DISCUSSION

The primary aim of the present investigation was to study the effects of the different types of internet addiction viz. cyber-sexual addiction, cyber-relational addiction and information overload, and gender on internet addiction and its correlates among adolescents. The effect of the employment status of the mothers on internet addiction and its correlates was also studied. For this purpose, 3x2x2 analysis of variance was employed with 30 replications in each condition.

The secondary aim was to study the relationship of internet addiction with Eysenckian dimensions of Personality viz., Psychoticism, Neuroticism, Extraversion and Social Desirability (Lie Scale), State – Trait Anxiety, Locus of Control, Sensation Seeking (Thrill and Adventure Seeking, Experience Seeking, Disinhibition, Boredom Susceptibility and Total Sensation Seeking), Shyness, Loneliness, Stress Symptoms, Daily Hassles and Uplifts, Coping (Task Focused Coping, Emotion Focused Coping and Avoidance Focused Coping), Mental Health and its dimensions (Being Comfortable With Self, Being Comfortable With Others, Perceived Ability to Meet Life’s Demands and Total Mental Health), Perceived Parental Bonding (Perceived Maternal Care, Perceived Maternal Overprotection, Perceived Paternal Care, Perceived Paternal Overprotection), Satisfaction With Life and Perceived Social Support.

Predictors of internet addiction in terms of above mentioned variables were also identified for all the groups.

For diagnosing the Internet Addiction, Young’s Diagnostic Criteria (1996) was used. The test comprised of eight questions to be answered in terms of ‘Yes’ or ‘No’ response. According to Young (1996), any person...
giving a ‘Yes’ response to five or more of the questions, is diagnosed as a Dependent user of Internet.

For measuring internet addiction, Internet Addiction Test devised by Young (1998a) was used. It comprised of 20 items associated with internet use, including psychological dependence, compulsive use and withdrawal symptoms, as well as related problems of school, sleep, family and time management. According to Young’s criteria, persons scoring in the range of 20 – 39 points are average on-line users. Such persons might surf the Web a bit too long at times, but they have control over their usage. Persons scoring in the range of 40 – 69 points experience frequent problems because of the Internet. Persons scoring in the range of 70 – 100 points experience significant problems in their lives, caused by their internet use. Consequently, subjects scoring more than 20 points were identified as dependent users of internet and subjects scoring less than 20 points were identified as non-dependant internet users.

For classifying the Dependent Internet users into different categories of Cyber-sexual, Cyber-relational and Information Overload groups, subjects were personally interviewed regarding the various purposes they used the internet for; and in accordance with the excessive usage in particular areas such as social networking, information seeking and viewing pornography, they were classified into three categories viz., Cyber-Sexual, Cyber-Relational and Information Overload. They were also asked about the various sites frequently visited by them.

Eysenck’s Personality Questionnaire - Revised (EPQ-R) devised by Eysenck et al. (1985) was used to measure the four dimensions of personality viz. Psychoticism, Neuroticism, Extraversion and Social Desirability (Lie Scale). Rotter’s Locus of Control Scale (1966) was used to measure the externality – internality dimension of locus of control.
For measuring Sensation Seeking, sensation seeking scale by Basu et al. (1993) was used. It measures four dimensions viz. Thrill and Adventure Seeking, Experience Seeking, Disinhibition and Boredom Susceptibility. State – Trait Anxiety Inventory (STAI) given Speilberger et al. (1970) was employed to measure the dimensions of state anxiety and trait anxiety.

Shyness was measured using the Shyness Questionnaire devised by Henderson and Zimbardo (2000).

To measure stress, Stress Symptoms Rating Scale developed by Heilbrun and Pepe (1985) was used. In addition to this, the Daily Hassles and Uplifts Scale by Delongis et al. (1982) was used to measure the hassles and uplifts in the life of adolescents.

The Coping Styles Inventory by Carver et al. (1989) was used to measure three types of coping viz. Task Focused Coping, Emotion Focused Coping and Avoidance Focused Coping. Mental health of the individuals was measured using WHO Measure of Mental Health adopted for use in India by Wig (1999) which has three dimensions viz. Being Comfortable with Self, Being Comfortable with Others and Perceived Ability To Meet Life Demands. All the three dimension totaled to give total mental health score.

Loneliness was measured using revised UCLA Loneliness Scale devised by Russel et al. (1980). Life satisfaction was measured using the Satisfaction With Life Scale developed by Diener et al. (1985).

Perceived Parental Bonding among the adolescents was measured using the Parental Bonding Instrument by Parker et al. (1979). It has four dimensions viz. perceived Perceived Paternal care, perceived Perceived Paternal over protection, perceived Perceived Maternal care and perceived Perceived Maternal overprotection.
Perceived Social Support was measured with the help of the Perceived Social Support Questionnaire devised by Nehra et al. (1996).

The sample was collected in two phases. In the first phase, the various schools and colleges in the tricites of Chandigarh, Mohali and Panchkula were contacted and after obtaining due permission from the authorities concerned, the students in the age range of 16 – 18 years were administered Young’s Diagnostic Questionnaire as a screening instrument to identify internet dependence in these adolescents. Purposive sampling technique was used to select the subjects for the study. Out of approximately 700 students, 360 students who were dependent users of internet (as per Young’s criteria of Internet Addiction) and 40 subjects who were non – dependent users of internet (as per Young’s criteria of Internet Addiction) were enlisted as subjects. Thus the final sample comprised of 400 adolescents. After the screening phase, the subjects were explained about the nature and aim of the investigation and were requested to volunteer as respondents. They were then administered another test on Internet Addiction (to assess the extent of internet addiction) and were also personally interviewed and asked questions regarding the various reasons they use the internet for. They were asked about the sites most frequently visited by them. On the basis of their responses, they were categorized into the Cyber-sexual, Cyber-relational and Information Overload groups, depending on the type of internet usage they showed most frequent. They were then administered other tests to find the various psychosocial correlates of internet addiction. Only those individuals belonging to the nuclear families and those belonging to the middle income group were included in the final sample in order to control the effect of socioeconomic variables.

The raw scores consisted of scores on all the above mentioned 31 variables viz. Internet Addiction, Psychoticism, Neuroticism, Extraversion
and Social Desirability (Lie Scale), State – Trait Anxiety, Locus of Control, Thrill and Adventure Seeking, Experience Seeking, Disinhibition, Boredom Susceptibility and Total Sensation Seeking, Shyness, Loneliness, Stress Symptoms, Daily Hassles and Uplifts, Task Focused Coping, Emotion Focused Coping and Avoidance Focused Coping, Being Comfortable With Self, Being Comfortable With Others, Perceived Ability to Meet Life’s Demands, Total Mental Health, Perceived Maternal Care, Perceived Maternal Overprotection, Perceived Paternal Care, Perceived Paternal Overprotection, Satisfaction With Life and Perceived Social Support.

The raw scores were analyzed using appropriate statistical analysis viz. Descriptive statistics, t- tests, Anova, Discriminant Functional Analysis, Inter- Correlations and Regression analysis.

Tables 1.1 to 1.8 show the means and standard deviations of the Total sample, Male adolescents, Female adolescents, Children of Working Mothers, Children of Non-working Mothers, the Cyber-Sexual group, Cyber-Relational Group and Information Overload group, respectively. Tables 2.1 to 2.6 show the t-ratios comparing Male adolescents and Female adolescents, Children of Working and Non-working Mothers, the Cyber-Sexual and Cyber-Relational groups, the Cyber-Sexual and Information Overload groups, the Cyber-Relational and Information Overload groups; and the Experimental and Control group respectively. Tables 3.1 to 3.31 show the ANOVA values for all the 31 variables viz. Internet Addiction, Psychoticism, Neuroticism, Extraversion, Social Desirability (Lie Scale), Being Comfortable With Self, Being Comfortable With Others, Perceived Ability to Meet Life’s Demands, Total Mental Health, Stress Symptoms, Task Focused Coping, Emotion Focused Coping, Avoidance Focused Coping, Satisfaction With Life, State Anxiety, Trait Anxiety, Daily Hassles, Daily Uplifts, Perceived Maternal Care, Perceived Maternal Overprotection,
Perceived Paternal Care, Perceived Paternal Overprotection, Loneliness, Thrill and Adventure Seeking, Experience Seeking, Disinhibition, Boredom Susceptibility, Total Sensation Seeking, Perceived Social Support, Locus of Control and Shyness. Tables 4.1 to 4.3 show the stepwise Discriminant Functional Analysis for the Cyber-Sexual versus Cyber-Relational groups, Cyber-Sexual versus Information Overload groups and the Cyber-Relational versus Information Overload groups, respectively. Tables 5.1 to 5.8 show the inter-correlation matrices for the Total sample, Male adolescents, Female adolescents, Children of Working Mothers, Children of Non-working Mothers, the Cyber-Sexual group, the Cyber-Relational group and the Information Overload group, respectively. Tables 6.1 to 6.8 show the regression analysis for the criterion variable of Internet Addiction for the Total sample, Male adolescents, Female adolescents, Children of Working Mothers, Children of Non-working Mothers, the Cyber-Sexual group, the Cyber-Relational group and the Information Overload group, respectively. Tables 6.9 to 6.16 show the regression analysis for the criterion variable of Total Mental Health, for the Total sample, Male adolescents, Female adolescents, Children of Working Mothers, Children of Non-working Mothers, the Cyber-Sexual group, the Cyber-Relational group and the Information Overload group, respectively. Tables 6.17 to 6.24 show the regression analysis for the criterion variable of Stress Symptoms, for the Total sample, Male adolescents, Female adolescents, Children of Working Mothers, Children of Non-working Mothers, the Cyber-Sexual group, the Cyber-Relational group and the Information Overload group, respectively. Tables 6.25 to 6.32 show the regression analysis for the criterion variable of Satisfaction With Life, for the Total sample, Male adolescents, Female adolescents, Children of Working Mothers, Children of Non-working Mothers, the Cyber-Sexual group, the Cyber-Relational group and the Information Overload group, respectively. Tables 6.33 to 6.40 show the
regression analysis for the criterion variable of Total Sensation Seeking, for the Total sample, Male adolescents, Female adolescents, Children of Working Mothers, Children of Non-working Mothers, the Cyber-Sexual group, the Cyber-Relational group and the Information Overload group, respectively.

A. The results of t-ratios, ANOVA and DFA are being discussed below:

I. DIFFERENCES BETWEEN THE CYBER-SEXUAL, CYBER-RELATIONAL AND INFORMATION OVERLOAD GROUPS

1.1 It was hypothesized that there would be differences among the different types of internet users viz. Cyber-Sexual, Cyber-Relational and Information Overload on Internet Addiction.

A glance at the t-ratio table for the Cyber-Sexual and Cyber-Relational group (Table 2.3) revealed that the Cyber-Sexual group scored higher than the Cyber-Relational group on Internet Addiction (t-ratio = 2.87, p<0.01). A glance at the t-ratio table for the Cyber-Sexual and Information Overload group on Internet Addiction (Table 2.4) revealed that the Cyber-Sexual group scored higher than the Information Overload group on Internet Addiction (t-ratio = 5.40, p<0.01). A glance at the t-ratio table for the Cyber-Relational group and the Information Overload group (Table 2.5) revealed that the Cyber-Relational group scored higher than the Information Overload group on Internet Addiction (t-ratio = 2.47, p<0.01).

A perusal of the ANOVA Table 3.1 revealed that there were significant differences between the Cyber-Sexual, Cyber-Relational and Information Overload groups on Internet Addiction (F-ratio = 16.39, p<0.01).
A glance at the DFA Table 4.1 revealed that there were significant differences between the Cyber-sexual and Cyber-relational groups, on Stress Symptoms, Extraversion, Daily Hassles, Daily Uplifts, Emotion Focused Coping and Psychoticism. A glance at Table 4.2 revealed that there were significant differences between the Cyber-sexual and Information Overload groups, on Daily Hassles, Internet Addiction, Extraversion, Emotion Focused Coping, Social Desirability (Lie Scale), Psychoticism, Boredom Susceptibility and Daily Uplifts. A perusal of Table 4.3 revealed that there were significant differences between the Cyber-relational and Information Overload groups, on Internet Addiction and Locus of Control.

Hence, the above results reveal significant differences between the three types of internet users on Internet Addiction and the hypothesis relating to this has been upheld by the results obtained.

A review of the studies in the area of Internet Addiction reveals that very few studies concerning the different types of internet users have been conducted. Most of the research deals with studying the relationship of internet addiction with various variables. A few preliminary findings have been initiated in this area; they also deal with the personality characteristics of the different users and/or gender or socio-cultural factors influencing the different uses of various applications of the internet.

Cooper et al. (2000) studied cybersex compulsives and found that the group was 79% male. Goodson et al. (2001) reported that men were significantly more likely than women to access sexually explicit materials on the Internet. However, not all studies about cyber sex addiction agree about the male dominance of the group (Griffiths, 2004).
Everton et al. (2005) found that people who use their computers in unproductive ways tend to be men, younger, more impulsive, and less conscientious. They also found that those who use their computers for riskier PUWC behaviors (like viewing sexual content) tended to have sensation seeking personalities.

Vas and Gombor (2008) explained the gender differences in internet addiction by stating that males scored higher on the arousal motive and therefore, they may use the Internet more for accessing sports news, sports sites, match scores and adult material, which may satisfy as well as arouse them. Fallows (2004) stated that it is men who have an increased probability of using the Internet to a higher extent for collecting information.

Amichai-Hamburger et al. (2008) studied the application of information seeking among the internet users by employing the Five-Factor Model when they assessed the personality profile of Wikipedia contributors. Their results revealed significant differences between Wikipedia members and non-Wikipedia members with regard to the factors of agreeableness, openness, and conscientiousness. These were found to be lower for the Wikipedia members as compared with non-Wikipedia members.

Ross et al. (2009) studied the cyber-relational internet addiction by studying the psychological profiles of the Facebook users. They suggested that Facebook use is related to personality. Using a Five-Factor Model personality questionnaire, they examined behavior on Facebook as reported by users. Their first five predictions pertained to the relationship between behavior and the user's personality. They predicted that (1). Due to their greater tendency to be sociable, individuals who scored higher on the trait of Extraversion would (a) demonstrate more frequent use of Facebook; (b) make greater use of Facebook components for
communication: (c) have more “Facebook friends”; and (d) belong to more Facebook groups (2). It was predicted that individuals who scored higher on the trait of Neuroticism would be more willing to share personally identifying information on Facebook, spend more time on Facebook, and be less likely to use private messages, since they would be seeking to receive social support through Facebook (3). People with an ability to engage in caring and meaningful interpersonal offline relationships and who scored higher on the trait of agreeableness were expected to have greater numbers of “Facebook friends” on their profile (4). Those with a tendency to be curious and desirous of exploring new activities, who scored higher on the trait of openness to experience, were expected to be more willing to use Facebook as a communication tool and to use a greater number of components, resulting in greater knowledge of Facebook features (5). Individuals who scored higher on the trait of Conscientiousness and who placed great importance on fulfilling their obligations and meeting deadlines were expected to demonstrate a more limited use of Facebook activities.

Guadagno et al. (2008) employed the Five Factor Model in their study of the blogs. They found that people who are high in openness and high in neuroticism are likely to be bloggers. Additionally the neuroticism relationship was moderated by gender indicating that women who are high in neuroticism are more likely to be bloggers as compared with those low in neuroticism, whereas, no differences were found for men. These results indicate that personality factors impact on the likelihood of being a blogger and have implications for understanding who blogs.

A few researchers have also pointed out that those who used e-mail or the internet had significantly greater perceived stress scores than those who did not (Fogel and Israel, 2009). Chatting online among college
students was found to be associated with greater perceived prolonged stress for women while no association was found for men (Thomée et al, 2007). Those who use the Internet primarily for non-interactive purposes also tend to have fewer in-person social ties (Zhao, 2006). In contrast, those who frequent interactive sites tend to maintain strong interpersonal (in-person) connections (Zhao, 2006). However, different interactive sites reflect varying degrees of interaction. Specifically, “email users tend to communicate online with people whom they also contact offline,” whereas, “chat users tend to communicate with some of their social contacts exclusively online”

1.2 It was hypothesized that there would be differences among the types of internet users viz., Cyber-sexual, Cyber-relational and Information Overload, on the different correlates of Internet Addiction viz., Eysenckian dimensions of personality viz., Psychoticism, Neuroticism, Extraversion and Social Desirability (Lie Scale), State – Trait Anxiety, Locus of Control, Sensation Seeking (Thrill and Adventure Seeking, Experience Seeking, Disinhibition, Experience Seeking and Total Sensation Seeking), Shyness, Loneliness, WHO Mental Health and its dimensions (Being Comfortable With Self, Being Comfortable With Others, Perceived Ability to Meet Life’s Demands and Total Mental Health), Stress Symptoms, Daily Hassles and Uplifts, Coping (Task Focused Coping, Emotion Focused Coping and Avoidance Focused Coping), Parental Bonding (Perceived Maternal Care, Perceived Maternal Overprotection, Perceived Paternal Care and Perceived Paternal Overprotection), Satisfaction With Life and Perceived Social Support.
A glance at the t-ratio table for the Cyber-sexual and Cyber-relational group (Table 2.3) revealed that the Cyber-sexual group scored higher than the Cyber-relational group on Psychoticism (t-ratio = 3.98, p<0.01), Stress Symptoms (t-ratio = 4.95, p<0.01), Daily Hassles (t-ratio = 4.48, p<0.01) and Loneliness (t-ratio = 2.19, p<0.05). On the other hand, the Cyber-relational group scored higher than the Cyber-sexual group on Extraversion (t-ratio = 4.55, p<0.01), Social Desirability (Lie Scale) (t-ratio = 2.11, p<0.05), Perceived Ability to Meet Life’s Demands (t-ratio = 2.06, p<0.05), Total Mental Health (t-ratio = 2.06, p<0.05), Daily Uplifts (t-ratio = 2.34, p<0.05), Emotion Focused Coping (t-ratio = 3.67, p<0.01), Perceived Maternal Care (t-ratio = 2.15, p<0.05) and Perceived Paternal Care (t-ratio = 2.38, p<0.05).

A glance at the t-ratio table for the Cyber-sexual and Information Overload group (Table 2.4) revealed that the Cyber-sexual group scored higher than the Information Overload group on Psychoticism (t-ratio = 4.70, p<0.01), Neuroticism (t-ratio = 2.57, p<0.01), State Anxiety (t-ratio = 2.83, p<0.01), Stress Symptoms (t-ratio = 4.22, p<0.01) and Daily Hassles (t-ratio = 5.44, p<0.01). On the other hand, the Information Overload group scored higher than the Cyber-sexual group on Extraversion (t-ratio = 4.42, p<0.01), Social Desirability (Lie Scale) (t-ratio = 3.67, p<0.01), Thrill and Adventure Seeking (t-ratio = 2.68, p<0.01), Boredom Susceptibility (t-ratio = 2.52, p<0.05), Locus of Control (t-ratio = 2.59, p<0.05) and Emotion Focused Coping (t-ratio = 2.96, p<0.01).

A glance at the t-ratio table for the Cyber-relational and Information Overload groups (Table 2.5) revealed that the Cyber-relational group scored higher than the Cyber-relational group on Being Comfortable with Others (t-ratio = 2.09, p<0.05). On the other hand, Information Overload group scored higher than the Cyber-relational group on Locus of Control (t-ratio = 2.18, p<0.05).
A perusal of the **ANOVA Tables 3.1 to 3.31** revealed that there were significant differences between the three types of Internet users (viz., Cyber-sexual, Cyber-relational and Information Overload) on Internet Addiction (F-ratio=16.39, p<0.01), Psychoticism (F-ratio=12.78, p<0.01), Neuroticism (F-ratio= 3.51, p<0.05), Extraversion (F-ratio=12.02, p<0.01), Social Desirability (Lie Scale) (F-ratio=6.65, p<0.01), State Anxiety (F-ratio=3.77, p<0.05), Thrill and Adventure Seeking (F-ratio=3.53, p<0.05), Boredom Susceptibility (F-ratio=3.50, p<0.05), Locus of Control (F-ratio=4.59, p<0.01) Stress Symptoms (F-ratio=16.34, p<0.01), Daily Hassles (F-ratio=16.75, p<0.01), Emotion Focused Coping (F-ratio=7.52, p<0.01) and Loneliness (F-ratio=3.00, p<0.05), but there were no significant differences on the rest of the variables viz. Trait Anxiety, Experience Seeking, Disinhibition, Total Sensation Seeking, Shyness, Daily Uplifts, Task Focused Coping, Avoidance Focused Coping, Being Comfortable with Self, Being Comfortable with Others, Perceived Ability to Meet Life’s Demands, Total Mental Health, Perceived Maternal Care, Perceived Maternal Overprotection, Perceived Paternal Care, Perceived Paternal Overprotection, Satisfaction With Life and Perceived Social Support.

Hence, the hypothesis which stated that there are expected to be differences among the three types of internet users on the various correlates of Internet Addiction has been partially supported by the results obtained.

Thus, the previous researches indicate that various psychosocial factors play an important role in understanding the different types of internet users and the reasons for their high usage. The current study highlights that there is a difference in the level of Internet Addiction among the different types of Internet users, depending on the application they use more frequently. Thus, more research in this area is
required which focuses on the differences between the different types of Internet users, their usage level and their psychological profiles.

II. GENDER DIFFERENCES

2.1 It was hypothesized that male adolescents would score higher on Internet Addiction in comparison to female adolescents.

A glance at the t-ratio table for gender differences (Table 2.1) revealed that male adolescents scored higher than female adolescents on Internet Addiction (t-ratio = 2.64, p< 0.01).

A perusal of the ANOVA table for Internet Addiction (Table 3.1) revealed that male adolescents scored higher than female adolescents (F-ratio = 8.34, p< 0.01).

Hence, the above results clearly point out that the hypothesis regarding gender difference on internet addiction has been supported by the results obtained.

Previous studies in the area of gender differences in Internet Addiction have also reported that male adolescents score higher than female adolescents on internet addiction, but there are certain contradictory findings as well.

Scherer (1997) reported that dependent Internet users included a significantly larger proportion of men to women (71% men and 29% women, respectively) than the non-dependent users (50% are men and women). This observation validates the findings of Young (1998b) and Greenfield (1999a). A study on gender differences in sexual arousal found
that men tend to be more visual with respect to sexual fantasies while women are more process or verbally oriented (Buss, 1999).

Chou and Hsiao (2000) reported that gender is one of the predicting factors in Internet addiction, that is, males are more likely than females to become Internet addicts. Morahan-Martin and Schumacher (2000) reported that males were more likely than females to be pathological users (12% vs. 3%), whereas females were more likely than males to have no symptoms (28% vs. 26%) or have limited symptoms (69% vs. 61%) of behavioral pathology. The notion that males, or at least male college students, are more subject to Internet addiction has empirical support.

Morahan- Martin and Schumacher (2000) found the male-to-female ratio of internet addiction to be 3.8:1. Cao and Su (2006) also conducted a similar study and found the male-to-female ratio for Internet addiction students of 4.8:1 (53 males and 11 females) to be an indicator of a gender difference in Internet addiction.

Other researchers (Yoo et al., 2004; Ko et al., 2006) have also reported a higher prevalence of Internet addiction in boys than girls. Lam et al. (2009) also found that males were 50% more likely than females to be internet addicts.

Tsai et al. (2009) stated that the increased availability of pornography in cyberspace may be one of the reasons for the higher prevalence rate of Internet addiction in males. Lee (2010) reported that Gender has been found to explain different uses of the Internet and males were more likely to use the Internet than females.

A few researchers have also reported that gender does not have any impact on internet addiction. Brenner (1997) found no significant differences between men and women in terms of time spent online.
Goodson et al. (2001) reported that no differences existed between male and female students in their Internet and e-mail use, in their frequency of use, or in their source for logging on.

Other researchers have reported that in the recent years that gap between the males and females with regard to the time spent online does not exist, but there are still differences among males and females in the usages of internet.

Although the original gender gap in computer and Internet use appears to have narrowed to the point of nonexistence (DiMaggio et al., 2004; Feller, 2006; Hargittai, 2008), studies suggest that men and women use these technologies in different ways (Odell et al., 2000; Sherman et al., 2000; Lenhart and Madden, 2005). For example, adolescent girls (aged 15–17) are slightly more likely than boys to use home computers for e-mail, word processing, and completing school assignments as opposed to connecting to the Internet, creating spreadsheets or databases, using graphics and design software, managing household records or finances, or playing games (Lenhart and Madden, 2005). Although time spent online is about equal for both genders, more female college students use the Internet for e-mail (Odell et al., 2000; Sherman et al., 2000) and to conduct academic research than males (Odell et al., 2000; Selwyn, 2008). Male college students are also more likely to research purchases, look for news, and play games online (Odell et al., 2000). Related research has suggested that, in general, women are more likely to use the Internet for interpersonal communication, while men are more likely to use it for entertainment and to shop online (Morgan and Cotten, 2003; Lenhart and Madden, 2005; Joiner et al., 2005).

Rumbough (2001) pointed out that there are differences amongst males and females with regard to internet usage. He pointed out various
differences, such as, Males were more likely than females to indicate that they accessed pornography Web sites. In contrast, females were more likely than males to report accessing pornography sites by accident. Males were more likely than females to access weapons sites, online gambling sites and drug sites. Males were more likely than females to answer yes to this question: Internet Web sites that deal with racist material. Males were more likely than females to visit fake ID sites and use fake IDs obtained from the Internet. Males were more likely than females to visit. Females were more likely than males to indulge in academic cheating and purchase a paper from an online paper mill. Females were more likely than males to send fake e-mail as a joke and males were more likely than females to send fake e-mail to deceive someone, whereas, males were more likely than females to use the Internet to pirate software.

Chak (2003) pointed out that gender differences exist in the Internet activities they frequently take part in, with males being drawn to online games and females being attracted to online communication. Rice (2005) found that women search more than men for health or medical information over the internet. Men had greater preferences for websites with videos and sounds. Also, men visited websites containing humor, gaming, and sports, while women visited web sites such as online journals (Mitra et al., 2005).

Huang (2008) reported that females spent more time than males using e-mail. He further reported that females were heavier users than males of e-mail and MSN, while males were heavier users of chat rooms. Males are more likely than females to search the Internet for pornography. Although gender is important in Internet use for learning, its effect is much greater on pornography than on learning computer skills (Mesch, 2009).
Gender attitudes diverge in Internet usage. Women will use the Internet as a means to cultivate connectedness with the world around them, to create attachments that may be lacking in their everyday interactions with others, while men use the internet to “hunt” for subjects that interest them (Whitty, 2003; Gonyea, 2004). Women who engage in Internet usage and over-usage are often testing out their emotional range in an anonymous environment (Maheu, 1999). A hypothesis for this phenomenon is that these women perceive that society restricts their emotional range to purposefully avoid emotions such as anger and aggression. Emotional restriction coupled with society’s narrow view of female attractiveness and desirability, deems it logical that women will use the anonymous chat-room environment to engage long-term friendships and intimate relationships (Maheu, 1999; Whitty, 2003).

According to Gonyea (2004), men were more likely to use the Internet for basic gratification. While women use the Internet to form connections with others, men are more likely to engage in online sexual activity as a distraction from daily life, a means to cope with stress, and for meeting sexual partners (Cooper et al., 2002; Gonyea, 2004). However, men can be under-represented in studies concerning on-line addictions, because they may be less likely than their female counterparts to recognize their internet usage as problematic (Cooper et al., 2000).

Young (2011) reported that gender influences the types of applications and underlying reasons for Internet addiction. Men tend to seek out dominance and sexual fantasy online, while women seek out close friendships, romantic partners, and prefer anonymous communication in which to hide their appearance. Men are more likely to become addicted to online games, cyberporn, and online gambling, while women are more likely to become addicted to chatting, instant messaging, eBay, and online...
shopping. It seems to be a natural conclusion that attributes of gender played out in cyberspace parallel the stereotypes men and women have in our society.

2.2 It was hypothesized that there would be gender differences on the various correlates of Internet Addiction viz., Eysenckian dimensions of personality viz., Psychoticism, Neuroticism, Extraversion and Social Desirability (Lie Scale), State – Trait Anxiety, Locus of Control, Sensation Seeking (Thrill and Adventure Seeking, Experience Seeking, Disinhibition, Experience Seeking and Total Sensation Seeking), Shyness, Loneliness, WHO Mental Health and its dimensions (Being Comfortable With Self, Being Comfortable With Others, Perceived Ability to Meet Life’s Demands and Total Mental Health), Stress Symptoms, Daily Hassles and Uplifts, Coping (Task Focused Coping, Emotion Focused Coping and Avoidance Focused Coping), Parental Bonding (Perceived Maternal Care, Perceived Maternal Overprotection, Perceived Paternal Care and Perceived Paternal Overprotection), Satisfaction With Life and Perceived Social Support.

A glance at the t-ratio table for gender differences (Table 2.1) revealed that the males scored higher that females on Psychoticism (t-ratio =4.11, p<0.01), Stress Symptoms (t-ratio =2.38, p<0.05), Daily Hassles (t-ratio =2.91, p<0.01), Thrill and Adventure Seeking (t-ratio =2.49, p<0.05), Disinhibition (t-ratio =3.47, p<0.01), Boredom Susceptibility (t-ratio =3.58, p<0.01), Total Sensation Seeking (t-ratio =4.42, p<0.01), Locus of Control (t-ratio = 3.87, p<0.01) and Shyness (t-ratio = 2.45, p<0.05).

A perusal of the ANOVA Tables 3.1 to 3.31 revealed that significant gender differences emerged on Psychoticism (F-ratio = 18.57, p<0.01), Thrill and Adventure Seeking (F-ratio = 6.52, p<0.01), Disinhibition (F-ratio
= 12.45, p<0.01), Boredom Susceptibility (F-ratio = 14.52, p<0.01), Total Sensation Seeking (F-ratio = 23.01, p<0.01), Locus of Control (F-ratio = 16.84, p<0.01), Stress Symptoms (F-ratio = 6.41, p<0.05), Daily Hassles (F-ratio = 9.46, p<0.01) and Shyness (F-ratio = 6.85, p<0.05). No gender differences were observed on the rest of the variables viz. Neuroticism, Extraversion, Social Desirability (Lie Scale), State Anxiety, Trait Anxiety, Experience Seeking, Loneliness, Daily Uplifts, Being Comfortable with Self, Being Comfortable with Others, Perceived Ability to Meet Life’s Demands, Total Mental Health, Task Focused Coping, Emotion Focused Coping, Avoidance Focused Coping, Perceived Maternal Care, Perceived Paternal Overprotection, Perceived Paternal Care, Perceived Paternal Overprotection, Satisfaction With Life and Perceived Social Support.

Hence the hypothesis which stated that there would be gender differences on the various correlates of Internet Addiction has been partially supported by the results obtained.

Previous researches in the above mentioned areas with regard to gender differences have not pointed towards a clear cut direction. Certain studies report a difference between males and females whereas, other studies found no differences on the basis of gender.

Margalit and Eysenck (1990) studied gender differences in adolescents on personality. They found that the males had higher Psychoticism scores, and the girls scored higher on Neuroticism, Extraversion, and Lie score.

Lynn and Martin (1997) studied gender differences in Extraversion, Neuroticism and Psychoticism in 37 nations. They reported that women obtained higher mean score than men on Neuroticism in all 37 countries,
and men obtained higher mean scores than women on Psychoticism in 34 countries and on Extraversion in 30 countries.

Petrides et al. (2003) reported that in line with the results based on various Extraversion scales (Eysenck et al., 1992; Costa and McCrae, 1992; Costa et al., 2001), there were no gender differences on Extraversion. Also in accord with the previous research (Eysenck et al., 1985; Eysenck et al., 1992; Lynn and Martin, 1997) men scored higher than women on Psychoticism. In contrast, the frequently observed difference in Neuroticism in which women tended to score higher than men (Lynn and Martin, 1997; Costa et al., 2001) was not observed by Petrides et al. (2003).

Ivkovic et al. (2007), in a study on Eysenck’s personality factors, reported that there were large sex differences in Neuroticism with women scoring higher than men. They also found that men score slightly higher on Extraversion whereas, women scored higher on the Lie scale.

Researches in the area of sensation seeking also prove to be inconclusive. Roth et al. (2005) studied gender differences in sensation seeking across different age groups and socio demographic factors. They reported that males generally scored higher than females in all age groups.

Previous studies that have found a gender difference in sensation seeking are contradicted by the findings of Eachus (2007) who reported that neither the sub-scales, nor sensation seeking as a whole approached any statistical significance in terms of gender differences.

Maccoby and Jacklin (1974) in a review on personality and gender differences, found males to be more dominant, aggressive and less
anxious than females, while no difference was revealed on self esteem and locus of control, at least until late adolescence.

Feingold (1994) studied gender differences in personality and reported that females were higher than males in extraversion, anxiety, trust, and, especially, tender-mindedness (e.g., nurturance). There were no noteworthy sex differences in social anxiety, impulsiveness, activity, ideas (e.g., reflectiveness), locus of control, and orderliness.

Studies have reported gender differences in anxiety sensitivity, with women more sensitive than men (Stewart et al., 1997; Armstrong and Khawaja, 2002).

Moser et al. (2003) studied gender differences in anxiety and concluded that across a variety of cultures, women have higher anxiety than men and this relationship is independent of age, education level and marital status.

Abdel-Khalek and Alansari (2004) studied the gender differences among college students and reported that females scored higher than males on anxiety. This finding is consistent with the observations of previous researches (Weisman, 1985; Scheibe and Albus, 1992; Feingold, 1994; Yonkers and Gurguis, 1995; Gater et al., 1998; Pigott, 1999; Mackinaw-Koons and Vasey, 2000; Alansari, 2004a).

Although males and females alike can experience social anxiety, research contends that females tend to experience social anxiety more so than do males (Inderbitzen-Nolan and Walters, 2000; Valkenburg and Peter, 2007). One explanation for this may be due to the greater importance females place on interpersonal relationships. Given their higher likelihood of social anxiety, it is not surprising that research has found that socially anxious females tend to feel more comfortable
communicating with others online as opposed to in person (Hamburger and Ben-Artzi, 2000).

Mirroring the findings of past research, which stated that females tend to experience social anxiety more so than males (Inderbitzen- Nolan and Walters, 2000; Valkenburg and Peter, 2007), the findings of the study by Pierce (2009) also revealed that females reported feeling less comfortable in social situations (social anxiety), more so than did males. In addition, the results showed that females who were socially anxious tended to use SITs more than males in order to communicate and interact with others. Females also reported feeling more comfortable talking with others via text messaging and through their social networking sites rather than talking in person.

Schultz and Schultz (2005) found no significant differences in locus of control. Sherman et al. (1997) studied the gender differences in locus of control. They presented a synthesis of research in the last two decades that has explored the relationship of gender to locus of control measures. They suggested that both males and females are becoming more external. Females, however, tend to be more external than males on most locus of control measures. There are also gender differences in perceptions of control across behavioral domains. Factor analyses of locus of control measures indicate that males and females are relatively similar in primary factors but may differ substantially in some secondary factors. Two areas in which males and females appear to differ are perception of control over interpersonal relationships and perception of control over essentially uncontrollable life events. Gender differences also emerge in how locus of control relates to comparison variables. Internality, for example, appears to be more related to achievement for males than females and a better predictor of social adaptation for females than for males.
Previous studies in the area of mental health, stress and coping have also reported that there are gender differences in mental health, stress and coping.

There is no denying that men and women are different and the differences are manifested in a wide variety of ways. There is some evidence that supports the idea that men and women use social relationships differently to cope with stress (Greenglass, 2002). In line with traditional, face to face groups where women outnumber men 4:1, some research has indicated that more women use the internet for social support than men. Seckin (2009) searched Google to find “online discussion groups for cancer” and 31 active online support groups, the researchers purposively sampled people over 18 years old with a history of cancer. The sample revealed that approximately 75% of the participants were women.

The results of some studies suggest that adolescent girls experience more stress than adolescent boys (Allgood-Merten et al., 1990; Ge et al., 1994; Davies and Windle, 1997). However, other studies have failed to find significant gender differences in total stress among adolescents (e.g. Hankin et al., 2007). Hyde and colleagues (2008) noted that even among studies demonstrating statistically significant gender differences in total stress, the mean effect sizes have been quite small relative to the effect sizes typically seen in gender differences within the field of stress and depression; e.g. Davies and Windle (2007) reported a mean gender difference in adolescent stress of only $d = .12$. In a meta analysis of studies conducted on gender differences in stress, Davis et al. (1999) similarly concluded that females report only marginally higher levels of stress than do males.
These mixed findings may be due in part to the type of stressful events that have been included in examinations of gender differences in depression. Previous research has suggested that the presence or magnitude of gender differences may vary across stressor domain. Of particular interest is the domain of interpersonal stress. There is now consistent evidence that girls report more interpersonal stressors than boys (Rudolph and Hammen, 1999; Prinstein and Aikens, 2004; Shih et al., 2006). In a study of adolescents, Hankin et al. (2007) found that girls reported significantly more interpersonal, romantic and peer stressors than boys, but no more achievement or school stressors; the effect size for the gender difference in interpersonal stressors was $d = .48$ (girls reporting more stressors than boys), while the gender difference for achievement stressors was $d = .16$ (boys reporting more stressors than girls). Taken together, these results suggest that the previous mixed findings may have been due in part to the examination of stressors across all domains.

Chandra and Batada (2006) reported that in contrast with existing literature that emphasizes the influence of violence and neighborhood factors on stress among teens, teens prioritized other sources of stress, particularly from school, friends, and family. For support, they relied on different individuals, depending on the source of the stress — friends for romantic relationship stress and family for job, school, and family stress. Sex differences in the coping styles of the participating teens were found. Girls reported more frequent use of support-seeking and active coping strategies than boys.

It has been suggested that men and women differ when it comes to how they perceive and cope with stress. However, the results are somewhat controversial. Some have found proof of different types of stress and coping styles among men and women (Day and Livingstone,
2003; Matud, 2004), while others insist that there are no differences between the sexes (Hamilton and Fagot, 1998).

Some researchers (Day and Livingstone, 2003; Matud, 2004) have suggested that women tend to use emotion-focused coping more than men, who generally use problem-focused coping. It has been suggested that this could be a reason behind why women tend to perceive more stress in their lives, as well as having more problems with anxiety and depression than men (Hamilton and Fagot, 1998; Sandanger et al., 2004; Matud, 2004).

Tamres et al. (2002) used meta-analysis to examine recent studies of sex differences in coping. Women were more likely than men to engage in most coping strategies. The strongest effects showed that women were more likely to use strategies that involved verbal expressions to others or the self—to seek emotional support, ruminate about problems, and use positive self-talk. These sex differences were consistent across studies, supporting a dispositional level hypothesis.

Pilar et al. (2004) reported that, even after adjusting for socio demographic variables, women scored significantly higher than the men in chronic stress and minor daily stressors. Although there was no difference in the number of life events experienced in the previous two years, the women rated their life events as more negative and less controllable than the men. The women scored significantly higher than the men on the emotional and avoidance coping styles and lower on rational and detachment coping. The men were found to have more emotional inhibition than the women. And the women scored significantly higher than the men on somatic symptoms and psychological distress. Although the effect sizes are low, the results of this study suggest that women suffer
more stress than men and their coping style is more emotion-focused than that of men (Pilar, 2004).

Researchers have pointed out that gender role socialization is an important variable in looking at perception of stress and coping styles among men and women (Dedovic et al., 2009). It has been suggested that the differences between men and women are not attributed to gender itself, but to how men and women are socialized. For instance, men may be socialized to be more independent, problem-focused, and less likely to express their emotions. Women, on the other hand, may be encouraged through socialization to be more dependent, emotional, and supportive of others. These views are considered to be traditional gender roles. Some researchers have found that people who display traditional gender roles may use the problem-focused and emotion-focused coping styles accordingly, while those who display nontraditional roles may use a more personality based coping style that is not consistent with traditional gender role coping styles, or a combination of the two coping styles (Lengua and Stormshak, 2000; Matud, 2004).

Studies in the area of Shyness have also revealed similar results. Carducci et al. (2003) investigated the strategies used by shy individuals to deal with their shyness. They reported that shy females are more likely than shy males to deal with their shyness by selecting strategies that involve turning to others while shy males are more likely than shy females to select strategies that involve taking actions by themselves. Such a pattern of results is consistent with the more general “tend-and-befriend” response to stress in females characterized by seeking and providing social support (Taylor et al., 2000). Because social norms favor males as the initiator of social contact, shy males may be more inclined to select strategies that are more proactive, public, and done without social support.
Such strategies are also more likely to carry a greater risk of rejection and public embarrassment for shy males should their individualistic efforts to initiate social contact fail (Carducci et al., 2003).

Balda and Duhan (2010) found that girls were more socially inhibited/shy than boys. One of the reasons could be as reported by Engfer (1993) and Stevenson-Hinde (1989) that shyness in girls is more likely to be accepted and rewarded, whereas, shyness in boys is more likely to be discouraged.

Asendorpf (1993) and Sanson et al. (1996) have reported that possible causes of shyness could be genetic, poor attachment bond between parent and child, poor social skills, or harsh treatment by parents, siblings, or others. Frequently teasing or criticism may also lead to shyness.

To cope with socially inhibited/withdrawn or shy behavior, majority of mothers encouraged their children to make friends and to interact with others. Previous research also indicated that socially inhibited children sometimes become more socially comfortable through their parental efforts (Reznik et al., 1986). Kagan and his colleagues have conducted longitudinal research on infants exhibiting shy and timid temperaments at birth and followed them over a period of time. Six months later, some of the infants appeared to have outgrown their shyness. Kagan and Snidman (1991) suggested that parents of infants who outgrew their shyness were more likely to help their children learn to cope with small upsets. On the other hand, parents of infants who remained shy were more likely to comfort their children through their upsets, thus, further increasing shyness. These findings suggest that with efforts parents can help their children to overcome shyness to some extent.
Vahedi (2011) in a study on shyness, indicated that when comparing the scores of men and women, the results are partially congruent with the findings of other researchers (Coplan et al., 2001; Hirshfeld-Becker et al., 2004; Crozier, 2005) who reported that there was no gender difference in the total shyness score. Studies of gender difference in shyness and other forms of inhibited temperament have not been consistent. While some studies have reported higher levels of shyness and inhibition in females than in males, others have reported relatively similar gender ratios.

Gender differences in loneliness have been examined widely. Unfortunately the findings are ambiguous. Whereas, several studies have found no significant gender differences (Berg and Peplau, 1982; Archibald et al., 1995), others have shown that males were lonelier than females (Avery, 1982; Solano et al., 1982; Booth, 1983; Russell et al., 1980; Schultz and Moore, 1986; Stokes and Levin, 1986). Borys and Perlman (1985) found differentiated results of gender differences in loneliness using different measures. When loneliness was measured using the direct self-labeling measurement (e.g. “Do you feel lonely?”), females reported a higher level of loneliness, but males were lonelier when UCLA Loneliness Scale was used. As Lau and Gruen (1992) suggested, this may be because “the negative connotations and social consequences of being lonely may inhibit people from admitting that they are lonely, and this may be more so for men.”

Schmitt and Kurdek (1985) examined age and gender differences in and personality correlates of loneliness in different relationships. Loneliness was assessed in relation to dissatisfaction with four types of relationships (Family, Larger Groups, Friendships, and Romantic/Sexual). They reported that with regard to gender differences, college men
expressed more dissatisfaction with Family, Large Group, and Friendship relationships than college women.

Wiseman (1995) studied gender differences in loneliness among university students seeking counseling. He found that of the 325 students who sought counseling services, males were significantly higher in loneliness than females.

Crammer and Neyedley (1998) studied the effect of gender role orientations on gender and concluded that after removing the influence of gender role orientation, males were significantly more lonely, which too is consistent with past research (Koenig et al, 1994; Page, 1990; Russel et al, 1990; Schultz and Moore, 1986; Solano et al, 1982; Sokes and Levin, 1986), other studies show no significant difference (Archibald et al, 1995; Berg and Peplau, 1982; Brage at al, 1993; Tornstam, 1992).

Borys and Perlamn (1985) suggest that social pressures may influence one’s admission of loneliness, whereby, “men who display symptoms of loneliness may be regarded more negatively than women who display the same symptoms. It would follow then that men would not report feeling as lonely so as to save themselves from social reproach.”

In a Meta analytic study of predictors of loneliness during adolescence, Mahon et al. (2006) found that 19 of the 31 studies showed no significant gender differences. Of the remaining 12 studies, nine studies showed boys were significantly lonelier than girls were, two studies showed girls were significantly lonelier than boys were, and one study did not report gender differences.

Several studies indicated that men may feel lonely more often than women because they are not as well socialized in the social-emotional area (Bloom et al., 1978; Hill et al., 1976) and, as a result may deal with
their loneliness in ways that alienate them even further from social contacts (Jones et al., 1983). Alternatively, females may more successfully buffer loneliness, especially in the social-emotional areas of life (Wheeler et al., 1983; Borys and Perlman, 1985). Knox et al. (2007) found that among freshman and sophomore students, men were less likely to be in a romantic relationship and to know how to make friends, and the same men were more likely to drink more alcohol and to regard themselves as “losers” relative to female students. Such coping styles are likely to put them at even greater risk of loneliness.

Fontaine et al. (2009), in a study on gender traits and loneliness, also found that males were lonelier than females.

Cacioppo et al. (in press) found that women reported higher levels of loneliness than men. In addition, loneliness is also more likely to be spread more easily among females as compared to males. The researchers pointed out that women are both more likely to be affected by the loneliness of their friends and neighbors, and their loneliness is also more likely to be spread to other people in their social network.

Previous researches in the area of parental bonding have revealed significant gender differences in perceived paternal and maternal bonding.

Cubis et al. (1989) reported that overall, the adolescents perceived mothers as more caring but more personally intrusive than fathers. The researchers also studied gender differences in parental bonding and found that relative to sons, daughters saw their fathers as more personally intrusive and their mothers as less socially controlling and much more caring.

Stephens (2009) used PBI (Parental Bonding Instrument) to study gender differences in parental bonding and found that women were more
likely than men to indicate that their fathers were overprotective. There were no gender differences on the other dimensions of parental bonding.

Grotmol et al. (2010) studied gender differences in parental bonding in all the four dimensions of parental bonding given by Parker viz. Maternal Care, Maternal Overprotection, Paternal Care and Paternal Overprotection. The researchers found that men reported a significantly higher level of Maternal Overprotection and women reported that a significantly higher level of Paternal Care.

Past research in the area of Satisfaction with Life has also revealed that males and females do not differ on the dimension of satisfaction with life. However a few researches have also pointed out that males have higher life satisfaction than females.

Considering the relationship between gender and Subjective Well Being, it was found by Ayyash-Abdo and Alamuddin (2007) that men had higher positive affect than women among college youths. Studies also showed that females tend to report lower levels of emotional well being and subjective well being (Diener, 1984; Koo et al., 2004). Conversely another study revealed no significant gender differences in terms of Subjective Well Being (Suhail and Chaudhary, 2004).

Other researchers have also reported no differences among males and females on this dimension. Larson (1978) reported no gender differences in perceived life satisfaction among males and females. Light et al. (1985) studied life satisfaction among farm residents and they also reported that life satisfaction was not related to their gender.

In a study on examination of the psychometric properties of the SWL (Satisfaction With Life) Scale, Arrindelli et al. (1991) reported that SWLS scores were not affected by sex, age, educational level, health insurance
status or social desirability, but, as could be expected, clearly so by marital status.

Ayub (2010) studied gender differences in life satisfaction among adolescents and reported no gender differences among adolescents. Hussin (2011) also reported similar findings, stating that men and women did not differ significantly regarding satisfaction with life.

Saban et al. (2011) compared the perceived life satisfaction among males and females. The researchers reported that that sex did not significantly influence perceived satisfaction with life.

Most of the research in the area of gender differences in terms of perceived social support has revealed no differences between males and males on this dimension. But researchers have pointed out that men and women differ in terms of the source of such social support.

Davidson and Duberman (1982) and Reisman (1990) revealed that females across all ages had a higher tendency to disclose matters to friends. Females become involved in more in-depth communication through willingness to express their problems and stress. Another study by Prezza and Pacilli (2002) revealed that compared with males, females had larger social networks, more sources to draw support from, and were more satisfied with friends.

Karanci et al. (1999) found that there were no gender differences among males and females on perceived social support.

Cheng and Chan (2005) reported that females perceived lower family support but higher support from friends than males. The researchers pointed out that the possible reason for this could be due to the generally high level of self disclosure among females. In addition, a study by Prezza
and Pacilli (2002) found that there was a significant gender difference in family support; males reporting having high levels of social support from the family than their female counterparts. Antonucci and Akiyama (1987) reported that females received more support from networks than males. Previous studies (Antonucci and Akiyama, 1987; Cheng and Chan 2005) have found that females generally tend to have a higher overall social support, lower family support and more support from their friends than their male counterparts.

Rueger et al. (2008) studied perceived social support among adolescents and reported differences in the perception of social support among boys and girls. They reported that girls perceived higher levels of classmate and close friend support than boys. In addition, girls reported significantly more support from close friends than any other source, whereas boys reported significantly less support from classmates than any other source. Tam et al. (2011) reported that females perceived significantly higher levels of overall social support than males.

III. DIFFERENCES BETWEEN THE CHILDREN OF WORKING AND NON-WORKING MOTHERS

3.1 It was hypothesized that Children of Working Mothers would score higher than Children of Non-working Mothers on Internet Addiction.

A glance at the t–ratio table showing differences between the children of working and non-working mothers (Table 2.2) revealed that children of working mothers scored higher than the children of non-working mothers on Internet Addiction (t–ratio = 4.40, p< 0.01).
A perusal of the ANOVA table for Internet Addiction (Table 3.1) revealed that children of working mothers scored higher than the children of non-working mothers on Internet Addiction (F - ratio = 22.46, p< 0.01).

Hence the above results indicate that the Children of Working Mothers scored higher than the Children of Non-working mothers on Internet Addiction and the hypothesis relating to this has been supported by the results obtained.

A review of studies comparing the children of working and non-working mothers revealed mixed findings with certain studies citing the negative effects and others citing the positive effects of maternal employment on children. There are certain studies which revealed that there were no differences in children of working and non-working mothers. Internet Addiction is a relatively newer area of research which has not yet been explored by the researchers studying the impact of maternal employment on children.

Previous research in this area reveals that mothers’ employment status has a detrimental impact on children.

Increase in maternal employment have led to a decrease in time caring for and doing things with children since employment hours and hours of market work are negatively associated with mothers’ time with children (Coverman, 1985; Coverman and Joseph, 1986; Marsiglio, 1991; Zick and Bryant, 1996; Aldous et al., 1998). Other researchers have also pointed out that employed mothers spend less time in child care activities than non-employed mothers (Gershuny and Robinson, 1988; Nock and Kingston, 1988).

Theories regarding child development contend that the time mothers devote to their children is crucial to children's intellectual development.
According to these theories, the time mothers spend with their children, along with other financial and material resources, can be seen as investment into the production of child “quality” (Becker, 1981). Through repeated interactions children learn to trust their caregivers, build healthy social relations, and are exposed to intellectual stimulation (Coleman, 1988). These experiences help create social capital or the mechanism that facilitates the intergenerational transmission of knowledge, skills and human capital. Theories in developmental psychology also contend that long periods of separation can disrupt this process leaving mothers less sensitive and responsive to their children’s needs and leaving children less exposed to the stimulation necessary for their cognitive development (Vaughn et al., 1980; Belsky, 2001).

The majority of recent studies suggest that there are deleterious effects associated with employment during children’s first year but that the influence of maternal employment after the first year is more ambiguous (Baydar and Brooks-Gunn, 1991; Blau and Grossberg, 1992; Harvey, 1999; Brooks-Gunn et al., 2002; Ruhm, 2004; James-Burdumy, 2005). Many studies also demonstrate that the influence of maternal employment differs by the characteristics of mothers and families, suggesting that maternal employment may be more harmful for children from advantage backgrounds – children from wealthier families, non-Hispanic white children and children from intact families. Desai et al. (1989) found that maternal employment only negatively influences children from higher income families but not children from middle or low income families.

Hawkins et al. (2009) found that many of the children had unhealthy habits such as drinking sodas (41%), snacking on potato chips (37%), and spending more than two hours a day watching TV or using a computer (61%), regardless of whether or not their mothers worked. The results
were similar for mothers who worked part time and full time, and were not related to factors such as the mother's education level or ethnicity.

There is an alternative view also, which states that when both parents are working, it leads to more parental supervision and lesser autonomy to children.

Sayer et al. (2004) pointed out that the erosion of community bonds within neighborhood, heightened perceptions of crimes in some settings, and the expansion in children's extracurricular activities, along with the increasing distances children must travel to participate in these activities all appear to have increased the level of parental supervision of children's activities. Warr and Ellison (2000) report that over 80% of the mothers and fathers fear about the safety of their children. Research has shown that such fears affect parental decisions about children's activities (Best, 1990; Kurz, 2002). The increase in children's participation in extracurricular activities since the 1980s may be fuelled in part by parents' concern for children's safety (Kurz, 2000; Hofferth and Sandberg, 2001a; Kurz, 2002). For example the once common practice of unsupervised neighborhood has been replaced by scheduled play dates, parents driving their children to soccer, Little League, or other activities and then remaining to ferry children home. As a result, parents today may spend considerably more of their evening and weekend time supervising children as compared to parents in the mid – 1960s (Sayer et al., 2004).

Research in the area of internet addiction has revealed that Family factors are implicated in development of Internet Addiction. These include parental separation (Hur, 2006) and parental overprotection, over-interference, and warmth and refusal (Peng and Zhou, 2007).
Thus a review of the previous researches as well as the findings of the current study point out that the children of working mothers are at greater risk for development of Internet Addiction, though these preliminary findings need to be supported by future researches in this area.

3.2 It was hypothesized that the children of working and non-working mothers would score differently on the various correlates of Internet Addiction viz., Eysenckian dimensions of personality viz., Psychoticism, Neuroticism, Extraversion and Social Desirability (Lie Scale), State – Trait Anxiety, Locus of Control, Sensation Seeking (Thrill and Adventure Seeking, Experience Seeking, Disinhibition, Experience Seeking and Total Sensation Seeking), Shyness, Loneliness, WHO Mental Health and its dimensions (Being Comfortable With Self, Being Comfortable With Others, Perceived Ability to Meet Life’s Demands and Total Mental Health), Stress Symptoms, Daily Hassles and Uplifts, Coping (Task Focused Coping, Emotion Focused Coping and Avoidance Focused Coping), Parental Bonding (Perceived Maternal Care, Perceived Maternal Overprotection, Perceived Paternal Care and Perceived Paternal Overprotection), Satisfaction With Life and Perceived Social Support.

A glance at the t-ratio table for the children of working and non-working mothers (Table 2.2) revealed that the children of working mothers scored higher than the children of non-working mothers on Avoidance Focused Coping (t-ratio = 3.86, p<0.01), Loneliness (t-ratio = 2.09, p<0.05), Locus of Control (t-ratio = 2.09, p<0.05) and Shyness (t-ratio = 2.18, p<0.05). On the other hand, the children of non-working mothers scored higher on Being Comfortable with Others (t-ratio = 3.14, p<0.01), Perceived Ability to
Meet Life’s Demands ($t$-ratio = 3.04, $p<0.01$), Total Mental Health ($t$-ratio = 4.23, $p<0.01$), Satisfaction With Life ($t$-ratio = 2.85, $p<0.01$), Daily Uplifts ($t$-ratio = 3.84, $p<0.01$) and Perceived Social Support ($t$-ratio = 2.26, $p<0.05$).

A perusal of the ANOVA tables 3.1 to 3.31 revealed that significant differences emerged between the two groups Locus of Control ($F$-ratio = 5.09, $p<0.01$), Being Comfortable with Others ($F$-ratio = 10.37, $p<0.01$), Perceived Ability to Meet Life’s Demands ($F$-ratio = 9.83, $p<0.01$), Total Mental Health ($F$-ratio = 19.86, $p<0.01$), Daily Uplifts ($F$-ratio = 15.10, $p<0.01$), Avoidance Focused Coping ($F$-ratio = 14.95, $p<0.01$), Shyness ($F$-ratio = 5.43, $p<0.05$), Loneliness ($F$-ratio = 4.63, $p<0.05$), Satisfaction with Life ($F$-ratio = 8.36, $p<0.01$) and Perceived Social Support ($F$-ratio = 5.11, $p<0.05$). No gender differences were observed on the rest of the variables viz. Psychoticism, Neuroticism, Extraversion, Social Desirability (Lie Scale), State Anxiety, Trait Anxiety, Thrill and Adventure Seeking, Experience Seeking, Disinhibition, Boredom Susceptibility, Total Sensation Seeking, Stress Symptoms, Daily Hassles, Being Comfortable with Self, Task Focused Coping, Emotion Focused Coping, Perceived Maternal Care, Perceived Maternal Overprotection, Perceived Paternal Care, Perceived Paternal Overprotection.

Hence the hypothesis which stated that the Children of Working and Non-working mothers would score differently on the various correlates of Internet Addiction has been partially supported by the results obtained.

Previous studies in this area have revealed inconsistent findings, with regard to the effect on maternal employment on children.

Repeated studies by developmental psychologists (Gold and Andres, 1978b; Easterbrooks and Goldberg, 1985) found no consistent evidence
that maternal employment was harmful to children. This does not mean that working mothers have no problems with their children, but merely that the problems are not significantly different. As compared to the children of full-time homemakers, children of working mothers generally do not differ in terms of anxiety, incidence of antisocial behavior, dependence, or complaints of stress-related disorders – headaches, upset stomachs and so on. In fact, children of working mothers hold fewer stereotyped gender-role attitudes and view their mothers as more competent. In addition, daughters of working mothers are more achievement oriented – setting higher career goals for themselves – than daughters of nonworking mothers (Rathus, 1987). Besides that, these children score higher in intelligence tests and have greater internal locus of control (Rathus, 1987).

Rathus (1987) points out that unfortunately, there are several qualifications to make the experience of having a working mother a positive one. The working-mother experience is likely to be positive if –

1. The mother wants to work rather than being forced to do so.

2. When parents are not there, adequate childcare is available.

3. There is adequate support from husbands and/or other family members.

Although family situations with working mothers can be good for the children – if one or more of the above needs are missing – the family experience can be a traumatic one for both children and parents. If you hear about something going wrong with children who have a working mother – before you blame it on her working – remind yourself about some of these other factors involved.
Domingo et al. (1997) examined attachment scores of adult children whose mothers were employed and how maternal employment varied as a function of children’s personality styles. They reported that subjects high on Extraversion seemed to show more adverse attachment consequences in adulthood following full-time maternal employment during infancy. Adults who scored high on extraversion may have been more comfortable with continual maternal presence during infancy, while those more introverted as adults may have adapted better to the periods of separation associated with infant day care.

Howell (1973) reported that Children are likely to be positively affected by maternal employment, and attendant changes in family function, if the mother finds satisfaction in work outside the home and if she is supported by family members. The children of employed mothers are likely to attain a nonstereotyped view of the nature and value of male and female abilities. Further, Other specific direct effects of maternal employment on children have not been demonstrated. The researchers pointed out that It is probable that intervening variables (such as child-rearing style) are critical, and that maternal employment per se should not be expected to have single and uniform effects on the lives of children.

Previous studies which have focused on differences among the children of working and non-working mothers in the area of stress, mental health and coping skills has revealed significant differences among adolescents whose mothers are working and those adolescents whose mothers are housewives.

The results of such studies reveal that the children of working mothers feel more stress. Cavell (2001) reported that children of working mothers suffer from psychological stress 28% more of the time compared to that of the children of non working mothers. Researchers have pointed
out that the mother's employment can influence the mother's sense of 'role strain' i.e. (a) when she finds it difficult to balance the demands of her role of a worker with the demands of her role as a mother (b) when she is dissatisfied with her role. Such role strain occurs when the mother feels that there is a poor match between her aspirations or education and her job duties (Joebgen and Richards, 1990), or when she is in the midst of work transitions (Flanagan and Eccles, 1993). Simply, the mother feels the stress because of the nature of her multiple roles. When such stress or strain is experienced, an influence on adolescent adjustment can occur (Lerner and Galambos, 1985, 1991; Galambos et al., 1995; Lerner, 1994).

In addition there may be implications for youth simply because, when their mother is at work, there is no parent in the home. Indeed, a mother's time at work is obviously associated with the amount of unsupervised time a youth experiences after, and sometimes before, school (Richards and Duckett, 1994; Muller, 1995).

In the area of family relations, researchers have shown that adolescents with working mothers were more involved in running the home, and had more disagreements with their parents than those with non-working mothers (Douvan and Adelson, 1966; Propper, 1972). In studies of peer relations it was found that adolescents with working mothers were less likely to participate in clubs and organizations (Douvan and Adelson, 1966; Propper, 1972). Some girls who do not take part in these high school activities may seek greater excitement elsewhere. Hansson et al.(1981) found that college females whose mothers worked when their daughters were in high school had the greatest likelihood of unintended pregnancy, since they were more sexually active, more willing
to engage in unprotected intercourse, and had less knowledge about birth control.

The explanation most often invoked to account for the relationship between maternal employment and juvenile delinquency is that the working mother is unable to adequately supervise her adolescent who is then more likely to get into trouble (Hoffman, 1974). As children get older they are unlikely to get receive substitute care but are expected to care for themselves.

Repetti and Wood (1997a) examine the connections between daily work stress and mother – child interaction at the end of the workday. They reported that mothers tended to withdraw from both positive and negative interactions with their children on stressful workdays. It is not always possible, however, to withdraw. Almeida and McDonald (1998) that for both husbands and wives, on the days when they experienced high levels of both work stress and home stress, parent – adolescent tension escalated.

Montemayor and Clayton (2001) pointed out the positive outcomes if the mother is working. They stated that stated that on the positive side, adolescents with working mothers may develop a greater sense of autonomy and adult maturity than those with non-working mothers. Also employed mothers, may be models of feminine competence for their adolescents, who might develop less stereotyped and traditional sex-role concepts. Finally, employed mothers may have a less stressful relationship with their adolescents because they would not be as fully invested in child rearing and therefore could more easily relinquish maternal control than could the fulltime homemakers (Birnbaum, 1975).
However, even Montemayor and Clayton (2001) pointed out that it has negative outcomes as well. They stated that on the negative side, the lessened supervision which adolescents with working mothers probably receive could increase the risk of negative peer influences leading to involvement in a variety of illicit and illegal acts such as premarital sex, drug and alcohol use, and delinquency. In addition, parent – adolescent relations may be strained if the adolescent feels rejected by a working mother, or rebels against the increase in home chores and responsibility for the caretaking of younger siblings.

In short, previous studies point out that when the mother is working, it leads to more unsupervised time and this may drive the adolescents towards more stress and strain, it also leads to more peer influence. So this area needs further exploration, in the light of the upcoming addiction of Internet.

Similar findings have been reported in the area of Shyness and Loneliness. Research suggests that, maternal employment, by itself, is unlikely to impede a child’s social and emotional development (Gottfried and Gottfried, 2006). In fact, the opposite may be true, for children of working mothers, particularly daughters, tend to be more independent, to enjoy higher self-esteem, and to hold higher educational and occupational aspirations and less stereotyped views of men and women than those whose mothers are not employed (Hoffman, 1989; Richards and Duckett, 1994). Moreover, early studies of toddlers (Schachter, 1981), primary school-aged children (Gold and Andres, 1978a), and adolescents (Gold and Andres, 1978b) consistently established that children of employed mothers were as confident in social settings as children whose mothers remained at home and were somewhat more sociable with peers.
Bakir (2008) studied the relationship of after school care arrangement, maternal work status, and after school activity type with loneliness and social dissatisfaction of elementary school students. The author reported no differences in loneliness and social dissatisfaction among students who have working mothers and stay-at-home mothers.

Deb et al. (2010) reported that opportunities for economic advancement have intensified work with long and hard working hours, particularly for the 'new economy' workers – middle class workers who will travel long distances on public transport for work (Fernandez, 2006). It is not unexpected, then that parents may struggle to find time with their children and that children may be left alone or in hands of domestic servants who are not trained in child care. As a result, some of them feel lonely, even neglected, and become anxious.

Researchers have also pointed out similar differences in the area of Perceived Parental Bonding, Satisfaction With Life and Perceived Social Support.

The attributes of time spent with parents and the communication between parent and adolescent are important measures of parent physical and emotional availability. For example, in terms of attachment, Moore and Hofferth (1979) found that working women spent half as much time caring for their children as did housewives, but their children still developed normal attachments to them. Other studies with young children have shown that the quality of the time the parents and children spend together, along with the making of adequate child-care arrangements, outweighs the quantity of time spent together (Easterbrooks and Goldberg, 1985). Recent literature on the multiple roles increase stress levels and diminish parenting capacity (Repetti, 1994; O'Neil and Greenberger, 1994), yet other studies suggesting that multiple roles bring
health-giving benefits such as higher incomes, feelings of competence, increased self esteem and wider social relationships that have follow on effects to family relationships (Barnett, 1999).

Albert et al. (2004) in a cross cultural study, found that maternal control appeared to convey security and acceptance to Indian adolescents whereas, for German adolescents this was perceived as overprotection and constraint.

Deb et al. (2010) reported that in terms of adolescents’ perceptions of the quality and quantity of time spent with their parents, the majority (78.7%) felt that they received quality time from their mothers, while noticeably less (67.9%) considered they received quality time from their fathers. On the surface this may not seem to be a cause of concern, yet one fifth and one third of the adolescents perceive that they do not receive quality time from their mothers and fathers respectively. Notably this coexists with over half of the adolescents being unable to talk with their fathers about their personal issues (60%) and over one third (40%) being unable to talk with their mothers about the same. Since the liberalization of the Indian economy in 1991, dual earning families have become more commonplace, yet the specific challenges faced by Indian families in combining paid work and family responsibilities has received little attention (Lewis et al., 2007).
B. The results of the Correlation Analysis and Regression Analysis are being discussed below:

I. PERSONALITY DIMENSIONS AND INTERNET ADDICTION

1.1 It was expected that internet addiction would be positively related with Psychoticism and Neuroticism.

1.2 It was expected that internet addiction would be negatively related with Extraversion and Social Desirability (Lie Scale).

A glance at the intercorrelation matrices shown in Tables 5.1 to 5.8 revealed that Internet Addiction was positively and significantly related with ‘Psychoticism’ in the Total Sample ($r = .21$), Male adolescents ($r = .25$), Children of Working Mothers ($r = .23$), Children of Non-working Mothers ($r = .22$) and the Cyber-Sexual group ($r = .27$). The intercorrelation matrices for the other groups viz. Female adolescents, the Cyber-Relational group and the Information Overload group did not reveal any significant relationship between Internet Addiction and Psychoticism.

A glance at the intercorrelation matrices shown in Tables 5.1 to 5.8 revealed that Internet Addiction was positively and significantly related with ‘Neuroticism’ in the Total Sample ($r = .22$), Male adolescents ($r = .21$), Female adolescents ($r = .25$), Children of Non-working Mothers ($r = .35$), the Cyber-Sexual group ($r = .27$) and the Cyber-Relational group ($r = .27$). The intercorrelation matrices for the other groups viz. Children of Working Mothers and the Information Overload group did not reveal any significant relationship between Internet Addiction and Psychoticism.

A glance at the intercorrelation matrices for shown in Tables 5.1 to 5.8, revealed that Internet Addiction was not related with ‘Extraversion’ for any of the groups being studied.
A glance at the intercorrelation matrices shown in Tables 5.1 to 5.8, revealed that Internet Addiction was negatively and significantly related with ‘Social Desirability (Lie Scale)’ (r = -.18) for the Cyber-sexual group. A further perusal of the above mentioned tables revealed that Internet Addiction was not related with ‘Social Desirability (Lie Scale)’ for the rest of the groups viz. Total Sample, Male adolescents, Female adolescents, Children of Working Mothers, Children of Non-working Mothers, the Cyber-Relational group and the Information Overload group.

A perusal of the Stepwise Multiple Regression Equation for the Children of Non-working Mothers (Table 6.5) revealed that ‘Neuroticism’ emerged as a significant predictor for Internet Addiction but it did not emerge as a significant predictor for the rest of the groups. A perusal of the Stepwise Multiple Regression Equation for all the other groups viz. Total Sample (Table 6.1), Male adolescents (Table 6.2), Female adolescents (Table 6.3), Children of Working Mothers (Table 6.4), Children of Non-working Mothers (Table 6.5), Cyber-Sexual group (Table 6.6), Cyber-Relational group (Table 6.7) and Information Overload group (Table 6.8) revealed that Psychoticism, Extraversion and Social Desirability (Lie Scale), did not emerge as significant predictors of Internet Addiction.

Hence, the above results suggest that the hypotheses which stated that Internet Addiction would be positively related with Psychoticism and Neuroticism, and negatively related with Extraversion and Social Desirability (Lie Scale), have been partially supported.
1.3 It was expected that Internet Addiction would be positively related with State and Trait Anxiety.

A glance at the intercorrelation matrices shown in Tables 5.1 to 5.8 revealed that Internet Addiction was positively and significantly related with ‘State Anxiety’ in the Total Sample (r = .24), Male adolescents (r = .24), Female adolescents (r = .23), Children of Working Mothers (r = .19), Children of Non-working Mothers (r = .34), the Cyber-Sexual group (r = .21) and the Cyber-Relational group (r = .31), but internet addiction was not related with State Anxiety for the Information Overload group.

A glance at the intercorrelation matrices shown in Tables 5.1 to 5.8 revealed that Internet Addiction was negatively and significantly related with ‘Trait Anxiety’ in the Total Sample (r = -.10), Female adolescents (r = -.16), the Cyber-Sexual group (r = -.22) and the Cyber-Relational group (r = -.22). For the rest of the groups viz. Male adolescents, Children of Working Mothers, Children of Non-working Mothers, Information Overload group Internet Addiction was not related with Trait Anxiety.

A perusal of the Stepwise Multiple Regression Equation for the Cyber-Relational group (Table 6.7) revealed that ‘State Anxiety’ emerged as a significant predictor for Internet Addiction but it did not emerge as a significant predictor for the rest of the groups. A perusal of the Stepwise Multiple Regression Equation for all the other groups viz. Total Sample (Table 6.1), Male adolescents (Table 6.2), Female adolescents (Table 6.3), Children of Working Mothers (Table 6.4), Children of Non-working Mothers (Table 6.5), Cyber-Sexual group (Table 6.6), Cyber-Relational group (Table 6.7) and Information Overload group (Table 6.8) revealed that Trait Anxiety did not emerge as a significant predictor of Internet Addiction.
Thus, the above findings point out that Internet Addiction was positively related with State Anxiety but negatively related with Trait Anxiety. This means the hypothesis regarding the relationship of Internet Addiction with Anxiety has been only partially supported by the results, since the hypothesis suggested a positive relationship with both State and Trait Anxiety dimensions.

1.4 It was hypothesized that Internet Addiction would be positively with Sensation Seeking and its dimensions viz. Thrill and Adventure Seeking, Experience Seeking, Disinhibition and Boredom Susceptibility.

A glance at the intercorrelation matrices shown in Tables 5.1 to 5.8 revealed that Internet Addiction was positively and significantly related with ‘Disinhibition’ in group of Children of Non-working Mothers \( (r = .16) \) and the Cyber-Relational group \( (r = .18) \). The intercorrelation matrices for the rest of the groups viz. Total Sample, Male adolescents, Female adolescents, Children of Working Mothers, the Cyber-Sexual group and the Information Overload group did not reveal any significant correlation between Internet Addiction and ‘Disinhibition’.

A glance at the intercorrelation matrices shown in Tables 5.1 to 5.8 revealed that internet addiction was not related with ‘Thrill and Adventure Seeking’, ‘Experience Seeking’, ‘Boredom Susceptibility’ and ‘Total Sensation Seeking’ for the various groups being studied, viz. Total Sample, Male adolescents, Female adolescents, Children of Working Mothers, Children of Non-working Mothers, the Cyber-Sexual group, the Cyber-Relational group and the Information Overload group.
A perusal of the Stepwise Multiple Regression Equation for the Total Sample (Table 6.1), Children of Non-working Mothers (Table 5.5) and the Cyber-Relational group (Table 6.7) revealed that ‘Experience Seeking’ emerged as a significant predictor for Internet Addiction but it did not emerge as a significant predictor for the rest of the groups. A perusal of the Stepwise Multiple Regression Equation for the Cyber-sexual group (Table 6.6) revealed that ‘Disinhibition’ emerged as a significant predictor for Internet Addiction but it did not emerge as a significant predictor for the rest of the groups. Stepwise Multiple Regression Equation for the Female adolescents (Table 6.3) and the Children of Working Mothers (Table 6.4) revealed that ‘Boredom Susceptibility’ emerged as a significant predictor for Internet Addiction but it did not emerge as a significant predictor for the rest of the groups. A perusal of the Stepwise Multiple Regression Equation for all the groups viz. Total Sample (Table 6.1), Male adolescents (Table 6.2), Female adolescents (Table 6.3), Children of Working Mothers (Table 6.4), Children of Non-working Mothers (Table 6.5), Cyber-Sexual group (Table 6.6), Cyber-Relational group (Table 6.7) and Information Overload group (Table 6.8) revealed that ‘Thrill and Adventure Seeking’ did not emerge as a significant predictor of Internet Addiction.

Thus the results point out a mixed finding with regard to Sensation Seeking and its dimensions, since the correlation matrices reveal that sensation seeking and its dimensions were not related with Internet Addiction (except for one group). But, regression analysis revealed that Disinhibition, Experience Seeking and Boredom Susceptibility emerged as significant predictors of Internet Addiction for some of the groups. Hence, the hypothesis indicating a positive relationship of Internet Addiction with Sensation Seeking and its dimensions has been partially supported by the results of the present study.
1.5 It was hypothesized that Internet Addiction would be positively related with Locus of Control.

A glance at the intercorrelation matrices shown in Tables 5.1 to 5.8 revealed that Internet Addiction was positively and significantly related with ‘Locus of Control’ for the Cyber-relational group \( r = 0.25 \) but it did not reveal significant correlations for the rest of the groups.

A perusal of the Stepwise Multiple Regression Equation for the Children of Working Mothers (Table 6.4) revealed that ‘Locus of Control’ emerged as a significant predictor of Internet Addiction but it did not emerge as a significant predictor for any other group, as revealed by the stepwise Multiple Regression Equations for the Total Sample (Table 6.1), Male adolescents (Table 6.2), Female adolescents (Table 6.3), Children of Non-working Mothers (Table 6.5), the Cyber-Sexual group (Table 6.6), the Cyber-Relational group (Table 6.7) and the Information Overload group (Table 6.8).

The above results indicate that Locus of Control has been related with Internet Addiction for only one of the groups out of the various groups under study. Thus, the hypothesis regarding Internet Addiction and Locus of Control, has not received substantial support.

Some earlier studies also reveal the role of Personality dimensions in Internet Addiction.

Young (1997b) reported that Internet Dependents were less likely to control their use of highly interactive features than other on-line applications. It is possible that a unique reinforcement exists that such anonymous on-line relationships gathered from such interactive
applications have the ability to provide fulfillment of unmet real life social needs. Further, naturally vigilant and private persons may drawn to such anonymous interactive features of the Internet as this allows them to converse with others in uninhibited ways and form new relationships with greater ease than in real life circumstances. Anonymous electronic communication may also attract less conforming individuals who use the medium to rant radical ideologies or discuss taboo social belief systems they maintain, yet in real life either self-inhibit or find few others who share those views (Young, 1998a).

Katz and Aspden (1997) found that people who formed friendships over the Internet had higher levels of extroversion, sociability, and willingness to take risks. Kraut et al. (1998), however, found that more extroverted individuals were actually less likely to use the Internet. Individuals high in sociability or those with large traditional social networks may continue their sociable behavior and desire for social contacts online. Support for this premise has been found in some studies (Cody et al., 1997; Joe, 1997).

Hamburger and Ben-Artzi (2000) suggested that Internet use was related to personality. They demonstrated that on the Internet “the poor can get richer,” namely, that introverts can compensate themselves for the difficulties they experience in offline social interactions. According to Amichai-Hamburger (2002), personality is a leading factor in understanding why people behave the way they do on the Internet. Since the net, by its very nature, is powered by human interaction, it follows that we cannot understand the workings of the Internet without understanding the personalities of those who surf it (Amichai-Hamburger, 2005). This link between personality and Internet use has been demonstrated using a number of different personality theories, among them those of extroversion
and neuroticism (Hamburger and Ben-Artzi, 2000); need for cognition (Amichai-Hamburger et al., 2007; Kinar and Amichai-Hamburger, 2008); need for closure (Amichai-Hamburger et al., 2004) and sensation seeking (Lin and Tsai, 2002).

Swickert et al. (2002) found that high computer use combined with high levels of neuroticism was associated with decreased perceptions of social support. Kraut et al. (2002) reported that internet impacts the introverts and extroverts differently. They found that introverts who use the Internet more become lonelier but the reverse was found for extroverts, more Internet use was related to increased well-being.

McKenna and Bargh (1998) identify introversion, emotional instability, and low agreeableness as personality markers of vulnerability for developing Compulsive Internet Use. Agreeing with these findings, Caplan (2003) also stated that adolescents low in emotional stability, extraversion, and agreeableness are more likely to have relatively low competence in the interpersonal domain, and therefore have fewer social resources in their daily lives. Thus, these adolescents can also be expected to use the Internet to avoid being alone and turn to people online who are disconnected from their daily life (McKenna and Bargh 1998; Gross et al., 2002; Caplan, 2003;). These adolescents are more likely to lose control over their Internet use than other adolescents, because an important part of their social lives is on the Internet, whereas in their daily life they may feel socially isolated (Davis, 2001).

Cao and Su (2006) studied the Internet Addiction in relation to Eysenck Personality Questionnaire. The results of their study indicated that the Internet addiction group had higher scores in Neuroticism and Psychoticism temperament categories than those of the control group, suggesting that children with high scores in these two temperament
categories may be more likely to exhibit Internet addiction behaviors than their peers. Given that higher scores in the Lie category may be interpreted as a certain degree of maturity, and may be beneficial for the development of conduct, the Internet addiction group scored lower in the Lie dimension than the control group did, suggesting that children who are less mature may be more inclined to become Internet addicts. Similar research in other counties has also pointed out this linkage. For instance, Yang and colleagues (2005) investigated personality characteristics of Korean senior high school students with Internet addiction using 16-PF. The result revealed that the students with Internet addiction were easily affected by feeling, emotionally less stable, imaginative, absorbed in thought, self-sufficient, experimenting and preferred their own decisions (Cao and Su, 2006).

For introverted, low-agreeable, and emotionally less-stable youths, daily Internet use was more strongly associated with Compulsive Internet Use and, in turn, Compulsive Internet Use more strongly linked to feelings of loneliness (van der Aa et al., 2009).

Amichai-Hamburger and Vinitzky (2010) pointed out that that Extraversion indeed has a positive effect on the number of friends, but no effect was found with regard to the use of Facebook groups. In addition, the current findings indicate that a highly extroverted personality may demonstrate lower use of personal information than less extroverted personalities. Interestingly, however, introverts place more personal information on their Facebook profiles as compared with extroverts. This may be explained by the fact that extroverts rely on their social skills and so feel less need to promote themselves. Amichai-Hamburger and Vinitzky (2010) revealed a U-shaped correlation between neurotic personality and the amount of basic information reported on Facebook.
This result indicates that people with low or high levels of neuroticism were inclined to share more basic information than people with moderate levels of neuroticism.

Research in the area of relationship between anxiety and internet usage has been limited but researchers working in this area have pointed out that Anxiety was positively related with Internet Addiction. Egger and Rauterberg (1996) found that internet addicts tended to use internet for longer durations. They also found that the Internet addict group felt more anxious if their Internet use was restricted and would be more likely to feel guilty or depressed if they spent a long time online.

Huang et al. (2010), in a study on internet addiction, compared the personality profiles of adolescent males with and without Internet Addiction Disorder. They reported that the profiles of adolescents with Internet Addiction Disorder revealed significantly higher scores on anxiety.

Findings on sensation seeking and Internet abuse are varied, with certain studies stating a positive relationship between the two, but others indicating a negative relationship, and still others indicating no relationship between Internet Addiction and Sensation Seeking.

Lin and Tsai (2002) in a study comparing Internet Dependents and Non-Dependents reported that Internet dependents scored significantly higher on total sensation seeking and disinhibition than Internet non-dependents. They reported that dependent Internet users scored higher on a scale of overall sensation seeking and on the disinhibition subscale than did non-dependent Internet users, but there was no difference in the groups’ subscale scores regarding life-experience seeking, and thrill- and adventure seeking. Researchers explained that adolescents’ strong developmental needs, such as striving for personal identity, may be
carried out through breaking social inhibitions, which may in turn lead to Internet dependence.

Other researchers have also reported that risk-taking behaviour, boredom susceptibility and sensation seeking have been associated with the development of Internet Addiction (Shi et al., 2005, Cao et al., 2006; Jenaro et al., 2007; Yang and Tung, 2007; Xiao et al., 2007,).

Some other researchers such as Lavin et al. (1999) found that dependent Internet users scored lower on the sensation-seeking scale, as well as on the thrill and adventure-seeking, and the excitement-seeking subscales. Researchers explained that dependent Internet users tend to be quite sociable in their Internet use, but not to the point of sensation seeking.

Armstrong et al. (2000) investigated the extent to which sensation seeking and low self-esteem predicted heavier Internet use. Results indicated that self esteem was a better predictor of Internet Addiction compared to impulsivity. Similar studies examining a sample of Chinese middle and high students did not find that sensation seeking led to Internet abuse (Qing-Xin et al., 2005).

Velezmoro et al. (2010) reported that Sensation Seeking as a whole does not appear to be related to Internet abuse, as those with high total sensation seeking scores probably seek out more engaging activities. While it was expected that those sub scores of sensation seeking would predict Internet abuse for sexual purposes, only disinhibition significantly predicted abuse.

Research in the area of Locus of Control and Internet Addiction has been limited but it has also revealed mixed findings.
Chak (2003) reported that greater dependent use of the Internet was found to be significantly linked to psychologically mediating variables -- locus of control. Specifically, internality, a measure of whether one believes that one has control over one’s life, was negatively associated with Internet addiction. This means that a person will be less likely to be addicted to the Internet when one believed one is in control of his/her life. Moreover, two measures assessing whether a person believes that powerful others and/or chances to have control over one’s life, were found to be positively related to Internet addiction. These results imply that internally-oriented individuals or individuals who believe that powerful others and/or chances have no effect on their lives, attempt to manipulate or influence their environment, and believe that they themselves are the master of their destinies. They strongly believe in their ability to influence the world and their own lives. They can control, cut back, or stop Internet use at will. They would not have the feelings of restlessness, moodiness, depression or irritability when attempting to cut down use of the Internet. Externally-oriented people or people who believe that powerful others or chances have control over their lives were found to be less successful in controlling their Internet use. As a result, they often have problems of staying online longer than originally intended or jeopardizing loss of significant relationships, job, educational or career opportunities because of Internet use.

Corno (1993) found that individuals with an external rather than an internal locus of control of reinforcement find it harder to ignore extraneous noise, stimuli or other distractions when working and feel less in control of their accessibility to others. Hair et al. (2006) stated that these individuals when faced with constant email interruptions may well experience feelings of stress.
Hair et al. (2006) studied the potential of email to cause disruption in work. They reported that external locus of control was found to be related to the general ability to ignore distractions and lack of ability to deal with distractions was found to be related to the stressed orientation. However, Eternal Locus of Control was not found to be significantly related to any underlying orientation to email (Hair et al., 2006).

II. MENTAL HEALTH, STRESS AND COPING

2.1 It was hypothesized that internet addiction was expected to be negatively related to WHO Mental Health and its dimensions viz. Being Comfortable With Self, Being Comfortable With Others, Perceived Ability to Meet Life’s Demands and Total Mental Health.

A glance at the intercorrelation matrices shown in Tables 5.1 to 5.8 revealed that Internet Addiction was negatively and significantly related with ‘Being Comfortable with Self’ dimension of Mental Health in the Total Sample (r = -0.14), Male adolescents (r = -0.29), Children of Non-working Mothers (r = -0.18) and the Cyber-Sexual group (r = -0.18). The intercorrelation matrices for the other other groups viz. Female adolescents, Children of Working Mothers, the Cyber-Relational group and the Information Overload group did not reveal significant correlation between Internet Addiction and Being Comfortable with Self dimension of Mental Health.

A glance at the intercorrelation matrices shown in Tables 5.1 to 5.8 revealed that internet addiction was negatively and significantly related with ‘Being Comfortable with Others’ dimension of Mental Health in the Total Sample (r = -0.13), Female adolescents (r = -0.16) and the Cyber-Relational group (r = -0.21). The intercorrelation matrices for the other
groups viz. Male adolescents, Children of Working Mothers, Children of Non-working Mothers, the Cyber-Sexual group and the Information Overload group did not reveal significant correlation between Internet Addiction and ‘Being Comfortable with Others’ dimension of Mental Health.

A glance at the intercorrelation matrices shown in Tables 5.1 to 5.8 revealed that internet addiction was negatively and significantly related with ‘Perceived Ability to Meet Life’s Demands’ dimension of Mental Health for the Cyber-sexual group ($r = -0.18$). The intercorrelation matrices for the rest of the groups viz. the Total Sample, Male adolescents, Female adolescents, Children of Working Mothers, Children of Non-working Mothers, the Cyber-Relational group, and the Information Overload group did not reveal significant relationship between Internet Addiction and ‘Perceived Ability to Meet Life’s Demands’ dimension of Mental Health did not reveal a significant relationship between Internet Addiction and Perceived Ability to Meet Life’s Demands.

A glance at the intercorrelation matrices shown in Tables 5.1 to 5.8 revealed that internet addiction was negatively and significantly related with ‘Total Mental Health’ in the Total Sample ($r = -0.24$), Male adolescents ($r = -0.30$), Female adolescents ($r = -0.17$), Children of Non-working Mothers ($r = -0.26$) and the Cyber-Sexual group ($r = -0.41$). The intercorrelation matrices for the rest of the groups viz. the Children of Working Mothers, the Cyber-Relational group, and the Information Overload group did not reveal significant correlation between Internet Addiction and ‘Total Mental Health’.

A perusal of the Stepwise Multiple Regression Equation for the Male adolescents (Table 6.2) revealed that ‘Being Comfortable with Self’ emerged as a significant predictor for Internet Addiction. A perusal of the Stepwise Multiple Regression Equation for the Total Sample (Table 6.1),
Female adolescents (Table 6.3), Children of Working Mothers (Table 6.4), Children of Non-working Mothers (Table 6.5), Cyber-Sexual group (Table 6.6), Cyber-Relational group (Table 6.7) and Information Overload group (Table 6.8) revealed that Mental Health and its dimensions did not emerge as significant predictors of Internet Addiction.

Hence, the above results clearly point out that the hypothesis expecting a negative relationship between Internet Addiction and Mental Health has been upheld for most of the groups.

2.2 It was hypothesized that Internet addiction would be positively related with Stress Symptoms and Daily Hassles, and negatively related with Daily Uplifts.

A glance at the intercorrelation matrices shown in Tables 5.1 to 5.8 revealed that internet addiction was positively and significantly related with ‘Stress Symptoms’ in the Total Sample ($r = .30$), Male adolescents ($r = .28$), Female adolescents ($r = .30$), Children of Working Mothers ($r = .36$), Children of Non-working Mothers ($r = .23$), the Cyber-Sexual group ($r = .32$) and the Information Overload group ($r = .28$). The intercorrelation matrix for the Cyber-Relational group did not reveal significant relationship between Internet Addiction and ‘Stress Symptoms’.

A glance at the intercorrelation matrices shown in Tables 5.1 to 5.8 revealed that internet addiction was positively and significantly related with ‘Daily Hassles’ in the Total Sample ($r = .19$), Male adolescents ($r = .22$), Children of Working Mothers ($r = .23$), Children of Non-working Mothers ($r = .18$) and the Cyber-Sexual group ($r = .33$). The intercorrelation matrices for the rest of the groups viz. Female adolescents, Children of Working Mothers, the Cyber-Relational group and the Information Overload group
did not reveal significant correlation between Internet Addiction and ‘Daily Hassles’.

A glance at the intercorrelation matrices shown in Tables 5.1 to 5.8 revealed that internet addiction was negatively and significantly related with ‘Daily Uplifts’ in the Total Sample (r = -.20), Male adolescents (r = -.29), Children of Non-working Mothers (r = -.19) and the Cyber-Sexual group (r = -.44). The intercorrelation matrices for the rest of the groups viz. Female adolescents, Children of Working Mothers, Children of Non-working Mothers, the Cyber-Relational group and the Information Overload group did not reveal significant correlation between Internet Addiction and ‘Daily Uplifts’. The intercorrelation matrix for the females did not reveal significant relationship between Internet Addiction and ‘Daily Uplifts’.

A perusal of the Stepwise Multiple Regression Equation for the Total Sample (Table 6.1), Male adolescents (Table 6.2), Children of Working Mothers (Table 6.4) and Information Overload group (Table 6.8) revealed that ‘Stress Symptoms’ emerged as a significant predictor of Internet Addiction but it did not emerge as a significant predictor for the rest of the groups. A perusal of the Stepwise Multiple Regression Equation for the Total Sample (Table 6.1), Male adolescents (Table 6.2), Children of Non-working Mothers (Table 6.4) and the Cyber-Sexual group (Table 6.6) revealed that ‘Daily Hassles’ emerged as a significant predictor of Internet Addiction but it did not emerge as a significant predictor in the rest of the groups. A perusal of the Stepwise Multiple Regression Equation for the Cyber-Sexual group (Table 6.6) revealed that ‘Daily Uplifts’ emerged as a significant predictor of Internet Addiction but it did not emerge as a significant predictor in the rest of the groups.

Hence, the above results clearly demonstrate that the hypothesis related with the significant relationship of Internet Addiction with
Stress Symptoms, Daily Hassles and Uplifts has been largely supported by the findings of the present results.

2.3 It was hypothesized that internet addiction was expected to be positively related to emotion focused and avoidant focused coping styles and, negatively related with task focused coping style.

A glance at the intercorrelation matrices shown in Tables 5.1 to 5.8 revealed that internet addiction was negatively and significantly related with ‘Task Focused Coping’ in the Total Sample (r = -.13), Male adolescents (r = -.16), Children of Non-working Mothers (r = -.28), the Cyber-Relational group (r = -.24) and the Information Overload group (r = -.19). The intercorrelation matrices for the rest of the groups viz. Female adolescents, Children of Working Mothers and the Cyber-Sexual group did not reveal significant correlation between Internet Addiction and ‘Task Focused Coping’.

A glance at the intercorrelation matrices for the Tables 5.1 to 5.8 revealed that internet addiction was not related with ‘Emotion Focused Coping’.

A glance at the intercorrelation matrices shown in Tables 5.1 to 5.8 revealed that internet addiction was positively and significantly related with ‘Avoidance Focused Coping’ in the Total Sample (r = .33), Male adolescents (r = .34), Female adolescents (r = .30), Children of Working Mothers (r = .16), Children of Non-working Mothers (r = .42), the Cyber-Sexual group (r = .42) and the Cyber-Relational group (r = .44), but the intercorrelation matrix for the Information Overload group did not reveal significant relationship between Internet Addiction and ‘Avoidance Focused Coping’.

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A perusal of the **Stepwise Multiple Regression Equation** for the Total Sample (Table 6.1), Male adolescents (Table 6.2), Female adolescents (Table 6.3), Children of Working Mothers (Table 6.4), Children of Non-working Mothers (Table 6.5), the Cyber-Sexual group (Table 6.6) and the Cyber-Relational group (Table 6.7) revealed that ‘**Avoidant Focused Coping**’ emerged as a significant predictor in Internet Addiction but it did not emerge as a significant predictor for the Information Overload group (Table 6.8). A perusal of all other tables viz. Total Sample (Table 6.1), Male adolescents (Table 6.2), Female adolescents (Table 6.3), Children of Working Mothers (Table 6.4), Children of Non-working Mothers (Table 6.5), the Cyber-Sexual group (Table 6.6), the Cyber-Relational group (Table 6.7) and the Information Overload group (Table 6.8) revealed that ‘Task Focused Coping’ and ‘Emotion Focused Coping’ did not emerge as significant predictors for Internet Addiction.

**Hence the hypotheses related with the significant relationship of Internet Addiction with the different Coping styles, have been upheld only for Task Focused Coping and Avoidance Focused Coping styles.**

Many earlier studies have also reported similar findings regarding the relationship of Internet Addiction with Mental Health, Stress and Coping styles.

**Bai et al. (2001)** studied internet addiction in relation to mental health problems and reported that the most common impending diagnosis was anxiety disorder (29 percent), followed by mood disorder (24 percent). The survey responses indicated that 26 percent had an impending substance use disorder. The researchers further stated that few of the survey respondents raised the issue of Internet addiction as a problem in their subsequent interactions with the online mental health professionals,
although some reported many failed attempts to cut down on their time spent online, and some reported feeling depressed, nervous, and agitated when they were not online. Either these persons did not recognize the problem or they did not know how to ask for help. Their addiction to the Internet may complicate their existing mental problems (Mitchell, 2000). Yang (2001) also found that those adolescents with excessive computer use were found to show serious socio psychiatric problems.

Huang and Zhang (2001) and, Cao and Su (2006) reported that the students with Internet addiction have less ability in overall time management and in each subcategory time management disposition. Consequently, Internet addicts’ weaker sense of time management may lead to their weaknesses in planning for study and daily life, time monitoring and self-management. On the other hand, this weak time management ability may also result in inefficient time allocation and can therefore cause more emotional and psychological problems in adolescents.

Cao and Su (2006) further stated that Internet addiction is associated with behavioral and emotional problems experienced by the students with Internet addiction. For example, they may have conduct, hyperactivity and concentration problems, and are hence often criticized by parents and teachers, and seldom get approval from them. Such tendencies may stimulate these students to use the Internet as a way to vent their anger and feel a sense of achievement.

Mathy and Cooper (2003) measured the duration and frequency of Internet Use across five domains, namely, past mental health treatments, current mental health treatments, suicidal intent, as well as past and current behavioral difficulty. They found that the frequency of internet use was related to past mental health treatments, and suicidal intent. Also, the
duration of Internet use was related to past and current behavioral difficulties.

Sun et al. (2005) also reported that adolescents with more psychosocial risk factors or detrimental health behaviors were more likely to use the Internet. Further, self-reported health problems were associated with higher levels of Internet use.

Ryu et al. (2004) found that there were significant positive correlations among Internet addiction, depression, and suicidal ideation in adolescents. However, many times the internet addicts fail to realize that it is a problem.

Huang et al. (2010) reported that profiles of adolescents with Internet Addiction Disorder revealed significantly higher scores for obsessive–compulsive, interpersonal sensitivity, depression, anxiety, hostility, and paranoid ideation. The results of this study confirmed that IAD often occurs concurrently with mental symptoms.

Young (2011) found that Internet addicts suffer from emotional problems such as depression and anxiety-related disorders and often use the fantasy world of the Internet to psychologically escape unpleasant feelings or stressful situations.

In the area of Stress and Internet Addiction, researchers such as, Lavoie and Pychyl (2001) stated that the connection between Internet abuse and perceived stress needs to be further examined. Some researchers have found that the Internet is used by some as a means of stress relief. In this regard, Velezmooro et al. (2010) reported that although it is not possible to determine any causal relationships, and a bidirectional relationship may exist, it is possible that those who have pre-existing psychological problems may use the Internet as a means of stress relief.
In the same manner, it is possible that the high level of stress associated with college life may lead some individuals to abuse the Internet.

Whang et al. (2003), in a study comparing Internet Addicts, Possible Addicts and Non Addicts, stated that high dependency on the internet of the Internet Addiction group was associated with interpersonal difficulties and stress in reality.

Leung (2007) explained the relationship between stress and internet usage by likening it with the mood management theory of Zillmann (1982) by stating that internet can be used in part to block thoughts that cause anxiety and stress.

Lam et al. (2009) studied adolescents aged 13 – 18 years and found that stress-related variables were associated with Internet addiction among adolescents as they are also related to other addictions. He further pointed out that the odds were 10 times greater for young people who had experienced a recent event and felt very stressed and 2.8 times greater for those who felt moderately stressed than for those who had no stressful experience (Lam et al., 2009).

It is not just that such individuals experience stress and problems related with mental health, but, rather their coping strategies are also ineffective which has been pointed out by various researchers. Adolescents with Internet Addiction adopt negative coping styles such as fantasy or retreat rather than rational problem solving approaches (Liu, 2007). Lam et al. (2009) suggest that internet addiction may be caused by using the internet as a coping mechanism for stress or stress-related problems. Those who have a poor relationship with their family or who have recently been exposed to a stressful situation may use the internet as a way to distract themselves.
Greenfield (1999b) postulated that the Internet is not as benign as we might think and has powerful mood altering capabilities, and over 29% of the Internet addicts he studied reported using the Internet to “alter their mood or escape on a regular basis.” In such instances, he found that their use of the computer was less about using it as a tool and more about finding a psychological escape to cope with life’s problems. Because the addiction serves a useful purpose for the addict, the sensation or attachment can grow to such proportions that life becomes unmanageable.

Whang et al. (2003) reported that more Internet Addicts tried to escape from reality than Possible Addicts and Non-addicts. When they got stressed out by work or were just depressed, IA showed a high tendency to access the internet.

Adolescents and children in need of mood repair because of school related problems appeared to seek comfort in the Internet for relaxation, fun, to show others or to receive encouragement, to care about other’s feelings, to impress people, and to gain status. Entertainment and relationship maintenance motives may be an appropriate and positive coping strategy to temporarily reduce stress and anxiety (Leung, 2007).

Coping mechanisms help the individuals to deal with everyday life stressors on both an emotional and a cognitive level. Li et al. (2008) indicated that generalized problematic internet users used more avoidant coping style and less problem-solving coping style as compared to non-problematic internet users. The scores of avoidant coping style are significantly correlated with the score of GPIU (Generalized Problematic Internet Use) scale. Problem-solving is inversely correlated with the score of GPIU scale. An important interpretation of these results is that, although using self-blame, fantasy, withdrawal or rationalization as coping mechanisms may have short term benefits such as, relief from pressure,
for an individual, the rigid use of these avoidant coping styles may later contribute to stress and GPIU. Avoidant coping style is a maladaptive affect regulation of the stress response. Problem-solving may be an effective strategy to buffer the impact of stress and diminish the risk of GPIU (Li et al., 2008).

III. SHYNESS

3.1 It was hypothesized that Internet Addiction would be positively associated with Shyness.

A glance at the intercorrelation matrices shown in Tables 5.1 to 5.8 revealed that internet addiction was positively and significantly related with ‘Shyness’ in all the groups viz. the Total Sample ($r = .29$), Male adolescents ($r = .27$), Female adolescents ($r = .29$), Children of Working Mothers ($r = .22$), Children of Non-working Mothers ($r = .33$), the Cyber-Sexual group ($r = .43$), the Cyber-Relational group ($r = .20$) and the Information Overload group ($r = .21$).

A perusal of the Stepwise Multiple Regression Equation for the Total Sample (Table 6.1), Female adolescents (Table 6.3), Children of Working Mothers (Table 6.4), Children of Non-working Mothers (Table 6.5) and the Cyber-Sexual group (Table 6.6) revealed that ‘Shyness’ emerged as a significant predictor of Internet Addiction but it did not emerge as a significant predictor for the rest of the groups viz. Male adolescents (Table 6.2), the Cyber-Relational group (Table 6.7) and the Information Overload group (Table 6.8).

Hence, the above results clearly point out that the hypothesis which stated that Internet Addiction would be positively related with
Shyness has been substantiated by the results obtained, in all the groups.

Previous researches in this area have also reported similar findings regarding the relationship between Internet Addiction and Shyness.

Researchers point out that those adolescents who reported feeling more loneliness and/or social anxiety in school are more likely to use the Internet, particularly communicating with strangers online (Gross et al., 2002). The Internet may be more beneficial for socially anxious and isolated people, suggesting that developing intimate relationships online may be more comfortable for them than offline (Kraut et al., 2002).

Young (1997a) and Whang et al. (2003) reported that Internet addicts tended to engage in interactive services, in order to compensate for their lack of interpersonal interaction in reality. Chak and Leung (2004) also found that shyness and a person's likelihood of being addicted to using the internet were indeed correlated.

Stritzke et al. (2004) compared the shy and non shy internet users in online and offline contexts. They reported that shy and non shy internet users were significantly different on offline measures of rejection sensitivity, initiating relationships and self disclosure. However, they were not significantly different on these same three domains in the online social context. The researchers stated that the results are interpreted as support for a self-presentation theory account that the absence of visual and auditory cues online reduces shy individuals' experience of detecting negative or inhibitory feedback cues from others.
Yuen and Lavin (2004) compared the online and offline interactions of dependent and non-dependent internet users. They reported that the shyness level for non-dependents did not differ online or in face-to-face interactions. However, dependents' shyness was greater in face-to-face interactions relative to online interpersonal exchanges. The study also discussed how various Internet resources (e.g., e-mail, chat rooms, and instant messages) can be used to ameliorate shyness and how such negatively reinforced behavior could foster dependence.

Personality characteristics like shyness, low self-esteem, lack of emotional and social skills, poor time management skills have been associated with the development of Internet Addiction (Shi et al., 2005, Cao et al., 2006; Jenaro et al., 2007; Yang and Tung, 2007; Xiao et al., 2007).

Yen et al. (2007) and Shepherd and Edelmann (2005) reported that social phobia has been reported to be positively associated with Internet use in adolescents. Sheeks and Birchmeier (2007) predicted that individuals who indicated higher levels of both shyness and sociability would be able to express their true-selves to a greater extent online. Their relationships online would grow more quickly and be more satisfying relative to others.

Research investigating the benefits of the Internet, however, has found that it can also be a place to test social skills (Parks, 1996), overcome shyness in face-to-face interactions (Myers, 1987), and form personal relationships (Katz and Aspden, 1997; Parks and Roberts, 1998). The Internet has been suggested as a way for isolated or physically disabled people to communicate in a manner that protects them from social expectations (Kanaley, 1995; Sharf, 1997; Turkle, 1995). Larsen (1998) described online social environments as providing opportunity for role-play.
for those who experience anxiety during normal conversation. The anonymity of the Internet may provide opportunities for self-disclosure and some protection against social anxiety for shy individuals (McKenna and Bargh, 2000).

The absence of visual and auditory cues online reduces shy individuals' experience of detecting negative or inhibitory feedback cues from others (Stritzke et al., 2004). Campbell et al. (2006) reported that "chat" users who are socially fearful may be using the Internet as a form of low-risk social approach and an opportunity to rehearse social behavior and communication skills, which, may help them improve interaction with offline, face-to-face, social environments.

Socially anxious and shy adolescents who use the Internet for social reasons may be compensated for their poor sociability offline with some social benefits like feelings of adequacy and worthiness, by communicating with others online (Ellison et al., 2007; Lee, 2009, 2010).

Some researchers have reported that sociable people tend to use the internet for social communication more than the shy individuals. Birnie and Horvath (2002) reported that online social communication is more likely to be an outlet for the sociable person than a compensatory mechanism for the shy or socially anxious individual with infrequent or superficial social contacts.

Although some research suggests that computer mediated technologies and socially interactive technologies promote and even increase face-to-face social interaction (McKenna and Bargh, 1999; Kavanaugh et al., 2005), others argue that these technologies allow users to avoid or replace face-to-face communication (Nie and Erbring, 2000). If the person is shy (socially anxious) and feels uncomfortable with face-to-
face interactions, these technologies may serve as a useful tool for avoiding such unpleasant situations and therefore may replace face-to-face communication (Pierce, 2009).

IV. LONELINESS

4.1 It was hypothesized that Internet Addiction would be positively related with Loneliness.

A glance at the intercorrelation matrices shown in Tables 5.1 to 5.8 revealed that internet addiction was positively and significantly related with ‘Loneliness’ with respect to the Total Sample ($r = .13$), Male adolescents ($r = .22$), Children of Non-working Mothers ($r = .23$) and the Cyber-Sexual group ($r = .28$). It did not reveal significant correlation for the rest of the groups viz. Female adolescents, Children of Working Mothers, the Cyber-Relational group and the Information Overload group.

A perusal of the Stepwise Multiple Regression Equations for all groups viz. Total Sample (Table 6.1), Male adolescents (Table 6.2), Female adolescents (Table 6.3), Children of Working Mothers (Table 6.4), Children of Non-working Mothers (Table 6.5), the Cyber-Sexual group (Table 6.6), the Cyber-Relational group and the Information Overload group (Table 6.8) revealed that ‘Loneliness’ did not emerge as a significant predictor of Internet Addiction for any of the groups.

Hence, the above results clearly point out that the hypothesis which stated that Internet Addiction would be positively related with Loneliness has been partially substantiated by the results obtained.

Many findings from the previous studies have also reported similar results with regard to the relationship between Internet...
Addiction and Loneliness. However, there are differences in researchers regarding the causal direction. Some researchers point out that loners tend to use the internet more, whereas, other researchers put forth the view that excessive internet use leads to loneliness.

Kraut et al. (1998), in a longitudinal study, reported that using the internet leads to significant increases in loneliness and depression. In this study, the authors attempted to assess causal direction. The Home Net field trial followed 93 households in their first 12-18 months online. Although the sample as a whole reported high well-being at the start of the study, those participants who used the Internet more became reliably less socially involved and more lonely and showed an increase in depressive symptoms. These changes occurred even though participants’ dominant use of the Internet was communication.

Morahan-Martin (1999) reviewed the related literature extensively and concluded that research has not determined whether loneliness is symptomatic of excessive Internet use, or if heavy Internet use is symptomatic of loneliness. However, she suggests that loneliness is caused by excessive Internet use. She also contends that once the Internet becomes a substitute for real-life social interaction, users may be caught in a vicious cycle.

In a study conducted by the Stanford Institute for the Quantitative Study of Society, researchers found that use of the Internet could lead to loneliness and a decline in social engagement (Nie and Ebring, 2000).

Kubey et al. (2001) pointed out that the unique social qualities of Internet represent a most significant utility for otherwise lonely individuals
who can be with “friends” at any time of day or night, rather than using the telephone or seeking out would-be friends down the hall or across the quad.

Whang et al. (2003) studied the internet usage and divided people into three categories viz. Internet Addicts (IA), Possible Addicts (PA) and Non Addicts (NA). They found that IA reported the highest degree of loneliness, followed by PA and NA. They pointed that IA group 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 (Whang et al., 2003).

Nalwa and Anand (2003) also conducted a similar study and compared the dependent and non-dependent internet users. They reported that the higher the scores on the loneliness scale, the more dependent on Internet usage the subjects are. Further, on the loneliness measure, significant differences were found between the two groups, with the dependents scoring higher than the non-dependents (Nalwa and Anand, 2003).

Hur (2006) reported the declines in the size of social circles and increases in individuals’ levels of depression and loneliness is associated with the greater use of the Internet.

Recently, Ong et al. (2011) compared the familial and social loneliness among internet users. They found that individuals who had participated in online chatting exhibited greater familial loneliness than those who had not because the time spent in online chatting reduced the time spent in familial relationships. They concluded that online chatting can reduce social
loneliness through high-quality Internet relationships but may exacerbate familial loneliness.

Studies have shown that the more immediate a form of communication and the more that this communication is used within existing close relationships, the more likely it is to decrease feelings of loneliness (Reid and Reid, 2007; Sum et. al, 2008; Van den Eijnden et. al, 2008; Hu, 2009). These findings suggest that students who use less immediate channels, such as e-mail, may be lonelier. Alternatively, lonelier college students may report less frequent use of all channels with parents (Gentzler et al., 2011).

There are a few contradictory findings also which suggest that increased internet usage leads to decrease in feelings of loneliness.

Shaw and Gant (2002), for instance, found that increased Internet usage was associated with decreased levels of loneliness and depression and increased levels of social support and self-esteem. McKenna et al. (2002) found that Internet use reduces feelings of loneliness by increasing users’ social circles and helping them become less socially anxious.

Oldfield and Howitt (2004) also found that those who spent more time on emails were less likely to be lonely. These authors contend that this is possibly because emails were used by individuals in their sample to support and maintain friendships, rather than as an alternative to offline friendships.

V. PARENTAL BONDING, SATISFACTION WITH LIFE AND PERCEIVED SOCIAL SUPPORT

5.1 It was hypothesized that Internet Addiction would be positively related with Perceived Maternal and Paternal Overprotection, and negatively related with Perceived Maternal and Paternal Care.
A glance at the intercorrrelation matrices shown in Tables 5.1 to 5.8 revealed that internet addiction was negatively and significantly related with ‘Perceived Maternal Care’ in the Total Sample \( r = -.21 \), Male adolescents \( r = -.24 \), Female adolescents \( r = -.18 \), Children of Working Mothers \( r = -.15 \), Children of Non-working Mothers \( r = -.26 \), the Cyber-Sexual group \( r = -.34 \) and the Cyber-Relational group \( r = -.22 \). It did not reveal significant correlation for the Information Overload group.

A glance at the intercorrrelation matrices shown in Tables 5.1 to 5.8 revealed that internet addiction was positively and significantly related with ‘Perceived Maternal Overprotection’ in the Total Sample \( r = .21 \), Male adolescents \( r = .27 \), Female adolescents \( r = .17 \), Children of Non-working Mothers \( r = .30 \), the Cyber-Sexual group \( r = .25 \) and the Cyber-Relational group \( r = .36 \). It did not reveal significant correlation for two groups viz. the Children of Working Mothers and the Information Overload group.

A glance at the intercorrrelation matrices shown in Tables 5.1 to 5.8 revealed that internet addiction was negatively and significantly related with ‘Perceived Paternal Care’ in the Total Sample \( r = -.20 \), Male adolescents \( r = -.22 \), Female adolescents \( r = -.19 \), Children of Working Mothers \( r = -.19 \), Children of Non-working Mothers \( r = -.19 \) and the Cyber-Sexual group \( r = -.39 \). It did not reveal significant correlation for two groups viz. the Cyber-Relational group and the Information Overload group.

A glance at the intercorrrelation matrices shown in Tables 5.1 to 5.8 revealed that internet addiction was positively and significantly related with ‘Perceived Paternal Overprotection’ in the Total Sample \( r = .13 \), Children of Non-working Mothers \( r = .16 \) and the Cyber-Relational group \( r = .20 \). It did not reveal significant correlation for the rest of the groups.
viz. Male adolescents, Female adolescents, Children of Working Mothers, the Cyber-Sexual group and the Information Overload group.

A perusal of the Stepwise Multiple Regression Equation for the Cyber-Relational group (Table 6.7) revealed that ‘Perceived Maternal Overprotection’ emerged as a significant predictor for this group but it did not emerge as a significant predictor for the rest of the groups. A perusal of the Stepwise Multiple Regression Equation for the Cyber-Sexual group (Table 6.6) revealed that ‘Perceived Paternal Care’ emerged as a significant predictor for this group but it did not emerge as a significant predictor for the rest of the groups. A perusal of the Stepwise Multiple Regression Equations for all groups viz. Total Sample (Table 6.1), Male adolescents (Table 6.2), Female adolescents (Table 6.3), Children of Working Mothers (Table 6.4), Children of Non-working Mothers (Table 6.5), the Cyber-Sexual group (Table 6.6), the Cyber-Relational group (Table 6.7) and the Information Overload group (Table 6.8) revealed that ‘Maternal Care’ and ‘Paternal Overprotection’ did not emerge as significant predictors of Internet Addiction for any of the groups.

Thus, the results of the present study indicate that Internet Addiction is related with the various dimensions of Perceived Parental Bonding viz. Perceived Maternal Care, Perceived Maternal Overprotection, Perceived Paternal Care and Perceived Paternal Overprotection.

5.2 It was hypothesized that Internet Addiction would be negatively related to Satisfaction with Life.

A glance at the intercorrelation matrices shown in Tables 5.1 to 5.8 revealed that internet addiction was negatively and significantly related
with ‘Satisfaction with Life’ in the Total Sample ($r = -.32$), Male adolescents ($r = -.41$), Female adolescents ($r = -.23$), Children of Working Mothers ($r = -.19$), Children of Non-working Mothers ($r = -.39$), the Cyber-Sexual group ($r = -.48$) and the Cyber-Relational group ($r = -.31$). It did not reveal significant correlation in one group only i.e. the Information Overload group.

A perusal of the Stepwise Multiple Regression Equations for the Total Sample (Table 6.1), Male adolescents (Table 6.2) Children of Non-working Mothers (Table 6.5) and the Cyber-Sexual group (Table 6.6) revealed that ‘Satisfaction with Life’ emerged as a significant predictor of Internet Addiction. For the rest of the groups, it did not emerge as a significant predictor of Internet Addiction as can be seen by the perusal of Table 6.3 (Female adolescents), Table 6.4 (Children of Working Mothers), Table 6.7 (the Cyber-Relational group) and Table 6.8 (the Information Overload group).

Hence, the above results indicate that the hypothesis related with the relationship of Internet Addiction and Satisfaction with Life was upheld for most of the groups.

5.3 It was hypothesized that Internet Addiction would be negatively related with Perceived Social Support.

A glance at the intercorrelation matrices shown in Tables 5.1 to 5.8 revealed that Internet Addiction was significantly and negatively related with ‘Perceived Social Support’ in the Male adolescents ($r = -.18$) and the Cyber-Relational group ($r = -.21$). The rest of the groups viz. the Total Sample, Female adolescents, Children of Working Mothers, Children of Non-working Mothers, the Cyber-Sexual group and the Information Overload group.
Overload group, did not reveal a significant correlation between Internet Addiction and Perceived Social Support.

A perusal of the **Stepwise Multiple Regression Equations** for all the groups viz. Total Sample (Table 6.1), Male adolescents (Table 6.2), Female adolescents (Table 6.3), Children of Working Mothers (Table 6.4), Children of Non-working Mothers (Table 6.5), the Cyber-Sexual group (Table 6.6), the Cyber-Relational group (Table 6.7) and the Information Overload group (Table 6.8) revealed that 'Perceived Social Support' did not emerge as a significant predictor of Internet Addiction for any of the groups.

Hence, the above results indicate that Perceived Social Support has been found to be related with Internet Addiction for one group only but not for the other groups, indicating that the hypothesis related with the significant relationship between Internet Addiction and Perceived Social Support has been only partially supported.

Previous researches studying the relationship of Internet Addiction with Perceived Parental Bonding, Satisfaction with Life and Perceived Social Support have also been reported to be related to these variables.

In a cross sectional study involving seventh grade students, Sun et al. (2005) found that less parental monitoring and more unsupervised time were positively related to email use, chat-room use, and at home Internet use.

Leung and Lee (2005) reported that among the social interaction motives, parental emotional support is found to be consistently related to internet usage. The more emotional support from the parents an
adolescent feels, the less likely they are to use the Internet. Knowing this, this makes sense that those who are more stable secure and sure with parents and/or family, will spend more time doing different activities, instead of Internet use. Again this reveals that the relationship with parents and/or is an important issue for adolescents because interactive activities with parents promote cognitive, physical, and social development. Lacking support from parents, those adolescent seek social support from the experiences of interacting on the Internet (Rixhon and Shapiro, 2003; Yen and Yen, 2007). Psychological security and social interactive support may be the motives for adolescents with low parental support to use the Internet more than those who have high parental support.

Relationships with parents are known to be related to Internet use among adolescents. Parental attitude and parental involvement can be a psychological distress factor associated with adolescents’ demographic backgrounds. Orleans and Laney (2000) found that minimal parental involvement would result in the most socially positive effect on children’s computer use. Parental rules such as time limits or checking up also affects children’s use of the Internet negatively (Lenhart et al., 2001). Some researchers found that the increase in family conflicts is associated with more frequent time and use in adolescents’ Internet use (Mesch, 2006). A study of 1,501 Internet users aged 10 – 17 found that adolescents who had high levels of conflict with parents and alienation from parents were more likely to use the Internet so as to form close online relationships (Wolak et al., 2003).

Choi and Ross (2006) suggest that young people who have been raised in collectivist, hierarchical, family-focused societies are able to act and socialize independently for the first time through the Internet. They contend that it is possible that the opening up of this “new world” may put
youth living in collectivist societies at higher risk for the development of Internet Addiction. Social networks, particularly Internet use of parents and friends, also predict the Internet connectedness of teenagers (Jung et al., 2005).

Lam et al. (2009), in a study involving 12 – 18 year old adolescents, found that self-reported dissatisfaction with one’s family and recent stressful events are both associated with addiction to the internet. The researchers also reported that students who were very dissatisfied with their family were nearly 2.5 times more likely than those who were satisfied with their family to be addicted to the internet.

Huang et al. (2010) reported that adolescents with Internet Addiction Disorder consistently rated parental rearing behaviors as being over-intrusive, punitive, and lacking in responsiveness. These findings suggest that the influences of parenting style and family function are important factors in the development of Internet dependency.

Research on the linkages between adolescents’ daily Internet use and well-being has provided contrasting findings (Caplan 2003). While some studies found that daily Internet use was associated with lower well-being (e.g., Kraut et al., 1998; Ybarra et al., 2005) other studies found contradicting evidence (e.g., Gross et al., 2002; Kraut et al., 2002).

Kraut et al. (1998) found that using the Internet had a negative influence on psychological well-being and social involvement. The results of research done by Papacharissi and Rubin (2000) about the motives for Internet use showed that life satisfaction is negatively related to Internet dependency. Other analyses showed that an inverse relationship between Internet use and well-being were even linked to using the Internet
for social purposes (Kraut et al., 1998). For example, greater use of the Internet was associated with decrease in psychological well-being. This was confirmed by a longitudinal study among American University students in which a significant negative relation was found between the amount of Internet usage for personal reasons and life satisfaction (Weiser, 2001). In another study, Kraut et al. (2002) found opposite associations in which the authors showed an overall positive effect between Internet uses and communication, social involvement, as well as well-being.

Further, researchers over the last few years have been very interested in whether the Internet is detrimental to one’s psychological health or whether, instead, it might enhance one’s well-being. In the early stages, researchers emphatically argued that greater use of the Internet was associated with negative effects on an individual (Kraut et al., 1998). More recently, studies have found that the Internet, in contrast, can contribute positively to psychological well-being (Shaw and Gant, 2002).

The Internet users who were less satisfied with their lives had greater likelihood of using the Internet (Papacharissi and Rubin, 2000). Ellison et al. (2007) in a study involving undergraduate students, that extensive use of social network sites, was beneficial to gain social capital for those who reported low esteem by helping them to get more information and opportunities for connecting with existing offline contacts, so it increased self esteem. Ellison et al.’s (2007) study supported the “poor get richer” hypothesis that online social networks use is beneficial for those with low life satisfaction at their school by getting more out of their college experience.

Van den Eijnden et al. (2008) found a positive relationship between daily Internet use and subsequent depressive symptomatology. No
relationship was found between participants’ daily Internet use and loneliness. These findings are supported by several cross sectional studies. For instance, Ybarra et al. (2005) found a positive relationship between daily Internet use and feelings of depression. In addition, Weiser (2001) found a negative association between daily Internet use and general wellbeing when the participants’ Internet use had a “social orientation”. In contrast, however, several studies found no relationship between daily Internet use and well-being (Sanders et al. 2000; Wastlund et al. 2001; Gross et al. 2002).

Vas and Gombor (2008) reported that the Internet may be a good tool to fill free time or to pass time. Current studies have shown that people who have higher life satisfaction tend to use the Internet more for information-seeking and social interaction. On the other hand, people who have lower life satisfaction use the Internet for passing time and instead of engaging in social interactions (Papacharissi and Rubin 2000). Students who are happier about their life are motivated more toward other life resources and hence, score lower in general toward motives for Internet use (Vas and Gombor, 2008).

Some researchers did not agree with any link between Internet use and well-being. McKenna and Bargh (1999) found in their early survey that the Internet use was not related to increased levels of loneliness or depression. Several studies also found no associations between the Internet use and measures of adolescents’ well-being (Gross et al., 2002; Gross, 2004).

Studies in the area of perceived social support have also reported significant relationship with Internet Addiction. While some researchers point out that internet proves to be helpful in improving perceptions of social support, others report it has detrimental effects.
Young (1998 a) suggested that those who suffer from Internet Addiction do not experience the same feelings of alienation others feel when spending long periods of time sitting alone. Additionally, the Internet’s interactive capabilities may help the on-line user to feel a sense of connectedness among other users despite being physically alone.

Gustafson et al. (1999) showed changes in social support after 5 months of participation in a multifaceted intervention that included many components in addition to social support. Because there is now evidence that Internet-based interventions can change perceptions of social support, these interventions become suitable vehicles for studying social support as a mediator of health outcomes (Barrera et al., 2002).

Davis (2001) reported that both daily Internet use and Compulsive Internet Use are related to people's social contexts i.e., a lack of social support from one's family members or peers, and/or experiencing social isolation in the peer context may facilitate the development from daily Internet use to Compulsive Internet Use, because the social contacts and reinforcement which are obtained on the Internet may result in an increased desire to maintain a “virtual” social life. When adolescents would develop Compulsive Internet Use, however, they would have little time and energy left to actively maintain social contacts in daily life, and this would increase their risk for the onset of feelings of loneliness, depressive moods, and low self-esteem.

Barrera et al. (2002) reported that Internet-based interactions led to relative gains in support perceptions. It is also remarkable that these effects were achieved over just 3 months with a group of people who were novice users of the Internet.
Leung (2007) reported that the more adolescents and children feel that the Internet can provide them with news and information about the world and help them feel less lonely, more relaxed, and less tense, the more they are confident that social support is always accessible. Similarly, the more they are satisfied with the relationship maintenance functions of the Internet (i.e., they can use the Internet to care about other's feelings, to stay in touch, to show encouragement, to meet new people and feel involved with other people), the more they will perceive different dimensions of social supports to be readily available to them.

Some researchers report that online communication allows for the development of computer-mediated social support (e.g., support via email and chat rooms), which could buffer the negative effects of stressful life circumstances, as do types of non computer-mediated social support (Cotton, 2001; Whang et. al, 2003). Such researches point out that internet usage has a good impact on alleviating stress. The studies suggest that self-disclosure is an important component of emerging adults' feelings of intimacy in friendships and intimate behaviors with friends include "emotional support, trust and loyalty, sharing activities, and offers of instrumental support" (Radmacher and Azmitia, 2006). There is also evidence that support from such intimate relationships may serve as a buffer against stress for college students (Cohen and Hoberman, 1983). Students appear to use technology to obtain social support (LaRose et al., 2001), and greater use of online communication tools such as email and chat room/instant messaging is related to reduced depressive symptoms (Morgan and Cotten, 2003).