helps the researcher to choose tools, samples and research design.

Review of literature is helpful for a researcher in selection of problem, objective and hypotheses. As Best and Good states that, "Practically all human knowledge can be found in books and literature. Unlike other animals that must start a life with each generation, man builds upon the accumulated and recorded knowledge of the past" (Best,1977).

"The keys of the vast storehouse of published literature may open the doors to sources of significant problems and explanatory hypotheses and provide helpful orientation for

definition of the problem, background for selection of procedure, and comparative data for interpretation of results" (Good, 1973).

The present review focuses on the available literature and seminal studies on internet addiction, mental health and personality concerning youth/school/college going students. The review is conducted in order to understand the available knowledge on the topic and to support the present research. It becomes evident in the review that there are many studies which are indirectly or directly related to the present investigation. The studies incorporated in this chapter are based on various abstracts, journals, dissertations, books and the online sources.

2.1.1 The Purpose of Literature Review

1. To locate each study according to its contribution in order to enhance knowledge about the present research problem.

2. To illustrate the relationship among the studies taken into account.

3. To identify new angels in order to critically interpret past studies.

4. To bring into light the gaps in the existing literature.

5. To synthesize the contractions in the available literature.

6. To prevent duplication of the researches that has already been conducted.

2.1.2 Features of a Literature Review

1. Interpreting old material from new perspective, and compare and contrast the old with new.

2. Tracing the major scholarly discussion on the area of research.

3. Keen evaluation of strengths and limitations of the sources in order to develop an understanding as well as to advice the reader about the significance of the relevant researches.

In conclusion, it brings into light the existing void in the available body of literature on the topic and the progression of the intellectual pursuit on the topic.

Meena, Mittal and Solanki (2012), hypothesized the symptoms to be "low awareness of the time spent in use, high gratification (this activity has radically changed the use of free time, especially among adolescents and young adults), the decline in non-virtual social relationships and an impact on academics, work and family." On the basis of this hypothesis, they conducted a study on 200 urban school going teenagers both male and female. Based on the findings, it was concluded that 24.74% of the sample self-proclaimed having "occasional or frequent problems with the use of social networks", while 2.02% reported "severe problems". Only 1% of the sample mentioned about non-frequent usage of social networks. Furthermore, the major problem among youth is online gaming, pornography and unnecessary web searches.

WHO (2014) concluded three following major themes on the internet addiction:

1. First theme focuses on the "*need to conceptualize and define the scope, phenomenology and typology of disorders associated with excessive use of Internet, computers, smartphones and similar devices which have shared signs and symptoms with substance use disorders and behavioural addictions*".

2. Second theme highlighted "*need for intensifying international research to address current knowledge gaps and to generate essential needed information for development of prevention and treatment policies, strategies and interventions.*"

3. And the third theme concerned with the "*need for documenting and evaluating policies, strategies and interventions aimed at preventing and reducing health risks and disorders associated with the relatively new phenomenon of excessive use of the Internet and electronic devices.*"

These themes or guiding principles clearly indicates that internet addiction among student population is a major concern not only for school/college teachers rather it has a far broader picture. Along with teachers, parents and society at large is being drastically affected by the increasing reported numbers of internet addictions among younger population, which largely includes students. According to an online report published by Press Trust of India (2018), "*the number of people visiting the All India Institute of Medical Sciences (AIIMS) Behavioural Addiction Clinic with complaints of internet addiction has almost doubled, since the launch of the facility two years ago.*" This report is an alarming one, highlighting that apart from depression, stress, anxiety and other behavioural issues, internet addiction is leading to various other psychological issues which are growing at a rapid pace.

In 2019, Mr. Didyala written an article in online version of Times of India (Hyderabad City) that "*cases of addiction to gaming, internet and porn sites are on the rise, say doctors, pointing out how it has resulted in many landing up at de-addiction centres.*" Further, this report also revealed the worries of parents and teachers regarding these behavioural issues at school/college level as they are associated with violent and aggressive behaviour too. Additionally, report also indicated the rise in the number of youngsters approaching de-addiction centres.

In the line with these four reports in the public domain it was thoughtful to take up an empirical investigation to understand the gap in the scientific researches, particularly in Indian socio-cultural context and reporting the major findings to create empirical base for highlighting the necessary for the current investigation. For the purpose, most relevant and meaningful researches have been listed in the chronological order for the reference.

Liau et al. (2005) on a sample of 1124 school going students (Mean age = 14.32 years) investigated the factors that influenced the adolescents to risky internet behaviour. The data were collected by an online survey administering 93 items that were part of the SAFT project (Staksrud, 2000). The result of the study indicated that the users visited inappropriate websites and received inappropriate message from internet.

Ko et al. (2006) selected 3662 students (2328 boys and 1334 girls) through random sampling to examine the difference of personality characteristics between internet addicted and normal users. They administered Chinese version Cloninger's Tri-dimensional Personality Questionnaire (TPQ; Chen et al., 2002), Chen Internet Addiction Scale (CIAS; Ko et al. 2005), Questionnaire for Experience in Substance Use (Q-ESU; Yen, Yang, Ko & Yen, 2005) for data collection. They found that the higher level of novelty seeking (NS), higher level of harm avoidance (HV) and low level of reward dependency (RD) were good predictor for internet addiction among students.

Bernardi & Pallanti (2009) has done a descriptive clinical analysis of outdoor patients who focus on clinical, demographic features and comorbidities, and also assessed dissociative symptoms with internet addiction disorder disabilities. For the purpose a sample of 50 adult students were screened with using Internet Addiction Scale (IAS; Young, 1998) and the Sheehan Disability scale used to assess dissociative symptoms. Findings of the study confirmed that dissociative symptoms are related to severity and impact of IAD.

Tsai et al. (2009) investigated the risk factor related to internet addiction among 1360 freshmen of University in Taiwan and collected the data by using self-

reported questionnaire for demographic information, IAT scale-R (CIAS-R; Chen et al., 2003), Health Questionnaire (HQ; Chong & Wilkinson, 1989), Measurement of Support Function (MSF; Lin et al,1999, Berkman & Glass, 2000) and Maudsley Personality Inventory (MPI, Eysenck & Eysenck, 1975). The finding of the study confirmed that psychological symptoms, neuroticism and psychiatric morbidity were closely related to internet addiction. Findings showed that addicted students also face a number of health-related problems.

Yen et al. (2009) accessed the relationship between personality types of internet addicted as well as alcoholic usage. A total of 2453 students were approached but 1992 students filled the complete scales. The researchers have used Chen Internet Addiction Scale (CIAS; Chen, Weng, Su, Wu, & Yang, 2003), Behaviour Inhibition System and Behaviour Approach System Scale (BIS/BAS; Chen, Ko, Lu, 2005) for data collection. The finding of study indicated internet addiction related with harmful alcohol use. Internet addiction and hazardous alcohol use was not related with behaviour inhibition system.

Xiuquin et al. (2010) in a study compared the personality profile of male university students with internet addicted and without internet addicted. The researcher administered Symptom Checklist-90-R, Eysenck Personality Questionnaire Revised, Egna Minnen and Barndoms Uppfostran-my memories of upbringing. All tests were validated by researcher on Chinese students. A total sample of 304 students was selected; 204 were addicted and 100 were healthy. The continuous variable and categorical variables were evaluated by two-sample t-test and chi-square or Fisher's exact test, and non-parametric data were evaluated through Mann-Whitney U-test. All

data were analysed with SPSS statistical software. The outcomes of the study indicated that there was no significant demographic distinction between both groups; mental health and personality were nearly related to parental styles. Further, the finding of study suggested that the influence of parenting style and family environment function was important element in development of online activities or internet dependency.

Ko et al. (2010) investigated the risk factors involved in internet addiction on a sample of 216 college students volunteered through an advertisement, which included 132 male and 84 females. Data were collected by administering 'Diagnostic Criteria of Internet Addiction' (DCIA; Ko et al., 2009), Tridimensional Personality Questionnaire (TPQ; Clonger, 1987), Lawa Gambling Task (LGT; Bechara, et al., 2000), and Ballon Analog Risk Task (BART; Lejuez, et al., 2002). The major findings of the study revealed that 49% male students and 17% female students were found high on internet addiction. Further, TPQ scores showed that addicted students had better implicit emotional learning compare to other students. Additionally, results of study also revealed that addicted students had a better performance on the low gambling task.

Batigun and Kilic (2011) studied interested to find purpose and prevalence of internet usage among university students which consisted of 1198 students (672 female and 525 male) from various universities in Istanbul and Ankara. IAS, Big Five Personality Inventory and demographical information were utilized to gather data. Data were analysed through regression analysis. Result of which indicated that male students spent more time on internet usage as compared to female students. Further, findings also indicated that students from higher SES have higher internet addicted then those from lower SES.

Sepehrian and Lotf (2011) conducted an empirical investigation to find out the relationship of internet addiction with anxiety and personality types (Type A and Type B). They selected 330 students from 7 different universities through random sampling method and administered standardized psychological measures pertaining to Young's Internet Addiction Questionnaire (IAT; Ghasemzadeh, et al. 2007; Yoo, et al 2004), types A and B personality (Ganji, 2001), and Najjarian et al. (1994) Anxiety Questionnaire (Abolghasani, et al 1999). The results from statistical analysis revealed that students with type A personality were higher addicted compare to type B personality. Neither type A nor type B personality found as significant predictor of internet addiction. With regard to gender differences, findings of t-test indicated that male students were more addicted to internet than female students.

Conclusion (2005-2011)

The set of above findings from the year 2005 to 2011 indicated that internet addiction has been investigated among adolescents and young adults mostly on students either at school, college or university level. Further, the significant variables studied among the student population includes risky internet behaviour (Liau et al., support function and personality, personality types and alcoholic use (Bernardi & Pallant, 2009; Tsai, et al., 2009; Yen, et al., 2009), risk factors among college students (Ko, et al., 2010) (2005), personality characteristics (Ko, et al., 2006), clinical, demographic features and comorbidities, and also assessed dissociative symptoms with IAD disabilities, health, and, anxiety and personality (Type A and Type B) types (Sepehrian & Lotf, 2011).

From all the above reported findings it can be concluded that in the span of six to seven years, researchers revealed many psychological problems associated with

internet addiction. Additionally, some of the researchers were also interested to understand the relation of internet addiction with personality traits and type (Type – A/B). Simultaneously, one can observe that all the reported studies were done on the sample of adolescents and young adults, involved in academics at different level. The following studies focus on the similar kind of studies from 2012 to 2016 and depict the idea the interest of investigators to explore more psychological or behavioural correlates of internet addiction.

Celik and Basal (2012) investigated the relationship between personality traits and internet addiction on a sample of 210 students, drawn through purposive sampling. The overall sample was divided into two groups including students enrolled in regular mode and in distance education mode. The Ten Item Personality Inventory (TIPI; Gosling et al., 2003), and Turkish translated Internet Addiction Scale (IAS; Bayraktar, 2001) were administered to accomplish the research objectives. The results of the study indicated that openness to experience was found as the weakest independent variable predictor and conscientiousness emerged as the most powerful predictor variable of internet addiction.

Jiang et al. (2012) assessed the personality traits of college students with Internet addiction by using two self-report scales including Tridimensional Personality Questionnaire (TPQ; Cloninger, 1986), and the Chen Internet Addiction Scale (CIAS; Chen, Weng, Su, Wu, & Yang, 2003). The samples were selected through stratified random sampling, which comprises of 697 participants from colleges and vocational school in Wenzhou, China. To analyse the data SPSS (ver. 15.0) software was used and t-test, chi-square test and Pearson correlation method for data analyses were employed.

Major study findings proved that technical college students were more addicted to internet addiction as well as they were found addicted to tobacco and alcohol.

Stieger, Burger, Bohn, & Voracek (2013) conducted a research with the purpose to study psychological characteristics of a user after quitting his/her social networking site (SNS) account i.e. Facebook. For achieving the objective, an online by study was conducted by using Privacy Concern Scale (PCS; Buchman, Paine, Joinson & Reips, 2007), Internet Addiction Test (IAT; Young, 1998), Mini International Personality Item Pool Personality Measures (MINI PIPI; Donnellan, Oswald, Baird & Lucas 2006), for data collection. Tests were applied on users of both the groups and quitters of Social Networking Sites (SNS). ANCOVA was used to covariance controlling for sex and age. The key finding from this series that face book quitters were more concerned about their privacy and use of internet compared to current face book users.

Cole and Holley (2013) aimed to provide the data on the clinical and personality characteristics of online play gamer, those played MMO (massive multiplayer online game). First of all, they administered a demographic questionnaire for basic information, and then divided the sample in two groups based on their scores [low and high] on MMOs. Data was collected with the help of generalized pathological internet use scale (Caplan, 2002), Spielberger State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, Lusheve, Vagg & Jacobs, 1970), Tellegen Absorption Scale and Social Phobia Scale (SPS, Mattick & Clarke, 1998). Independent sample t-tests were used by investigators and compared them to the users with low and high PIU on the variable of interest. Findings on the study highlighted that those who reported high level

of PIU (Problematic Internet Use) were more likely to have higher level of social phobia.

Andreassen et al. (2013) selected 218 (171 females and 45 males) psychology UG students from University of Bergen, Norway for a descriptive survey research. The investigators administered a number of standardized psychological tools including – Bergen Facebook Addiction Scale (BFAS; Griffiths, 2005), Game Addiction Scale for Adolescents (GASA; Griffiths, 2005), Young Diagnostic Questionnaire (YDQ; Young, 1998), the Exercise Addiction Inventory (EAI; Griffiths, 2005), Mobile Phone Addiction Index (MPAI; Leung, 2007), Compulsive Buying Scale (CBS; Young, 1998), Study Addiction Scale (Andreaseen, Griffiths, Hetland & Pallesen, 2012) and NEO-FFI-R (McCrae & Costa, 2004). They analysed the data with Pearson's product-moment correlation coefficient and point-biserial correlation coefficients. The Major findings were "neuroticism was positively associated with internet addiction whereas, study addiction and extroversion were positively associated with Facebook and mobile phone addiction, and additionally both were also positively associated with excessive addiction and compulsive behaviour. Openness to experience was found negatively associated with Facebook addiction and mobile phone addiction. However, agreeableness was negatively associated with internet addiction exercise addiction mobile phone addiction and compulsive buying. Further, conscientious was negatively associated with Facebook addiction, video game addiction, internet addiction and positively associated with exercise addiction and study addiction." The investigators concluded through the findings of the study that behavioural addictions were related to personality traits.

Kuss, Griffiths, & Binder (2013) in a study focused on internet addiction and personality traits, for the purpose they organized a cross-sectional survey and collected data from 2257 students from English University. In total there were 120 questions to be filled through online survey with the help of Assessment for Computer and Internet Addiction Screener (AICA-S; Wolfling, Muller & Beutel, 2010) and personality traits were measure through NEO Five Factor Inventory (NEO-FFI; Costa & Mccrae, 1992). Major findings of the study indicated that 3.2% students of the sample were addicted to internet. Further results, also indicated that engaging in online gaming, shopping and other online activities were responsible for internet addiction.

Dalbudak, Evren, Aldemir, & Evren (2014) investigated the relationship between internet addiction and alexithymia, temperament and dimension of personality. A sample of 319 students was selected from Conservative University in Ankara for the investigation and administered Toronto Alexithymia Scale-20 (TAS-20; Gulec et al., 2009), Temperament and Character Inventory (TCI; Kose et al., 2004), the Internet Addiction Scale (IAS; Nichols & Nicki, 2004), the Turkis version Beck Anxiety Inventory (BAI; Ulusoy, Hisli & Erkmen, 1998) and the Turkis version Beck Depression Inventory (BDI; Hisli, 1989). Final statistical outcomes revealed that higher internet addiction was reported by male participants as compared to female participants. Findings further confirmed that severity of internet addiction was positively linked with alexithymia and negatively linked with self-directedness.

Bahrainian, Alizadeh, Raeisoon, Gorji, & Khazaee (2014) to conduct a study recruited the sample by cluster sampling and evaluated through Beck Depression Inventory (BDI; Dabson & Mohammadkhani, 2007), Cooper Smith Self-Esteem

Inventory (CSEI), and translated Internet Addiction Test (IAT; Johanson & Gotestam, 2004). Investigators concluded that depression and self-esteem scores emerged as significant predictors of internet addiction.

Kodavanji, Chathoth, kumar, Anupama, Kini, Pai (2014) completed a study to assess the impact of internet addiction on 90 (34 male and 56 female) medical students. Internet addiction was assessed through Young Internet Addiction Test (IAT; Young, 1998). After scoring of tests, participants were divided into two groups comprised of addicted and non-addicted participants. Further, they compared the life style between participants from both the groups. The finding of this research indicated negative impact of internet addiction on addictive user life style.

Dalbudak, Evren, Aldemir, & Evren (2014) explored the relationship between internet addicted and the severity of borderline personality types like dissociative experience, childhood traumas, depression and anxiety symptoms of Turkish university students. 271 students completed questionnaires pertaining to about internet addiction, depression, anxiety, child trauma questionnaire (CTQ-28, Bernstein et al. 1994, 1997), Dissociative Experience scale (DES-28; Bernstein & Putnam, 1986) and Border Personality Inventory (BPI). Chi-square test, one-way ANOVA and univariate covariance analysis (ANCOVA) were used to analyse data, and found that the rate of internet users was 19.9% high internet addiction risk group, 38.7% in the mild internet addiction risk group and 41.3% in the group without internet addiction risk. The researcher also found with the help of correlation analysis that the severity of internet addiction group was related with DSE, BPI, Emotional Abuse, CTQ depression and anxiety score.

Floros, Siomos, Stogiannidou, Giouzepas, & Garyfallos (2014) conducted a study on a sample of 268 medical students drawn through convenience sampling, to measure the level of internet addiction among them while taking their personality and psychopathology variables into account. Online Cognition scale (OCS; Devis, Flett & Besser, 2002), the Defence Style Questionnaire (DSQ; Hyphantis, 2010), the Zuckerman-Kuhlman Personality Questionnaire (ZKPQ; Zuckerman, Kuhlman, Joireman, Teta & Al, 1993) and the Symptoms Checklist (SCL-10; Stamatis, Anastasia & Nicholas, 1991), were administered online to gather the data. The findings if the study revealed that use of social networking websites were hindrance to student progress, and additionally findings also confirmed that more usage of internet was a predictor of student's obstacle in studies and symptoms of psychopathology.

Seifi, Ayati & Fadaei (2014) investigated the relationship between internet addiction, anxiety, depression and stress among University students (Male = 133; Female = 76), selected through stratum random sampling. The data were collected with the help of standardized test i.e. Internet Addiction Test (IAT; Young et al., 1998), and Depression, Anxiety and Stress Survey (DASS-21; Sahebi, et al., 2005). Statistical outcomes of the study highlighted significant positive relationship of internet addiction with anxiety, stress and depression. Furthermore, the result of the study also indicated that internet addiction can be also predictor of depression, anxiety and stress among internet users.

Servidio (2014) examined the impacts of personality traits and demographical profile on internet addiction. For the purpose 190 Italian university students were selected through random sampling method and were administered the Italian version of

Internet Addiction Test (IAT; (Ferraro, Caci, D'amico, & Blasi 2007).), student's internet usage questionnaire and Big Five Adjective (BFA; Barbaranelli, Caprara, and Steca, 2002) was used to investigate the five factor of personality traits. The researcher used multiple linear regression data analysis and found that male internet users were more addicted than their female counterparts. Results also revealed that same user behaviours found to be the predictor of internet addiction.

Sharma, Shau, Kasar and Sharma (2014) attempted to check the level of internet addiction among 400 students from various professional courses. Data were gathered with the help of Young Internet Addiction Questionnaire (IAQ; Young, 1998) and analysed with the help of SPSS by running chi-square test to examine variables. On the basis of major findings, they revealed that boys were more addicted compared to girls.

Yao, He, Ko, & Pang (2014) aimed to investigate the influence of personality, parental behaviour and self-esteem on internet addicted among students in China. Survey method was used for data collection through assessment of Young Internet Addiction Questionnaire (IAQ; Young, 1998), Egna Minnenav Barndoms Uppfostran (EMBU; Perris, Jacobsson, Linndström, Knorring, & Perris, 1980) was used to assess the parenting behaviour, Eysenck Personality Questionnaire (EPQ; Eysenck & Eysenck, 1991) was use to assess the participants' personality and Rosenberg's Self-Esteem Scale (RSES; Rosenberg, 1989). A total of 2397 students participated in this research but finally 2095 students were considered valid. The study revealed that psychotic and neurotic types of personality were positively linked with I.A., and the influence of parental behaviour on I.A. was also significant.

Chacko, Jospeh, Abraham, Aranha & Shetty (2015) conducted a descriptive survey research to measure the knowledge and attitude regarding ill effect of internet addiction among 100 medical students which were selected through purposive sampling. The study was conducted by administering two standardized psychological scales, first was structured knowledge questionnaire and second was attitude scale regarding the ill effect of internet addiction. The collected data were analysed through SPSS and it was concluded that nursing students of Mangalore were sufficiently aware about the internet addiction and its favourable attitude towards negative effects of excessive use of internet.

Chen, Quan, Lu, Fei & Li (2015) studied the psychological correlation of social dysfunction among internet addicted students. They identified 133 addicted students with the help of Young's criteria for internet addiction and then they were assessed on internet related social dysfunction with (YDQ; Young, 1999), and psychosocial characteristics by the Symptom Check List 90 (SCL-90), MMPI-AF, The Trait Coping style questionnaire (TCSQ) and EMBU. The collected data were analysed through ANOVA and two sample t-test for comparing the characteristics of addicted and non-addicted students. The researchers found no significant difference in terms of age and sex between two groups.

Oskenbay et al. (2015) conducted an experimental study with an objective to investigate the internet addiction and its impact on personality and anxiety. To identify the internet users, they administered internet characteristics questionnaire, and based on the obtained scores they identified 60 internet users, those who were frequent visitors of the Internet Cafes/Clubs. On the selected samples, they administered questionnaire

pertaining to internet addiction, internet characteristics questionnaire, BIG Five personality trait and emotional intelligence. The results of the study showed that internet addiction can negatively influence the personality traits of students which can further affect their emotional stability and impulsiveness. Findings of the study also concluded that the people who reported internet addiction have low level of emotional intelligence.

Ozturk, Bektas, Ayar, Oztornacı, & Yagcı (2015) through a cross-sectional study attempted to analyse the connection between personality traits and internet addiction among school students selected from two different schools. To accomplish the study objectives, they selected 328 adolescents by random sampling, and data were collected through survey method by administering Chinese Internet Addiction Scale (CIAS; Chen, Weng, Su, Wu, & Yang, 2003) and Adjective Based Personality Test (ABPT; Bacanli et al., 2009) to the selected sample. The collected data analysed by using descriptive statistics, t-test and logistic regression analysis through SPSS. The statistical outcomes indicated significant difference between internet addiction and personality traits.

Vaidya, Jaiganesh, & Krishnan (2015) investigated the demography of internet addiction in Pondicherry and its comorbidities with FoMo (Fear of Missing out). A sample of 150 participants were drawn through random sampling. Data were gathered with Young's Internet Addiction Test (IAT; Young, 1998) and Andrew Pryzbylski's Fear of Missing out Scale (FoMo; Przybylski, Murayama, Dehaan & Gladwell, 2013). The result of the present study showed that the internet addiction was strongly associated with FoMo. People found high on internet addiction tend to

experience FoMo more intensely, as compared to people found low on internet addiction.

Wang, Ho, Chan, & Tse (2015) investigated correlation of personality traits to addictive behaviours for various online activities among school students. They administered the Chines version of Internet Addiction Test (IAT; (Lai et al., 2013; Young, 1998).) along with Game Addiction Scale (GAS; Lemmens, Valkenburg & Peter, 2009), and Bergen Facebook Addiction Scale (BFAS; (Andreassen, Torsheim, Brunborg, & Pallesen, 2012).) and Personality traits were assessed using the 10-item short version of the Big Five Inventory (Rammstedt & John, 2007). on a sample of 920 recruited students in different district of Hong Kong which was done through cluster sampling. Results were demonstrated based on significant difference on personality traits and addictive online activities of participants. Higher neuroticism and less conscientious were found significant in association with higher internet addiction.

Błachnio & Przepiorka (2016) conducted two parallel studies with the objective to find out the type of personalities and orientations that are connected with I.A. and Facebook addiction. The sample for each study were 631 and 452 graduate students with mean age of whole sample were 22.48 years and 64% participants were women graduate students. The data were collected through the Young Internet Addiction Test (IAT, Young, 1998), Ten Item Personality Measure (Gosling et al., 2003), Positive Orientation Scale (Capara et al. 2010), The Bergen Facebook Addiction Scale (BFAS; Andreassen et al., 2012), and Facebook Intensity Scale (FIS; Ellison, Steinfield, & Lampe, 2007). The result of the study showed that lower positive orientation, emotional stability, conscientiousness, and openness to experience are related to problematic use of I.A. and F.B.A.

Holodos (2016) conducted a study in Slovakia and it was his first attempt to analyse the impact of Type D Personality in predicting internet addiction beyond the big five personality dimensions. He collected data through online by sending Solvak adaption questionnaire NEO-FFI (Ruisel & Halama, 2007), Internet Related Problem Scale (IRPS; Armstrong et al., 2000), Type D Personality assess scale (Durka, 2006) which he sent via email to 1600 (800 male and 800 female) university students. The results of statistical analysis confirmed that there wasn't any noticable impact of the Type D Personality on level of IRPS after controlling for the effect of Big Five Personality Traits.

Rigi Kootesh, Raisi & Ziapour (2016) studied the relationship between internet addiction and mental health and quality sleep among 250 students, selected through random sampling. Descriptive-correlation method was used to achieve the objective of study. Data were collected with the help of Pittsburgh Sleep Quality Inventory (PSQI; Buysse et al., 1989), Mental Health Checklist (MHC; Gholami & Mansoobifar, 2009), Young Internet Addiction Questionnaire and (YIAT; Widyanto & Mc murran, 2004). The result of the study showed an important distinction between internet addiction with mental health ($r = 0.279$; $p \leq 0.01$) and sleep quality ($r = 0.909$ $p \leq 0.01$). Further, it was found that the internet addiction is a predictor of sleep quality and mental health.

Muller et al. (2016) carried out an empirical investigation with the purpose of the study was to see if the use of social networking websites is related to internet addiction behaviour and psychosocial distress. In addition to that, they were also interested to see if demographical personality variables predict the addictive user.

Participants were drawn through random sampling and total sample included 9173 participants. Data were collected by administering the scales pertaining to Assessment of Internet and Computer Game Addiction (AICA-S; (Muller, Beutel, Egloff et al., 2014; Muller, Beutel & Wolfling, 2014; Muller, Glaesmer et al., 2014)), Strength and Difficulties questionnaire (SDQ; Goodman, 1997), NEO Five Factor Inventory (NEO-FFI; (Costa & McCrae, 1992; Borkenau & Ostendorf, 1991), Eating Disorder Inventory, subscale "Interpersonal Distrust" (Garner, 1991). Computer based application, SPSS (ver. 22) was used to analyse the data. Despite some limitations, they analysed that internet is related intense social networking website usage at least to some extent. It affected both boys and girls in same manner.

Sahraian, Hedayati, Mani, & Hedayati (2016) examined the relationship between internet addiction and different personality traits among medical college students from Shiraz University of Medical Sciences. In this cross-section study, they collected only 278 valid fulfilled questionnaires out of 687 which were originally distributed. Data were collected by administering the Persian version internet addiction test (Mohammad salehi et al., 2015) and Iranian version NEO-Five Factor Inventory (Anisi et al., 2011). The result of study indicated that 55% of participants were addicted to internet out of which 51.4% were Mild, 2.9% Moderate and 0.4% were severely addicted. They also found that participants of 5th and 11th semester obtained higher score on internet addiction comparatively to participants from other semesters.

Zadra et al. (2016) examined link between internet addiction and personality disorder by using the survey method and interview method for data collection. Internet addiction assessment was done through Composite International Diagnostic Interview

(CIDI; Wittchen, 1994), Personality assessment was done through German version Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II; First, Gibbon, Spitzer, Williams, & Benjamin, 1997), ADHD symptoms done through German translation of the Conners' Adult ADHD Rating Scale (CAARS; Conners, Erhardt, & Sparrow, 1999), assessment of impulsivity was done through a German version (Preuss et al., 2003) of the Barratt Impulsiveness Scale (BIS-11; Patton, Stanford, & Barratt, 1995) and self-esteem done with Rosenberg's self-esteem scale (Rosenberg, 1965). The result of the study showed that those participants reported high addiction to internet found to suffer more personality disorder comparatively to normal users.

Yu and Chao (2016) investigated the impact of cyber bullying, cyber pornography and internet fraud on adolescence physical and mental health, and also examined the moderating effect of Internet addiction among adolescence. They selected 8480 students for achieving the objective of study and collected data through self-made close- ended questionnaire, including two parts – first regarding basic information of students and second about the information related to variables of study. Results of the statistical analyses indicated that internet addiction had significant positive effect on physical and mental health of individuals.

Conclusion (2012 – 2016)

Internet addiction keep on growing through this phase, which indicates that researchers were interested to explore internet addiction not only in school students and other college/university level students rather among medical students (Floros & Siomos 2014; Chacko, et al., 2015; Sahraian, et al., 2016)), too. During this phase, internet addiction studied along with personality traits (Celik & Basal, 2012; Jiang, et. al., 2012;

Kuss et al., 2013, 2014; Servidio, 2014) and investigated psychological characteristics of social networking site account quitters (Burger, et al., 2012). Some other researches focus on the perceived family functioning, stressful life events (Yan, et al., 2013), anxiety and social phobia among online gamers (Cole & Holley, 2013), and compulsive buying behaviour, game addiction, and study addiction among adolescents (Andreassen, et al., 2013) in relation to their internet addiction behaviour. Further, internet addiction was also explored in connection to alexithymia, temperament and personality dimensions (Dalbdak et al., 2013).

Moreover, researchers conducted researches to understand the role or association or effect of internet addiction with depression, self-esteem, anxiety, stress (Bahrainian, et al., 2014; Seifi et al., 2014; Yao, et al., 2014; Ostovar, et al., 2016)), borderline personality, childhood traumas, and dissociative experience (Dalbudack, et al., 2014). Some of the researchers explored gender differences on "Internet Addiction" among young adults (Sharma et al., 2014).

Coping style (Chen et al. 2015), emotional intelligence (Oskenbay et al. 2015), Fear of Missing out (Vaidya et al., 2015), Mental Health (Ying, et al. 2015), Type D Personality (Holodos, 2016), Sleep Quality (Kootesh, et al. 2016), Interpersonal Distrust, Strength and Difficulties, and Eating Disorder (Muller, et al. 2016), ADHD, impulsivity and self-esteem (Sinazadra, et al., 2016), schizotypal personality type (Truzoli, et al., 2016), and impact of cyber pornography, cyber bullying and internet fraud on physical and mental health, and also examined the moderating effects of internet addiction among adolescence (Yu & Chao, 2016) were some of the significant variables explored and investigated in relation to internet addiction during this phase.

Dass, Sharma, Thamilselvan & Marimuthu (2017) explored the information technology usage among 75 volunteers from in-patient and out-patient psychiatric (age 16 and above) setting of National Institute of Mental Health and Neurosciences, Bengaluru, Karnataka. Data were collected through survey method by administering internet addiction impairment index (Widyanto & Mcmurran 2004; Young 1999), video game use patterns (Griffiths, Davies, & Chappell, 2004), pornography addiction screening tool, mobile phone screening. Results of study proved that age was negatively correlated with mobile addiction, internet video game and pornography.

Błachnio, Przepiorka, Senol-Durak, Durak, & Sherstyuk (2017) research established a relationship between Facebook addiction, Internet addiction and personality on the sample of 1011 internet users from Poland, Turkey and Ukraine. Polish, Turkish and Ukrainain version of Bergen Facebook Addiction Scale (BIAS; Andreassent et al., 2012), Young Internet Addiction Scale and Ten Item Personality Inventory (TIPI; Gosling, Rentfrow & Swan, 2013) were administered on the study sample. Findings of the study indicated a strong association between Facebook and internet addiction. Further, researchers also reported a significant possible prediction of Facebook addiction by personality traits.

Gervasi, La Marca, Lombardo, Iacolino, & Schimmenti (2017) conducted a research to reveal the relationship between maladaptive personality traits and internet addiction. For the purpose they collected a sample of 349 students from university, aged 18-25 years and administered the Internet Addiction scale (IAT; Young, 1998; Ferraro et al. 2007) along with 25 items Personality Inventory for DSM-5-Brief Form- Adult

(PID-5-BF; Krueger et al. 2012). The Results of the study confirmed that psychoticism domain of personality emerged as the predictor of internet addiction.

Munno et al. (2017) conducted a study to explore the relationship between Internet Addiction Disorder and personality. They employed Internet Addiction Test (IAT; Young, 1998; Ferraro et al. 2007) and Minnesota Multiphasic Personality Inventory-Adolescents (MMPI-A; Sirigatti & Pancheri, 2001) on a sample of 224 high school students from Turin M.C. schools. After analysis of the data, the researcher revealed that 24.6 % students were found to be problematic users and another 1.6 % was highly addicted.

Zhou, Li, Li, Wang, & Zhao (2017) examined unique association between personality and student 'Internet Addiction'. To achieve their objective, they applied the Chinese version of "Big Five Personality Inventory" (BFPI; Zhou, Niu & Zou, 2000), adopted coping style questionnaire and Young Internet Addiction Diagnostic Questionnaire (YIADQ; Young, 1996), on a sample of 998 students. On the basis of major finding, it was concluded that agreeableness and consciousness were negatively linked with "Internet Addiction"; on the other hand extraversion, neuroticism and openness were positively linked with 'Internet Addiction'.

Sharma and Sharma (2018) conducted a cross-sectional study to find out the relationship between internet addiction and psychological well-being among 461 college students who were selected through simple random sampling. The data was collected through survey method by administering Young's "Internet Addiction Test" (IAT; Young, 1998) and Ryff's Psychological Well-Being Scale (PWBS; Abbott et al., 2006). The collected data were analysed with the help of SPSS software. Result

exposed a significant negative correlation between "Internet Addiction" and psychological well-being (r = -0.57, p < 0.01). Meaning thereby, psychological well-being of students has been declined if they reported higher internet addiction.

Pamanabha, Sharma & Raghavendra (2019) explored and graded the severity of internet addiction in relation to academic performance among medical U.G. students. The researchers were selected 146 U.G. students through random sampling. The data were collected through Young's "Internet Addiction Test" (IAT; Young, 1998) and data were analysed by running chi-square test on SPSS software. The result of the study indicated non-significant association of internet addiction with academic performance among students.

Sheela and Rajendran (2020) investigated the relation between internet addiction and emotional maturity among a sample of 300 higher secondary students, selected through stratified random sampling. The researcher adopted the survey method and data were collected by administering internet addiction scale and emotional maturity scale. The data were analysed through Karl Pearson's Product Moment correlation, outcome of which revealed significantly negative correlation (-0.374) between internet addiction and emotional maturity.

During last four years, one of the major research findings done in Indian population was at "National Institute of Mental Health and Neurosciences", Bengaluru, Karnataka which focused on video game use patterns, internet addiction impairment index and pornography addiction mobile phone usage (Dass et al. 2017). More significantly over here too, researchers were interested to understand relation of internet addiction with personality (Blachino, et al., 2017; Munno, et al., 2017; Zhou, et al.,

2017), maladaptive personality traits (Gervasi, et al. 2017), and coping style (Zhou, et al., 2017).

Psychological Well-Being (Sharma & Sharma, 2018), academic performance (Pamanabha, Sharma & Raghavendra, 2019), and emotional maturity (Sheela & Rajendran, 2020) are some of the recently studied variables in Indian context among school/college/university students. The trend indicates that internet addiction has been studied worldwide in relation to many major behavioural or psychological attributes, but no single study took all the variables identified for the current study on the identified population. Thus, it makes sense to undertake such a research to validate the previous findings and understand the variables from a new perspective.

This chapter focuses largely on the relevant review of literature available through different sources to give the direction to plan the methodology for the current investigation.