RELATED LITERATURE REVIEW

"A literature review is to describe, summarize, evaluate, clarify and/or integrate the content of primary reports."

-Cooper, H. M. (1998)
CHAPTER - II

RELATED LITERATURE REVIEW

2.0 INTRODUCTION

This chapter reviews the related literature for the present study. It discusses the recent Internet usage convention reports, pattern of Internet usage, Internet addiction and Internet pornography. It furthermore discusses influence of Internet use on Social Competence, Emotional Maturity and General Well-being of adolescents.

2.1 CONCEPT OF RELATED LITERATURE REVIEW

Introduction is a gate-way and review of literature is the gate-pass for the research work to be done by a researcher. A literature review is a body of text that aims to review the critical points of current knowledge including substantive findings as well as theoretical and methodological contributions to a particular topic (Literature Review Wikipedia, 2010). A literature review is purely descriptive and secondary source of the literature relevant to a particular field or topic.

Most often associated with academic-oriented literature, such as a thesis, a literature review usually precedes a research proposal and result section. Its ultimate goal is to bring the reader up to date with current literature on a topic and forms the basis for another goal, such as future research that may be needed in the area. A well-structured literature review is characterized by a logical flow of ideas; current and relevant references with consistent, appropriate referencing style; proper use of terminology and an unbiased and comprehensive view of the previous research on the topic (Literature Review Wikipedia, 2010).

It provides a framework for relating new findings to previous findings in the discussion section of a dissertation. Without establishing the state of the previous research, it is impossible to establish how the new research advances the previous research.
Finally, the literature review is a "legitimate and publishable scholarly document" (LeCompte et al., 2003). Apart from the above reasons for writing a review (i.e., proof of knowledge, a publishable document and the identification of a research family), the scientific reasons for conducting a literature review are many. Gall, Borg, and Gall (1996) argue that the literature review plays a significant role in:

• Delimiting the research problem,

• Seeking new lines of inquiry,

• Avoiding fruitless approaches,

• Gaining methodological insights,

• Identifying recommendations for further research, and

• Seeking support for grounded theory.

Thus, the task of related literature review is highly creative and tedious because researcher has to synthesise the available knowledge of the field in a unique way to provide the rationale for his/her study.

The present study has been conducted to find out the perceived influence of Internet use on Social Competence, Emotional Maturity and General Well-being of adolescents' on the basis of Residential Background, Gender, Academic Stream and Frequency of Internet Access. Literature review in the concerned field is of immense importance in locating the research problem. The findings of the previous studies help in solving such problems as what methods, hypotheses and generalisation are to be followed in the present study and how can a study be performed more intelligently and effectively.

The present investigator went through the studies pertaining to her field of research to find out what has been done, what remains to be done and to compare her interpretation of factors with those of the former researchers.

The researcher collected some novel and prime research studies which have been done in India and Abroad on different aspects of Internet use among adolescents. Very few
research studies and recent reports on adults have been included to provide a meaningful base to the present study. The sources of related literature review are theses, dissertations, periodicals, journals, books, specialized dictionaries, educational resource and information centre (ERIC) and Wikipedia. Because the central theme of the present study is Internet, so, investigator collected some research studies from the Internet. The adumbrate of the literature review of perceived influence of Internet use on social competence, emotional maturity and general well-being of adolescents is given in the table 2.0:

Table 2.1: Outline of Related Literature Review

<table>
<thead>
<tr>
<th>S.No</th>
<th>Research Field</th>
<th>No. of Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Recent Reports about Internet Usage Convention</td>
<td>04</td>
</tr>
<tr>
<td>2</td>
<td>Pattern of Internet Usage</td>
<td>38</td>
</tr>
<tr>
<td>3</td>
<td>Internet Addiction</td>
<td>31</td>
</tr>
<tr>
<td>4</td>
<td>Internet Pornography</td>
<td>13</td>
</tr>
<tr>
<td>5</td>
<td>Internet Usage and Social Competence</td>
<td>14</td>
</tr>
<tr>
<td>6</td>
<td>Internet Usage and Emotional Maturity</td>
<td>03</td>
</tr>
<tr>
<td>7</td>
<td>Internet Usage and General Well-being</td>
<td>16</td>
</tr>
</tbody>
</table>

Total No. of Studies 119

2.2 RECENT REPORTS ABOUT INTERNET USAGE CONVENTION

Pew Internet and Life Project report (2010) concluded that people's online news experience is a social, interactive and more popular than newspapers or radio. In digital era, 61% (6 out of 10) Americans get news online. People share links to news stories by e-mail, post articles on Face book and Twitter by discussing the articles on message
boards and other sites. 75% of respondents get news forwarded through e-mail or posts on social networking sites, while 37% of online users get reported news on sites like Facebook and Twitter. 81% search for weather information online followed by national news at 73%, 52% looks for sports news and 47% for entertainment/celebrity news. According to Pew survey, about two-thirds of the study's online news users were younger than 50 and nearly 30% were younger than 30. This report was based on a daily tracking survey of 2,259 adults age 18 or older. A combination of land line and cellular numbers was used in survey. Survey also suggests, social networking sites like Facebook and Twitter have made news a more participatory experience.

Pew Internet Project (2010) conducted a survey on 800 adolescents between ages 12 and 17 revealed that 93% teens go online. The most popular activity for the age group (78%) is online games. Communicating by email is not as popular with teens, however, only 73% of teens use email and equal number (73%) of teens use social networking sites. 67% send Instant Messages, 62% get news online, 57% of teens watch videos, 48% buy products and 31% look for health information. Only 14% of teenagers worked on their own blogs in 2009. Additionally, teens do not use Twitter in large numbers – just 8% of online teens use Twitter, a percentage similar to the number (8%) who use virtual worlds.

According to an Australian study done by Coker (2009), 70% of people who use the Internet at work engage in Workplace Internet Leisure Browsing (WILB) activities. Among the most popular WILB activities were searching for information about products, reading online news sites, playing online games and watching videos on YouTube. Study looked at people who browsed in moderation, or were on the Internet for less than 20% of their total time in the office. The study concluded that people who use the Internet for personal reasons at work are about 9% more productive as compared to those who do not. Study author Brent Coker also said, “Those who behave with Internet addiction tendencies will have a lower productivity than those without.”

Pew Internet and American Life Project (2005) closed that the vast majority of teens in the United States, 87% of those aged 12 to 17, now use the Internet in a greater variety of ways than they did in 2000. There are now approximately 11 million (51%) teens that go online daily, compared to about 7 million (42%) in 2000. 89% teens send and read email.
research studies and recent reports on adults have been included to provide a meaningful base to the present study. The sources of related literature review are theses, dissertations, periodicals, journals, books, specialized dictionaries, educational resource and information centre (ERIC) and Wikipedia. Because the central theme of the present study is Internet, so, investigator collected some research studies from the Internet. The adumbrate of the literature review of perceived influence of Internet use on social competence, emotional maturity and general well-being of adolescents is given in the table 2.0:

Table 2.1: Outline of Related Literature Review

<table>
<thead>
<tr>
<th>S.No</th>
<th>Research Field</th>
<th>No. of Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Recent Reports about Internet Usage Convention</td>
<td>04</td>
</tr>
<tr>
<td>2.</td>
<td>Pattern of Internet Usage</td>
<td>38</td>
</tr>
<tr>
<td>3.</td>
<td>Internet Addiction</td>
<td>31</td>
</tr>
<tr>
<td>4.</td>
<td>Internet Pornography</td>
<td>13</td>
</tr>
<tr>
<td>5.</td>
<td>Internet Usage and Social Competence</td>
<td>14</td>
</tr>
<tr>
<td>6.</td>
<td>Internet Usage and Emotional Maturity</td>
<td>03</td>
</tr>
<tr>
<td>7.</td>
<td>Internet Usage and General Well-being</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td><strong>Total No. of Studies</strong></td>
<td><strong>119</strong></td>
</tr>
</tbody>
</table>

2.2 RECENT REPORTS ABOUT INTERNET USAGE CONVENTION

Pew Internet and Life Project report (2010) concluded that people’s online news experience is a social, interactive and more popular than newspapers or radio. In digital era, 61% (6 out of 10) Americans get news online. People share links to news stories by e-mail, post articles on Face book and Twitter by discussing the articles on message
boards and other sites. 75% of respondents get news forwarded through e-mail or posts on social networking sites, while 37% of online users get reported news on sites like Facebook and Twitter. 81% search for weather information online followed by national news at 73%, 52% looks for sports news and 47% for entertainment/celebrity news. According to Pew survey, about two-thirds of the study’s online news users were younger than 50 and nearly 30% were younger than 30. This report was based on a daily tracking survey of 2,259 adults age 18 or older. A combination of land line and cellular numbers was used in survey. Survey also suggests, social networking sites like Facebook and Twitter have made news a more participatory experience.

Pew Internet Project (2010) conducted a survey on 800 adolescents between ages 12 and 17 revealed that 93% teens go online. The most popular activity for the age group (78%) is online games. Communicating by email is not as popular with teens, however, only 73% of teens use email and equal number (73%) of teens use social networking sites. 67% send Instant Messages, 62% get news online, 57% of teens watch videos, 48% buy products and 31% look for health information. Only 14% of teenagers worked on their own blogs in 2009. Additionally, teens do not use Twitter in large numbers – just 8% of online teens use Twitter, a percentage similar to the number (8%) who use virtual worlds.

According to an Australian study done by Coker (2009), 70% of people who use the Internet at work engage in Workplace Internet Leisure Browsing (WILB) activities. Among the most popular WILB activities were searching for information about products, reading online news sites, playing online games and watching videos on YouTube. Study looked at people who browsed in moderation, or were on the Internet for less than 20% of their total time in the office. The study concluded that people who use the Internet for personal reasons at work are about 9% more productive as compared to those who do not. Study author Brent Coker also said, “Those who behave with Internet addiction tendencies will have a lower productivity than those without.”

Pew Internet and American Life Project (2005) closed that the vast majority of teens in the United States, 87% of those aged 12 to 17, now use the Internet in a greater variety of ways than they did in 2000. There are now approximately 11 million (51%) teens that go online daily, compared to about 7 million (42%) in 2000. 89% teens send and read email.
81% of teen Internet users play games online. 76% get news online. 75% of online teens use instant messaging and 48% teens who use instant messaging exchange IMs at least every day. 43% have made purchase online and 31% use the Internet to get health information. Still, despite this momentum, 13% of American teenagers or about 3 Million people still do not use the Internet. About half (47%) of teens who say they do not go online have been online before but have since dropped off. Those teens who remain offline are clearly defined by lower levels of income and limited access to technology. They are also disproportionately likely to be African-American. On the opposite end of the spectrum, nearly all teens in households earning more than $75,000 per year are online, most of them with high-speed connections.

2.3 PATTERN OF INTERNET USAGE

The Internet is becoming increasingly influential for many people. It seems that there is no aspect of life that use the Internet does not touch (Erdogan, 2008). For many adolescents the Internet is the main source of information and entertainment, and is an important tool for communication (Lenhart, Madden and Hitlin, 2005; Mesch and Talmud, 2006; Livingstone and Helsper, 2007). They reportedly prefer being online to other media, including the telephone, TV, and radio (Louge, 2006). Many adolescents become so involved with using the Internet that they miss class or skip exams, even when they know they might fail in their classes (Chou, 2001; Tsai and Lin, 2003).

The increasing pervasiveness of the Internet in the lives of adolescents is by now well established, but there remains a dearth of research on what exactly youth are doing when they are online, with whom, and why, and, moreover, how these aspects of Internet use may be related to adolescent’s pattern of Internet usage. The Table 2.2 depicts related literature review of pattern of Internet usage among adolescents:

Table 2.2: Literature Review of Pattern of Internet Usage Research Studies

<table>
<thead>
<tr>
<th>Investigator</th>
<th>Problem Statement</th>
<th>Sample</th>
<th>Research Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erdur-Baker</td>
<td>Cyberbullying</td>
<td>276</td>
<td>The results revealed that 32 % of the</td>
</tr>
</tbody>
</table>
students were victims of both cyber and traditional bullying, while 26% of the students bullied others in both cyber and physical environments. Compared to female students, male students were more likely to be bullies and victims in both physical and cyber-environments. The multivariate statistical analysis indicated that cyber and traditional bullying were related for male students but not for female students. Moreover, the multiple regression analysis revealed that both frequent and risky usage of Internet account for a significant variance of cyberbullying but their contributions differ based on genders.

The findings of the study showed that low self-esteem and low feelings of loneliness predict a larger chance to meet online contacts. For depression and social anxiety only cross-sectional relations were found, indicating depressed feelings that are related to a larger chance to meet online contacts, but this is no causal relationship. In addition, negative longitudinal relations were found between parental rules about the content of Internet use, parental monitoring and the quality of
communication about Internet use on meeting online contacts. Cross-sectionally, positive relations were found between the parental rules about the duration of Internet use and the frequency of the communication about Internet use. It is suggested that when parents want to prevent their children from meeting online contacts, it would be wise to impose strict rules and monitor their children’s Internet use and it required high quality communication.

Koovakkai and Muhammed (2010) conducted a study on the Kerala State Locale Factor of India (Rural=75 and Urban=75) on Internet Abuse among the Adolescents. The analysis revealed that the habit of changing/manipulating information on the Internet, habit of downloading vulgar pictures/pornographic items, plagiarism and tendency of sending unwanted messages are comparatively high among the adolescents in rural areas. Comparatively higher percentage of the adolescents in rural areas was found giving false information on the Internet as fun. The rural adolescents were behind the urban adolescents in understanding that giving false information on the Internet is unethical and a criminal offence. As compared to the urban adolescents, the Internet abuse was
more among the rural adolescents. This may be because of their ignorance about the seriousness of the matter. With the rustic innocence they found it a fun, and this calls for proper education and awareness programmes to the adolescents especially in rural areas. The study suggests that parents' involvement in guiding the young generation is also important.

Path analysis showed the direct influence of age and socioeconomic status on young people's access, the direct influence of age and access on their use of online opportunities, and the direct influence of gender on online risks. The importance of online skills was evident in so far as online access, use and skills were found to mediate relations between demographic variables and young people's experience of online opportunities and risks. Further, an unexpected positive relationship between online opportunities and risks was found, with implications for policy interventions aimed at reducing the risks of Internet use.

Results suggested that youths who had been better adjusted at ages 13-14
Twymatt et al. (2010) and Behaviour Problems Predict Young Adults' Communication on Social Networking Websites years were more likely to be using social networking web pages at ages 20-22 years, after statistically controlling for age, gender, ethnicity, and parental income. Overall, youths' patterns of peer relationships, friendship quality, and behavioural adjustment at ages 13-14 years and at ages 20-22 years predicted similar qualities of interaction and problem behaviour on their social networking websites at ages 20-22 years. Findings are consistent with developmental theory asserting that youths display cross-situational continuity in their social behaviours and suggest that the conceptualization of continuity may be extended into the online domain.

Comparing Children and Adolescents Engaged in Cyberbullying to Matched Peers The typical activities and experiences with traditional bullying and cyberbullying of 52 children aged 11 to 17 were compared to those of 52 matched controls. Children exposed to cyberbullying, whether as a cyberbully, cybervictim, or both (bully/victim), spent more time on computer-based social activities. Nearly two thirds of cyberbully/victims were also traditional bully/victims. While
preliminary, results suggest that efforts to prevent cyberbullying may need to focus on patterns of Internet use, amount and type of social activities, and exposure to traditional bullying as risk factors for engaging in cyberbullying.

*Clarke (2009)*

Early Adolescents' Use of Social Networking Sites to Maintain Friendship and Explore Identity: Implications for Policy

Children The ethnographic study viewed early adolescence as a key stage in which emotional development can affect children's level of wellbeing, and friendship is especially important as they turn from their family to the outside world. In playing with identity, building relationships, maintaining friendships and turning to each other for encouragement and companionship, children gain 'digital agency'. This process may be beneficial and an important source of support and comfort to the young adolescent who is experiencing transition both cognitively, physically, and through change of school. It is suggested that policy decisions need to be based on a sound understanding of how children use digital technology, raising awareness of the benefits as well as the potential risks, encouraging peer communication and support, and
Lei, Zhou and Wang (2009) reported significant differences in online activities between American students and Chinese students. Results confirmed significant differences in online activities between American students and Chinese students were found in school, but not at home. There were significant school/home differences in Internet use for American students, but not much school/home difference was found for Chinese students. Salient similarities between American students and Chinese students were found in terms of the most popular activities they engaged in inline and Internet use in teaching and learning in school had some influence on students’ interest in learning specific subjects. Further analysis suggests that different pedagogical practices in these two cultural contexts led to the different uses of the Internet in school between American students and Chinese students.

| Milani, Osualdella and Blasio (2009) | Quality of Interpersonal Relationships and Problematic Internet Use in 98 Italian adolescents aged 14 to 19 | The cross-sectional approach revealed that 36.7% adolescents showed signs of Problematic Internet Use (PIU). These adolescents use the Internet for many hours per week; most utilize dysfunctional coping strategies and... |
Adolescence show worse interpersonal relations than peers who did not show signs of PIU. No gender difference was found (t-test). Pearson's correlation confirmed that the quality of interpersonal relationships was negatively correlated with the level of PIU, which in turn positively correlated both with the amount of time spent on the Internet and with the score for the avoidance coping strategy.

Results indicated that frequency of Internet use, parental rules, type of personal information given out, frequency of chatting, inappropriate websites have been visited, and type of Internet advice heard were found to be predictors of adolescents' development. Results showed a high tendency of students to spend more time online, giving up their social or family duties. Boys were significantly more likely than girls to be pathological Internet users and girls were more likely than boys to have no symptoms. The study concluded a significant positive correlation between measures of Internet use and time spent online for the Internet. Implications for and development as impacted by social
support networks are discussed in the study. These results suggest that the Internet may be an important aid for teenager as they searched for a young identity.


The main findings of the study were:

(a) Internet access remains at a very low level and is insufficiently used for school purposes,
(b) younger students use it more frequently than older ones for information seeking concerning school work,
(c) the Internet is an indicator of social and economic stratification since most young people with access to it come from family environments with a higher educational and socioeconomic background and live in urban and semi urban areas,
(d) boys make up the majority of systematic users, mainly for entertainment purposes,
(e) the Internet is a place and space safeguarding the “privacy” of young people with the majority of them preferring to surf alone,
(f) parental supervision and monitoring seems to be absent largely from the relationship between youth and the Internet, and
(g) in general, the frequency and type of Internet use are not significantly
affected by students' places of residence or the educational level and profession of their parents.

Multiple Regression analysis revealed that Turkish adolescents' loneliness was associated with both increased Internet usage and Internet attitudes. Multivariate Analysis of Variance found adolescents who reported excessive uses of the Internet for web surfing, instant messaging, emailing and online games had a significantly higher mean score of loneliness than those who did not. In addition, male adolescents reported a higher frequency of Internet usage and more loneliness than females. Male adolescents reported a higher frequency of web surfing and online games than females. However, females reported a higher frequency of e-mailing. Turkish adolescents reported average time per week spent on the Internet as 6.84 hours.

The study examined how the social and cultural resources of young people relate to their usage behaviour within the informal space of the Internet and what options are available to counter these digital inequalities in terms of
The Effect of Internet Use on Adolescents Political Participation (16 Year-olds) in Belgium

Quintelier and Vissers (2008)

The study investigated young people's behaviour. Results confirmed that time on the Internet do not have an effect on the propensity to participate in public life. Some online activities are clearly and significantly associated with offline political participation. The investigators introduce a distinction between time spent on the Internet (time-replacement hypothesis) and various activities performed online.

Incidence and Correlates of adolescents Internet Usage in Northern Cyprus Adolescents in North Cyprus

Bayraktar and Gun (2007)

Results showed that the Internet was used primarily by male students. Adolescents used the Internet generally for entertainment and communication. It was found that adolescents generally introduce themselves differently while chatting. Mostly violent games were played on the Internet and playing these games was related to anti-social aggression and aggression toward the self.

Bayraktar and Gun (2007) encounter aging online informative and educative activities. The results showed that even among young user, who are supposedly the 'Internet-savvy' generation, significant and enduring inequalities of outcome persist—especially in terms of different indicators of educational background.
Research findings indicated that 1.1% of the students who used the Internet were pathological Internet users. These users visited significantly more chat sites, mp3 sites, pornographic sites, and shopping sites than other users. Also, it was found that students' grade point average (GPA) decreased when pathological Internet usage increased.

Chan and Fang (2007) Use of the 405 Chinese Internet and persons traditional media aged 15 to among young 24 in Hong Kong people Kong

It was found that Internet plays a prominent role among the young people in Hong Kong. A majority of respondents aged 15 to 24 spent one to three hours per day in the Internet. The main reasons for Internet usage were for listening to music and for fun. The Internet was the preferred media choice for information driven activities. Magazines retained importance for entertainment and shopping activities while the television retained importance for news and current affairs. Most of the respondents found useful websites through search engines. Interpersonal information sources gave way to the Internet for obtaining information about sensitive issues. This paper offers an updated map of the Hong Kong young people's media usage,
especially the use of Internet. It provides guidelines for marketers to reach them in a cost effective manner.

Ciro (2007) Exploring 1097th Results of hierarchical regression analysis indicated performance on one measure of online reading comprehension ability accounted for a significant amount of variance in performance on a second measure of online reading comprehension ability over and above offline reading comprehension ability and a measure of topic-specific knowledge. Furthermore, there was an interaction between prior knowledge and online reading comprehension ability, such that higher levels of online reading comprehension skills may help compensate for lower levels of topic and task specific prior knowledge when adolescents complete online reading tasks requiring them to locate, critically evaluate, synthesize, and communicate information using the Internet. Findings from the study may open new possibilities for theory, research, and practice to support efforts that address the needs of diverse adolescent readers in new Internet reading contexts.
The result revealed that alienation positively predicted pathological Internet use (PIU) directly and also indirectly mediated by leisure services preference. Trust predicted PIU negatively. The results of the study help parents and educators in understanding adolescents' more appropriate Internet use.

Findings show that older teens engage in more online communication activities than do younger children and so encounter more communication risks. Although girls communicate more on the internet, this seems not to put them more at risk. It was found that children's offline social psychological characteristics, particularly their levels of life satisfaction and risk-taking, influence their online communication, with different online communication activities being predicted by different patterns of off and online characteristics. There are weak indications that, in families which have a more conversational style of communication, teens may take fewer risks online, including a lower likelihood of meeting online friends'
offline. Multiple regression analyses show that those children and teens who are less satisfied with their lives and who have become more frequent and skilled internet users are more likely to value the internet as a communicative environment in which they feel more confident than they do offline, particularly in relation to the potential for anonymous communication. Since this in turn leads some into risky activities, the implications for research and policy are discussed.

Jackson et al. (2006) Results of regression analysis indicated that children who used the Internet more had higher scores on standardized tests of reading achievement and higher grade point averages 6 months, 1 year, and 16 months later than did children who used it less. Older children used the Internet more than did younger children, but age have no effect on the nature or the academic performance benefits of Internet use. Implications for the digital "use" divide are discussed. The findings suggest that the implications of the “digital divide” in Internet use may be more serious than was initially believed.
Multivariate analyses showed that adolescents' unequal access to socio-economic and cognitive resources shaped their use of the Internet as information and an entertainment medium. Adolescents with greater socio-economic and cognitive resources used the Internet more frequently for information and less often for entertainment than their peers with fewer socio-economic and cognitive resources. A similar pattern regarding adolescents' tendency towards ubiquitous Internetting was found. The findings tentatively suggest that the emerging digital differentiation approach describes current digital divide phenomena more adequately than the disappearing digital divide approach.

The results confirmed that early adolescents were most prone to talk with strangers on the Internet. Introversion was not related to adolescents' tendency to talk with strangers. The motives of entertainment, meeting new people, and social compensation increased adolescents' online communication with strangers. Adolescents' online
communication with strangers did not enhance their probability to establish online romantic relationship.

Yabrra et al. (2006)

It was found that 45% (223) respondents reported ever having used the Internet. Among Internet users, searching for HIV/AIDS information on a computer or online was significantly related to using the Internet weekly, emailing, visiting chat rooms, and playing online games. In contrast, going online at school was inversely related to looking for HIV/AIDS information via technology. If Internet access were free, 66% (330) reported that they would search for information about HIV/AIDS prevention online. Both the desire to use and the actual use of, the Internet to seek sexual health and HIV/AIDS information is high among secondary school students in Mbarara. The study concluded that Internet may be a promising strategy to deliver low-cost HIV/AIDS risk reduction interventions in resource-limited settings with expanding Internet access.

Yan (2006)

Descriptive Statistics and Path Analysis found that none of the three
Adolescents’ and Middle School Students of New England Internet use factors, duration of Internet use, frequency of Internet use, or informal Internet classes attended, had an effect on technical understanding of the Internet. In contrast, frequency of Internet use and informal Internet classes had small but significant effects on social understanding. Many children had 4-5 years of online experiences, used the Internet daily or weekly, and had attended at least one informal Internet class. This finding differs from the finding of the previous study (Yan, 2005). In that study, the aggregated variable of duration and frequency had a small but significant impact on technical but not social understanding. The variable of informal classes is a new addition to this study. It was found to have a slightly larger effect on social understanding than frequency of Internet use, with no effect on technical understanding.

It was found that more pupils use the Internet outside school (at home, in Internet cafés) than within school and that boys have more opportunities to access the Internet. Both inside and outside school, pupils’ favourite activities...
among Greek High School Pupils Inside and Outside School

Internet activities relate to information gathering for personal purposes and to entertainment. Boys use the Internet for entertainment and Web page creation more than girls do, whereas no other significant gender differences were noted regarding pupils' other Internet activities, such as communication via e-mail, chat or videoconferencing, Web surfing and information search for personal or school purposes.

**Griffiths, Davies and Chappell (2004)**

Online 540 Online Results showed that adolescent gamers were significantly more likely to be male, significantly less likely to gender swap their characters, and significantly more likely to sacrifice their education or work. In relation to favourite aspects of game play, the biggest difference between the groups was that significantly more adolescents than adults claimed their favourite aspect of playing was violence. Results also showed that in general, the younger the player, the longer they spent each week playing.

**Prezza, Pacilli and Dinelli**

Loneliness and 331 Italian The results confirmed that those with a higher socio-economic status use Internet more; The computer is used more by those who frequently belongs

The study revealed that there was a strong relationship between avoidant coping strategies offline and entertainment Internet use. Further, study indicated that adolescents who considered communication as the most important use of the Internet also coped with loneliness through emotional expression and social coping. Results suggest that online and offline coping behaviours are strongly related especially if they are avoidant.

Vaizoglu et al. (2004) Internet Use among High School Students in Ankara,

It was found that 86.5% of the students used the Internet at home. Significant differences between boys and girls were found in terms of hours spent on
Turkey the Internet and purpose of use, and changes over time in hours spent. Daily and weekly Internet use is more frequent among boys than girls. Boys visit cyber-sex sites more than girls. Those whose weekly Internet use was 4 hours or more were found to have been using the Internet for 36 months or more; they had irregular eating habits; and their relatives complained more frequently on the amount of time they spent on the Internet.

The study revealed that children with a television set in their rooms went to bed significantly later on weekdays, weekend days and got up significantly later on weekend days and reported overall levels of being tired. Children with a gaming computer in their rooms went to bed significantly later on weekdays and spent significantly less time in bed and reported higher levels of tiredness. Further, findings indicate that children who spent more time using the Internet went to bed significantly later during the week and during the weekends. They got up later on weekend days. They spent less time in bed during the week and reported higher levels of tiredness. Going out
was also significantly related to sleeping later and less. The study concludes that computer game playing and Internet use are related to sleep behaviour as well.

**Ghany (2003)** The Effect of 400 Using the Adolescents Internet for the Youth

The study revealed that 74% respondents considered more dangers of using the Internet which effects the youth negatively i.e. visiting pornographic sites, chatting with strangers, loading songs and music, and joining internationally suspicious groups. The study indicates that the main use of the Internet is for entertainment purposes, followed by cultural and sporting interests.

**Grima and Bellia (2002)** Internet Use 215 Maltese Adolescents among Maltese adolescents in State junior Lyceums

The study has demonstrated the extensive use that is made of the Internet or communication purpose, and that males are more concerned with technical aspects than females are, who tend to be more concerned with social issues. This study showed quite aware of the advantages and the disadvantages of using the Internet and of the risk among adolescents’ and of the risk that the Internet might pose to them. The study also highlights the need for adults and educators to carefully monitor and guide children
Lee and Kuo (2002) noted the Internet and Displacement Effect: Children's Media Use and Activities in Singapore. Results showed that an increase in Students Internet use depressed television viewing, but stimulated newspaper reading, radio listening, and socializing with friends. However, it had no significant impact on physical activities and interaction with family members. Change in the perception of the importance of the Internet as an information source was also found to be related to the perceived importance of other media sources.

Lin and Tsai (2002) examined Sensation Seeking and Internet Dependence of Taiwanese High School Adolescents. The findings of the study indicated that Internet dependence spent more time on-line than non-dependents. While Internet dependents perceived significantly more negative Internet influences on daily routines, school performance and parental relation than non-dependents. Both groups viewed Internet use as enhancing peer relations. Internet dependents scored significantly higher on overall sensation seeking and disinhibition than Internet non-dependents. However, both groups did not differ in the life experience seeking subscale and thrill and adventure seeking.
It was found that 72.6% respondents use the Internet. The study revealed that the Internet is primarily a source of information for Internet users, accounting for about 91.5% of Internet usage, a source of amusement and whiling away the time. These two uses accounts for about 88.7%. Communicating through e-mail comes in the third rank with 59.3%. The study concludes that there is no statistically significant difference between males and females in this respect.
offline contact by mail or telephone (70%), or involved face-to-face meetings (41%). Few youths reported bad experiences with online friends.

Lenhart et al. (2001) Teenage Life 754 Online Youth Aged 12 to 17 Instant Message Generation and the Internet's Impact on Friendships and Family Relationships The results confirmed that 55% of parents with online teens think that the Internet is a good thing for their own children, only 6% think it is a bad thing; 55% of parents believe that it is essential for today's children to learn how to use the Internet in order to be successful and another 40% believe it is important. The report shows that parents and their children often do not agree about how their families address issues related to the Internet.

Mitra and Rana (2001) Children and the Internet: Children in New Delhi Experiments with minimally Invasive Education in India It is observed that children seem to understand and use the technology fluently. Language and formal education do not seem to make any significant difference. These children had a very limited understanding of the English alphabet and could not speak the language. MS paint and Internet explorer were the most commonly used application. Children invented their own vocabulary to define terms on the computer, e.g. “sui” for the cursor, “channels” for websites and
Thus, Internet is a medium with unique qualities like anonymity which may make cyberspace a particularly intriguing place for young people, who tend to be both socially awkward and eager to connect with others. It is just one of many technological advances to which adults are adjusting and adolescents are growing up (Wolak, Mitchell and Finkelhor, 2002).

A glance at table 2.2 revealed that adolescents use the Internet for making connections and maintaining relationship with the people (Clark, 2009; Lenhart, 2001). The communication applications of the Internet, such as e-mail, instant messaging, blogs, and chat rooms have entrenched themselves in the lives of adolescents (Astanidou and Menexes, 2010; Clark, 2009; Ghany, 2003; Lenhart et al., 2001; Tayeeh, 2002; Wolak, Mitchell and Finkelhor, 2002) and explored typical adolescent issues such as sexuality, identity, and partner selection (Clark, 2009; Erdogan, 2008; Peter and Valkenburg, 2005).

It is widely known that the average amount of time spent on the Internet is rapidly increasing, and that the starting age of Internet users is steadily decreasing (Vaizoglu et al., 2004; van den Bulck, 2004; Yan, 2006). As time moves forward, the Internet is becoming a larger factor in the lives of people at progressively younger ages. Thus, parents, psychologists, educators, technology creators and lawmakers must become aware of the potential risks and rewards of this phenomenon (Cooper, 2003 cited in Erdogan, 2008).

### 2.4 INTERNET ADDICTION

The concept of addiction, though traditionally used to describe a physical dependence on a substance (Holden, 2001), has been applied to excessive use of the Internet (Yellowlees and Marks, 2007). A variety of terms have been used to describe this including "Internet addiction" (Bai, Lin, and Chen, 2001; Mitchell, 2000; Shapira, Goldsmith, Keck, Khosla, and McElroy, 2000; Young, 1998), "pathological Internet use" (Davis, 2001), and "problematic Internet use" (Davis, Flett, and Besser, 2002). Researchers have described a syndrome of intense preoccupation with using the Internet (Chou, 2001; Treuer, Fabian, and Furedi, 2001), excessive amounts of time spent online, compulsive use of the
Internet, difficulty in managing the time spent on the Internet, feeling that the world outside of the Internet is boring, becoming irritated if disturbed while online, decreased social interaction with "real" people (Kraut et al., 1998), and increased loneliness and depression (Nalwa and Anand, 2003; Whang, Lee, and Chang, 2003 cited in Younglees and Marks, 2007).

Some Internet researchers have hypothesized that students may be at the highest risk for developing problematic Internet use (Nalwa and Anand, 2003), in part because for many students, online access is free, fast, and available all the time (Younglees and Marks, 2007). So, research in this area is strongly recommended. At present, a lot of researches are carried out on Internet addiction. Investigator collected 31 quality researches onwards 2003 to till date and tried to present the literature review in systematic form. Table 2.3 depicts related literature review of Internet addiction.

Table 2.3: Literature Review of Internet Addiction Research Studies

<table>
<thead>
<tr>
<th>Investigator</th>
<th>Problem Statement</th>
<th>Sample</th>
<th>Research Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kim et al. (2010)</td>
<td>The Effects of Internet Addiction on the Lifestyle and Dietary Behaviour of Korean Adolescents</td>
<td>853 Korean Junior High School Students</td>
<td>It was found that high-risk Internet users drank and smoked more and had a poorer quality diet and higher frequency of meal skipping than no risk Internet users. High-risk Internet users reported more irregular sleep patterns and more episodes of sleep disturbance than no risk Internet users. The results of the study suggest that children should be educated as to what a balanced diet and optimum physical activity routine is to remain healthy and grow. Furthermore, the government should take an active</td>
</tr>
</tbody>
</table>
role in designing and evaluating Internet addiction-related health intervention strategies. Close attention should be paid to students at risk of Internet addiction, as well as students at low risk to prevent them from becoming addicted to the Internet.

| Pathological Internet Use Linked to Teen Depression | Lam (2010) | 1,041 Chinese Teens with an Average Age of 15 | Results confirmed that at the beginning of the study, 62 teens (6.2%) were classified as having moderately pathological use of the Internet (based upon a survey designed to identify pathological usage patterns), while 2 (0.2%) were at severe risk. After nine months, the teens were assessed for anxiety and depression. Eight (0.2%) had significant anxiety while 87 (8.4%) had developed depression. Those who had been identified as having pathological Internet use were at about two and half times more risk of having developed depression than those who had not exhibited pathological use. No relationship was observed between pathological Internet use and anxiety, however. The result suggests that young people who are initially free of mental health...
Sethi, Campbell and Ellis (2010) University effective in treating symptoms of depression and anxiety compared to standalone online or face-to-face therapy. Post intervention scores for online therapy show significantly decreased anxiety, distress and frequency of automatic negative thoughts, compared to control participants. The study concluded that adolescents with mild to moderate depression and/or anxiety can benefit from computerised therapy that is provided in conjunction with face-to-face therapy. The study also suggests that for those who are unable to access face-to-face therapy – such as those who are physically disabled, or for communities in which there is stigma problems but use the Internet pathologically could develop depression as a consequence. A screening program for pathological use of the Internet could be considered in all high schools to identify individuals at risk for counselling and treatment.
Results showed that the proportions of boys who were classified as Internet addicts and possible Internet addicts were 2.5% and 53.7%, respectively. For girls, the corresponding proportions were 1.9% and 38.9%, respectively. The prevalence of Excessive Day Sleep (EDS) was 11.1% (boys, 11.1%; girls, 11.1%). When Internet addicts were compared with non-addicts, they consisted of more boys, drank alcohol more, and considered their own health condition as poor. But smoking was not related with Internet addiction. The prevalence rate of EDS for Internet addicts was 37.7%, whereas that for possible Internet addicts and non-addicts was 13.9% and 7.4%, respectively. With adjustment for duration of Internet use, duration of sleep time, age, gender, smoking, taking painkillers

| Choi et al. (2009) | Internet Overuse and Excessive Daytime Sleepiness in Adolescents | 2336 High School Students in South Korea | attached to seeking help — computerised therapy may be a viable option. This is an important finding, especially in light of current capacity-to-treat and accessibility of problems faced in the treatment of adolescent depression and anxiety. |
due to headache, insomnia symptoms, witnessed apnoea, and nightmares, the odds of EDS were 5.32-fold greater in Internet addicts and 1.9-fold greater in possible Internet addicts compared to non-addicts. The study suggests that clinicians should consider examining Internet addiction in adolescent cases of EDS.

<table>
<thead>
<tr>
<th><strong>Gong et al. (2009)</strong></th>
<th>Adolescent Addictive Internet Use and Drug Abuse in Wuhan, China</th>
<th><strong>Huang and Leung (2009)</strong></th>
<th>Instant Messaging Addiction among Teenagers in China</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3018</strong> Students</td>
<td>Result confirmed that the prevalence rate of Internet addiction and Drug Use (DU) are 5% and 4%, respectively. Adolescent DU and intention of DU were significantly predicted by Addictive Internet Use (AIU), which is mediated by Pro-Drug Attitude (PDA), Anti-Drug Attitude (ADA), and perceived social norm of DU. These findings contribute to the theoretical and managerial understanding of the role of AIU behaviours on adolescent DU. It suggests that prevention education of DU should be strengthened among young Internet users.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>95.8%</strong> IM participants and <strong>9.8%</strong> IM addicts in China</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor analysis identified four major</td>
<td><strong>330</strong> The study revealed that 95.8% of participants use IM, and 9.8% of them can be classified as IM addicts.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Teenagers in China: Shyness, Alienation, and Academic Performance Decrement

IM addiction symptoms among teenagers: preoccupation with IM, loss of relationship due to overuse, loss of control, and escape. Results also showed that shyness and alienation from family, peers, and school are significantly and positively associated with levels of IM addiction. Regression analysis showed both the level of IM use and level of IM addiction are significantly linked to teenagers’ academic performance decrement.

The findings showed that depression, attention-deficit/hyperactivity disorder, social phobia, and hostility were found to predict the occurrence of Internet addiction in the 2-year follow-up, and hostility and attention-deficit/hyperactivity disorder were the most significant predictors of Internet addiction in male and female adolescents, respectively. These results suggest that attention-deficit/hyperactivity disorder, hostility, depression, and social phobia should be detected early on and intervention carried out to prevent Internet addiction in adolescents. Also, sex differences in...
psychiatric comorbidity should be taken into consideration when developing prevention and intervention strategies for Internet addiction.

Ko et al. (2009) The Associations Between Aggressive Behaviours and Internet Addiction and Online Activities in Adolescents

Result demonstrated that after controlling for the effects of shared associated factors and watching violent TV programs, adolescents with Internet addiction were more likely to have aggressive behaviours during the previous year. The association was more significant among adolescents in junior high schools than in senior high/vocational schools. Online chatting, adult sex web viewing, online gaming, online gambling, and bulletin board system were associated with aggressive behaviours. The results suggest that preventive programs for aggressive behaviours should pay attention and conducted among Internet addict adolescents.

Lam et al. (2009) Factors Associated with Adolescents in Internet Addiction among Guangzhou City of Southeast

The study classified normal (89.2%), moderate (10.2%) and severely addicted (0.6%) Internet users. Multivariate logistic regression analyses found a 50% increased odds for males to be addicted to the
Adolescents in China Internet when compared to females. Other potential risk factors included drinking behaviour, family dissatisfaction, and experience of recent stressful events. Stress-related variables were associated with Internet addiction among adolescents as they are also related to other addictions. It is suggested that clinicians need to be aware of potential comorbidities of other problems such as stress and family dissatisfaction among adolescent Internet addiction patients.

Lin et al. (2009) The Effects of 1289 Parental Adolescents Monitoring and in Taiwan Leisure Boredom on Adolescents’ Internet Addiction Results showed that leisure boredom, involvement in Internet and social activities increase the probability of Internet addiction; however, family and outdoor activities along with participative and supportive parental monitoring decrease these tendencies. Older adolescents appear to be more dependent on the Internet than younger adolescents. Demographic variables such as age and gender were not main factors in explaining adolescents' Internet addiction. Overall evidence suggests that parental monitoring is a major inhibitor of Internet addiction. Thus,
adolescents should be supervised in their daily routines and encouraged to participate in family and outdoor activities. In addition, adolescents should develop a positive attitude toward leisure and the skills to prevent overdependence on online relationships with the assistance of parents.

**Park et al. (2009)**

Prevalence of Internet Addiction and School Correlations with Family Seoul Factors among South Korean Adolescents

The study revealed that 10.7% adolescents considered at high risk for Internet addiction and in need of further assessment and intervention. Parenting attitudes, family cohesion, and family violence exposure were associated with Internet addiction. These findings indicate that family play an important role in preventing Internet addiction and must be considered when programs are developed to minimize excessive Internet usage by high-risk adolescents.

**Seo et al. (2009)**

Internet Addiction and Interpersonal Problems in Korean Adolescents

The cross-sectional survey found that the 547 (80.9%) participants were identified as general users. 108 (16%) were potential risk users and 21 (3.1%) were high-risk users. There were statistically significant positive correlations between Internet
addiction and interpersonal problems. There were significant positive correlations between Internet addiction and hours spent playing games. Internet addicted adolescents also had more interpersonal problems. The study suggests that it is important to raise awareness about Internet addiction, and close attention must be paid not only to students at risk of Internet addiction but also to students at low risk to prevent students from becoming addicted to the Internet.

Tsitsika et al. (2009) Internet Use and Misuse: A Multivariate Regression Analysis of the Predictive Factors of Internet Use among Greek Adolescents

The multivariate regression analysis revealed that the most significant predictor of overall Internet use included accessing the Internet via one's own home portal and for the purpose of social interaction. Internet access via the school environment was a significant deterrent among low (1-3 h/week) Internet users, while access via Internet cafes was a significant predictor for high (11-20 h/week) Internet users. Moreover, accessing the Internet for the purpose of game playing was the most significant predictor for excessive (> 20 h/week) Internet use. The
prevalence of borderline Internet use among the study population was 12.8%, while 1.00% reported addictive Internet use. The study concluded that excessive Internet use is predicted solely by the location of Internet access (own home portal) and the scope of Internet use (i.e., sites relating to socialization and game playing) and may lead to Internet addiction, particularly among male adolescents.

Chi-square results showed that depression and low family monitoring were the discriminative factors for Internet addiction in gender and age-specified groups of adolescents. Low connectedness to school, high family conflict, having friends with habitual alcohol drinking, and living in rural areas also had discriminative effects on adolescent Internet addiction in different gender and age. It is suggested that parents and health and educational professionals should monitor the Internet-using behaviours of adolescents who have the factors discriminating for Internet addiction identified in the present study.
The Prevalence of Computer and Internet Addiction among Pupils

The results confirmed that every fourth pupil was addicted to the Internet. Internet addiction was very common among the youngest users of computers and the Internet, especially those who had no brothers and sisters or came from families with some kind of problems. Moreover, more frequent use of the computer and the Internet was connected with higher levels of aggression and anxiety. The study suggests that it is necessary to make the youth and their parents aware of the dangers of uncontrolled Internet use and pay attention to behaviour connected with Internet addiction.

Of the Sample, 977 students were found Internet users, who were classified into 37 Internet addicts, 304 possible Internet addicts, and 636 moderate users. It was found that Internet addicts are lonelier and have lower self-esteem and poorer social skills than moderate users, but not necessarily than possible addicts or nonusers.

Approximately 30% and 4.3% of subjects showed intermittent Internet addiction and Internet addiction,
Symptoms among Korean Adolescents

Ko et al. (2008) The Association between Internet Students Addiction and Belief of Frustration Intolerance: The Gender

Korea respectively. Multivariate Logistic Regression analysis revealed that junior high school students and students having a longer period of Internet use were significantly associated with intermittent addiction. When the demographic and Internet-related factors were controlled, obsessive-compulsive and depressive symptoms were found to be independently associated factors for intermittent addiction and addiction to the Internet, respectively. The study concludes that staff working in junior or senior high schools should pay closer attention to those students who have the risk factors for intermittent addiction and addiction to the Internet. The study suggests that early preventive intervention programs are needed that consider the individual severity level of Internet addiction.

Significant gender difference on the association between Internet addiction and frustration intolerance was found. The association was higher in male adolescents. Regression analysis revealed that male adolescents with Internet
addiction had higher intolerance to frustration of entitlement and emotional discomfort, and female adolescents with it had higher intolerance to emotional discomfort and lower tolerance to frustration of achievement. The study also suggests that frustration intolerance should be evaluated for adolescents with Internet addiction, especially for males and rational emotive behaviour therapy focusing on different irrational beliefs should be provided to male and female adolescents with Internet.

The result confirmed that Internet addiction was associated with problematic alcohol use. Besides, the psychosocial proneness of problem behaviour is associated with Internet addiction as well as problematic alcohol use in adolescents. These results suggest Internet addiction might be included in the organization of problem behaviour theory, and it is suggested that prevention and intervention can best be carried out when grouped with other problem behaviours.

A quarter of the adolescents surveyed
<table>
<thead>
<tr>
<th>Study</th>
<th>Sample</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Siomos et al. (2008)</td>
<td>Correlates of Adolescents Excessive Internet Use among Youth in Singapore</td>
<td>(25%) reported that they did not access the Internet every day, while 17.1% of adolescents reported using it for more than 5 hours every day. Excessive Internet use was associated with (i) no rules of Internet use at home, (ii) less likelihood of having confidants, (iii) feelings of sadness or depression and (iv) perceived poorer grade/school work. The study concludes that the high figures of excessive Internet use (17.1%) reported in the study is not equivalent to Internet addiction as no diagnostic instruments were used. However, school counsellors and teachers need to be made aware of the prevalence of and problematic behaviours associated with excessive Internet use. It is suggested that training and resources should also be made available to parents and caregivers so that they can play a greater role in setting boundaries and detecting early warning signs.</td>
</tr>
</tbody>
</table>

The study showed that 70.8% of adolescents had access to the Internet. The most frequent type of Internet use is online games, representing 50.9% of Internet users,
and information services, representing 46.8%. The prevalence of Internet addiction among Internet users of Central Greece is 8.2%, and it concerns mainly the male students who play online games and visit Internet cafés.

Internet Use 3975

Tahiroglu et al. (2008) among Turkish Adolescents

Turkish Adolescents

The most common purpose for using the Internet was playing games, followed by general information search. Female users mostly preferred searching for general information; male users preferred playing games. The most preferred type of game was violent games. While preference for strategy and fantasy role-play games increased with age, preference for other games decreased. Participants who used the Internet mostly for general information searches and school-related searches had lower Online Cognition Scale (OCS) scores. The highest OCS scores were related to violent games, followed by Fantasy Role-Play (FRP) strategy and sports and motor racing games. The study concluded that computers and the Internet are useful, important inventions, but like other inventions, if used improperly, they may be
The study revealed that the rate of Internet use among the surveyed adolescents was 94.32%, among which the incidence rate of Internet addiction was 8.78%. Boys, senior middle-school students were more susceptible to Internet addiction than girls and Junior middle-school students. Students from vocational senior middle-school were most susceptible. The 2nd grade students of senior middle-school have the highest risk for Internet addiction. The study concluded that the prevalence of Internet use and Internet addiction in adolescents of Shanghai should be comparatively high in China, which indicates that great attention should be paid to the prevention and control.

Logistic Regression analysis results revealed that Internet addiction or substance use in adolescents was associated with more severe psychiatric symptoms. Hostility and depression were associated with Internet addiction and substance use after controlling for other symptoms. Further study concludes that Internet addiction should be included in the
organization of problem behaviour theory, and it is suggested that prevention and intervention can best be carried out when grouped with other problem behaviours. Moreover, more attention should be devoted to hostile and depressed adolescents in the design of preventive strategies and the related therapeutic interventions for Internet addiction.

Cao and Su (2007) - Internet Addiction School among Chinese Students: Prevalence and Psychological Features

The cross-sectional study revealed that the rate of Internet use among the surveyed adolescents was 88%, among which the incidence rate of Internet addiction was 2.4%. In the study, male-to-female ratio for Internet Addiction is 4.8:1. Results do not clearly indicate whether the psychological characteristics in this study preceded the development of Internet addiction behaviour or were a consequence of Internet use. The study suggests that incidence of Internet addiction is not rare in Chinese adolescents. Specifically, adolescent males are more likely than females to be Internet addicts. In addition, compared with students who use the Internet less frequently, adolescents with Internet addiction
Ha et al. (2007) Depression and 452 Korean Adolescents This study showed a significant association between Internet addiction and depressive symptoms in adolescents. Regarding biogenetic temperament and character patterns, high harm avoidance, low self-directedness, low cooperativeness and high self-transcendence were correlated with Internet addiction. In multivariate analysis, among clinical symptoms depression was most closely related to Internet addiction, even after controlling for differences in biogenetic temperament. The findings of the study suggest the necessity of the evaluation of the potential underlying depression in the treatment of Internet-addicted adolescents.

Yang and Tung (2007) Comparison of 1708 High Internet Addicts School and Non-addicts Adolescents in Taiwanese High School The analytical results revealed that Internet addicts spent almost twice as many hours online on average than the non-addicts. Notably, surfing with a social/entertainment motivation and gratification was positively correlated with Internet addiction. While Internet addicts perceived the Internet to have
significantly more negative influences on daily routine, school performance, teacher and parental relation than non-addicts, both Internet addicts and non-addicts viewed Internet use as enhancing peer relations. Moreover, students with personalities characterized by dependence, shyness, depression and low self-esteem had a high tendency to become addicted.

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The findings of a correlation survey design found that among the sample, 1.6% was diagnosed as Internet</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Kim et al. (2006)</th>
<th>Internet Addiction in School Korean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1573 High</td>
</tr>
</tbody>
</table>
Adolescents and Students: A Questionnaire Survey

Kim and Chun (2005) Association of Internet Addiction with Health Promotion Lifestyle Profile and Perceived Health Status in Adolescents

Two groups were identified—dependents and non-dependents. Significant behavioural and functional usage differences were revealed between the two groups. Dependents were found to delay other work to spend time online, lose sleep due to late-night logons, and


769 Multivariate analysis showed that there was a statistically significant difference in health promotion lifestyle profile according to Internet addiction status. There was also a significant negative correlation between Internet addiction and health promotion lifestyle profile. Further, the study showed that the severe Internet addiction group had the lowest score in health promotion lifestyle profile and perceived health status, which suggest that the addiction could have a negative effect on the health status of adolescents.

addicts, while 38.0% was classified as possible Internet addicts. The prevalence of Internet addiction did not vary with gender. Further, the study indicates that the levels of depression and suicide ideation were highest in the Internet-addicts group.
feel life would be boring without the Internet. The hours spent on the Internet by dependents were greater than those of non-dependents. On the loneliness measure, significant differences were found between the two groups, with the dependents scoring higher than the non-dependents.

By reviewing the table 2.3, it is evident that Internet addiction is a psychological dependence on the Internet characterized by an increasing investment of resources on Internet-related activities, unpleasant feelings when off-line, an increasing tolerance to the effects of being online, and denial of the problematic behaviours (Kandell, 1998).

It is apparent that compared to non-addicts, Internet addicts tended to be students and younger in age (Ghassemzadeh et al., 2008; Hollingsworth, 2005; Lam et al., 2010). Because adolescents are in the process of psychological maturation and solidifying their personalities, they are particularly vulnerable to developing addictive behaviours (Kim et al., 2010; Lam et al., 2009). They often have easy access to the Internet and highly flexible schedules that makes adolescents particularly vulnerable to developing Internet addiction (Choi et al., 2009; Nalwa and Anand, 2003; Tsitsika et al., 2009). Given that certain family characteristics also appear to be related to the development of Internet addiction in adolescents, (Zboralski et al., 2009). Some researchers recommend a family-based prevention approach patterned after the family-based approach used to intervene for those at risk of substance abuse (Mythily et al., 2008; Park et al., 2008). Such an approach would include training parents to improve their ability to communicate with their children, promoting healthy family interactions, teaching parents effective family monitoring skills, and aiding the family in reducing maladaptive family functions (Jang et al., 2008; Ko et al., 2009; Lin et al., 2009; Park et al., 2008).
Thus, Internet addiction review also highlighted the influence of individual, social and technological factors that may predispose adolescents to developing Internet addiction. In addition, the possible negative physiological and social impacts of addiction are highlighted. However, as this review also pointed out – the existing studies on Internet addiction have many inconsistencies and gaps in the measures and research designs employed. Research about the Internet addiction is still in infancy, especially in adolescent stage and development of theoretically and methodologically sound experimental approaches is required to gain a deeper understanding of Internet addiction in adolescents.

2.5 INTERNET PORNOGRAPHY

Soon after its commercialization in 1993, the Internet and the World Wide Web gained prominence in producing, disseminating, storing, and presenting pornographic materials known as cyberporn or cybersex (Lo and Wei, 2005). Content analyses (Heider and Harp, 2000; Mehta and Plaza, 1997; Rimm, 1985) have shown that pornographic materials posted and distributed on the Internet have been presented in an unprecedented and interactive dimension. Internet pornography is perceived as possibly more accessible, more explicit and more harmful than pornography in its traditional forms (Beaver, 2000; Buzzell, 2005). Concerns over the excessive growth of Internet pornography have given rise to a moral panic (McMurdo, 1997).

The growing research on effects of Internet pornography has primarily focused on adult users (Barak and Fisher, 1997; Barak, Fisher, Belfry, and Lashambe, 1999; Lo and Wei, 2002; Wu and Koo, 2001). This is largely due to the ethical and legal considerations of exposing children and adolescents to potentially harmful material (Ybarra and Mitchell, 2005). But, children and adolescents are also the heavy users of online pornography because of easy access and availability of Internet wherever they want. The need for research in this area is particularly strong (Donnerstein and Smith, 2001). The influence of Internet pornography on the Web-savvy adolescents is a hotly debated topic and few empirical studies exist which definitively examined the issue in the Table 2.4:
<table>
<thead>
<tr>
<th>Investigator</th>
<th>Problem Statement</th>
<th>Sample</th>
<th>Research Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wei et al. (2010)</td>
<td>Internet Pornography and Teen Sexual Attitudes and Behaviour in Taiwan</td>
<td>1688 Adolescents</td>
<td>Exploratory Factor analysis revealed that 96.1% were active Internet users. Nearly half (42.4%), indicated that they had surfed pornographic websites. It was found that interactivity plays a key role in the relationship between exposure to pornography and adolescents' sexual attitudes and behaviours. Moreover, the relationship between use of interactive features of Internet pornography and sexual permissive attitudes and behaviour is stronger than the relationship between exposure to traditional media and sexual permissive attitudes and behaviour.</td>
</tr>
<tr>
<td>Mesch (2009)</td>
<td>Social Bonds and Internet Pornographic Exposure among Adolescents in Israel</td>
<td>998 Adolescents</td>
<td>Multivariate analysis showed that the percentage of adolescents who use the Internet for pornography consumption was lower than those who use Internet for other purposes. The study also indicated that males were more likely than females to search the Internet for pornography. Further, study concluded that</td>
</tr>
</tbody>
</table>
adolescents using the Internet for pornography appear less socially integrated and more socially marginal. They expressed less commitment to their families, less pro-social attitudes, and less attachment to school than their fellows who did not use the Internet for that purpose. Frequent users for communication, information, entertainment and learning purposes were no different from less frequent users in the strength of their social bonds.

Peter and Valkenburg (2009) Adolescents’ Exposure to Adolescents’ Sexual Explicit Internet Material and Sexual Satisfaction: A Longitudinal Study Structural Equation Modeling analysis revealed that exposure to Sexual Explicit Internet Material (SEIM) consistently reduced adolescents’ sexual satisfaction. Lower sexual satisfaction also increased the use of SEIM. Moderator analyses showed that the negative effect of SEIM on sexual satisfaction was stronger for adolescents who had no or limited sexual experience as well as for adolescents who perceived the majority of their peers to be sexually inexperienced. The study also indicates that the effect of exposure
to SEIM on sexual satisfaction did not differ among male and female adolescents.

The cross-sectional study found the prevalence of overall PIS use was 19.47%. Among Pornographic Internet Site (PIS) users, 57.29% reported infrequent and 42.71% reported frequent PIS use. The predictors of infrequent PIS use included male gender, Internet use for sexual education, chat rooms, and purchases. The predictors of frequent PIS use were male gender, Internet use for sexual education, and less than 10 hours per week Internet use. Compared to non-PIS users, infrequent PIS users were twice as likely to have abnormal conduct problems; frequent PIS users were significantly more likely to have abnormal conduct problems and borderline pro-social score. Thus, both infrequent and frequent PIS use is prevalent and significantly associated with social maladjustment among Greek adolescents.

The findings indicate that overall
72.8% of adolescents (93.2% of boys, 62.1% of girls) had seen online pornography before age 18. Most exposure began when youth were ages 14 to 17, and boys were significantly more likely to view online pornography more often and to view more types of images. Girls were significantly more likely than boys (42.3% of girls, 6.8% of boys) to report never looking for pornography on purpose, indicating they were involuntarily exposed. A small minority of participants, 12.0% of boys and 18.7% of girls said that they had a strong effect on their attitudes or emotions. Boys reported sexual excitement feeling while girls reported significantly more embarrassment.

Multinomial Logistic Regression Model found 42% of youth Internet users had been exposed to online pornography in the past year. Of those, 66% reported unwanted exposure. Youth who used filtering and blocking software had lower odds of wanted exposure. Both unwanted and wanted exposure is concentrated among teenagers, rather than younger.
children. More research concerning the potential impact of Internet pornography on youth is warranted, given the high rate of exposure, the fact that much exposure is unwanted, and the fact that youth with certain vulnerabilities, such as depression, interpersonal victimization, and delinquent tendencies, have more exposure.

*Chiou (2006)*

Adolescents'* Sexual Self-Disclosure on the Internet: Deindividuation and Impression Management

The analysis indicated that adolescents who were willing to self-disclose sexual topics in real life also self-disclosed them more in cyberspace, and vice versa. The findings also indicated that cyberspace might not be a substitute channel of compensatory gratification for sexual self-disclosure in real life. As for gender differences, the breadth and depth of sexual self-disclosure in male adolescents were greater than in female adolescents, in both real life and cyberspace. Male adolescents tend to be more active in Internet sexuality than females. However, female adolescents’ sexual emancipation in cyberspace is not evident in Taiwan.

*Peter and Adolescents'* 745 Dutch

It was found that 71% of the male
Exposure to Adolescents Sexually Explicit Material on the Internet

Adolescents and 40% of the female adolescents had been exposed to some kind of online sexually explicit material in the 6 months prior to the interview. Adolescents were more likely to be exposed to sexually explicit material online if they were male, were high sensation seekers, were less satisfied with their lives, were more sexually interested, used sexual content in other media more often, had a fast Internet connection, and had friends that were predominantly younger. Among male adolescents, a more advanced pubertal status was also associated with more frequent exposure to online sexually explicit material. Among female adolescents, greater sexual experience decreased exposure to online sexually explicit material.

It was found that 70% of respondents had navigated the Internet. Chi-Square results revealed that about 38% of the adolescents had some exposure to Internet pornography with boys reporting significantly higher exposure frequencies than girls. The regression model indicated that Taiwanese adolescents used
Internet pornographic sources such as magazines, books, and comics more as compared to traditional media. Further, this exposure was associated with greater acceptance of sexual permissiveness and the greater likelihood of engaging in sexually permission behaviour. This exposure showed sustained relationships with sexually permissive attitudes and behaviour when it was examined simultaneously with exposure to traditional pornography, general media use, and demographics. One of the main concerns about the effects on adolescents' permissive attitudes and behaviour is that they may undermine family—taught values against premarital and extra-marital sex (Zillmann and Bryant, 1988).

Ybarra and Mitchell (2005) Exposure to Internet Pornography among Children and Adolescents: A National Survey

The study revealed that the seekers of pornography, both online and offline are significantly more likely to be male, with only 5% of self-identified seekers being female. The vast majority (87%) of youth who have intentionally looked at pornography are 14 years of age and more likely to report traditional exposures, such as magazines or movies. The study
concluded that among young, regular Internet users, those who report intentionally seeking pornography may be facing multiple challenges, including poor caregiver-child relationship, delinquent behaviour and substance use. Further, there is an increased trend for youth who report clinical features associated with depression and lower levels of emotional bonding with their caregiver to be more likely to report online seeking versus offline-only seeking behaviour. Thus, intentional exposure to pornography may be behaviour among many for young people struggling in their adolescence. It is suggested that parents should focus on healthy caregiver-child relationship, as this is most strongly related to pornography seeking behaviour.

*Cameron et al. (2004)*

| Adolescents’ Experience with Adolescents Sex on the Web: Results from Online Focus Groups |
|-----------------------------------------------|-----------------------------------------------|
| 40 Participants reported high levels of exposure to Sexually Explicit Websites (SEW) and Sexually Oriented Websites (SOW). Females found SEW to be socially distasteful and noted concerns that such images objectified women. Some male participants avoided SEW, while... |
others were willing consumers. Further, study revealed that in general participants believed that their exposure to online sexual images and information had no influence on them, and reported that their parents have no knowledge about what they see on the Internet. The study suggests that parents, teachers, physicians and other healthcare experts should become more aware of the easy access to such material on the web and seek ways to reduce the potentially harmful effects of exposure.

It was found that 88% had navigated the Internet and 44% had surfed pornographic websites. The results indicated that most respondents believe that Internet pornography has a greater negative influence on others than on themselves. Female respondents tend to perceive greater negative effects of Internet pornography on other males than on other females, and they are readier to support restrictions of Internet pornography. Finally, the magnitude of perceptual bias appears an unreliable predictor of support for
media restriction. This novel gender-differential approach strengthens the growing literature on the third-person effect.

Random dial telephonic survey revealed that 65% being exposed to online pornography could have a serious impact on those under 18 while 34% said such exposure is not a big deal. The survey illuminates concerns about changes in the attitudes and beliefs of young people. Over half (57%) of respondents believe that viewing Internet pornography may encourage young people to have sex earlier. Almost 49% indicate that Internet pornography promotes negative attitudes towards women, with a similar percentage (49%) indicating that the images may promote the perception that unprotected sexual activity is okay. Beyond perception and beliefs, no information is available about actual outcomes / linkage between purposeful exposure to Internet pornography and psychosocial developmental challenges.
Thus, the literature review table of Internet pornography showed how adolescents use Internet pornography and what the correlates (e.g., demographics, general media sexual attitudes, and behaviour) of exposure to Internet porn is and the relationship between the exposure and sexual attitudes, beliefs, and behaviour.

Results are mixed, with some investigators arguing for clear and consistent effects of exposure to pornography and subsequent sexually aggressive attitudes and behaviours (Mesch, 2009; Peter and Valkenburg, 2009; Wei et al., 2010), while others describe null or inconclusive findings, with specific relevance to adolescents, there is the additional concern of negative effects on facets of sexual development, such as sexual callousness, for those who are exposed to pornography (Lo and Wei, 2005; Peter and Valkenburg, 2009, Tsitsika et al., 2009; Ybarra and Mitchell, 2005).

It can be concluded that exposure of children and adolescents to this material is particularly by chance, unwanted (Wolak, Mitchell and Finkelhor, 2007) and worrying in that it can have a negative effect on their development, motivating greater acceptance of sexual permissiveness, sexual activity at an early age, acceptance of negative attitudes to women, and rape myths (Lo and Wei, 2002; Peter and Valkenburg, 2009; Rideout, 2001; Sabina, Wolak and Finkelhor, 2008). Not surprisingly, policymakers, parents, and educators fear cyber porn will cause greater social harm than traditional pornography (Lo and Wei, 2005).

Exposure to online pornography might have reached a point where it can be characterized as normative among youth Internet users, especially teenage boys. Medical practitioners, educators, other youth workers, and parents should assume that most boys of high school age who use the Internet have some degree of exposure to online pornography, as do many girls (Chiou, 2006; Lo and Wei, 2005; Peter and Valkenburg, 2009; Sabina, Wolak and Finkelhor, 2008; Ybarra and Michell, 2005). To safeguard against this type of exposure, filtering and blocking software has been developed to prevent access to specific sites on computer. Parents and professionals should not shy away from this topic. Frank direct conversations with adolescents that address the possible influences of pornography on sexual behaviour, attitudes about sex, and relationships are needed (Wolak, 2007).
2.6 INTERNET USAGE AND SOCIAL COMPETENCE

Because adolescents use the Internet for the purpose of connecting with others at higher rates than any other age group (Lenhart, Rainie, and Lewis, 2001), a better understanding of how Internet use effects their social development is an important line of scientific inquiry. Indeed, a small but growing body of research is beginning to examine the implications of various electronic forums for social interaction (e.g., chat rooms, news groups, message boards) on adolescent behaviour (Gross, 2004; Subrahmanyam, Greenfield, and Tynes, 2004; Tynes, Reynolds, and Greenfield, 2004). The Table 2.5 shows the literature review of influence of Internet use on Social competence of adolescents:

Table 2.5: Literature Review of Internet Use and Social Competence

<table>
<thead>
<tr>
<th>Investigator</th>
<th>Problem Statement</th>
<th>Sample</th>
<th>Research Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonetti et al.</td>
<td>The Relationship of Loneliness and Social Anxiety with Children’s and Adolescents’ Online Communication</td>
<td>626 Adolescents in Australia</td>
<td>Findings showed that children and adolescents who self-reported being lonely communicated online significantly more frequently about personal and intimate topics than those who did not self-report being lonely. The former were motivated to use online communication significantly more frequently to compensate for their weaker social skills to meet new people. Results suggest that Internet usage allows them to fulfil critical needs of social interactions, self-disclosure,</td>
</tr>
</tbody>
</table>

Results revealed that there is no direct effect between playing World of Warcraft (WoW) and adolescents' social competence and feelings of loneliness. However, Indirect effect with the variety of communication partners as a mediator was found. Adolescents who play WoW have more variety in their communication partners during the game. Moreover, variety in communication partners leads to an increase of social competence and a decrease of loneliness.

Lee (2009) Online Communication of U.S. Aged 12 to 18 Adolescents Social Ties: Who Benefits more from Internet Use?

Regression analysis and SEM Model found that for parent-child relationships, time using a computer for communication was negatively related to time interacting with parents. However, frequent use of online communication did not weaken or strengthen the quality of parent-child relationships. For friendships, time using a computer for
study and recreation was negatively related to time with friends, whereas time in online communication was not related to time with friends. Rather, frequent online communication was associated with cohesive friendships. As Wellman et al. (2001) and Shklovski et al. (2004) argue, these findings suggest that adolescents use online communication as an additional communication modality to enhance the quality of friendships, while time in face-to-face interaction with friends is not decreased or increased. Internet use may lead to the digital divide in social capital. As economically rich persons have more chance to access the Internet, socially rich persons with strong ties more frequently use online communication, and as a result, they can build or maintain more cohesive friendships and connectedness to school than persons with lower sociability.
closeness to friends was positively predicted by online communication and adolescents’ perceptions of the Internet’s effectiveness for developing depth of communication. Social anxiety was a negative predictor of online communication. However, when socially anxious adolescents believed in the Internet’s effectiveness for developing breadth and depth of communication, they benefited just as much as less socially anxious adolescents from the Internet’s opportunities to stimulate closeness of friendship.

This online survey found that the adolescents who more often experimented with their identity on the Internet more often communicated online with people of different ages and cultural backgrounds. This communication, in turn, had a positive effect on adolescents’ social competence but did not affect their self-concept unity.
The study concluded that social competence of lonely adolescents benefited significantly from these online identity experiments.

Results from the in-depth interviews on the dimensions of avoidance decision making, self-reflection, identity formation and ego strengths, showed Internet usage had a full range of impact in the majority of the students. This indicates that online communication as an individual experience and as a network of shared group membership is salient in the identity development of these adolescents. Further analysis observed new ways of understanding identity formation and showed that Internet usage impacts adolescent identity development and should be regarded as a significant aspect of behavioural growth by parents, health care providers and teachers. Adolescents were
not aware of decision-making practices during online interactions.

*Mesch and Talmud (2007)*

Multivariate analysis found that when a friend was met at school the likelihood of similarity in age, gender, and place of residence was higher than when contact was made online. Friends met in the neighbourhood and schools were usually closer than friends met online. However, social similarity mattered even for friends who were met online. The more similar an online friend was in residence and gender, the stronger was the social tie. Older, female adolescents were more likely to report strong ties than younger, male adolescents. The study contributes to the understanding of the differential quality of face-to-face and online relationships.

*Peter and Valkenburg (2006)*

The study revealed that younger, socially anxious and lonely adolescents more strongly value the
Communications controllability of Internet communication and perceive it as broader, deeper and more reciprocal than older, non-socially anxious and non-lonely adolescent respondents. Boys perceive Internet communication as more reciprocal than girls do. The greater the adolescents' need for affiliation, the more often they regard Internet communication as deeper than face-to-face communication. The findings suggest that a stronger focus on perceptions of Internet communication may improve understanding of the Internet as a social medium.

Jung et al. (2005) The Influence of 1303 Adolescents The study examined the influence of the social environment on adolescents' connectedness to the Internet in East Asia, one of the most wired regions in the world. It was found that among the Internet-using adolescents, their Internet connectedness patterns differ by the nature of their social environments.
Mazalin and Moore (2004) found that time spent in chatrooms, online browsing, and games was related to higher levels of social anxiety and less mature identity status among older adolescents and young adult males, but not females.

Heitner (2002) reported that time spent on the Internet during the weekdays was significantly negatively correlated with limited peer status. Time spent on the worldwide web was significantly positively correlated with limited peer status and social skills deficits. Time spent on E-mail was significantly positively correlated with limited peer status, social skills deficits, social introversion, and social withdrawal. Time spent in Chat Rooms was significantly positively correlated with limited peer status and social skills deficits. Time spent on Instant Messenger was significantly negatively correlated with limited peer status.
status, social introversion, and social withdrawal. Time spent on Multi-player On-line games was significantly negatively correlated with limited peer status. “Not Social” Internet users primarily surfed the World Wide Web and played single-player on-line games, “Asynchronous social” Internet users primarily communicated with others through e-mail and posted to message boards, and “Synchronous social” Internet users primarily communicated with others through Instant Messenger, participated in Chat Rooms, and played multi-player on-line games. A gender by type of Internet use 2 x 3 ANOVA found a main effect for type of Internet use for limited peer status, social skills deficits, social introversion, and social withdrawal. The results of this investigation can be utilized by school and child-clinical psychologists to identify adolescents who may be experiencing social
Mesch (2001) found that the lower an individual’s level of attachment to close friends and the less pro-social attitudes he/she expressed, the higher was the likelihood of his/her being a frequent Internet user. However, Internet users were more likely than nonusers to participate in social activities such as parties, singers’ performances, and sports activities. The study concluded that contrary to public perception it appears that among the adolescent population of Israel, Internet use is not displacing other social activities. However, adolescents who are more socially isolated are more likely to be frequent Internet users.

Wolfradt and Doll (2001) supported that Internet-specific personal and social factors together accounted for more variance of the Internet use motives than the global personality traits.
With regard to the personality traits, neuroticism was found to be positively associated with the entertainment motive and with the interpersonal communication motive and extraversion was positively associated with the communication motive only.

Kalmus (2000) Estonian Adolescents' Expertise in the Internet in Comparative Perspective 6534 Adolescents

Results showed that Internet use is almost universal among 12-18 years old across eight European countries. Data, in the study, revealed that young people in Europe are highly confident about their proficiency in the Internet. This research suggests that creative online production of 12-18 year olds is relatively limited; a minority of young people develop their own websites or blogs. Parents are not frequently included in their children’s “Internet Universe”. The study concludes in line with Mizera (2003) that factors effecting the socialisation of children are numerous, varying from differences in societal
structures to beliefs about children and their role in society.

Some studies suggest that Internet communication may be especially advantageous for shy, socially anxious, or marginalized youth, enabling them to practice social skills without the risks associated with face-to-face interactions (Heitner, 2002; Mesch and Talmud, 2007; Visser and Antheunis, 2010). Additionally, online communication may encourage more truthful exchanges: many people report a greater willingness to share thoughts and feelings online than they would in person (Bonetti et al., 2010; Lee, 2009). This freedom from social pressures may help adolescents build more confidence in real social situations and can elicit a sense of connection to others, an important aspect in adolescent social development (Bonetti et al., 2010; Mesch, 2001; Valkenburg and Peter, 2005).

Thus, researches showed that adolescents use the Internet primarily for social reasons (Peter and Valkenburg, 2006) and online exchange decreases social isolation and increase social competence (Valkenburg and Peter, 2008; Visser and Antheunis, 2010), social anxiety (Mazalin and Moore, 2004) among adolescents and helps them connect with people and explore their identity (Long and Chen, 2007).

2.7 INTERNET USAGE AND EMOTIONAL MATURITY

Free and sometimes anonymous communication through chat rooms, blogs, and instant messages pose risks to teens (Louge, 2006) and leads to emotional disturbance. Table 2.6 shows literature review of the influence of Internet use on social competence of adolescents.

<table>
<thead>
<tr>
<th>Investigator</th>
<th>Theme</th>
<th>Sample Size</th>
<th>Research Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kelleci and Inal</td>
<td>Psychiatric</td>
<td>2080</td>
<td>It was found that Internet use in</td>
</tr>
</tbody>
</table>
Symptoms in students in Adolescents with Turkey Internet Use: Comparison without Internet Use

Beebe et al. (2004) Heightened 50168 9th Vulnerability and 50168 Increased Risk-taking among 50168 Students Adolescents Chat Room Users: Results from a State-wide School Survey

The study revealed that for boys and girls, use of Internet chat rooms was associated with psychological distress, a difficult living environment, and a higher likelihood of risky behaviours. Although most chat room users did not report serious problems, this group included a disproportionate number of troubled individuals. The study concluded that because chat room use serves as an indicator of heightened vulnerability and risk-taking, parents and others need to be aware of potential dangers posed by online contact between strangers and youth.

Gould et al. (2002) Seeking Help from the Internet Adolescents during Adolescence in New York

It was found that nearly one fifth of the adolescents sought help on the Internet for emotional problems. The proportions of males and females seeking help on the Internet did not significantly
differ. Internet help-seekers were significantly more likely than non-help-seekers to score above the clinical threshold on the Columbia Impairment Scale. These at risk youths tended to combine Internet help-seeking with other sources of help, rather than substituting it for other resources. More than 20% of Internet help-seekers were dissatisfied with the help they received, and only 14% thought it had helped them very much.

Thus, it can be concluded that for the Internet to realize its potential as an effective resource for teenagers struggling with emotional problems, further studies is needed (Gould et al., 2002).

2.8 INTERNET USAGE AND GENERAL WELL-BEING

During the past few decades, the Internet has become increasingly important in adolescents' lives. Recently, among scholars and in the popular media a heated debate has unfolded about the impact of Internet use-especially online communication-on adolescents' well-being (Van der aa et al., 2009). The Table 2.7 is an effort to provide a basis for this research to know the influence of Internet use on general well-being/well-being of adolescents.

Table 2.7: Review of Literature colligated Internet Usage and General Well-being

| Investigator | Problem Statement | Sample | Research Outcome |

| Investigator | Problem Statement | Sample | Research Outcome |

| Investigator | Problem Statement | Sample | Research Outcome |

| Investigator | Problem Statement | Sample | Research Outcome |

| Investigator | Problem Statement | Sample | Research Outcome |

| Investigator | Problem Statement | Sample | Research Outcome |

| Investigator | Problem Statement | Sample | Research Outcome |

| Investigator | Problem Statement | Sample | Research Outcome |
The study revealed that heavy Internet use was significantly associated with psychosocial problems, and heavy game use was significantly associated with psychosocial problems and less physical activity. The time spent on Internet (hours/day) and the number of pathological Internet users increased during the study. The number of game users' decreased but heavy game use increased. The association between heavy Internet use and psychosocial problems and between game use and psychosocial problems and less physical activity emphasizes the need to target different health behaviours in health education programme. In conclusion, we found some evidence that a health education programme encompassing different health issues and peer education has a beneficial effect on health behaviour in secondary school children.
related to low well-being through Compulsive Internet Use (CIU). In addition, daily Internet use was found to be more strongly related to CIU in introverted, low-agreeable, and emotionally less-stable adolescents. In turn, again, CIU was more strongly linked to loneliness in introverted, emotionally less-stable adolescents, and less agreeable adolescents. The study demonstrated that daily Internet use, in itself, is only marginally and not directly associated with low well-being in adolescence and young adulthood. The risks of Internet use are clearly dependents on individuals’ tendencies toward compulsive use of Internet, such as not being able to stop using the Internet, Internet use interfering with other duties or social contacts, and a constant preoccupation with Internet use.

Online Communication, Compulsive Internet Use, and

van den Eijnden et al. (2008) Online Communication, 663 Students Instant Messaging proved to be the most popular form of online communication among young adolescents, as well as the most
Psychosocial Well-being among Adolescents: A Longitudinal Study

frequently used Internet application in the study. The SEM Model results showed that frequent online communication is positively related to Compulsive Internet Use. A positive relationship was found between Instant Messenger use and feeling of depression. However, such a relation was not found for e-mailing and chatting chat rooms, and also not found for feelings of loneliness. The study concluded that adolescents who spent more time communicating by Instant Messaging showed a higher incidence of Compulsive Internet Use. The study also suggests that excessive use of the Instant Messenger may be a risk for the psychological well-being of adolescents.

Nwagwu (2007) The Internet as a Source of Adolescent Reproductive Health Information among Adolescent girls in an Urban City in Nigeria

More than 73% of the girls reported having ever used the Internet; more than 74% and 68% of them being in-school and out-of-school respectively. The in-school girls (43.9%) reported having home access more than the out-of-school (5.6%)
although the out-of-school have used the Internet for finding reproductive and related information more than the in-school. While parents (66.22%) and teachers (56.15%) are the two sources most used to the in-school girls, friends (63.18%) and the Internet (55.19%) were reported by the out-of-school youth as the two most used sources of information to them. The Internet is not a first choice of source of reproductive health information for both the in-school and out-of-school adolescent girls in Owerri, Nigeria. The study gives an indication that in-school and out-of-school adolescents might be facing different information challenges as shown in their different patterns of use of the global infrastructure.

An ANOVA analysis revealed that loneliness was not related to the total time spent online, nor to the time spent on e-mail, but was related to participants' gender. Regression model showed that
gender and participants' perceptions regarding their online relationships were the only variables that predicted loneliness. Adolescents who felt that their relationship with online partners was one that they could turn to in times of need were lonelier. However, perceived support from significant others was not related to time spent online, time on e-mail, participants' relationships with online partners, and to their perceptions about these relationships. The study also discussed the implications of the results for researchers, parents, and other lay persons.

Valkenburg and Peter (2007) Online Communication and Adolescent Well-being: Testing the Stimulation versus the Displacement Hypothesis A moderating effect of type of online communication on adolescents' well-being was found. IM, which was mostly used to communicate with existing friends, positively predicted well-being via the mediating variables (a) time spent with existing friends and (b) the quality of these friendships. Chat in a public chat
room, which was relatively often used to talk with strangers, had no effect on adolescents’ well-being via the mediating variables.

Regression analysis revealed that age and gender differences were found (e.g., males participated in more total leisure and computer/video gaming, girls accessed the Internet and web surfed more frequently), these differences did not influence the overall pattern of relationships. Higher Internet use was associated with decreased television/video watching and reading. Further, it was found that those adolescents who engaged in higher levels of Internet/web surfing reported lower levels of psychological well-being. Also, computer/video gaming and Internet use were found to be associated with higher levels of depression and lower levels of effect and potency during the study week, though heavier users did not experience more loneliness or
boredom. The results suggest the existence of electronic media lifestyle patterns that put adolescents at-risk. The research can be used by policy makers to develop guidelines for parents and practitioners for dealing with the electronic media environment to which children are exposed and the competing electronic media activities that contribute to sedentary lifestyles and health risks.

Sun et al. (2005)  
Internet Accessibility and Usage among Urban Adolescents in Southern California: Implications for Web-Based Health Research  

The findings of the study showed that nearly all (99%) of the respondents could access the Internet either at school or at home. Higher SES and Asian ethnicity were associated with higher Internet use. Among those who could access the Internet, depression was positively related with chat-room use and using the Internet longer than 1 hour per day at home. and hostility was positively related with Internet favouring. Less parental monitoring and more unsupervised time were positively related to email use,
chat-room use, and at home Internet use, but not related to at school Internet use. Substance use was positively related to email use, chat-room use, and at home Internet use. Self-reported health problems were associated with higher levels of Internet use at home but lower levels of Internet use at school. The study suggests that the Internet is already a potential venue for large scale health communication studies. Adolescents with more psychosocial risk factors or detrimental health behaviours were more likely to use the Internet. Therefore, if used properly, Internet interventions could effectively address the high risk populations.

*Casas et al.* (2004) Subjective Well-being, Values and Adolescents in Catalonia: Achievement of Spain. The Case of Planned versus by Chance Searches on Internet

Results confirmed a positive relation between satisfaction with life domains and overall satisfaction with life. Satisfaction with life as a whole showed also to be positively correlated with non-materialistic values. No direct relation has been observed between values and behavioural
intentions to plan or not to plan action to fulfil intended goals. Perceived control, but also satisfaction with some life domains and with life as a whole seems to act as mediating factors between behavioural intentions and values.

Donchi and Moore (2004) It's a Boy Thing: 336 Young People Aged between 15 and 21 Results indicated that females with more online friends were higher on self-esteem and lower on loneliness than females with fewer online friends, but the opposite was true for males. A higher number of online regular friendships seemed to militate against self-esteem and was related to greater loneliness for males. For face-to-face friendships, the effects on well-being were in the same direction for males and females, but stronger for males. Those with more face-to-face friendships were higher on self-esteem and less lonely. In addition, young men who rated their online friendship networks as very important were more likely to have lower self-esteem and to be
lonely. Actual time spent on the Internet was not a predictor of well-being for either sex when online and offline friendship factors were included in the regression equation.

The findings of the study challenged prevailing expectations regarding gender, well-being, and identity play. For the most part, adolescent boys' and girls' online activities have become more similar than different. On average, boys and girls alike described their online social interaction as (1) occurring in private settings such as e-mail and instant messages, (2) with friends who are also part of their daily, offline lives, and (3) devoted to fairly ordinary yet intimate topics (e.g., friends, gossip). No associations were found between Internet usage and well-being. Online pretending was reported to be motivated by a desire to play a joke on friends more often than to explore a desired or future identity, but participants reported a range of
The findings revealed that within this age group higher reliance on Internet communication coupled with lower reliance on face-to-face communication, especially in association with a smaller face-to-face friendship group was predictive of loneliness. While Internet use was not directly predicted by psychological well-being measures in general, motives for using the Internet appeared to mediate such associations in accordance with the uses and gratifications model.

Time spent on-line was not associated with dispositional or daily well-being. However, as suggested by intimacy theory, the closeness of instant message communication partners was associated with daily social anxiety and loneliness in school, above and beyond the contribution of dispositional measures.
Internet, and Adolescents dissimilar socioeconomic and ethnic groups access and use the Internet, with a large percentage seeking health information. The study concludes with recommendations for future health web sites targeting adolescents.

Borzekowski et al. (2001) showed that half (49%) of the sampled adolescents had used the Internet to get health information. Topics most often explored through the Internet included sexually transmitted diseases; diet, fitness, and exercise; and sexual behaviours. Adolescents found Internet information to be of high value (using a composite gauging worth, trustworthiness, use, and relevance), with no significant differences related to sex, ethnicity, or mother's education. When considering 11 separate health topics, girls found it more valuable to have information on birth control, diet and nutrition, exercise, physical abuse, sexual abuse, and dating violence. There were no differences based on
mother’s education for the value of having specific health information available through the Internet. The study concluded that for adolescents, the Internet is an accessed and valued information source on a range of sensitive health issues.

**Unger et al. (2001)**

<table>
<thead>
<tr>
<th>Study Description</th>
<th>Sample Size</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are Adolescents Attempting to Buy Cigarettes on the Internet in California</td>
<td>Logistic Regression analysis revealed that among youth under 18 years of age who were current smokers, 2.2% reported attempting to purchase cigarettes on the Internet. Attempted Internet purchases were more likely among younger respondents, males’ frequent smokers and respondents reporting lower perceived availability of tobacco products from retail and social sources. The study concluded that few adolescent smokers in California had attempted to obtain cigarettes from the Internet.</td>
<td></td>
</tr>
</tbody>
</table>

By analyzing the table 2.7, it can be concluded that the studies have provided mixed results. Some of these studies revealed depression or loneliness as indicators of well-being (de Leeuw et al., 2010; Subrahmanyam and Lin, 2007; van den Fijnden et al., 2008); others showed that positive and negative effects and association between Internet
usage and well-being (Gross, 2004). The studies colligated Internet usage and general well-being/well-being demonstrated that Internet use is positively related to time spent with existing friends (Gross, 2004), to the closeness of existing friendships (Valkenburg and Peter, 2007), and to well-being (Donchi and Moore, 2004; Mannell et al., 2005). The literature table indicates that most of the adolescents access the Internet for health information (Borzekowski and Rickert, 2001; Borzekowski et al., 2001; de Leeuw et al., 2010; Nwagwu, 2007; Sun et al., 2005). Thus, influence of Internet usage on adolescents’ well-being/general well-being is an emerging research area and many researching are carrying on.

2.9 **SUM-UP**

This chapter provided literature on the recent Internet usage convention reports, pattern of Internet usage, Internet addiction and Internet pornography. It discussed regulate the Internet on social competence, emotional maturity and general well-being of adolescents. The next chapter will provide the development of General Well-being Scale standardized in the present study.