

T.C.  
MARMARA ÜNİVERSİTESİ  
SOSYAL BİLİMLER ENSTİTÜSÜ  
İŞLETME ANABİLİM DALI  
ÜRETİM YÖNETİMİ VE PAZARLAMA BİLİM DALI

A COMPULSIVE CONSUMPTION:  
INTERNET USE ADDICTION TENDENCY  
The case of Turkish high school students

Yüksek Lisans Tezi

MUHİDDİN ASLANBAY

Danışman: Yrd.Doç.Dr.Emine ÇOBANOĞLU

İstanbul, 2006

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## **ACKNOWLEDGEMENTS**

Many thanks for their support to;

Prof.Dr.Tuncay Kocamaz

Prof.Dr.Sedefhan Oğuz

Asst.Prof.Dr.Serra Yurtkoru

Very special thanks to;

Asst.Prof.Dr.Emine Çobanoğlu

for her consulting and support.

And to my wife;

for her contributions to my life.

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## **ABSTRACT**

### **Key words:**

**Internet: a Marketing Communication Tool, Cybermarket, Techno Class, Compulsive Internet Consumption, Internet Addiction.**

Acceleration in information and communication technologies caused marketers to pay closer attention to rising number of experiences of consumers in cyberspace. The internet is used in marketing arenas in great extend as a communication tool and even as a payment system where total process of commerce is practised. Besides, direct contact with consumers enable marketers to developpe their information bases over data warehouses to use for further more focused marketing communications and CRM activities.

The aim of this thesis is to exhibit the levels and the variations of these levels of internet use among Turkish high school students. Academic literature shows that high levels of internet consumption turns out to be compulsive and causes addiction. This thesis presents a field research applied in İstanbul on April-May 2006, amongst 296 high school students.

In this research main variables are internet addiction symptom items and the antecedents of internet addiction as gratification of internet use items, demographic / socioeconomic variables of students, situational factors of internet use and other media consumption habits of students. Some gratification factors were found to have significant relationship with internet addiction. These factors explained 39 % of variation of internet addiction. Findings show that some demographic/socioeconomic variables of students, and situational factors of internet use have significant relationship with gratification of internet use factors. Other media consumption was found to have no significant relationship either with gratification of internet use or internet addiction. Findings have significant commonalities with researches from different countries.

This thesis have important implications not only for marketers and researchers but also psychologists and educators, since internet addiction generally end up with psychological disorders in life.

## ÖZET

### **Dizin terimleri: Bir Pazarlama İletişimi Aracı Olarak İnternet, Siber Pazar, Tekno Sınıf, Kontrol dışı İnternet Tüketimi, İnternet Bağımlılığı.**

Ülkelerin bilgi toplumu olmayı hedeflediği, bilişim ve iletişim teknolojilerinin hızla geliştiği günümüzde pazarlamacılar siber alanı deneyimleyen tüketicilerin davranışlarıyla yakından ilgilenmektedirler. Siber alana giriş aracı olan internet, firmalarca tüketicileriyle doğrudan iletişim aracı olarak kullanıldığı gibi aynı zamanda ürünlerini sergiledikleri, ödemelerini gerçekleştirdikleri bir ticaret kanalı olarak etkin bir şekilde kullanılmaktadır. Tüketicisiyle her bir iletişim yeni bir veri olarak firmalarca veri ambarlarında toplanmakta, analiz edilmekte ve tüketiciye uyarlanmış pazarlama aktiviteleri olarak dönerek tüketicinin sadakatini arttırmaktadır.

Bu tezin amacı, Türk lise öğrencilerinin internet kullanım süreçlerinde internet kullanım oranlarını ortaya koymak ve bu oranda oluşabilecek değişikliklerin nedenlerini araştırmaktır. Akademik yazın, internet tüketimi oranının artmasının, kontrol dışı tüketimle ve dolayısıyla bağımlılıkla sonuçlanabildiğini ortaya koymaktadır. Bu tez, 296 lise öğrencisini örneklem alan ve internet bağımlılığını araştıran bir saha araştırmasını da kapsamaktadır. Araştırma Nisan- Mayıs 2006 döneminde İstanbul'un değişik semtlerine dağılmış okullarda gerçekleştirilmiştir. .

Bu araştırmada ana değişkenler olarak, internet bağımlılık semptomları ve bağımlılığı tetikleyen internetten alınan haz değişkenleri, öğrencilerin demografik / sosyoekonomik özellikleri, internet kullanımında durum faktörleri ve öğrencilerin diğer medya kullanım alışkanlıkları kullanılmıştır. Araştırma sonucunda internetten alınan haz faktörleri ile internet bağımlılığı arasında belirgin bir ilişki bulunmuştur. Bu faktörler internet bağımlılığındaki değişimi % 39 açıklamıştır. Bazı demografik ve sosyo ekonomik faktörlerin yanı sıra bazı durumsal faktörler internet bağımlılığıyla ilişkili çıkmıştır. Diğer medya tüketimi internet bağımlılığını açıklamadığı bulunmuştur. Bulgular farklı ülkelerden araştırmalarla bir çok ortak noktada buluşmaktadır. Bu tez pazarlamacı ve araştırmacılar için olduğu kadar, internet bağımlılığının genellikle psikolojik bozukluklara yol açması nedeniyle psikologlar ve eğitimciler için de önemli bulgular içermektedir.

## 1. INTRODUCTION

Last quarter of 20<sup>th</sup> century has been the period of extensive development of technology and transition to information society. During this period, technology has triggered **consumption** and **consumer dynamics** leading to changes of **marketing orientations** of commercial companies. Relatively there have been mass changes in all terms of products, production, communication amongst the companies, communication between producer and consumer, distribution channel use, payment style and marketing communication applications.

Within this process, also named as “to be digitalized”, changing consumption structure and the communication that the consumer sets with technology have become more important and a “**net generation**” has evolved having common characteristics like globally oriented, technology prone and insisting right to information (Leung 2004).

### 1.1. Objectives of the Study

In a changing market and a newly defined consumer, it is inevitable for marketers to analyze Internet consumption. Researches show that consumers’ differences lead to different attitudes of Internet usage in cyber markets (Darlan 1987). Internet usage has extended the social class concept. Social class is defined as the division of members of a society into a hierarchy of distinct status classes, so that members of each class have relatively the same status, and members of all other classes have either more or less status. The classification of society’s members into a small number of social classes enable researchers to note the existence of shared values, attitudes, and behavioral patterns among members within each social class and differing values, attitudes, and behavior between social classes. Social class used to be a subject of relative rankings in terms of specific factors; relative wealth, power, prestige and status. In the last decade, one more dimension has been augmented over all: the degree of literacy, familiarity and competency with technology, especially computers and the Internet, and a “**techno class**” has born. Those who are unfamiliar or lack computer skills are

being referred to as "technological under classed." Consumers throughout the world have come to believe that it is critical to acquire a functional understanding of computers in order to ensure that they do not become obsolete, or hinder themselves socially or professionally. It appears that those without necessary computer skills will increasingly find themselves to be "under classed" and "disadvantaged." (Schiffmann & Kanuk 2004).

According to Venkatesh (1998), when examining the issue of consumers on Internet, there appear to be two recurring narratives. One refers to the unidimensional perspective of marketing and how marketing tries to annex the cyberspace. The second narrative views consumers as trying to use cyberspace as a place to exercise their freedoms, establish their identities and use the cyberspace as a life world. Consumer freedoms are plenty in cyberspace. In a cyber store, there are no behavioral norms that one normally encounters in a regular store.

Cyberspaces provide a culture of simulation, signification, and communication as opposed to realism, representation, and objective participation. Cyberspaces create virtualities of all sorts. As Burke (1996) states, the cyberspace is most effective in the internet marketing and electronic commerce world through its ability to create a virtual environment where the consumer can experience the as-if physical product or actual service (see figure 1). A great revolution in consumer marketing in terms of real time marketing and customized mass marketing is observed, both of which were inconceivable only just a few years ago. In real-time marketing, the consumer is presented the material and some of his/her questions are answered on the spot and the consumer can make product selection and make the payment also (Venkatesh 1998). Another transformational idea of cyberspace refers directly to the identity of the consumer. The concept of uniqueness is central to the consumer, that is, to be treated as an individual with a unique self. The idea of personal identity, and not to be treated as part of the mass market go hand in hand. This has also been one of the central problems of advertising over the last century, ever since mass advertising became a reality. Advertising is basically a mass enterprise. The historical challenge of advertising has been to create advertising messages which have a "mass appeal" and yet treat each individual consumer as a unique person as if the advertising was meant only for him/her and no-one else. With the emergence of virtual environments, the opportunity to make the individual consumer feel unique has become less fearing. (Hoffman & Novak 1996). All these transformations change

the phase of marketing in the information era and shortened the distance between firm and consumer.

**Figure 1: Marketing on cyberspace**



(Source: Venkatesh 1998)

On the other hand, this transformation brings questions as to its benefits for consumers and firms. As the popularity of the Internet grows so do concerns over its **excessive use**. The effort of individuals to adapt to the new codes of life sometimes end up with a **compulsive consumption behavior**. As observed in every product category, Internet became one of the compulsive consumption areas. A large amount of time spent logged-on falls out to be so called addicted to Internet. The term “**Internet addiction**” was proposed by Dr. Ivan Goldberg for pathological compulsive Internet usage (Kanwal & Archanapret 2003). The term “Internet addiction” has been used to describe problematic, excessive, or mal-adaptive use of the Internet. Internet addiction, more formally known as **pathological Internet consumption**, is a type of **impulse control disorder** similar to addictions identified with conventional mass media such as television but potentially more serious. “People use the Internet to avoid problems in their lives or because they lack social skills. If you're depressed or problems, you

can spend 18 hours a day on the Internet and not worry about any of it. But obsessive Internet use only makes matters worse” Goldberg, 1997.

The main objective of this study is to explore whether there is a compulsive consumption of Internet, thus find out the existence or tendency of Internet addiction among Turkish youth, age between 15-18 years old. The study aims to find out the distribution of compulsive internet consumption amongst general internet consumption. The study also aims to find out the reasons of Internet addiction, besides internet usage frequency, the purpose of internet usage, and the demographic /socio economic profiles of internet users. For marketers it is a very valuable data to reveal the consumption of Internet as a new rising marketing communication medium for all the contemporary firms as well as a distribution channel and payment system for e commerce companies.

## **1.2. Significance of the Study**

Marketers study area of internet consumption and try to reveal the most effective way to communicate one-to-one with consumers through this new medium. Besides the extend of internet usage as high users, medium users and low users are newly defined clusters to customize the marketing and communication activities for commercial companies. Marketers especially have an eye over the high users segment, in a range towards compulsive consumption. This segment attracts marketers being a potential profitable online buyer at the same time unfortunately also have the possibility to end up with damaging consequences for individual consumers.

In Turkey increasing usage of Internet has been observed in the last decade. Turkey has 13,7 % penetration of Internet usage among population in 2005, hence has a significant growing rate of 450,7 % in the last five years (table 1).

**Table 1: World Internet Usage And Population Statistics**

World Regions	Population (2005 Est.)	Population % of World	Internet Usage, Latest Data	Usage Growth 2000-2005	% Population (Penetration)	World Users %
Africa	896,721,874	14.0 %	16,174,600	258.3 %	1.8 %	1.7 %
Asia	3,622,994,130	56.4 %	323,756,956	183.2 %	8.9 %	34.5 %
Europe	731,018,523	11.4 %	269,036,096	161.0 %	36.8 %	28.7 %
Middle East	260,814,179	4.1 %	21,770,700	311.9 %	8.3 %	2.3 %
North America	328,387,059	5.1 %	223,392,807	106.7 %	68.0 %	23.8 %
Latin America/Caribbean	546,723,509	8.5 %	68,130,804	277.1 %	12.5 %	7.3 %
Oceania / Australia	33,443,448	0.5 %	16,448,966	115.9 %	49.2 %	1.8 %
<b>WORLD TOTAL</b>	<b>6,420,102,722</b>	<b>100.0 %</b>	<b>938,710,929</b>	<b>160.0 %</b>	<b>14.6 %</b>	<b>100.0 %</b>
Country	Population (2006 Est.)	Population % of World	Internet Usage, Latest Data	Usage Growth 2000-2006	% Population (Penetration)	World Users %
Turkey	74,709,412	1.1%	10,220,000	450,7 %	13,7 %	0.8 %

NOTES: (1) Internet Usage and World Population Statistics were updated on July 23, 2005. 2) Demographic (Population) numbers are based on data contained in the world-gazetteer website. (4) Internet usage information comes from data published by Nielsen/NetRatings, by the International Telecommunications Union, by local NICs, and by other other reliable sources.

Source: [www.Internetworldstats.com](http://www.Internetworldstats.com).

The researches realized in countries having high internet penetration show that compulsive internet consumption is becoming a wide spread problem (see pp:16-25). Turkey might have a similar threat due to the high increase rate. The lack of researches specifically about internet addiction in Turkey underlines the significance of this study. The study will enlight Turkish not only marketers, but also psychologists, educators and academicians about the issue.

### I.3. Scope of the Study

This thesis is composed of six parts. In the first part, significance of the topic is discussed. Second part presents the different definitions of compulsive internet consumption as an addiction, and the studies that were conducted in the field to build on the concept. This part also covers researches revealing the extend of internet addiction in different countries all around the world. Research methodology & design, general research findings and conclusion are presented in parts three to five. In the appendix, the questionnaire used in the field research is attached along with different internet addiction inventories.

## **2. COMPULSIVE INTERNET CONSUMPTION : AN ADDICTION**

At the turn of the century, the business world is under immense pressure to change and adapt appropriately and quickly enough to secure competitiveness and future growth. Organisations feel the impact of increased competition, globalisation and digitisation. To survive and prosper, organisations have to master constant change and growing complexity (Leer 2000). These changes caused major redefinitions of the concept of marketing. Customers are demanding more, product development and management ways are changing radically, distribution channels, payment systems are virtualised, markets are increasingly become global (O'Connor & Galvin 2001). Internet is becoming a fundamental and often necessary vehicle for communications and transactions between marketers and consumers (Coupey 1995). As a means for electronically transferring information between buyers and seller, the internet has changed our ideas of what constitutes a market place. On a general level, marketing with the internet has created a shift from a physical transaction space to an information-defined transaction space. In a traditional marketplace, buyers acquire information about goods and services, often from direct hands on examination of the products and through face to face conversations with seller. In an internet created market space, however the environment changes (Coupey 1995). With the introduction of the internet, marketers have the technology to mass customize communication and products to increasingly smaller markets. In such a dynamic environment, marketers use the Internet for information publishing, transaction systems, mass customisation. Consumers spend some amount of time gathering information and considering alternatives prior to their purchases. The term internet marketing tends to refer to an external perspective of how the internet can be used in conjunction with traditional media to acquire and deliver services to customers. One of the key features of internet marketing using the web is that the consumer consciously decide to visit a particular site according to the particular information or experience they are seeking. Therefore it is a pull medium, which contrasts with the push media used for mass marketing. The implication for marketers is that internet marketing strategies for most of the companies should focus on the acquisition of site visitors, converting them to the required action on the site and then retaining these visitors (Chaffey et al. 2000). Internet marketing differs from conventional marketing communications because of the digital medium used for

communications. Interactivity, intelligence, individualisation, integration, disintermediation and independence of location are the keywords for this process (Chaffey et al. 2000).

For many companies the first steps into internet marketing are not the result of well defined integrated internet strategy, rather they are a necessary response to a rapid market development, like the decision to create a web site. However internet marketing strategy involves much more focus than a web site. From the marketing mix perspective, many new options of strategies are open to marketers. There are alternatives for varying the product in the online context, either about the decisions affecting core product or the extended product. Pricing strategies and models also have changed by the increasing price transparency and the dynamic interactive pricing. Internet has tremendous implications for place in the marketing mix since the internet has a global reach along with the impact of rising disintermediation(Chaffey et al. 2000). If a firm wants to build brands and inform, it will operate at cognitive and attitude levels, perhaps utilising information publishing, web advertising, and other internet promotional techniques (Strauss and Frost, 1999). From the promotion perspective internet is a new medium that have high attraction potential especially among youngsters who are more technological oriented than elders.

This new cyber technology brings new experiences for the consumer. The combination of available **stimulating content, ease of access, convenience, low cost, visual stimulation, autonomy, and anonymity**—all contribute to a highly **psychoactive experience** although computers and the Internet, seem to be easily overused / abused, and at worst, addictive. (Greenfield 1999). Recent researches indicated that some on-line consumers were becoming addicted to the Internet in much the same way that others became addicted to drugs, alcohol, or gambling, which resulted in school failure (Murphey, 1996); reduced work performance (Robert Half International, 1996), and even marital discord and separation (Quittner, 1997). Increased levels of depression are associated with those who become addicted to the Internet. This suggests that clinical depression is significantly associated with increased levels of personal Internet use (Young 1998).

Interest in the growing phenomenon of technological dependencies or technological addictions has been reported in the literature since the early 1990s. However, studies of online behaviour have changed in emphasis over the years. These changes reflect changes in user

behaviour that have themselves resulted from changes in both technology and in users themselves. Early studies of online behaviour tend to focus on “technostress”, computer anxiety, and computer phobia since computer hardware and software were difficult to use, resulting in stress, frustration, and anxiety among users. As computers have become easier to use and the Internet has become more of a household word, studies of online behaviour have increasingly emphasised different behaviours.

Youngsters are more close to technology so their relation with internet is the interest of researchers from many fields. Over the newly structured technological infrastructure a new generation is evolving that is called as The Netgeneration. Net generation is described as accepting of diversity, curious, assertive, and self-reliant. In addition, the Netgeneration is described to have the following characteristics (Leung 2004):

- *Global orientation and emotionally uninhibited:* Technology, especially the Internet, facilitates the ability of the Net-generation to talk with others around the world. Net-geners find it easier to expose their inner thoughts online and the anonymity of the Internet allows them to reveal their feelings as much as they like. E-mail and chat rooms provide opportunities for this generation to exchange ideas with others without regard to ethnic or geographical boundaries. Netters have grown up understanding the need for interconnectivity to the worldwide community. And they have been connected globally via the Internet.
- *Right to information and learning:* With strong belief in equal opportunity, Netters are strong advocates of lifelong learning. They believe that access to information and the expression of opinions are fundamental rights. They understand that they need to update and maintain their training at cutting edge to ensure their employability. More than previous generations, they accept and recognize that they will go through numerous job changes and perhaps five to eight different careers in their lifetimes—aided by distance learning. This generation desires a good education. The right to privacy and the right to speak out are equally important.
- *Technology savvy:* Net-geners possess a keen sense of being innovative and investigative. They have a passionate interest in how technology works. Net-geners want options. Accustomed to years of TV channel surfing and Internet surfing, they expect a world of almost limitless choices. They value independence and are intellectually open to new ideas through access to the Internet. They are incredibly innovative about their use of the Net, and

love its immediacy. To them, prime time is anytime. They control their “programming” agenda. The emphasis is no longer on the delivery of information and entertainment, but on the search— which they control.

- *Preoccupied with maturity and adulthood:* The Netgeneration is a generation deeply preoccupied with maturity. This preoccupation is rooted in a desire to be treated like an adult by adults and judged based on what you can contribute rather than how old you are. This generation also resents that their ideas and activities are often suspect because they are young and inexperienced.

The newly forming net generation is a new huge target market to be revealed by marketers. On the other hand, the last few years in particular have seen the rise of studies of online users that emphasize the engaging, absorbing, entrancing aspects of online use. Many of these studies emphasize the negative aspects of the Internet’s newly discovered hypnotic power. Prolonged online use can result in users being characterized or labeled as pathological, compulsive or addicted. (Quinn 2001). Compulsive consumption of any good is in the realm of abnormal behavior. Consumers who are compulsive have an addiction; in some respects, they are out of control, and their actions may have damaging consequences to them and those around them (Schifman & Kanuk 2004).

## 2.1. Internet Addiction

**Internet addiction** is a broad **term covering** a wide variety of behavioral and impulse-control problems which include;

- **Cyber sexual addiction** - addiction to adult chat room or cyber porn.
- **Cyber relationship addiction** - online friendships made in chat rooms or cyber porn.
- **Net compulsion** - compulsive gambling, day trading, or auction shopping.
- **Information overload** - compulsive Web or database surfing.
- **Computer addiction** - compulsive game playing or programming

(Hansen 2002 )

Therapists note that the incidence of **cross-addiction** seems very common among Internet addicts. Internet use can weaken an individual's psychological well-being. Young

(1997) reports that 54% of Internet addicts report a prior history of depression, 34% suffer from anxiety, and others suffer from low self-esteem. Young has also observed individuals go from one addiction to another. To be diagnosed as having **Internet Addiction Disorder**, a person must meet certain **criteria** as prescribed by the American Psychiatric Association. **Three or more of these criteria** must be **present** at any time **during a twelve month period** (Ferris n.a.):

(I) tolerance, as defined by either of the following:

(A) A need for markedly increased amounts of time on Internet to achieve satisfaction

(B) Markedly diminished effect with continued use of the same amount of time on Internet

(II) Withdrawal, as manifested by either of the following

(A) The characteristic withdrawal syndrome

(1) Cessation of (or reduction) in Internet use that has been heavy and prolonged.

(2) Two (or more) of the following, developing within several days to a month after

Criterion 1:

○ psychomotor agitation

○ anxiety

○ obsessive thinking about what is happening on Internet

○ fantasies or dreams about Internet

○ voluntary or involuntary typing movements of the fingers

(3) The symptoms in Criterion B cause distress or impairment in social, occupational or other important other area of functioning

(B) Use of Internet or a similar on-line service is engaged in to relieve or avoid withdrawal symptoms

(III) Internet is often accessed more often or for longer periods of time than was intended

(IV) There is a persistent desire or unsuccessful efforts to cut down or control Internet use

(V) A great deal of time is spent in activities related to Internet use (e.g., buying Internet books, trying out new WWW browsers, researching Internet vendors, organizing files of downloaded materials

(VI) Important social, occupational, or recreational activities are given up or reduced because of Internet use.

(VII) Internet use is continued despite knowledge of having a persistent or recurrent physical, social, occupational, or psychological problem that is likely to be caused or exacerbated by

Internet use (sleep deprivation, marital difficulties, lateness for early morning appointments, neglect of occupational duties, or feelings of abandonment in significant others)

Young (1999) summarizes the **criteria for** internet addiction under eight constructs. Individuals meet **five of these eight criteria** in order to **qualify as an addict**.

- Preoccupation with Internet
- Need for longer amounts of time online
- Repeated attempts to reduce Internet use
- Withdrawal when reducing Internet use
- Time management issues
- Environmental distress (family, school, work, friends)
- Deception around time spent online
- Mood modification through Internet use

To address some of these concerns, Davis (1999) extends Young's definition; Davis proposes that problematic Internet use be categorized as **Specific Pathological Internet Use (SPIU)** and **Generalized Pathological Internet Use (GPIU)**. The first describes using the Internet to heighten the intensity of a pre-existing addiction (e.g., gambling or pornography), whereas the second describes using the Internet generally (e.g., chatting, browsing, etc). Hall and Parsons (2001) present a third term for Internet-related disorders, **Internet Behavior Dependence (IBD)**. Consistent with an addictions orientation, they expect Internet addicted people to demonstrate “dependence” criteria such as failure to fulfill major role obligations at work, school or home; longer use with less enjoyment; restlessness, irritability, and anxiety when not using; extended use with unsuccessful attempts to cut down, control, or stop use; and continued use despite knowledge of physical, psychological, and social problems associated with excessive use. In terms of becoming “addicted” to the Internet, several researchers have further described a correlation between the amount of time online and reported negative consequences (Griffiths 2000).

According to Orzack (2005) the **symptoms of computer addiction** are quite specific;

### *Psychological Symptoms*

- Having a sense of well-being or euphoria while at the computer
- Inability to stop the activity
- Craving more and more time at the computer
- Neglect of family and friends
- Feeling empty, depressed, irritable when not at the computer
- Lying to employers and family about activities
- Problems with school or job

### ***Physical Symptoms***

- Carpal tunnel syndrome
- Dry eyes
- Migraine headaches
- Back aches
- Eating irregularities, such as skipping meals
- Failure to attend to personal hygiene
- Sleep disturbances, change in sleep pattern

Griffiths (1996) provides a framework to measure addiction. Six **components of addiction** are proposed: **salience, mood modification, tolerance, withdrawal symptoms, conflict, and relapse** (Chou & Ting 2003). *Salience* occurs when the particular activity becomes the most important activity in the person's life and dominates his or her thinking (preoccupations and cognitive distortions), feelings (cravings), and behaviour (deterioration of socialized behaviour). *Mood modification* refers to the subjective experiences that people report as a consequence of engaging in the particular activity and can be seen as a coping strategy. *Tolerance* is the process whereby increasing amounts of the particular activity are required to achieve the former effects. *Withdrawal symptoms* are the unpleasant feeling states and/or physical effects that occur when the particular activity is discontinued or suddenly reduced (e.g., the shakes, moodiness, irritability, etc.). *Conflict* in this context, refers to the conflicts between the addict and those around them (interpersonal conflict) or from within the individuals themselves (intrapsychic conflict) that are concerned with the particular activity. *Relapse* is the tendency for repeated reversions to earlier patterns of the particular activity to recur and for even the most extreme patterns typical of the height of the addiction to be quickly restored after many years of abstinence or control (Griffiths 2000). The research of

Widyanto and McMurrin (2004) showed six **consequent factors of Internet addiction; salience, excessive use, neglecting work, anticipation, lack of control, and neglecting social life**. Also, in 1997, Brenner made a research of 563 sample, and found **addictive users experienced “tolerance”** (being warned of excessive time spent online), **“withdrawal”** (inability to stop thinking about the Net if away from it for a time), and **“craving”** (unsuccessful attempts to spend less time on the Internet) (Quinn 2001). Technological addictions are a subset of behavioural addictions and that behavioural addictions feature the core components of addiction. These core components are expanded upon.

There have been many attempts by medical doctors and psychologists to explain addiction disorders generally. These theories include **psychodynamic and personality** explanations, **sociocultural** explanations, **behavioral** explanations, and **biomedical** explanations (Ferris n.a.). According to Sue & Sue (1994), *psychodynamic and personality* views account for addiction through early childhood traumas, correlations with other certain personality traits or other disorders, and inherited psychological dispositions. If it is the right combination of time, person, and event, then addiction may take place. *Sociocultural* explanations propose that addictions vary according to sex, age, socioeconomic status, ethnicity, religion, and country (Ferris n.a.). *Behavioral* explanations are based on B.F. Skinner's studies on operant conditioning. The person performs a behavior and gets either rewarded or punished for the behavior. To illustrate, there might be a child who is painfully shy and fears meeting new people. Whenever it is time for recess, he goes off on his own, and does not play with the other children. Thus, he avoids having to talk to anyone new, and consequently leads to Internet. *Biomedical* explanations focus on hereditary and congenital factors, chemical imbalances in the brain and neurotransmitters. According to this perspective, this would cause someone to be susceptible to addiction (Sue & Sue 1994).

These studies in medical and psychology area also prepared a base for internet addiction within the frame of consumption literature. Notion of technological addictions have previously been studied in England (Griffiths, 1996). However, after being initiated by Dr. Goldberg, when the concept of Internet addiction was first introduced in a pioneer study by Young (1996), started a controversial debate by both clinicians and academicians. Part of this controversy revolved around the contention that only physical substances ingested into the body could be termed "addictive."

The other controversial element related to the use of the Internet addiction is that unlike chemical dependency, the Internet offers several direct benefits as a technological advancement in our society and not a device to be criticized as "addictive". The Internet allows a user a range of practical life applications such as the ability to conduct research, to perform business transactions etc.

Song et al (2004) studied the seven **gratification (reinforcement) factors** specific to the Internet: **Virtual Community, Information Seeking, Aesthetic Experience, Monetary Compensation, Diversion, Personal Status, and Relationship Maintenance** that accounted for 28% of the variance in Internet Addiction Tendency. Overall, there were two factors, Information Seeking and Monetary Compensation, that were clearly content gratifications. Aesthetic Experience and Diversion were clearly process gratifications. Three others, Virtual Community, Personal Status, and Relationship Maintenance, were predominantly process-oriented but also had characteristics of content gratifications. Indeed, all gratifications could be considered instrumental in the sense of "seeking a desired outcome."

Young (1997), through her research, made a different classification, although covering the same content as Song. She classified three major areas of **reinforcement** pertaining to these two way communication features: **social support, sexual fulfillment, and creating a persona**. *Social support* can be formed on the basis of a group of people who engage in regular computer-mediated communication with one another for an extended period of time. With routine visits to a particular group, a high degree of familiarity among other group members is established forming a sense of community. In real life, people are unable to express these opinions to their closest confidants however, in Cyberspace, they feel free to express such opinions without fear of rejection, confrontation, or judgment since the presence of others was less readily available and their own identities were well masked. *Sexual fulfillment* can be played out such that people can engage. They feel free to carry out illicit sexual impulses and were able to act in ways that differed from real life conduct without fear of repercussion. *Creating a persona* is easier as each on-line user has the ability to remove the imposed constraints of real life in order to experiment with altered perceptions of oneself. Creating a persona through a fictitious handle allows one to transform himself mentally into a new person on-line. Besides, socioeconomic status, gender, age, and race all play a role in the

development of identity which builds the basis of interpersonal interactions. In Cyberspace, such issues die into the background as all virtual inhabitants are created equal. This equal footing fosters confidence when interacting. According to Gross et al., most of the time, young people online are interacting with friends from their existing social networks. In an American study of 130 children aged 11 to 13 years, partners were usually friends from school. However, 12% of partners in this study had been met online. Most of the online communication was devoted to the usual topics discussed offline and was motivated by a desire for companionship (Gross, Juvonen & Gable 2002). Therefore, it not easy to differentiate normal from pathological Internet use. The symptoms can easily be masked as "I need this as part of my job," "It's just a machine," or "Everyone is using it" due to the Internet's prominent role in our society (Young & Rodgers 1998; Young 1999). The **Rational Addiction Theory**, as proposed by Becker and Murphy (1998) and other economists, does add some insights to understanding of addiction development. It suggests that an individual's continuous interaction with certain goods builds up a "consumption capital" over time. As this capital accumulates, the utility of the goods to the consumer increases, which in turn increases the likelihood of addiction. However, addiction to certain goods with a maximized utility does not necessarily mean that these addicts are enjoying the greatest happiness. Rather, they are prisoners of desire; their happiness will drop to the lowest level if the addictive goods are withheld. Praterelli and Brown (2002) described that individuals with "computer/ Internet addiction" have a mixture of obsessive-like characteristics related to their computer/Internet use, prefer on-line interactions, may use the Internet "to feel better", alleviate feelings of depression, and to become sexually aroused. Therefore, increased Internet use may cause individuals to become isolated from their peers and from social interaction (Shapira et al 2003). More importantly, Internet addicts do not think about looking for professional help from psychologists or counselors. They consistently think that Internet overuse is a personal or minor problem (Chou 2001).

According to Orzack (2005), the side effect of changing technology may manifest itself at home, at school, and at work. Families, school counselors, and health care specialists have begun to notice the aberrant behavior and mental health problems of computer addicts. As an impulse control disorder, computer addiction resembles pathological gambling. Addicts feel unhappy when they are away from the computer and try unsuccessfully to stop using it. They become preoccupied with thoughts about the computer and spend constantly increasing

amounts of time and money on it, often neglecting their families and work. They then compound the problem by denying how much time and money they are spending (Walther & Reid 2000) . Similar problems were found in a 1997 survey of 531 students at the University of Texas at Austin conducted by psychologist Kathy Scherer. There, 98% of dependent users said they found themselves staying online longer than they wanted. More than a third reported problems in social, academic and work responsibilities that they attributed to overuse of the Internet. Almost half said they had tried to cut down but couldn't (Greene1998).

Greenfield (1999) surveyed 17,251 webusers on to examine Internet use and abuse behavior. Results of the survey suggest that there is psychological pattern of compulsive Internet use for certain individuals. Approximately 5.7 percent of Internet users surveyed meet the criteria for a serious **compulsive Internet consumption pattern**. Data show that there is **intense intimacy, disinhibition, loss of boundaries, timelessness, feeling out of control**. 1) *Intense Intimacy*- among all participants both males and females report intense intimacy while online (41%), among Internet compulsives this figure raises to seventy-five percent! There appears to be little difference between males and females, although it appears to be slightly higher for females. 2) *Disinhibition*- forty-three percent surveyed report an experience of disinhibition and this figure again jumps to eighty percent for Internet addicts, and again there were no robust sex differences here either. 3) *Loss of Boundaries*- thirty nine percent reported a loss of boundaries while online, with eighty-three percent of addicts reporting this experience. 4) *Timelessness*- the majority of those surveyed admitted to “sometimes losing track of time”; however, for those addicted to the Internet timelessness was described as “almost always” occurring. 5) *Feeling out of Control*, only eight percent of the total group surveyed report feeling out of control when online, while forty six percent of those who were addicted admitted to “feeling out of control”. According to **American Psychological Association 5-10 % of US Internet users can be classified as addicts** that translate into 200.000 cyberspace addicted consumers (Ross 2000). Studies show that the **Internet addicts go online more than 30 hours per week** (<http://support.microsoft.com>). China is calling attention to a rise in what it calls "Internet addiction disorder," a malady that the government says is spreading in the country. To help counter the "addiction," the government announced that a rehabilitation center for children suffering from the compulsive use of the Internet would open in Shanghai. (Trotter 2005). Especially the **youngsters are**

**found to be more trapped to Internet.** As part of the Australia Broadcasting Authority's survey of Internet use in the home a total of 192 of the cyber-panel members were found to be teens aged 11 to 17 years (Fleming & Rickwood 2004).

The theoretical background of internet addiction / compulsive consumption is summarised on Table 2.

**Table 2: Chronology of Internet Addiction Studies**

CONSTRUCT	RESEARCHER	DATE	VARIABLES
Theories behind compulsive internet consumption /internet addiction -medical field	Sue & Sue	1994	Psycho dinamic approach, Sociocultural approach, Behavioral approach, Biomedical approach
Theories behind compulsive internet consumption /internet addiction -consumption field	Griffiths	1996	Technological addiction
	Goldberg	1996	Initiated the term internet addiction
	Young	1996	First launched the term internet addiction to discussion
Psychoactive Experience in Internet	Greenfield	1999	Stimulating content, ease of access, convenience, low cost, visual stimulation, autoomy, anonymity
Extend of internet addiction	Hansen	2002	Cybersex, cyberrelationship, net compulsion, information overload, computer use
Internet addiction criteria	Griffits	1996	Salience, mood modification, tolerance, withdrawal, conflict, relapse
	Brenner	1997 (ed.in Quinn 2001)	Tolerance, withdrawal, craving
	Young	(1999-2005)	preoccupation, longer amounts, attempts to reduce, withdrawal, time mismanagement, environmental distress, deception over time, mood modification
	Widytanto & Mc Murrans	2004	Salience, excessive use, neglecting work, anticipation, lack of control, neglecting social life
	American Psyciatric Association (APA)	2005	Tolerance ( increased time nedd, diminished effect) , Withdrawal (agitation, anxiety, obsession, fantasy, typing movements of fingers)
	Orzack	2005	Psychological (sense of well being, inability to stop, more time, neglect of people, feeling empty, lying, problems with school and job), Physical (carpal tunnel syndrome, dry eyes, migraine, backaches, eating irregularities, failure of personal hygiene, sleep disturbances)
	Gratification / reinforcement of internet use	Young	1997
Song et al.		2004	Virtual community, information seeking, aesthetic experience, monetary compensation, diversion, personal status, relationship maintainance

## 2.2. Researches On Internet Addiction

Rising penetration of Internet among populations in many countries exert a pull on as a research area for academics in the area of both marketing and psychology. Most of the researches that are compiled from different countries in the world target young population rather than adults, are given below.

**Young** (1996) designed a study in **USA** among 396 dependent Internet users (Dependents) and a control group of 100 non-dependent Internet users (Non-Dependents) were classified. With the popularity and wide-spread promotion of the Internet, this study first sought to determine a set of criteria which would define addictive from normal Internet usage. Respondents who answered "yes" to five or more of the criteria were classified as addicted Internet users (Dependents) and the remainder was classified as normal Internet users (Non-Dependents) for the purposes of this study. The length of time using the Internet differed substantially between Dependents and Non-Dependent. Among Dependents, 17% had been online for more than one year, 58% had only been on-line between six months to one year, 17% said between three to six months, and 8% said less than three months. Among Non-Dependents, 71% had been online for more than one year, 5% had been online between six months to one year, 12% between three to six months, and 12% for less than three months. A total of 83% of Dependents had been online for less than one full year which might suggest that addiction to the Internet happens rather quickly from one's first introduction to the service and products available online. In many cases, Dependents had been computer illiterate and described how initially they felt intimidated by using such information technology. However, they felt a sense of competency and exhilaration as their technical mastery and navigational ability improved rapidly. In order to ascertain how much time respondents spent on-line, they were asked to provide a best estimate of the number of hours per week they currently used the Internet. It is important to note that estimates were based upon the number of hours spent "surfing the Internet" for pleasure or personal interest (e.g., personal e-mail, scanning news groups, playing interactive games) rather than academic or employment related purposes. Dependents spent an 8.04 hours per week compared to Non-Dependents who spent 4.70 hours per week. These estimates show that Dependents spent nearly eight times the number of hours per week as that of Non-Dependents in using the Internet. Dependents gradually developed a daily Internet habit of up to ten times their initial use as their familiarity with the Internet increased. This may be similar to tolerance levels which

develop among alcoholics who gradually increase their consumption of alcohol in order to achieve the desired effect. In contrast, Non-Dependents reported that they spent a small percentage of their time on-line with no progressive increase in use. This suggests that excessive use may be a distinguishable characteristic of those who develop a dependence to on-line usage. Results suggested that differences existed among the specific Internet applications utilized between the two groups as Non-Dependents predominantly used those aspects of the Internet which allowed them to gather information (i.e., Information Protocols and the World Wide Web) and e-mail. Comparatively, Dependents predominantly used the two-way communication functions available on the Internet (i.e., chat rooms, news groups, or e-mail). Non-Dependents viewed the Internet as a useful resource tool and a medium for personal and business communication. Dependents enjoyed those aspects of the Internet which allowed them to meet, socialize, and exchange ideas with new people through these highly interactive mediums. Dependents commented that the formation of on-line relationships increased their immediate circle of friends among a culturally diverse set of world-wide users. Additional probing revealed that Dependents mainly used electronic mail to arrange "dates" to meet on-line or to keep in touch between real time interactions with new found on-line friends. On-line relationships were often seen as highly intimate, confidential, and less threatening than real life friendships and reduced loneliness perceived in the Dependent's life. Often times, Dependents preferred their "on-line" friends over their real life relationships due to the ease of anonymous communication and the extent of control in revealing personal information among other on-line users. One major component of this study was to examine the extent of problems caused by excessive Internet use. Non-Dependents reported no adverse affects due to its use, except poor time management because they easily lost track of time once on-line. However, Dependents reported that excessive use of the Internet resulted in personal, family, and occupational problems that have been documented in established addictions such as pathological gambling, eating disorders, and alcoholism. Problems reported were classified into five categories: academic, relationship, financial, occupational, and physical (Young 1996).

In the research of **Petrie and Gunn** (1998), actualised in **England**, (46.1%) of sample stated that they were "addicted" to the Internet. This study has shown that users who defined themselves as "addicted" to the Internet were equally likely to be female as male, and had a mean age close to 30, contradicting the stereotype which has developed of Internet "addicts". Indeed, females showed higher scores on the IUAS scale of Internet use and attitudes

developed in this study. However, it was shown that there was a significant relationship between high Internet use and positive attitudes towards the Internet as measured by the IUAS and both depression and introversion.

**Morrison and Goldfine**, at the University of Idaho, USA surveyed 264 students and discovered what they say is the dark side of the Internet in 1999. Of the students surveyed while using 19 university computer labs, 2.8 percent reported they did not manage their time while online and that Internet use was interfering significantly with their lives. Another 4 percent said Internet use interfered with their lives somewhat. On average, students spend 1.6 hours a day on the Internet. Sending and receiving e-mail messages was the top use for 53 percent. Another 30 percent checked class assignments most, and about 17 percent used the Internet most for research and communicating with teachers (Erin 1999).

**Chou** (2001) actualised a study by interviewing **Taiwanese** college students. The subjects in this study were at least Internet heavy users, in terms of time they spent online. On average, they spent 4–5 hours per weekday, and 5–8 hours during weekends and school breaks. These subjects reported that the Internet significantly enhanced their self-identification, closer relationships with friends, and bonding with the world. However, eyesight deterioration and sleep deprivation were the major two negative impacts of Internet use. Other problems included poor grades and job performance. About one-third said they experienced loss, moodiness, anxiety, etc., when they could not log on to the Internet. Some subjects had tried the abstinence methods, which did not often work out.

Frequent Internet users have reported engaging in more social activities than less frequent users. In a study with 927 **Israeli** teenagers aged 13 to 18 years from a representative sample of Israeli households, it was reported that more than a third of the respondents were frequent Internet users (**Mesch** 2001), although the authors classified frequent use as anything more than once per week. Only 10% of respondents reported using the Internet daily. Importantly, however, frequent users reported having fewer friends and feeling more socially isolated than did light users.

A survey of Generalized Problematic Internet Use Scale (GPIUS) administered to 386 **USA** undergraduate students identified seven dimensions of problematic area including: mood alteration, perceived social benefits available online, negative outcomes associated with

Internet use, compulsive Internet use, excessive amounts of time spent online, withdrawal symptoms when away from the Internet, and perceived social control available online (**Caplan** 2002).

According to a research of Internet and flow surveys pool, over **Taiwan** 395 game club members, the flow components empathy (concentration and time distortion) and discovery (playfulness and exploratory behavior) are attractive experiences that lead to goal confusion and obsession. Combined with relapse and tolerance, similar to the side effects often found in drug abuse, a deep obsession creates a strong self-control disorder, as exhibited by withdrawal symptoms and failed attempts to stop the activity. Finally, self-control disorder also contributes to goal confusion by strengthening the de-pendence on the addictive activity and ignoring daily obligations and other important affairs. (**Chou & Ting** 2003)

**Tsai and Lin** (2003) presented a follow-up investigation of a series of studies about **Taiwanese** adolescents' Internet addiction. Through analyzing a series of questionnaires, among 700 Taiwanese high school adolescents a total of ninety students were viewed as Internet addicts 10 Taiwanese adolescents with Internet addiction were selected for in-depth interviews. Adolescents' interview data revealed the following: First, almost all of the interviewed adolescents exhibited most of the symptoms of Internet addiction as identified by previous studies, including compulsive use and withdrawal, tolerance, and related problems of school, health, family, finance, and time management. Moreover, almost all of the interviewed adolescents stated that messages on the Internet became the primary source of their information and knowledge. Many of them were addicted to the messages and activity on the Internet, but not by the Internet as a medium per se. Also, the world of the Internet seemed to become a place to relieve adolescents' depression. Most of the interviewed adolescents self-declared that they were Internet addicts, but none of them could clearly state what to do with such an addiction.

Internet users in **Korea** were investigated in terms of Internet over-use and related psychological profiles by the level of Internet use. Young's Internet Addiction Scale was used and 13,588 users (7,878 males, 5,710 females), out of 20 million from a major portal site in Korea, participated in this study. Among the sample, 3.5% had been diagnosed as Internet addicts (IA), while 18.4% of them were classified as possible Internet addicts (PA). The

Internet Addiction Scale showed a strong relationship with dysfunctional social behaviors. More IA tried to escape from reality than PA and Non-addicts (NA). When they got stressed out by work or were just depressed, IA showed a high tendency to access the Internet. The IA group also reported the highest degree of loneliness, depressed mood, and compulsivity compared to the other groups. The IA group seemed to be more vulnerable to interpersonal dangers than others, showing an unusually close feeling for strangers (**Whang et al 2003**).

A study was carried as a preliminary investigation of the extent of Internet addiction in school children 16–18 years old in **India**. Davis Online Cognition Scale and UCLA loneliness scales were used. The research revealed that 14% met the criteria for Internet addiction. Significant behavioral and functional usage differences emerged between dependents and nondependent. Dependents often delayed work to spend time online. Poor time management and lack of control may be the reasons for this. Dependents also reported losing sleep due to late-night logons. Sleep patterns are disrupted due to late-night logons. On the loneliness scale, significant differences emerged, with the dependents scoring higher than the non-dependents. Amongst the dependents, 17% had been online for 6 months, 22% for 6 months to 1 year, 39% for 1–2 years, and 22% for more than 2 years. Amongst non-dependents, 19% had been online for 6 months, 14% for 6 months to 1 year, 62% for 1–2 years, and 5% for more than 2 years. 17% of dependents spent less than 30 min on line per day, 50% spent 1–2 h per day, 28% spent 2–4 h, and 5.5% spent more than 4 h. Amongst the non-dependents, 29% spent less than 30 min per day online, 62% spent 1–2 h, and 9% spent 2–4 h. This does suggest that excessive usage may be a characteristic of those who develop dependence on the Internet... No major differences emerged in the applications being used by dependents and non-dependents. The main applications being used by both dependents and non-dependents are Email, Chat Rooms, Search Engines, Games, Online Gambling, E-Cards and Jokes, and Auction or shopping sites. The main difference remains in the length and time of usage between dependents and nondependent (**Kanwal & Archanapreet 2003**).

Data were collected from a purposive sample of 498 students in two Midwestern universities, **USA**, through a pool of Internet surveys distributed in class. Results show that many people do apparently use the Internet to form new relationships that are totally different from their real-life relationships. (**Song et al 2004**).

According to **Leung** (2004), in **Hong Kong**, born between 1977 and 1997, net-generation is the first generation to grow up surrounded by home computers, video games, and the Internet. A research by Internet addiction survey of Young, among 699 Net-genes between the ages of 16 and 24, resulted Addicted Net-genes are also strongly linked to the pleasure of being able to control the simulated world in online games. The finding reinforces previous research that “dependents” of the Internet spend most of their time in the synchronous communication environment engaging in interactive online games, chat rooms, and ICQ for pleasure-seeking or escape, while “non-dependents” use information-gathering functions available on the Internet. Furthermore, Internet addicts tend to watch television significantly less, indicating a displacement effect on traditional media use for the Net-generation.

**You et al** (2004) actualized a study to evaluate the relationship between attention deficit- hyperactivity/impulsivity symptoms and Internet addiction. In total, 535 elementary school were recruited in **Korea**. The presence or severity of Internet addiction was assessed by the Young's Internet Addiction test. Parents and teachers of the children completed the DuPaul's attention deficit hyperactivity disorder (ADHD) rating scale (ARS; Korean version, K-ARS) and Child Behavior Checklists. Children with the highest and lowest quartiles in K-ARS scores were defined to be in ADHD and non-ADHD groups, respectively. Five children (0.9%) met criteria for a definite Internet addiction and 75 children (14.0%) met criteria for a probable Internet addiction. K-ARS scores had significant positive correlations with Young's Internet Addiction test scores. The Internet addiction group had higher total scores of K-ARS and ADHD-related subcategories in the Child Behavior Checklists than the non-addiction group. The ADHD group had higher Internet addiction scores compared with the non-ADHD group. Therefore, significant associations have been found between the level of ADHD symptoms and the severity of Internet addiction in children.

An epidemiological study was performed on a representative sample of the **Norwegian** youth population (12 to 18 years old, N= 3,237; response rate 45.2%). The percentage who was frequent players (weekly) of different computer games was 63.3%, and the percentage of infrequent users was 36.7%. A mean of 2.7% (4.2% of the boys, 1.1% of the girls) could be described as exhibiting "pathological playing" according to the criteria in the 1998 Diagnostic Questionnaire for Internet Addiction of Young, and an additional 9.82%

(145% of the boys, 5.0% of the girls) were considered to be engaging in "at-risk playing." Of the weekly gamblers, 4.2% fulfilled 5 criteria for pathological playing, and an additional 15.5% 3 to 4 criteria, i.e., at-risk playing. This indicated that frequent gaming on computer games without money rewards may be related to problematic playing even though no monetary reward is involved (**Johansson and Götestam 2004**)

**Czech** university students as sample of 341 people were asked to participate an Internet addiction research via Internet addiction survey of Young . Twenty of them (% 6) were assessed as dependent and 324 as non-dependent. From the 142 women students were 1% dependent and from 199 male students 9%. In the group of university students, men more often have a problem with Internet addiction disorder than women. Also significant difference was discovered between the time that dependent and non-dependent students spend on the Internet: 44 hours per week for dependent and 13 hours per week for non-dependent students. The largest part of dependent users positively answered to the questions: "Do you stay on-line longer than originally intended?" and "Do you feel preoccupied with the Internet (think about previous on-line activity or anticipate next on-line session)?" (**Simkova and Cincera, 2004**).

Forty-one students were recruited at the Stockholm School of Economics for Internet addiction research in **Sweden**). A pool of Internet addiction survey of Young, UCLA Loneliness scale, Schwarts Value scale and Big Five inventory was used. They were on the average 21.1 years old (range 18–28), No link was found between personality and usage of the Internet. Results suggest that frequent users tend to be lonely, to have deviant values, and to some extent to lack the emotional and social skills characteristic of high emotional intelligence. (**Engelbert & Sjöberg 2004**)

The prevalence of features suggesting harmful use of the Internet is studied in a representative sample of 12–18 year-old **Finns** in a postal survey in 2001. Criteria were tailored analogously to the criteria of pathological gambling (DM IV), fulfilling four of the seven criteria operationalised as Internet addiction. Eighty five percent used the Internet. Among daily users 4.6% of boys and 4.7% of girls fulfilled the four criteria, infrequent users 0.3 and 0.5%, and all respondents 1.7 and 1.4%, respectively. The "addicts" spent more hours (mean 2.7) in the Internet daily than the "non-addicts" (mean 1.3). In the total population of the survey respondents, 1.4% of girls and 1.7% of boys met the definition of

“Internet addiction”. The prevalence rates of “Internet addiction” were in this study much lower than in previously published studies. Even in highest figures, those among daily users of the Internet, were at 4.6–4.7%, and in the total population less than 2% were classified as “addicted” (Ruttakerttu et al 2004).

Yang et al (2005) aimed to investigate the psychiatric symptomatology and personality characteristics of **Korean** senior high school students considered to use the Internet to excess. Along with Internet addiction survey of Young, also SCL9oR (psychiatric symptom checklist) and 16PF (personality factor) tests were used. A total of 328 students, aged 15 to 19 years, participated in the study. Students were divided into 4 Internet user groups according to their the Internet Addiction Test: nonusers ( $n = 59$ , 18.0%), minimal users ( $n = 155$ , 47.3%), moderate users ( $n = 98$ , 29.9%), and excessive users ( $n = 16$ , 4.9%). The excessive users group, when compared with the other groups in this study, reported the highest levels of symptomatology. The study also revealed that excessive users were easily affected by feeling, emotionally less stable, imaginative, absorbed in thought, self-sufficient, experimenting, and preferred their own decisions.

Lo et al. (2005) surveyed 174 **Taiwanese** college-age online players to collect data on the potential effects of online games on the quality of interpersonal relationships and levels of social anxiety. Gerthoner et al.’s Interpersonal Relationship Scale and Inderbitzen & Walter’s Social Anxiety Scale for Adults (SASA)- for Children (SASC) were used as test inventory. According to the results, the quality of interpersonal relationships decreased and the amount of social anxiety increased as the amount of time spent playing online games increased.

The researches presented above use the same or similar type of inventories to measure addiction. The findings have so much commonality indicating the rising widespread and thus seriousness of Internet addiction and the consequent disorders. These researches are summarized on table 3.

**Table 3: Researches Worldwide on Internet Addiction**

Researcher	Date	Country	Content	Assessment Inventory
Young	1996	USA	Internet habits / Internet Addiction and consequences	Internet Addiction Test (IAT) (Modified from DSM IV Pathological Gambling test of American Psychology Association)
Petrie and Gunn	1998	England	Internet habits / depression and introversion	Internet Usage Assessment Scale
Morrison and Goldfine	in Erin 1999	USA	Internet habits /impacts of addiction on school performance	n.a
Chou	2001	Taiwan	Internet habits /impacts of addiction on school performance and psychological state	Indepth interview
Mesch	2001	Israeli	Internet habits /impacts of addiction on school performance and psychological state	n.a.
Caplan	2002	USA	Internet habits /impacts of addiction on school performance and psychological state	Generalized Problematic Internet Use Scale (GPIUS)
Chou &Ting	2003	Taiwan	Internet habits /impacts of addiction on psychological state	In depth interview
Tsai and Lin	2003	Taiwan	Internet habits / symptoms of Internet addiction	In depth interview
Whang et al	2003	Korea	Internet addiction and related psychological profiles by the level of Internet use	IAT
Kanwal & Archanapreet	2003	USA	Internet addiction / behavioral and functional usage differences	Davis Online Cognition Scale and UCLA loneliness scales
Song et al	2004	USA	Internet addiction / reasons of Internet usage	A pool of Internet surveys
Leung	2004	Hong Kong	Profiles of Addicted Net-genres	IAT
You et al	2004	Taiwan	Symptoms and the severity of Internet addiction in children.	IAT + DuPaul's attention deficit hyperactivity disorder (ADHD) + Child Behavior Checklists.
Johansson and Götestam	2004	Norway	Pathological game playing	IAT
Simkova and Cincera	2004	Czech Republic	Internet addiction disorder	IAT
Engelbert & Sjöberg	2004	Sweden	Internet habits /impacts of addiction on psychological state	IAT + UCLA Loneliness scale, Schwarts Value scale and Big Five inventory
Ruttakerttu et al	2004	Finland	Internet habits / Internet Addiction	Tailored pathological gambling (DM IV)
Yang et al	2005	Korea	Internet addiction / psychiatric symptomatology and personality characteristics of excess users	IAT + SCL90R (psychiatric symptom checklist) and 16PF (personality factor)
Lo et al.	2005	Taiwan	Addicted online players / potential effects of online games on the quality of interpersonal relationships and levels of social anxiety.	Gerthoner et al.'s Interpersonal Relationship Scale and Inderbitzen & Walter's Social Anxiety Scale for Adults (SASA)- for Children (SASC)

The Internet has grown rapidly since its beginnings in early 1970s. The simplicity to life it brings attracted many people on. Hence now becoming dangerous for some people who are excessively using it, in a way becoming addicted to Internet. There is debate among users as to whether there really is such an addiction, and as to whether it's a bad thing. Some people feel that the Internet is just a harmless, friendly tool for gathering information, making new friends, and passing time. Nevertheless most of the academics from psychology and marketing fields found out through researches that there is Internet addiction, which is accepted as a compulsive consumption and results in out of control action disorder. It is excessive use of Internet that becomes hazardous to one's mental and physical health.

The important problem is that Internet addicts are not aware that it is a problem. Internet provides an escape from reality and everyday problems just like alcohol or drugs. Though addicts spend many hours on Internet and escape from life they do not take any action against. Instead they ignore it which intensify the problem. Addiction to the Internet affects the victim both psychologically and socially. Research in this area is still in the beginning phases, but the results warrant further studies.

### **3. RESEARCH DESIGN AND METHODOLOGY**

This chapter covers a field study conducted with 296 high school students living in Istanbul, Turkey. Among the sample 263 of the students use internet and the remaining 33 do not. In the chapter, the research objectives, design and methodology, conceptual model are presented

#### **3.1. Research Objectives**

The main objective of the research is to reveal the “internet addiction tendency”(IAT) of Turkish youth of age 15-18, living in Istanbul. The study also aims to analyze the factors that affect the internet addiction tendency. The relation between “gratification of internet usage” (GIU) and IAT is also assessed along with other factors that are stated in literature (see conceptual model, p:27).

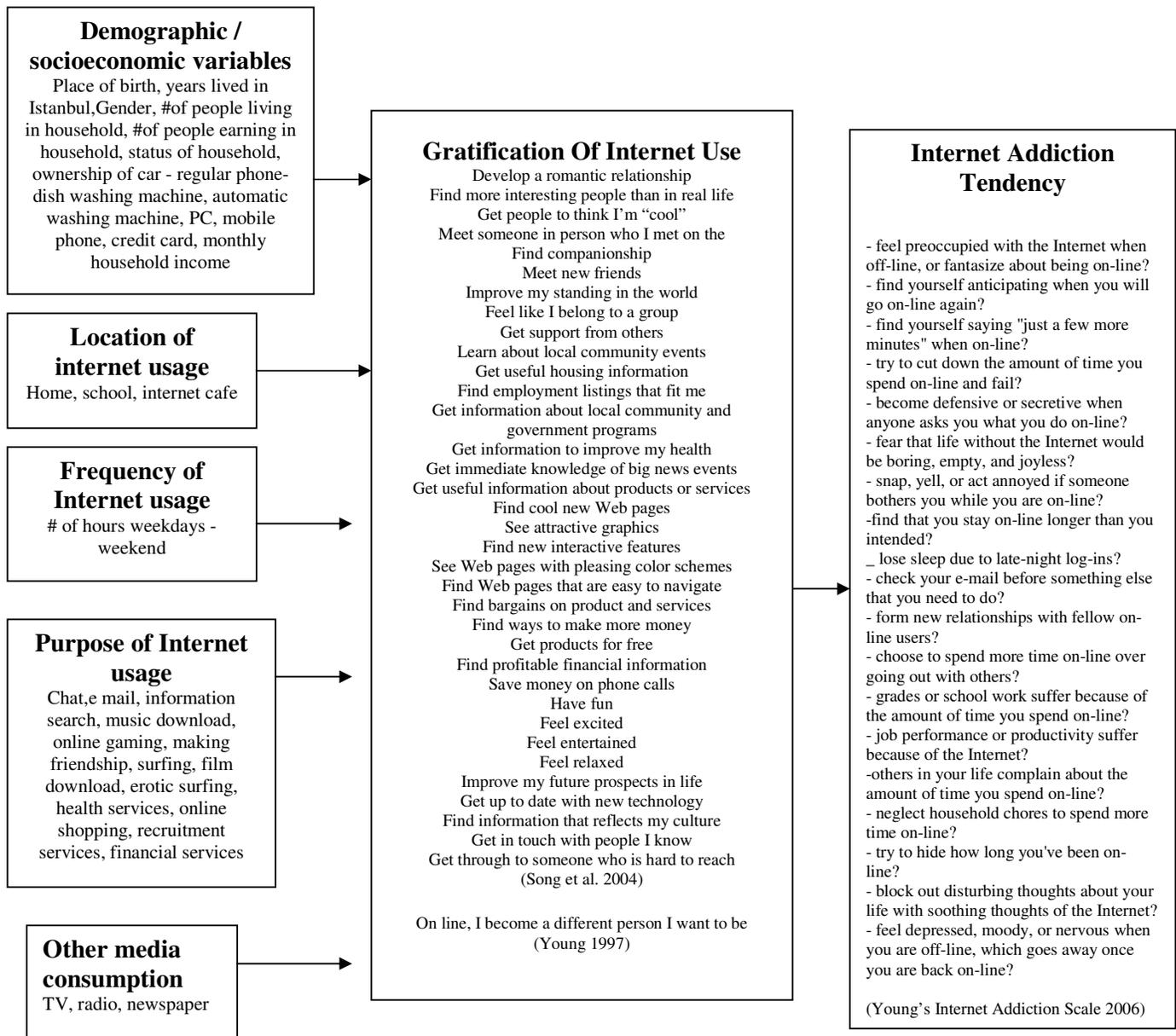
The specific research questions are:

- 1- Is there an internet addiction tendency of Turkish youth? If so, what is the level of internet addiction tendency?
- 2- What are the factors, directly and indirectly affect the internet addiction tendency?

#### **3.2. Conceptual Model of Research**

In the model “IAT” was taken as dependent variable and assessed by Young’s scale (2006). IAT is assumed to be dependent on the “GIU”, which is defined by Song et al (2004) and Young (1997). GIU is proposed to be dependent on demographic-socioeconomic variables, other media consumption and situational factors as location of internet usage, frequency of internet usage, purpose of internet usage as researched in different studies. The model is displayed on figure 2.

**Figure 2: Conceptual Research Model**



### 3.3. Hypothesis

First the hypothesis about relationship of both internet addiction tendency and internet usage with location of internet use, purpose of internet use, other media consumption habits, demographic / socioeconomic variables are proposed.

H1: There is no relationship between internet addiction tendency and hours spent on internet on weekdays

H2: There is no relationship between internet addiction tendency and hours spent on internet on weekends

H3: There is no relationship between internet addiction tendency and location of internet use

H4: There is no relationship between internet addiction tendency and purpose of internet use

H5: There is no relationship between internet addiction tendency and other media consumption habits

H6: There is no relationship between internet addiction tendency and demographic / socioeconomic variables

H7: There is no relationship between internet usage and location of internet use

H8: There is no relationship between internet usage and purpose of internet use

H9: There is no relationship between internet usage and other media consumption habits

H10: There is no relationship between internet usage and demographic / socioeconomic variables

The following hypothesis are developed over the proposed conceptual model

H11: There is no relationship between gratification of Internet usage and Internet addiction tendency

H12: There is no relationship between location of Internet usage and gratification of Internet usage

H13: There is no relationship between frequency of Internet usage and gratification of Internet

H14: There is no relationship between purpose of Internet usage and gratification of Internet usage

H15: There is no relationship between other media consumption and gratification of Internet usage

H16: There is no relationship between demographic / socioeconomic variables and gratification of Internet usage

### **3.4. Data Collection Instrument**

For this study the primary data were obtained through questionnaires administered by trained interviewers. The questionnaires were administered in high schools, in classes. Filling out the questionnaires took 15-20 minutes on the average. The questionnaire is a structured one (see appendix 1). Most of the answering categories are close ended rating scales of six items. Since the variables are translated from international inventories, the wording and scaling were revised by a pilot study applied to 30 students.

The questionnaire is composed of seven parts. In these parts there are 68 closed ended questions and 16 semi structured demographic & socioeconomic questions:

Internet usage - filter question	: Q1
Frequency of internet usage	: Q2
Location of internet usage	: Q3 – Q6
Purpose of internet usage	: Q7 – Q21
Gratification of internet usage	: Q22 - Q49
Internet addiction tendency	: Q50 - Q68
Demographic & socioeconomic factors	: D1 –D16

### **3.5. Sample**

The population of the research is high school students living in Istanbul, age between 15-18. The extend is Istanbul city. The time is May 2006. Sample size is 296, out of which 33 do not use internet. The internet usage ratio, demographic profile and socioeconomic profile of the sample are presented below.

**Table 4 -5: Internet usage and e mail ownership****internet usage**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	263	88,9	88,9	88,9
	No	33	11,1	11,1	100,0
	Total	296	100,0	100,0	

The students who use internet constitute the majority of the sample.

**Owning of a personal e-mail address**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	232	78,4	78,4	78,4
	No	64	21,6	21,6	100,0
	Total	296	100,0	100,0	

E mail ownership is parallel to internet use frequency.

**Table 6-8 : Demographic profile of sample****age**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15	58	19,6	19,6	19,6
	16	108	36,5	36,5	56,1
	17	97	32,8	32,8	88,9
	18	33	11,1	11,1	100,0
	Total	296	100,0	100,0	

**Gender**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	145	49,0	49,0	49,0
	Female	151	51,0	51,0	100,0
	Total	296	100,0	100,0	

**Place of Birth**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Istanbul	208	70,3	70,3	70,3
	other than Istanbul	88	29,7	29,7	100,0
	Total	296	100,0	100,0	

The ages are evenly distributed to different levels of high school. Equal distribution of male and female was taken as a quota factor for the sample. The birth place of majority of students is İstanbul.

**Table 9 - 25 : Socioeconomic profile of sample**

		location (region)			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Beşiktaş	119	40,2	40,2	40,2
	Beyoğlu	3	1,0	1,0	41,2
	Fatih	7	2,4	2,4	43,6
	Kağıthane	3	1,0	1,0	44,6
	Üsküdar	5	1,7	1,7	46,3
	Bakırköy	29	9,8	9,8	56,1
	Sarıyer	13	4,4	4,4	60,5
	Avcılar	3	1,0	1,0	61,5
	Şişli	21	7,1	7,1	68,6
	Ümraniye	90	30,4	30,4	99,0
	Kadıköy	1	,3	,3	99,3
	Eminönü	1	,3	,3	99,7
	Maltepe	1	,3	,3	100,0
	Total	296	100,0	100,0	

**How long you've been living in İstanbul?**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1- 4 years	21	7,1	7,1	7,1
	5 - 9 years	23	7,8	7,8	14,9
	10-14 years	36	12,2	12,2	27,0
	15+ years	216	73,0	73,0	100,0
	Total	296	100,0	100,0	

**Number of people living in household**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	5	1,7	1,7	1,7
2	4	1,4	1,4	3,0
3	43	14,5	14,5	17,6
4	130	43,9	43,9	61,5
5	61	20,6	20,6	82,1
6	35	11,8	11,8	93,9
7	16	5,4	5,4	99,3
8	2	,7	,7	100,0
Total	296	100,0	100,0	

**Number of people working in household**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	154	52,0	52,0	52,0
2	111	37,5	37,5	89,5
3	26	8,8	8,8	98,3
4	5	1,7	1,7	100,0
Total	296	100,0	100,0	

**Number of cars in household**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid No car	218	73,6	73,6	73,6
Commercial vehicals	3	1,0	1,0	74,7
Lower brands and models	9	3,0	3,0	77,7
average cars	47	15,9	15,9	93,6
Luxirous cars	19	6,4	6,4	100,0
Total	296	100,0	100,0	

**Status of household**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid own property	181	61,1	61,1	61,1
rent	86	29,1	29,1	90,2
Business accomodation	16	5,4	5,4	95,6
living in someone else's property	13	4,4	4,4	100,0
Total	296	100,0	100,0	

**Regular phone in household**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid exist	264	89,2	89,2	89,2
not exist	32	10,8	10,8	100,0
Total	296	100,0	100,0	

**Dishwasher in household**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid exist	206	69,6	69,6	69,6
not exist	90	30,4	30,4	100,0
Total	296	100,0	100,0	

**Automatic washing machine in household**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid exist	284	95,9	95,9	95,9
not exist	12	4,1	4,1	100,0
Total	296	100,0	100,0	

**Computers in household**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid exist	195	65,9	65,9	65,9
not exist	101	34,1	34,1	100,0
Total	296	100,0	100,0	

**Mobile phone in household**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid exist	280	94,6	94,6	94,6
not exist	16	5,4	5,4	100,0
Total	296	100,0	100,0	

**Credit card in household**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid exist	187	63,2	63,2	63,2
not exist	109	36,8	36,8	100,0
Total	296	100,0	100,0	

**Monthly income in household**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 500 YTL	24	8,1	8,1	8,1
	500+ - 750 YTL	39	13,2	13,2	21,3
	750+ - 1000YTL	59	19,9	19,9	41,2
	1000+ - 500 YTL	69	23,3	23,3	64,5
	1500+ - 2000 YTL	43	14,5	14,5	79,1
	2000+ - 3000 YTL	28	9,5	9,5	88,5
	3000+ - 4000 YTL	16	5,4	5,4	93,9
	More than 4000 YTL	18	6,1	6,1	100,0
	Total	296	100,0	100,0	

**Working status- Mother**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not working	223	75,3	75,3	75,3
	Working	57	19,3	19,3	94,6
	Retired	14	4,7	4,7	99,3
	Dead	2	,7	,7	100,0
	Total	296	100,0	100,0	

**Education level of parent- Mother**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	literate	32	10,8	10,9	10,9
	Primary	110	37,2	37,4	48,3
	Middle	35	11,8	11,9	60,2
	High school	87	29,4	29,6	89,8
	University	30	10,1	10,2	100,0
	Total	294	99,3	100,0	
Missing	System	2	,7		
Total		296	100,0		

**Working status- Father**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not working	11	3,7	3,7	3,7
	Working	258	87,2	87,2	90,9
	Retired	21	7,1	7,1	98,0
	Dead	6	2,0	2,0	100,0
	Total	296	100,0	100,0	

**Education level of parent- Father**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	literate	15	5,1	5,2	5,2
	Primary	67	22,6	23,1	28,3
	Middle	54	18,2	18,6	46,9
	High school	98	33,1	33,8	80,7
	University	56	18,9	19,3	100,0
	Total	290	98,0	100,0	
Missing	System	6	2,0		
Total		296	100,0		

The students attend to high schools in 14 different regions of İstanbul. Most of the students have been living in Istanbul life time. Nuclear families of 3-4 people are observed more frequently. Most of the students' households are monetarily compensated by one or two workers. There are no cars in majority of the households. Average brand cars are observed more frequently in the households that own cars. More than half of the households are the property of students' families. In almost all the houses there are regular phones, mobile phones and automatic washing machines. Ownership of dishwashers, computers and credit cards are also high. Majority of the students belong to middle and lower middle income group. Households of students seem to be compensated mostly by the father. Most of the mothers are not working. Education levels of fathers are higher than the mothers.

#### 4. FINDINGS

This chapter presents general findings of the field survey. Reliability analysis, anova, chi square and regression tests are used to analyze data.

##### 4.1. Reliability Analysis

Reliability analysis was applied separately to Internet gratification items and Internet addiction tendency items.

**Table 26: Reliability analysis for Internet gratification items**

##### Reliability Statistics

Cronbach's Alpha	N of Items
,753	6

##### ANOVA

		Sum of Squares	df	Mean Square	F	Sig
Between People		867,529	224	3,873		
Within People	Between Items	879,620	5	175,924	184,174	,000
	Residual <sup>a</sup>	1069,829	1120	,955		
	Total	1949,450	1125	1,733		
Total		2816,978	1349	2,088		

Grand Mean = 1,7640

a. Tukey's test for nonadditivity is undefined for dichotomous data.

**Table 27: Reliability analysis for Internet addiction tendency items**

Cronbach's Alpha	N of items
,9294	19

**ANOVA**

		Sum of Squares	df	Mean Square	F	Sig
Between People		5042,097	232	21,733		
Within People	Between Items	1143,592	18	63,533	41,390	,000
	Residual <sup>a</sup>	6410,092	4176	1,535		
	Total	7553,684	4194	1,801		
Total		12595,781	4426	2,846		

Grand Mean = 1,49

a. Tukey's test for nonadditivity is undefined for dichotomous data.

Both of the analysis shows that the reliability of the questionnaire is quite high.

#### 4.2. Internet Addiction Tendency

The data in this part are analyzed by two ways. First sample is categorized by total score of items as stated by Young. Than the total mean score is discussed item by item.

**Table 28: Internet addiction tendency (Young's scale) -categorized**

**young categorisation internet addiction tendency**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No internet adiction	83	28,0	35,6	35,6
	Low internet addiction tendency	95	32,1	40,8	76,4
	Avarage internet addiction tendency	51	17,2	21,9	98,3
	High internet addiction tendency	4	1,4	1,7	100,0
	Total	233	78,7	100,0	
Missing	System	63	21,3		
Total		296	100,0		

Missing systems include also 33 non internet users. Categories were assessed based on Young's computation. Low internet addiction tendency seems to be the most common, followed by low internet addiction tendency. However there is still a significant percent of "21,9" as average and "1,7" as high internet addiction tendency among students.

**Table 29: Internet addiction tendency -itemized**

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Check your e-mail before something else that you need to do?	259	0	5	2,62	1,801
Find yourself saying "just a few more minutes" when on-line?	255	0	5	2,15	1,835
Form new relationships with fellow on-line users?	257	0	5	1,89	1,678
Find stayed on-line longer than you intended?	256	0	5	1,87	1,748
Snap, yell, or act annoyed if someone bothers you while you are on-line?	258	0	5	1,81	1,748
Block out disturbing thoughts about your life with soothing thoughts of the Internet?	258	0	5	1,74	1,681
Find yourself anticipating when you will go on-line again?	258	0	5	1,73	1,737
Try to cut down the amount of time you spend on-line and fail?	256	0	5	1,71	1,774
Become defensive or secretive when anyone asks you what you do on-line?	259	0	5	1,56	1,649
Feel preoccupied with the Internet when off-line, or fantasize about being on-line?	261	0	5	1,41	1,451
Fear that life without the Internet would be boring, empty, and joyless?	261	0	5	1,39	1,479
Others in your life complain about the amount of time you spend on-line?	251	0	5	1,29	1,654
Choose to spend more time on-line over going out with others?	260	0	5	1,24	1,483
Lose sleep due to late-night log-ins?	258	0	5	1,17	1,657
Neglect household chores to spend more time on-line?	258	0	5	1,02	1,489
Feel nervous when you are off-line, which goes away once you are back on-line?	258	0	5	,99	1,498
Try to hide how long you've been on-line?	257	0	5	,77	1,310
Grades or school work suffer because of the amount of time you spend on-line?	259	0	5	,77	1,306
Performance or productivity suffer because of the Internet?	257	0	5	,66	1,156
Valid N (listwise)	226				

“Checking e mails before something else you need to do” and “finding yourself saying -just a few more minutes-when online” seem to be the most common symptoms of internet addiction tendency.

**Table 30-36: Relationship between internet addiction tendency and demographic/socioeconomic variables**

**Crosstab**

		internet addiction total score				Total	
		None internet user	Low internet addiction tendency	Average internet addiction tendency	High internet addiction tendency		
Dishwasher in household	exist	Count	51	72	41	4	168
		% within internet addiction total score	61,4%	75,8%	80,4%	100,0%	72,1%
	not exist	Count	32	23	10	0	65
		% within internet addiction total score	38,6%	24,2%	19,6%	,0%	27,9%
Total		Count	83	95	51	4	233
		% within internet addiction total score	100,0%	100,0%	100,0%	100,0%	100,0%

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8,618 <sup>a</sup>	3	,035
Likelihood Ratio	9,542	3	,023
Linear-by-Linear Association	7,860	1	,005
N of Valid Cases	233		

a. 2 cells (25,0%) have expected count less than 5. The minimum expected count is 1,12.

**Crosstab**

		internet addiction total score				Total	
		None internet user	Low internet addiction tendency	Average internet addiction tendency	High internet addiction tendency		
Computers in household	exist	Count	48	70	40	4	162
		% within internet addiction total score	57,8%	73,7%	78,4%	100,0%	69,5%
	not exist	Count	35	25	11	0	71
		% within internet addiction total score	42,2%	26,3%	21,6%	,0%	30,5%
Total		Count	83	95	51	4	233
		% within internet addiction total score	100,0%	100,0%	100,0%	100,0%	100,0%

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9,796 <sup>a</sup>	3	,020
Likelihood Ratio	10,799	3	,013
Linear-by-Linear Association	8,870	1	,003
N of Valid Cases	233		

a. 2 cells (25,0%) have expected count less than 5. The minimum expected count is 1,22.

**Crosstab**

			internet addiction total score				Total
			None internet user	Low internet addiction tendency	Average internet addiction tendency	High internet addiction tendency	
Monthly income in household	Less than 500 YTL	Count	3	4	6	0	13
		% within internet addiction total score	3,6%	4,2%	11,8%	,0%	5,6%
	500+ - 750 YTL	Count	11	11	7	1	30
		% within internet addiction total score	13,3%	11,6%	13,7%	25,0%	12,9%
	750+ - 1000YTL	Count	26	19	4	1	50
		% within internet addiction total score	31,3%	20,0%	7,8%	25,0%	21,5%
	1000+ - 500 YTL	Count	24	24	8	0	56
		% within internet addiction total score	28,9%	25,3%	15,7%	,0%	24,0%
	1500+ - 2000 YTL	Count	9	13	14	0	36
% within internet addiction total score		10,8%	13,7%	27,5%	,0%	15,5%	
2000+ - 3000 YTL	Count	5	13	3	0	21	
	% within internet addiction total score	6,0%	13,7%	5,9%	,0%	9,0%	
3000+ - 4000 YTL	Count	3	5	3	1	12	
	% within internet addiction total score	3,6%	5,3%	5,9%	25,0%	5,2%	
More than 4000 YTL	Count	2	6	6	1	15	
	% within internet addiction total score	2,4%	6,3%	11,8%	25,0%	6,4%	
Total	Count	83	95	51	4	233	
	% within internet addiction total score	100,0%	100,0%	100,0%	100,0%	100,0%	

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	37,564 <sup>a</sup>	21	,014
Likelihood Ratio	36,976	21	,017
Linear-by-Linear Association	4,932	1	,026
N of Valid Cases	233		

a. 15 cells (46,9%) have expected count less than 5. The minimum expected count is ,21.

**Crosstab**

			internet addiction total score				Total
			None internet user	Low internet addiction tendency	Average internet addiction tendency	High internet addiction tendency	
Owning of a personal e-mail address	Yes	Count	62	85	47	3	197
		% within internet addiction total score	74,7%	89,5%	92,2%	75,0%	84,5%
	No	Count	21	10	4	1	36
		% within internet addiction total score	25,3%	10,5%	7,8%	25,0%	15,5%
Total		Count	83	95	51	4	233
		% within internet addiction total score	100,0%	100,0%	100,0%	100,0%	100,0%

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	10,467 <sup>a</sup>	3	,015
Likelihood Ratio	10,220	3	,017
Linear-by-Linear Association	6,588	1	,010
N of Valid Cases	233		

a. 2 cells (25,0%) have expected count less than 5. The minimum expected count is ,62.

**Crosstab**

			internet addiction total score				Total
			None internet user	Low internet addiction tendency	Average internet addiction tendency	High internet addiction tendency	
Education level of parent-Mother	literate	Count	12	7	6	0	25
		% within internet addiction total score	14,6%	7,4%	11,8%	,0%	10,8%
	Primary	Count	42	30	11	0	83
		% within internet addiction total score	51,2%	31,6%	21,6%	,0%	35,8%
	Middle	Count	8	15	3	0	26
		% within internet addiction total score	9,8%	15,8%	5,9%	,0%	11,2%
	High school	Count	17	32	23	3	75
		% within internet addiction total score	20,7%	33,7%	45,1%	75,0%	32,3%
	University	Count	3	11	8	1	23
		% within internet addiction total score	3,7%	11,6%	15,7%	25,0%	9,9%
Total		Count	82	95	51	4	232
		% within internet addiction total score	100,0%	100,0%	100,0%	100,0%	100,0%

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	30,974 <sup>a</sup>	12	,002
Likelihood Ratio	33,316	12	,001
Linear-by-Linear Association	20,721	1	,000
N of Valid Cases	232		

a. 5 cells (25,0%) have expected count less than 5. The minimum expected count is ,40.

### Crosstab

			internet addiction total score				Total
			None internet user	Low internet addiction tendency	Avarage internet addiction tendency	High internet addiction tendency	
Education level of parent-Father	literate	Count	7	2	2	0	11
		% within internet addiction total score	8,6%	2,1%	4,1%	,0%	4,8%
	Primary	Count	26	24	5	0	55
		% within internet addiction total score	32,1%	25,3%	10,2%	,0%	24,0%
	Middle	Count	16	13	9	0	38
		% within internet addiction total score	19,8%	13,7%	18,4%	,0%	16,6%
	High school	Count	23	39	17	2	81
		% within internet addiction total score	28,4%	41,1%	34,7%	50,0%	35,4%
	University	Count	9	17	16	2	44
		% within internet addiction total score	11,1%	17,9%	32,7%	50,0%	19,2%
Total	Count	81	95	49	4	229	
	% within internet addiction total score	100,0%	100,0%	100,0%	100,0%	100,0%	

### Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24,678 <sup>a</sup>	12	,016
Likelihood Ratio	26,371	12	,010
Linear-by-Linear Association	18,316	1	,000
N of Valid Cases	229		

a. 8 cells (40,0%) have expected count less than 5. The minimum expected count is ,19.

**Crosstab**

		internet addiction total score				Total
		None internet user	Low internet addiction tendency	Average internet addiction tendency	High internet addiction tendency	
Working status-Mother	Count	73	68	31	2	174
	% within internet addiction total score	88,0%	72,3%	60,8%	50,0%	75,0%
Working	Count	8	17	18	2	45
	% within internet addiction total score	9,6%	18,1%	35,3%	50,0%	19,4%
Retired	Count	1	9	2	0	12
	% within internet addiction total score	1,2%	9,6%	3,9%	,0%	5,2%
Dead	Count	1	0	0	0	1
	% within internet addiction total score	1,2%	,0%	,0%	,0%	,4%
Total	Count	83	94	51	4	232
	% within internet addiction total score	100,0%	100,0%	100,0%	100,0%	100,0%

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	24,591 <sup>a</sup>	9	,003
Likelihood Ratio	24,583	9	,003
Linear-by-Linear Association	8,220	1	,004
N of Valid Cases	232		

a. 10 cells (62,5%) have expected count less than 5. The minimum expected count is ,02.

Internet addiction tendency is significantly related by some demographic/ socioeconomic variables. Higher internet addiction tendency is observed among sample who have dish washing machine at home, computers at home, higher monthly household incomes, owning a personal e mail adres, higher education levels of both mother and father, and working mother. H6 is rejected.

### 4.3. Frequency of Internet and Other Media Use

In this part the students' media consumption, as internet, TV, radio and newspapers are analyzed.

**Table 37-38: Frequency of internet use**

**hours spent on internet-weekdays**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	4	1,4	1,7	1,7
	1 - 3 hrs	20	6,8	8,5	10,3
	4 - 8 hrs	115	38,9	49,1	59,4
	9 - 15 hrs	75	25,3	32,1	91,5
	16 +	20	6,8	8,5	100,0
	Total	234	79,1	100,0	
Missing	System	62	20,9		
Total		296	100,0		

**hours spent on internet-weekend**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	3	1,0	1,3	1,3
	1 - 3 hrs	6	2,0	2,5	3,8
	4 - 8 hrs	101	34,1	42,4	46,2
	9 - 15 hrs	96	32,4	40,3	86,6
	16 +	32	10,8	13,4	100,0
	Total	238	80,4	100,0	
Missing	System	58	19,6		
Total		296	100,0		

The students seem to use internet regularly on average amounts in weekdays, but very highly on weekends.

**Table 39: Relation between hrs spent on internet weekdays and internet addiction tendency**

**Crosstab**

		young categorisation internet addiction tendency				Total	
		No internet adiction	Low internet addiction tendency	Avarage internet addiction tendency	High internet addiction tendency		
hours spent on internet-weekdays	1	Count % within young categorisation internet addiction tendency	2 3,1%		1 2,1%	3 1,5%	
	1 - 3 hrs	Count % within young categorisation internet addiction tendency	10 15,4%	5 5,7%	2 4,3%	17 8,4%	
	4 - 8 hrs	Count % within young categorisation internet addiction tendency	43 66,2%	42 48,3%	12 25,5%	1 25,0%	98 48,3%
	9 - 15 hrs	Count % within young categorisation internet addiction tendency	9 13,8%	32 36,8%	26 55,3%	2 50,0%	69 34,0%
	16 +	Count % within young categorisation internet addiction tendency	1 1,5%	8 9,2%	6 12,8%	1 25,0%	16 7,9%
Total		Count % within young categorisation internet addiction tendency	65 100,0%	87 100,0%	47 100,0%	4 100,0%	203 100,0%

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	39,181 <sup>a</sup>	12	,000
Likelihood Ratio	42,894	12	,000
Linear-by-Linear Association	29,563	1	,000
N of Valid Cases	203		

a. 10 cells (50,0%) have expected count less than 5. The minimum expected count is ,06.

**Table 40: Relation between hrs spent on internet weekends and internet addiction tendency**

**Crosstab**

		young categorisation internet addiction tendency				Total	
		No internet adiction	Low internet addiction tendency	Avarage internet addiction tendency	High internet addiction tendency		
hours spent on internet-weekend	1	Count % within young categorisation internet addiction tendency	2 3,0%			2 1,0%	
	1 - 3 hrs	Count % within young categorisation internet addiction tendency	3 4,5%	1 1,2%		4 2,0%	
	4 - 8 hrs	Count % within young categorisation internet addiction tendency	45 68,2%	29 33,7%	12 25,0%	86 42,2%	
	9 - 15 hrs	Count % within young categorisation internet addiction tendency	13 19,7%	42 48,8%	27 56,3%	3 75,0%	85 41,7%
	16 +	Count % within young categorisation internet addiction tendency	3 4,5%	14 16,3%	9 18,8%	1 25,0%	27 13,2%
Total		Count % within young categorisation internet addiction tendency	66 100,0%	86 100,0%	48 100,0%	4 100,0%	204 100,0%

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	42,935 <sup>a</sup>	12	,000
Likelihood Ratio	46,808	12	,000
Linear-by-Linear Association	31,722	1	,000
N of Valid Cases	204		

a. 11 cells (55,0%) have expected count less than 5. The minimum expected count is ,04.

There is a significant relationship between hours spent on internet weekdays / weekends and internet addiction tendency. H1 and H2 are rejected. The results show that in weekdays among high internet addicts in Turkey 25% spend 4-8 hours, 50 % spend 9-15 hours and 25 % spend more. On weekends, 75 % of them spend 9-15 hours and 25% spend more.

**Table 41-43: Other media consumption**

**Weekly average hours of tv exposure**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0 - 5 hrs	92	31,1	31,1	31,1
6 -10 hrs	115	38,9	38,9	69,9
10 - 15 hrs	31	10,5	10,5	80,4
16 -20 hrs	23	7,8	7,8	88,2
21 - 30 hrs	10	3,4	3,4	91,6
30 + hrs	25	8,4	8,4	100,0
Total	296	100,0	100,0	

**Weekly average hours of radio exposure**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0 - 5 hrs	198	66,9	66,9	66,9
6 -10 hrs	48	16,2	16,2	83,1
10 - 15 hrs	19	6,4	6,4	89,5
16 -20 hrs	12	4,1	4,1	93,6
21 - 30 hrs	11	3,7	3,7	97,3
30 + hrs	8	2,7	2,7	100,0
Total	296	100,0	100,0	

**Weekly average number of newspaper read**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid None	30	10,1	10,1	10,1
1	2	,7	,7	10,8
1- 7 newspapers	212	71,6	71,6	82,4
8 - 14 newspapers	38	12,8	12,8	95,3
15+ newspapers	14	4,7	4,7	100,0
Total	296	100,0	100,0	

Students seem to be regular average users of newspapers and TV but low users of radio. No significant relationship was found between other media consumption and internet addiction. H5 is accepted.

#### 4.4. Location of Internet Use

**Table 44: Location of internet use**

**Descriptive Statistics**

	N	Mean	Std. Deviation
location of internet usage- home	236	2,66	2,223
location of usage- internet cafe	249	1,84	1,641
location of internet usage -school	233	,70	1,104
location of usage- other	180	,66	1,150
Valid N (listwise)	170		

Location of internet usage is mostly home, followed by internet cafes. Schools are not widely used as an internet source. Some other places mentioned by students are friends' or relatives' houses and relatives' business offices.

**Table 45: Relationship between internet addiction tendency and location of internet use**

**Descriptives**

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	
					Lower Bound	Upper Bound			
location of internet usage- home	No internet adiction	68	1,84	2,127	,258	1,32	2,35	0	5
	Low internet addiction tendency	82	3,18	2,150	,237	2,71	3,66	0	5
	Avarage internet addiction tendency	46	3,52	2,178	,321	2,87	4,17	0	5
	High internet addiction tendency	4	4,50	,577	,289	3,58	5,42	4	5
	Total	200	2,83	2,244	,159	2,52	3,14	0	5
location of internet usage -school	No internet adiction	70	,80	1,269	,152	,50	1,10	0	5
	Low internet addiction tendency	83	,63	1,112	,122	,38	,87	0	5
	Avarage internet addiction tendency	42	,67	,816	,126	,41	,92	0	2
	High internet addiction tendency	3	,00	,000	,000	,00	,00	0	0
	Total	198	,69	1,110	,079	,53	,84	0	5
location of usage- internet cafe	No internet adiction	76	1,82	1,538	,176	1,46	2,17	0	5
	Low internet addiction tendency	87	1,78	1,653	,177	1,43	2,13	0	5
	Avarage internet addiction tendency	45	1,87	1,791	,267	1,33	2,40	0	5
	High internet addiction tendency	3	1,00	1,000	,577	-1,48	3,48	0	2
	Total	211	1,80	1,630	,112	1,58	2,02	0	5

**ANOVA**

		Sum of Squares	df	Mean Square	F	Sig.
location of internet usage- home	Between Groups	110,265	3	36,755	8,077	,000
	Within Groups	891,955	196	4,551		
	Total	1002,220	199			
location of internet usage -school	Between Groups	2,631	3	,877	,709	,548
	Within Groups	239,955	194	1,237		
	Total	242,586	197			
location of internet usage internet cafe	Between Groups	2,168	3	,723	,269	,847
	Within Groups	555,472	207	2,683		
	Total	557,640	210			

Significant relationship is observed between internet addiction tendency and location of internet use. Results show that use of internet at home increases addiction tendency. H3 is rejected.

#### 4.5. Purpose of Internet Use

**Table 46: Purpose of internet use**

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
chat	263	0	5	3,16	1,730
e mail	257	0	5	2,85	1,751
information search	263	0	5	2,63	1,291
music download	263	0	5	2,46	1,731
homework	263	0	5	2,22	1,367
online gaming	263	0	5	1,99	1,704
making friendship	261	0	5	1,87	1,683
surfing	253	0	5	1,68	1,692
film download	260	0	14	1,23	1,667
other	124	0	5	1,08	1,815
erotic surfing	258	0	5	,78	1,411
health services	259	0	5	,78	1,136
online shopping	261	0	5	,61	1,078
recruitment services	255	0	5	,50	1,042
financial services	253	0	5	,35	,929
Valid N (listwise)	90				

Chat, e mail, information search, music download and homework are the most observed reasons of internet usage. The only mentioned other purpose of usage is programme downloads. Among online games, action games, board games and FPS (first person shooter) games seem to be the most popular ones among the students.

**Table 47: Relation between purpose of internet use and internet addiction tendency****ANOVA**

		Sum of Squares	df	Mean Square	F	Sig.
information search	Between Groups	5,988	3	1,996	1,270	,285
	Within Groups	348,914	222	1,572		
	Total	354,903	225			
surfing	Between Groups	87,324	3	29,108	11,659	,000
	Within Groups	534,272	214	2,497		
	Total	621,596	217			
music download	Between Groups	101,693	3	33,898	13,201	,000
	Within Groups	562,352	219	2,568		
	Total	664,045	222			
film download	Between Groups	40,797	3	13,599	4,929	,002
	Within Groups	606,917	220	2,759		
	Total	647,714	223			
e mail	Between Groups	47,800	3	15,933	5,746	,001
	Within Groups	610,039	220	2,773		
	Total	657,839	223			
chat	Between Groups	92,728	3	30,909	12,201	,000
	Within Groups	564,946	223	2,533		
	Total	657,674	226			
erotic surfing	Between Groups	19,144	3	6,381	3,594	,014
	Within Groups	387,095	218	1,776		
	Total	406,239	221			
homework	Between Groups	12,993	3	4,331	2,384	,070
	Within Groups	397,868	219	1,817		
	Total	410,861	222			
online shopping	Between Groups	14,862	3	4,954	4,916	,003
	Within Groups	222,694	221	1,008		
	Total	237,556	224			
making friendship	Between Groups	93,677	3	31,226	12,755	,000
	Within Groups	538,569	220	2,448		
	Total	632,246	223			
financial services	Between Groups	5,284	3	1,761	2,165	,093
	Within Groups	175,698	216	,813		
	Total	180,982	219			
health services	Between Groups	1,832	3	,611	,499	,684
	Within Groups	270,631	221	1,225		
	Total	272,462	224			
recruitment services	Between Groups	3,658	3	1,219	1,275	,284
	Within Groups	206,573	216	,956		
	Total	210,232	219			
online gaming	Between Groups	9,407	3	3,136	1,067	,364
	Within Groups	652,522	222	2,939		
	Total	661,929	225			

**Descriptives**

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum	
					Lower Bound	Upper Bound			
information search	No internet adiction	81	2,74	1,233	,137	2,47	3,01	0	5
	Low internet addiction tendency	92	2,57	1,295	,135	2,30	2,83	0	5
	Avarage internet addiction tendency	49	2,43	1,173	,168	2,09	2,77	1	5
	High internet addiction tendency	4	1,75	1,708	,854	-,97	4,47	0	4
	Total	226	2,58	1,256	,084	2,42	2,75	0	5
surfing	No internet adiction	77	,99	1,303	,148	,69	1,28	0	5
	Low internet addiction tendency	88	1,97	1,615	,172	1,62	2,31	0	5
	Avarage internet addiction tendency	49	2,63	1,879	,268	2,09	3,17	0	5
	High internet addiction tendency	4	1,50	1,732	,866	-1,26	4,26	0	3
	Total	218	1,76	1,692	,115	1,54	1,99	0	5
music download	No internet adiction	81	1,74	1,595	,177	1,39	2,09	0	5
	Low internet addiction tendency	87	2,39	1,701	,182	2,03	2,75	0	5
	Avarage internet addiction tendency	51	3,33	1,479	,207	2,92	3,75	0	5
	High internet addiction tendency	4	4,75	,500	,250	3,95	5,55	4	5
	Total	223	2,41	1,730	,116	2,18	2,64	0	5
film download	No internet adiction	78	,68	1,122	,127	,43	,93	0	5
	Low internet addiction tendency	93	1,38	1,587	,165	1,05	1,70	0	5
	Avarage internet addiction tendency	49	1,65	2,332	,333	,98	2,32	0	14
	High internet addiction tendency	4	2,50	2,380	1,190	-1,29	6,29	0	5
	Total	224	1,21	1,704	,114	,99	1,44	0	14
e mail	No internet adiction	80	2,38	1,796	,201	1,98	2,77	0	5
	Low internet addiction tendency	90	3,19	1,550	,163	2,86	3,51	0	5
	Avarage internet addiction tendency	50	3,50	1,594	,225	3,05	3,95	0	5
	High internet addiction tendency	4	3,50	2,380	1,190	-,29	7,29	0	5
	Total	224	2,97	1,718	,115	2,75	3,20	0	5
chat	No internet adiction	82	2,46	1,867	,206	2,05	2,87	0	5
	Low internet addiction tendency	92	3,46	1,486	,155	3,15	3,76	0	5
	Avarage internet addiction tendency	49	4,02	1,299	,186	3,65	4,39	0	5
	High internet addiction tendency	4	4,75	,500	,250	3,95	5,55	4	5
	Total	227	3,24	1,706	,113	3,02	3,47	0	5
erotic surfing	No internet adiction	79	,48	1,131	,127	,23	,73	0	5
	Low internet addiction tendency	91	,65	1,205	,126	,40	,90	0	5
	Avarage internet addiction tendency	49	1,20	1,708	,244	,71	1,69	0	5
	High internet addiction tendency	3	1,67	2,887	1,667	-5,50	8,84	0	5
	Total	222	,73	1,356	,091	,55	,90	0	5

**Descriptives**

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
homework	No internet adiction	79	2,46	1,328	,149	2,16	2,75	0	5
	Low internet addiction tendency	91	2,07	1,365	,143	1,78	2,35	0	5
	Avarage internet addiction tendency	49	1,96	1,369	,196	1,57	2,35	0	5
	High internet addiction tendency	4	1,25	,957	,479	-,27	2,77	0	2
	Total	223	2,17	1,360	,091	1,99	2,35	0	5
online shopping	No internet adiction	78	,29	,791	,090	,12	,47	0	5
	Low internet addiction tendency	92	,53	,931	,097	,34	,73	0	5
	Avarage internet addiction tendency	51	,94	1,348	,189	,56	1,32	0	5
	High internet addiction tendency	4	1,25	1,258	,629	-,75	3,25	0	3
	Total	225	,56	1,030	,069	,42	,69	0	5
making friendship	No internet adiction	77	1,10	1,492	,170	,77	1,44	0	5
	Low internet addiction tendency	92	2,20	1,477	,154	1,89	2,50	0	5
	Avarage internet addiction tendency	51	2,63	1,800	,252	2,12	3,13	0	5
	High internet addiction tendency	4	3,50	1,732	,866	,74	6,26	1	5
	Total	224	1,94	1,684	,113	1,72	2,16	0	5
financial services	No internet adiction	78	,27	,878	,099	,07	,47	0	5
	Low internet addiction tendency	91	,21	,527	,055	,10	,32	0	2
	Avarage internet addiction tendency	47	,60	1,409	,206	,18	1,01	0	5
	High internet addiction tendency	4	,00	,000	,000	,00	,00	0	0
	Total	220	,31	,909	,061	,19	,43	0	5
health services	No internet adiction	81	,67	1,084	,120	,43	,91	0	5
	Low internet addiction tendency	91	,75	1,081	,113	,52	,97	0	5
	Avarage internet addiction tendency	49	,84	1,214	,173	,49	1,19	0	5
	High internet addiction tendency	4	,25	,500	,250	-,55	1,05	0	1
	Total	225	,73	1,103	,074	,58	,87	0	5
recruitment services	No internet adiction	77	,43	1,141	,130	,17	,69	0	5
	Low internet addiction tendency	92	,36	,750	,078	,20	,51	0	4
	Avarage internet addiction tendency	47	,66	1,109	,162	,33	,99	0	4
	High internet addiction tendency	4	,00	,000	,000	,00	,00	0	0
	Total	220	,44	,980	,066	,31	,57	0	5
online gaming	No internet adiction	81	1,88	1,608	,179	1,52	2,23	0	5
	Low internet addiction tendency	90	1,93	1,760	,185	1,56	2,30	0	5
	Avarage internet addiction tendency	51	2,39	1,767	,247	1,90	2,89	0	5
	High internet addiction tendency	4	2,00	2,160	1,080	-1,44	5,44	0	5
	Total	226	2,02	1,715	,114	1,79	2,24	0	5

There is a significant relationship between internet addiction and the purpose of internet use. H4 is rejected. High internet addicts make lower amounts of surf where as higher

amounts of music download, film download, e mail, chat, erotic surfing, online shopping and making friendship when compared with average, low or none internet addicts.

#### 4.6. Variables That Affect Internet Usage

In this part the existence of relationship between internet usage are analyzed with the purpose of internet usage, location of internet usage, demographic / socioeconomic factors and other media consumption. Chi square analysis is utilized to find the relationship. No significant relationship is found between internet usage and purpose of internet usage, location of internet usage, other media consumption. H7, H8,H9 are accepted.

Significant relationships are found between internet usage and demographic / socioeconomic variables.

**Table 48-51: Internet usage and demographic / socioeconomic variables.**

**Crosstab**

			Status of household				Total
			own property	rent	Business accomodation	living in someone else's property	
internet usage	Yes	Count	165	75	15	8	263
		% within internet usage	62,7%	28,5%	5,7%	3,0%	100,0%
		% within Status of household	91,2%	87,2%	93,8%	61,5%	88,9%
	No	Count	16	11	1	5	33
		% within internet usage	48,5%	33,3%	3,0%	15,2%	100,0%
		% within Status of household	8,8%	12,8%	6,3%	38,5%	11,1%
Total	Count	181	86	16	13	296	
	% within internet usage	61,1%	29,1%	5,4%	4,4%	100,0%	
	% within Status of household	100,0%	100,0%	100,0%	100,0%	100,0%	

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11,386 <sup>a</sup>	3	,010
Likelihood Ratio	8,224	3	,042
Linear-by-Linear Association	6,034	1	,014
N of Valid Cases	296		

a. 2 cells (25,0%) have expected count less than 5. The minimum expected count is 1,45.

**Crosstab**

			Computers in household		Total
			exist	not exist	
internet usage	Yes	Count	179	84	263
		% within internet usage	68,1%	31,9%	100,0%
		% within Computers in household	91,8%	83,2%	88,9%
	No	Count	16	17	33
		% within internet usage	48,5%	51,5%	100,0%
		% within Computers in household	8,2%	16,8%	11,1%
Total	Count	195	101	296	
	% within internet usage	65,9%	34,1%	100,0%	
	% within Computers in household	100,0%	100,0%	100,0%	

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4,999 <sup>b</sup>	1	,025		
Continuity Correction <sup>a</sup>	4,166	1	,041		
Likelihood Ratio	4,760	1	,029		
Fisher's Exact Test				,032	,022
Linear-by-Linear Association	4,982	1	,026		
N of Valid Cases	296				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 11,26.

**Crosstab**

			Credit card in household		Total
			exist	not exist	
internet usage	Yes	Count	172	91	263
		% within internet usage	65,4%	34,6%	100,0%
		% within Credit card in household	92,0%	83,5%	88,9%
	No	Count	15	18	33
		% within internet usage	45,5%	54,5%	100,0%
		% within Credit card in household	8,0%	16,5%	11,1%
Total	Count	187	109	296	
	% within internet usage	63,2%	36,8%	100,0%	
	% within Credit card in household	100,0%	100,0%	100,0%	

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5,014 <sup>b</sup>	1	,025		
Continuity Correction <sup>a</sup>	4,193	1	,041		
Likelihood Ratio	4,831	1	,028		
Fisher's Exact Test				,034	,022
Linear-by-Linear Association	4,997	1	,025		
N of Valid Cases	296				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 12,15.

**Crosstab**

		Monthly income in household								Total	
		Less than 500 YTL	500+ - 750 YTL	750+ - 1000YTL	1000+ - 1500 YTL	1500+ - 2000 YTL	2000+ - 3000 YTL	3000+ - 4000 YTL	More than 4000 YTL		
internet usage	Yes	Count	16	33	55	59	40	27	15	18	263
		% within internet usage	6,1%	12,5%	20,9%	22,4%	15,2%	10,3%	5,7%	6,8%	100,0%
		% within Monthly income in household	66,7%	84,6%	93,2%	85,5%	93,0%	96,4%	93,8%	100,0%	88,9%
No	Count	8	6	4	10	3	1	1			33
		% within internet usage	24,2%	18,2%	12,1%	30,3%	9,1%	3,0%	3,0%		100,0%
		% within Monthly income in household	33,3%	15,4%	6,8%	14,5%	7,0%	3,6%	6,3%		11,1%
Total	Count	24	39	59	69	43	28	16	18		296
		% within internet usage	8,1%	13,2%	19,9%	23,3%	14,5%	9,5%	5,4%	6,1%	100,0%
		% within Monthly income in household	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%	100,0%

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19,571 <sup>a</sup>	7	,007
Likelihood Ratio	18,702	7	,009
Linear-by-Linear Association	10,841	1	,001
N of Valid Cases	296		

a. 6 cells (37,5%) have expected count less than 5. The minimum expected count is 1,78.

Chi square analysis show that Internet usage is significantly related with status of household, computers in household, creditcard ownership in household and monthly household income. In case of house ownership, computer existence in household, credit card ownership in household and increasing household income levels, higher internet usage is observed. H10 rejected.

#### 4.7. Gratification Of Internet Usage

36 items of Internet gratification items were reduced to six significant factors by factor analysis.

**Table 52: Factor analysis - Internet gratification items**

**KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,839
Bartlett's Test of Sphericity	Approx. Chi-Square	2061,350
	df	231
	Sig.	,000

**Rotated Component Matrix<sup>a</sup>**

	Component					
	1	2	3	4	5	6
find more interesting people than in real life	,782	,274	,153	-9,03E-03	,140	,140
develop a romantic relationship	,758	-5,66E-02	,139	,149	,103	,248
Find companionship	,754	3,694E-02	,330	5,356E-02	,269	,103
Meet new friends	,684	,245	,322	-2,62E-02	,237	8,694E-02
Improve my standing in the world	,679	,105	,119	,218	-1,04E-02	-,360
Get immediate knowledge of big news events	,190	,758	,165	-4,51E-02	-7,23E-02	,108
Gather information on various subjects	,132	,752	9,275E-03	,145	-1,21E-02	-,127
Get useful information about products or services	4,234E-02	,741	,184	,102	8,057E-02	,160
Learn about local community events	-5,22E-02	,705	4,861E-02	-2,92E-02	,180	,113
Find cool new Web pages	,184	,531	,376	,184	,154	,218
Feel entertained	,180	,249	,813	-9,00E-02	5,243E-02	-3,11E-03
Feel relaxed	,147	,171	,803	,129	,150	-3,70E-02
Have fun	,165	,224	,796	-5,85E-02	1,951E-02	9,270E-02
Feel excited	,349	-,172	,707	,123	,111	,134
Find employment listings that fit me	2,774E-02	8,044E-02	-6,35E-02	,819	5,795E-02	-7,58E-02
Find ways to make more money	,160	-1,70E-02	,121	,719	9,613E-02	,151
Find bargains on product and services	3,967E-02	,275	1,129E-02	,588	3,889E-02	,489
Feel like I belong to a group	9,902E-02	-1,99E-04	8,642E-02	,220	,750	-4,44E-02
Get support from others	,186	,370	,108	-8,09E-02	,635	-,256
get people think I'm cool	,260	-6,44E-02	6,544E-02	4,821E-02	,575	,369
Meet someone who I met on the real life	,294	,301	,221	-3,77E-02	,425	,317
Surf for designed web sites	,231	,348	,140	,203	-3,92E-02	,661

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Resulting 6 factors are labeled as:

#### VIRTUAL RELATIONSHIP

Find more interesting people than in real life

Develop a romantic relationship

Find companionship

Meet new friends

Improve my standing in the world

#### INFORMATION SEEKING

Get immediate knowledge of big new events

Gather information on various subjects

Get useful information about products and services

Learn about local community events

Find cool new web pages

#### DIVERSION

Feel entertained

Feel relaxed

Have fun

Feel excited

#### MONETARY COMPENSATION

Find employment listings that fit me

Find ways to make more money

Find bargains on product and services

#### VIRTUAL COMMUNITY

Feel like I belong to a group

Get support from others

Get people think I am cool

Meet someone who I met in real life

#### AESTHETIC EXPERIENCE

Surf for designed web sites

**Table 53: Descriptives of Internet gratification variables**

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
diversion	263	,00	5,00	3,2367	1,34481
INFSEEK	250	,00	5,00	2,1704	1,19474
VERREL	262	,00	5,00	1,7313	1,28027
aesthetics experience	263	,00	5,00	1,3004	1,48436
virtual community	253	,00	5,00	1,2747	,90063
monetary compensation	259	,00	4,67	,7722	,94919
Valid N (listwise)	222				

Students seem to have highest scores of gratification on diversion factor.

#### **4.8. Test of the Conceptual Model**

The relationship between demographic / socioeconomic variables and significant internet gratification factors are analyzed by anova test.

**Table 54: Relationship between Internet gratification factors and demographic / socioeconomic factors**

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Place of Birth	Between Groups	26,878	134	,201	1,076	,353
	Within Groups	18,083	97	,186		
	Total	44,961	231			
How long you've been living in Istanbul?	Between Groups	91,397	134	,682	1,171	,206
	Within Groups	56,517	97	,583		
	Total	147,914	231			
Sex	Between Groups	32,983	134	,246	,955	,600
	Within Groups	25,000	97	,258		
	Total	57,983	231			
Education level	Between Groups	15,738	134	,117	1,104	,306
	Within Groups	10,000	94	,106		
	Total	25,738	228			
Number of people living in household	Between Groups	180,486	134	1,347	1,032	,438
	Within Groups	126,600	97	1,305		
	Total	307,086	231			
Number of people working in household	Between Groups	70,574	134	,527	1,016	,471
	Within Groups	50,283	97	,518		
	Total	120,858	231			
Status of household	Between Groups	89,795	134	,670	1,412	,036
	Within Groups	46,050	97	,475		
	Total	135,845	231			
Number of cars in household	Between Groups	276,936	134	2,067	1,073	,358
	Within Groups	186,783	97	1,926		
	Total	463,720	231			
Regular phone in household	Between Groups	11,849	134	,088	1,183	,191
	Within Groups	7,250	97	,075		
	Total	19,099	231			
Dishwasher in household	Between Groups	27,228	134	,203	1,031	,440
	Within Groups	19,117	97	,197		
	Total	46,345	231			
Automatic washing machine in household	Between Groups	5,818	134	,043	1,486	,020
	Within Groups	2,833	97	,029		
	Total	8,651	231			
Computers in household	Between Groups	28,313	134	,211	,928	,658
	Within Groups	22,083	97	,228		
	Total	50,397	231			
Mobile phone in household	Between Groups	4,568	134	,034	,810	,871
	Within Groups	4,083	97	,042		
	Total	8,651	231			
Credit card in household	Between Groups	29,516	134	,220	,946	,619
	Within Groups	22,583	97	,233		
	Total	52,099	231			
Monthly income in household	Between Groups	452,561	134	3,377	,923	,668
	Within Groups	354,883	97	3,659		
	Total	807,444	231			
Weekly average hours of tv exposure	Between Groups	295,197	134	2,203	1,086	,335
	Within Groups	196,717	97	2,028		
	Total	491,914	231			
Weekly average hours of radio exposure	Between Groups	207,139	134	1,546	1,208	,163
	Within Groups	124,167	97	1,280		
	Total	331,306	231			
Weekly average number of newspaper read	Between Groups	46,106	134	,344	,764	,926
	Within Groups	43,700	97	,451		
	Total	89,806	231			
Owning of a personal e-mail address	Between Groups	18,344	134	,137	,942	,629
	Within Groups	14,100	97	,145		
	Total	32,444	231			
Education level of parent- Mother	Between Groups	200,544	133	1,508	1,031	,440
	Within Groups	140,417	96	1,463		
	Total	340,961	229			
Education level of parent- Father	Between Groups	191,485	133	1,440	1,031	,441
	Within Groups	131,300	94	1,397		
	Total	322,785	227			
Working status- Mother	Between Groups	42,275	134	,315	,734	,951
	Within Groups	41,283	96	,430		
	Total	83,558	230			
Working status- Father	Between Groups	24,487	134	,183	,978	,550
	Within Groups	18,117	97	,187		
	Total	42,603	231			

**ANOVA**

		Sum of Squares	df	Mean Square	F	Sig.
Status of household	Between Groups	89,795	134	,670	1,412	,036
	Within Groups	46,050	97	,475		
	Total	135,845	231			
Automatic washing machine in household	Between Groups	5,818	134	,043	1,486	,020
	Within Groups	2,833	97	,029		
	Total	8,651	231			

Only status of household and automatic machine machine are found to have significant relation with average score of three significant factors of gratification- information seek, diversion, virtual community. H16 is rejected.

No significant relationships are found between significant factors of gratification- information seek, diversion, virtual community with frequency of internet use, location of internet use as well as other media consumption. H12, H13, H15 are rejected.

The relationship between variables in the conceptual model are further analysed by two regression analysis. The first one takes the six gratification factors as independent variables that have impact on internet addiction tendency. And the second one takes the frequency of internet usage, location of internet usage, purpose of internet usage as independent variables that have impact on gratification of internet usage factors as dependent variable.

**Table 55 :Regression analysis - gratification factors and internet addiction average**

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Durbin-Watson	
					R Square Change	F Change	df1	df2		Sig. F Change
1	,623 <sup>a</sup>	,388	,379	,83606	,388	42,300	3	200	,000	1,801

a. Predictors: (Constant), virtual community, INFSEEK, diversion

b. Dependent Variable: Internet addiction average

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	88,703	3	29,568	42,300	,000 <sup>a</sup>
	Residual	139,800	200	,699		
	Total	228,503	203			

a. Predictors: (Constant), virtual community, INFSEEK, diversion

b. Dependent Variable: Internet addiction average

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	-,103	,171		-,600	,549	-,440	,235
	INFSEEK	,267	,054	,303	4,950	,000	,161	,373
	diversion	,180	,050	,222	3,602	,000	,081	,278
	virtual community	,337	,072	,293	4,707	,000	,196	,478

a. Dependent Variable: Internet addiction average

Virtual relationship, monetary compensation and aesthetic experience do not have significant relations with internet addiction tendency. Where as, information seeking, diversion and virtual community seem to explain to some extend the internet addiction tendency. H11 is rejected.

**Table 56: Regression analysis - gratification factors and frequency of internet usage, location of internet usage, purpose of internet usage**

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,638 <sup>a</sup>	,407	,398	,67609

a. Predictors: (Constant), making friendship, music download, chat

**ANOVA<sup>b</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	66,392	3	22,131	48,416	,000 <sup>a</sup>
	Residual	96,905	212	,457		
	Total	163,297	215			

a. Predictors: (Constant), making friendship, music download, chat

b. Dependent Variable: infseek divers commun average

**Coefficients<sup>a</sup>**

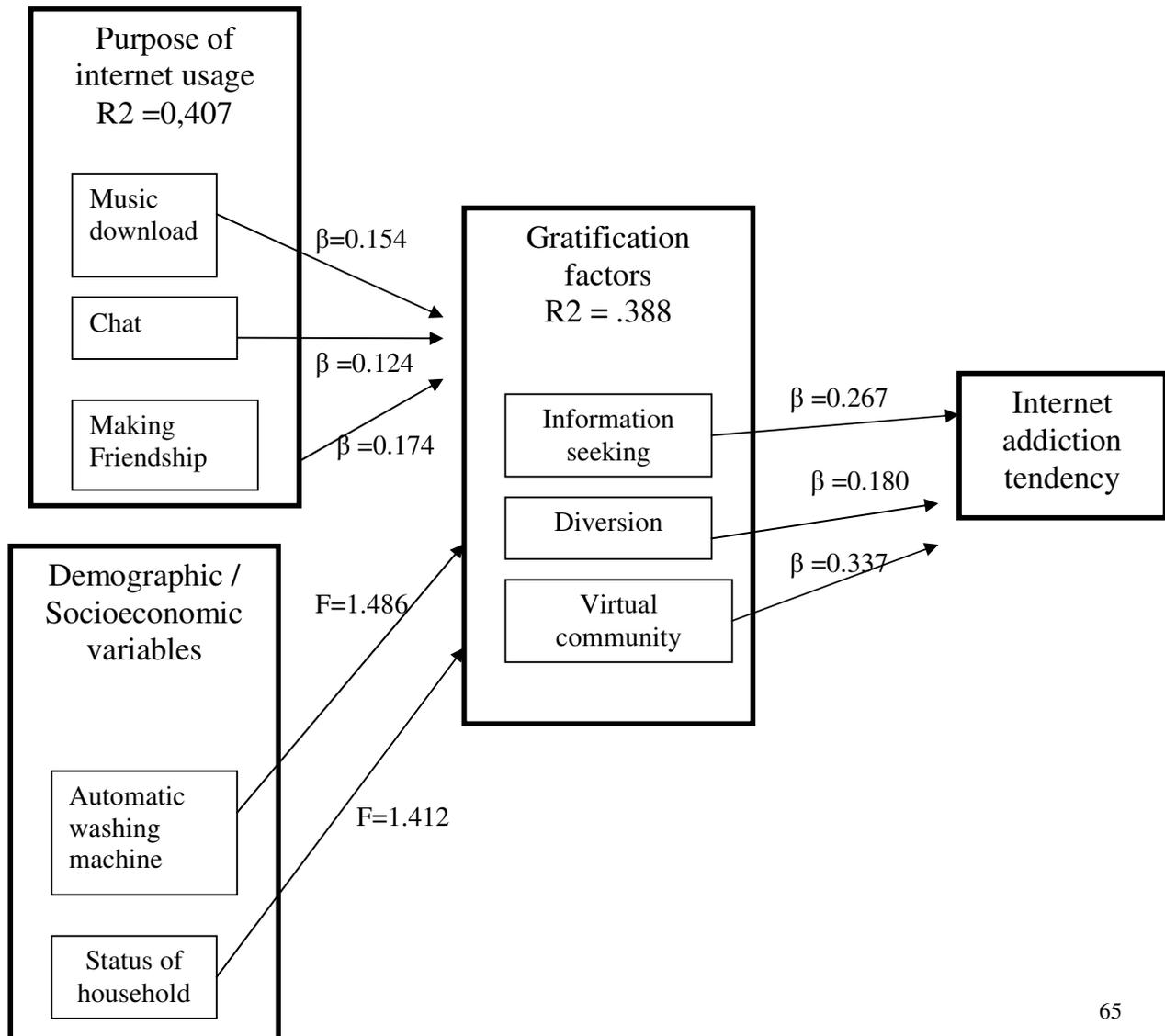
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,153	,109		10,590	,000
	music download	,154	,028	,310	5,503	,000
	chat	,124	,032	,240	3,880	,000
	making friendship	,174	,030	,334	5,706	,000

a. Dependent Variable: infseek divers commun average

The frequency of internet usage and location of internet usage seem not to have significant relationship with gratification of internet usage factors. On the other hand, music download, chat and making friendship as the purposes of internet usage seem to explain to some extent the gratification of internet use factors. H14 is rejected.

The resulting research model based on the data analysis above is presented on figure 3

**Figure 3: Result - Internet addiction tendency model**

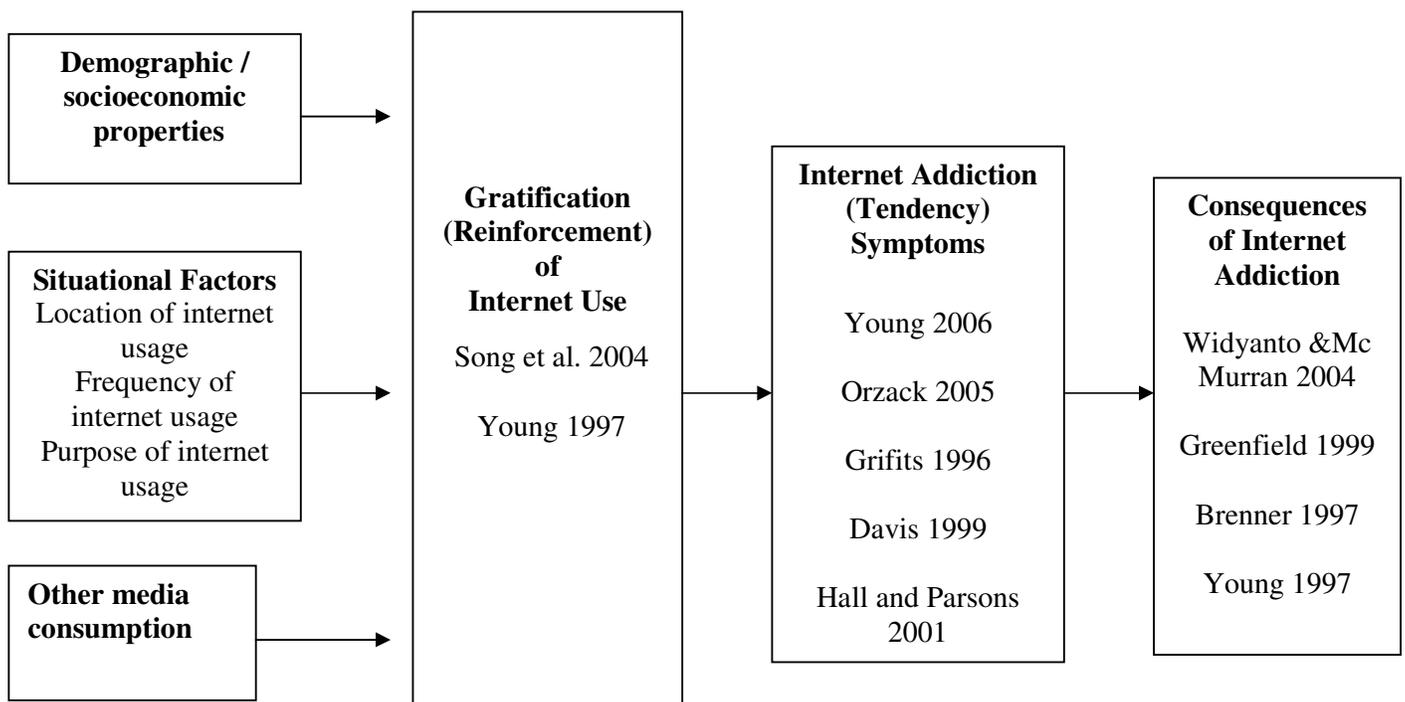


## 5. CONCLUSION & IMPLICATIONS

### 5.1. Conclusion

This thesis aims to spotlight the internet addiction tendency and its antecedents. As compiled on part 2.2., demographic / socioeconomic properties and other media consumption of internet consumers besides the situational factors have impact on the gratification of internet use. The gratification that consumers perceive during using the internet, leads to variances in internet addiction tendency, in turn ends up with different physical and psychological consequences of internet addiction. The model of the field study presented above (see figure 2), focused a cross cut of internet addiction variables discussed in the academic literature and did not include the last phase; consequences of internet use. Because the “consequences of internet addiction” is the focus of, on one hand cyber psychological literature covering depressive mood alteration, on the other hand it covers the medical literature and centers around the physical symptoms of sitting by computer for long hours (see figure 4).

**Figure 4: Model of Internet Addiction Variables Discussed in Literature**



In the academic literature different severe internet addiction frequencies are found in different countries. Different assessment inventories were used in these researches (see appendix 2). Young's inventory was the most often used, therefore this field study also utilized Young's internet addiction test. According to APA (American Psychological Association), %5-10 of USA internet users have severe problems about it. In USA Morrison and Goldfine (1999) found this frequency as 2.8 % , while Greenfield's research on 1999 resulted as 5.7%. India and Taiwan seem to have the highest rates, thus Tsai and Lin's research on 2003 showed that 12,9 % Taiwanese have high internet addiction, and this proportion is 14% in India that was found by Kanwall & Archanapret (2003). In Korea there seems to be an increasing trend by years. Whang et al.'s research resulted by 3,5 % on 2003, and this frequency rose up to 4,9 % on 2005, that was found by Yang et al. Simkova and Cincera (2004) found 6 % critical internet addiction in Czech Republic. In Finland this ratio is rather lower, 1,4% of girls and 1,7 % of boys have problems with internet use as found by Ruttakertu et al on 2004. The results of this thesis have similar findings with Finland and have a ratio of 1,7 % of internet addiction among Turkish high school students.

In this thesis results show that the sample students seem to use internet regularly on average amounts in weekdays, but very highly on weekends. The results show that in weekdays among high internet addicts in Turkey 25% spend 4-8 hours, 50 % spend 9-15 hours and 25 % spend more. On weekends, 75 % of them spend 9-15 hours and 25% spend more. Through the literature it is observed that internet dependents spend 8.04 hrs per week in USA (Young 1996), 1.6 hrs a day in USA (Morrison and Goldfine 1999), 2,7 hrs daily in Finland (Ruttakertu et al 2004).

This thesis found significant difference between internet use hours and internet addiction tendency levels. According to Scherrer's research (1997), 98 % addicts find themselves staying online longer hours than wanted. Almost half try to cut down but can not. This thesis shows that 100% of high internet users find stayed online longer than intended, 75 % tried to cut down but failed.

No significant relationship is found between internet usage with purpose of internet usage, location of internet usage, other media consumption. Significant relationship is found between internet usage and some demographic / socioeconomic variables. Internet usage is

significantly related with status of household, computers in household, creditcard ownership in household and monthly household income. In cases of house ownership, computer existence in household, credit card ownership in household and increasing household income levels, internet usage is observed. Internet addiction tendency is also found to have significant relationship with some demographic/socioeconomic variables. Higher internet addiction tendency is observed among sample who have dish washing machine at home, computers at home, higher monthly household incomes, owning a personal e mail adres, higher education levels of both mother and father, and working mother.

Location of internet usage for sample students is mostly home, followed by internet cafes. Significant relationship is observed between internet addiction tendency and location of internet use. Results show that addiction tendency is higher when internet is used at home.

According to Young's research (1996) high internet addicts predominantly use interactive chat rooms, e mail. In this thesis there is the same finding. High internet addicts make lower amounts of surfing where as higher amounts of music download, film download, e mail, chat, erotic surfing, online shopping and making friendship compared to avarage, low or none internet addicts. "Checking e mails before something else you need to do" and "finding yourself saying -just a few more minutes-when online" seem to be the most common symptoms of internet addiction tendency.

This thesis compiled 36 items of Internet gratification from Young (1997) and Song et al.(2004). Song et al (2004) reduced items to 7 factors as virtual community, information seeking, aesthetic experience, monetary compensation, diversion, personal status, relationship maintainence. This thesis ended up with 6 similar factors. Only "relationship maintainence" factor of Song et al. and "creating a persona" factor of Young was not identified in this research. In research of Song et al the factors explain %28 of variation in internet addiction and in this research %38.8 of variation. Virtual relationship, monetary compensation and aesthetic experience were found to have no significant relations with internet addiction tendency. Where as, information seeking, diversion and virtual community have significant relationship.

Among demographic / socioeconomic status variables, only status of household and automatic washing machine are found to have significant relation with average score of three significant factors of gratification- information seek, diversion, virtual community. No significant relationships are found between significant factors of gratification and other media consumption.

The frequency of internet usage and location of internet usage seem not to have significant relationship with gratification of internet usage factors. On the other hand, music download, chat and making friendship as the purposes of internet usage seem to explain 40,7 % of gratification of internet use factors.

Results in general show, in Turkey internet addiction frequency is lower relative to other countries in the world. But still there is a tendency.

The results of test of 16 hypothesis proposed above is presented on table 57.

**Table 57: Hypothesis Testing**

<b>ACCEPT</b>	H5: There is no relationship between internet addiction tendency and other media consumption habits
	H7: There is no relationship between internet usage and location of internet use
	H8: There is no relationship between internet usage and purpose of internet use
	H9: There is no relationship between internet usage and other media consumption habits
<b>REJECT</b>	H1: There is no relationship between internet addiction tendency and hours spent on internet on weekdays
	H2: There is no relationship between internet addiction tendency and hours spent on internet on weekends
	H3: There is no relationship between internet addiction tendency and location of internet use
	H4: There is no relationship between internet addiction tendency and purpose of internet use
	H6: There is no relationship between internet addiction tendency and demographic / socioeconomic variables
	H10: There is no relationship between internet usage and demographic / socioeconomic variables
	H11: There is no relationship between gratification of Internet usage and Internet addiction tendency
	H12: There is no relationship between location of Internet usage and gratification of Internet usage
	H13: There is no relationship between frequency of Internet usage and gratification of Internet
	H14: There is no relationship between purpose of Internet usage and gratification of Internet usage
	H15: There is no relationship between other media consumption and gratification of Internet usage
	H16: There is no relationship between demographic /socioeconomic variables and gratification of Internet usage

## **5.2.Implications**

The internet consumption studies give the marketers deep insight not only to understand the ways of direct communication with their customers but also the possible ways of displaying and selling their products in interactive channels of cyberspace, increasing loyalty of the customers through CRM activities. Valuable information can be augmented in data warehouses in each interaction with the consumer. These data can be used for cross selling, up selling, new product innovations, product line extensions, product–service–promotion-price customizations.

For mass marketing strategies, the extend of internet consumption can be used by marketers as a new independent segmentation criteria. Besides Internet usage level contributes to Techno class concept as recently being discussed in consumer behaviour literature. By adding the internet literacy variable over social status variables like possessions, occupation etc., more precise social status categories can be found.

For direct communication and micro segmentation on behalf of CRM, these findings also have important implications. Marketers who are willing to reach high school student as consumers through internet, must consider that high internet users are mostly into consuming ‘chat’, ‘music download’ and ‘making friendship’ sites. Core benefits and unique selling proposition of products or services offered through internet, as well as appeal of direct marketing or internet advertising targeting this group must regard these ‘themes’.

When the internet usage increases to a compulsive level, thus out of control consumption, it is called as internet addiction. Though the internet addicts seem to be a very profitable segment for many marketers dealing with the above mentioned functions, it ends up with disorders in people’s life. Therefore the result of this study has implications for psychologists that a global information age problem is starting in Turkey also.

The sample is chosen among high school students exhibiting different levels of internet addiction. This study also can be used by educators to understand not only the background of internet addiction but also the symptoms of it. There is a very important finding that has to be discussed in Turkish education field: though there are many ways of

developing a **self** through surfing various valuable information on internet, the students who have high internet addiction tendency use the internet only for chat, relationship and music download.

This study is limited to high school students, but the global literature show that internet addiction is a widespread problem among middle level and university students as well. Therefore further research must be extended to different age levels.

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APPENDIX 1  
Questionnaire

Yaş ..... (yaş 15-18 aralığında değilse teşekkür ediniz ve anketi sürdürmeyiniz)

Anket no:

İlçe ismi (lütfen açıkça yazınız):.....

K.1.[ ]

İnternet Kullanım Araştırması

İyi Günler. Adım..... Marmara Üniveristesinde yapılan bir tez çalışması için bir araştırma yürütüyoruz. Araştırmanın amacı gençlerin internet kullanım davranışını incelemektir. Çalışmada sorulan sorular yalnızca bilimsel amaçlarla kullanılacak olup ad, soyad gibi özel bilgileriniz istenmemektedir ve tüm yanıtlarınız gizli kalacaktır. Ankete gösterdiğiniz ilgi ve katkılarınız için teşekkür ederiz.

1	İnternet kullanıyor musunuz?	1> Evet <input type="checkbox"/> ( <b>Yanıt evet ise 2. sorudan devam ediniz, hayır ise diğer soruları atlayıp sadece 7. soruyu yanıtlayıp anketi bitiriniz</b> )  2> Hayır <input type="checkbox"/>
2	Haftada ortalama kaç saatinizi internette geçiriyorsunuz?	Hafta içi ..... saat Hafta sonu ..... saat
<b>İnterneti nerede kullanıyorsunuz?</b>		
3	Ev	1>Hiç bir zaman <input type="checkbox"/> 2>Nadiren <input type="checkbox"/> 3> Bazen <input type="checkbox"/> 4>Sık sık <input type="checkbox"/> 5> Çoğunlukla <input type="checkbox"/> 6>Her zaman <input type="checkbox"/>
4	Okul	1>Hiç bir zaman <input type="checkbox"/> 2>Nadiren <input type="checkbox"/> 3> Bazen <input type="checkbox"/> 4>Sık sık <input type="checkbox"/> 5> Çoğunlukla <input type="checkbox"/> 6>Her zaman <input type="checkbox"/>
5	İnternet Kafe	1>Hiç bir zaman <input type="checkbox"/> 2>Nadiren <input type="checkbox"/> 3> Bazen <input type="checkbox"/> 4>Sık sık <input type="checkbox"/> 5> Çoğunlukla <input type="checkbox"/> 6>Her zaman <input type="checkbox"/>
6	Diğer	1>Hiç bir zaman <input type="checkbox"/> 2>Nadiren <input type="checkbox"/> 3> Bazen <input type="checkbox"/> 4>Sık sık <input type="checkbox"/> 5> Çoğunlukla <input type="checkbox"/> 6>Her zaman <input type="checkbox"/> <b>Eğer diğer yanıtı varsa açıklamasını isteyiniz .....</b> .....

<b>İnterneti hangi amaçla kullanıyorsunuz?</b>							
7	Bilgi toplamak	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
8	Sörf yapmak	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
9	Müzik indirmek	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
10	Film indirmek	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
11	E-posta	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
12	Sohbet	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
13	Erotik siteleri ziyaret	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
14	Ödev yapmak	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
15	Alışveriş yapmak	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
16	Arkadaş bulmak	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
17	Finans/Banka/Yatırım siteleri ziyaret	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
18	Sağlık siteleri ziyaret	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
19	İş ilanları sitelerini ziyaret	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
20	Oyun oynamak	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
21	Diğer .....	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
<b>İnternet kullanma sürecinizle ilgili aşağıdaki tümceler sizi ne kadar açıklıyor?</b>							
22	Duygusal ilişkiler kuruyorum	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
23	Gerçek dünyadan daha ilginç insanlarla tanışıyorum	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
24	İnsanlar internette dolıştığım için beni havalı buluyorlar	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
25	Gerçek dünyadan tanıdığım birine rastlıyorum	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
26	Arkadaş buluyorum	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
27	Yeni insanlar tanıyorum	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
28	Hayata karşı güçlü durma duygumu geliştiriyorum	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
29	Kendimi olduğumdan daha başka bir kimlikle tanıtıyorum	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
30	Kendimi bir gruba ait hissediyorum	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman

31	Başkalarından çeşitli konularda destek alıyorum	1>Hiç bir zaman <input type="checkbox"/>	2>Nadiren <input type="checkbox"/>	3> Bazen <input type="checkbox"/>	4>Sık sık <input type="checkbox"/>	5> Çoğunlukla <input type="checkbox"/>	6>Her zaman <input type="checkbox"/>
32	Çevredeki sosyal aktiviteler (konser, parti vb.) hakkında bilgi topluyorum	1>Hiç bir zaman <input type="checkbox"/>	2>Nadiren <input type="checkbox"/>	3> Bazen <input type="checkbox"/>	4>Sık sık <input type="checkbox"/>	5> Çoğunlukla <input type="checkbox"/>	6>Her zaman <input type="checkbox"/>
33	İş arama sitelerinde iş arıyorum	1>Hiç bir zaman <input type="checkbox"/>	2>Nadiren <input type="checkbox"/>	3> Bazen <input type="checkbox"/>	4>Sık sık <input type="checkbox"/>	5> Çoğunlukla <input type="checkbox"/>	6>Her zaman <input type="checkbox"/>
34	Farklı konular hakkında bilgi topluyorum	1>Hiç bir zaman <input type="checkbox"/>	2>Nadiren <input type="checkbox"/>	3> Bazen <input type="checkbox"/>	4>Sık sık <input type="checkbox"/>	5> Çoğunlukla <input type="checkbox"/>	6>Her zaman <input type="checkbox"/>
35	Önemli olaylarla ilgili bilgiye hemen ulaşıyorum	1>Hiç bir zaman <input type="checkbox"/>	2>Nadiren <input type="checkbox"/>	3> Bazen <input type="checkbox"/>	4>Sık sık <input type="checkbox"/>	5> Çoğunlukla <input type="checkbox"/>	6>Her zaman <input type="checkbox"/>
36	İlgilendiğim ürünlerle ilgili bilgi alıyorum	1>Hiç bir zaman <input type="checkbox"/>	2>Nadiren <input type="checkbox"/>	3> Bazen <input type="checkbox"/>	4>Sık sık <input type="checkbox"/>	5> Çoğunlukla <input type="checkbox"/>	6>Her zaman <input type="checkbox"/>
37	Yeni ilginç sitelerde dolaşıyorum	1>Hiç bir zaman <input type="checkbox"/>	2>Nadiren <input type="checkbox"/>	3> Bazen <input type="checkbox"/>	4>Sık sık <input type="checkbox"/>	5> Çoğunlukla <input type="checkbox"/>	6>Her zaman <input type="checkbox"/>
38	Yeni fikirler arıyorum	1>Hiç bir zaman <input type="checkbox"/>	2>Nadiren <input type="checkbox"/>	3> Bazen <input type="checkbox"/>	4>Sık sık <input type="checkbox"/>	5> Çoğunlukla <input type="checkbox"/>	6>Her zaman <input type="checkbox"/>
39	Estetik tasarlanmış sitelerde dolaşıyorum	1>Hiç bir zaman <input type="checkbox"/>	2>Nadiren <input type="checkbox"/>	3> Bazen <input type="checkbox"/>	4>Sık sık <input type="checkbox"/>	5> Çoğunlukla <input type="checkbox"/>	6>Her zaman <input type="checkbox"/>
40	Ucuz ürün ve servis fırsatları arıyorum	1>Hiç bir zaman <input type="checkbox"/>	2>Nadiren <input type="checkbox"/>	3> Bazen <input type="checkbox"/>	4>Sık sık <input type="checkbox"/>	5> Çoğunlukla <input type="checkbox"/>	6>Her zaman <input type="checkbox"/>
41	Daha fazla para kazanmanın yollarını arıyorum	1>Hiç bir zaman <input type="checkbox"/>	2>Nadiren <input type="checkbox"/>	3> Bazen <input type="checkbox"/>	4>Sık sık <input type="checkbox"/>	5> Çoğunlukla <input type="checkbox"/>	6>Her zaman <input type="checkbox"/>
42	Telefondan daha ucuza iletişim kuruyorum	1>Hiç bir zaman <input type="checkbox"/>	2>Nadiren <input type="checkbox"/>	3> Bazen <input type="checkbox"/>	4>Sık sık <input type="checkbox"/>	5> Çoğunlukla <input type="checkbox"/>	6>Her zaman <input type="checkbox"/>
43	Keyif alıyorum	1>Hiç bir zaman <input type="checkbox"/>	2>Nadiren <input type="checkbox"/>	3> Bazen <input type="checkbox"/>	4>Sık sık <input type="checkbox"/>	5> Çoğunlukla <input type="checkbox"/>	6>Her zaman <input type="checkbox"/>
44	Heyecanlanıyorum	1>Hiç bir zaman <input type="checkbox"/>	2>Nadiren <input type="checkbox"/>	3> Bazen <input type="checkbox"/>	4>Sık sık <input type="checkbox"/>	5> Çoğunlukla <input type="checkbox"/>	6>Her zaman <input type="checkbox"/>
45	Eğleniyorum	1>Hiç bir zaman <input type="checkbox"/>	2>Nadiren <input type="checkbox"/>	3> Bazen <input type="checkbox"/>	4>Sık sık <input type="checkbox"/>	5> Çoğunlukla <input type="checkbox"/>	6>Her zaman <input type="checkbox"/>
46	Rahatlıyorum	1>Hiç bir zaman <input type="checkbox"/>	2>Nadiren <input type="checkbox"/>	3> Bazen <input type="checkbox"/>	4>Sık sık <input type="checkbox"/>	5> Çoğunlukla <input type="checkbox"/>	6>Her zaman <input type="checkbox"/>
47	Hayata bakış açımı genişletiyorum	1>Hiç bir zaman <input type="checkbox"/>	2>Nadiren <input type="checkbox"/>	3> Bazen <input type="checkbox"/>	4>Sık sık <input type="checkbox"/>	5> Çoğunlukla <input type="checkbox"/>	6>Her zaman <input type="checkbox"/>
48	Yeni teknolojiyi takip ediyorum	1>Hiç bir zaman <input type="checkbox"/>	2>Nadiren <input type="checkbox"/>	3> Bazen <input type="checkbox"/>	4>Sık sık <input type="checkbox"/>	5> Çoğunlukla <input type="checkbox"/>	6>Her zaman <input type="checkbox"/>
49	Ulaşılması zor insanlara daha kolay ulaşıyorum	1>Hiç bir zaman <input type="checkbox"/>	2>Nadiren <input type="checkbox"/>	3> Bazen <input type="checkbox"/>	4>Sık sık <input type="checkbox"/>	5> Çoğunlukla <input type="checkbox"/>	6>Her zaman <input type="checkbox"/>

**İnternet kullanmak konusundaki duygularınızla ilgili aşağıdaki tümceler sizi ne kadar açıklıyor?**

50	İnternette dışında meşgul olduğum işler, internete girmeme engel oluyormuş gibi hissediyorum	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
51	Nette olmadığım zaman, biran önce nete girebilmek için sabırsızlanıyorum	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
52	Nette fazla kaldığım zamanlarda, 'birkaç dakika daha' diyerek, netten çıkmayı erteliyorum.	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
53	Nette geçirdiğim zamanı azaltmaya çalışıyorum ama başaramıyorum	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
54	Nette bu kadar zaman ne yaptığım sorulduğunda sinirleniyorum	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
55	İnternette olmadığım zamanlar bana sıkıcı ve keyifsiz geliyor	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
56	Netteyken rahatsız edildiğimde sinirleniyorum	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
57	Planladığımdan daha fazla nette kalıyorum	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
58	Geceleri geç saatlere kadar internette olduğum için uykusuz kalıyorum	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
59	İnternette yapacağım işe başlamadan önce e-postalarımı bakıyorum	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
60	Kendim gibi nette dolaşan kişilerle arkadaşlıklar kuruyorum	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
61	Açıkhavada geçirdiğim zamandan daha fazlasını internette geçiriyorum	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
62	İnternet yüzünden okulumda sorunlar yaşıyorum	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
63	İnternet yüzünden üretkenliğim düşük	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman
64	Yakın çevremdekiler internette fazla zaman geçirmemden şikayetçiler	1>Hiç bir zaman	2>Nadiren	3> Bazen	4>Sık sık	5> Çoğunlukla	6>Her zaman

65	İnternet yüzünden ev ile ilgili sorumluluklarımı aksatıyorum	1>Hiç bir zaman <input type="checkbox"/> 2>Nadiren <input type="checkbox"/> 3> Bazen <input type="checkbox"/> 4>Sık sık <input type="checkbox"/> 5> Çoğunlukla <input type="checkbox"/> 6>Her zaman <input type="checkbox"/>
66	İnternette geçirdiğim zaman miktarını başkalarından saklıyorum	1>Hiç bir zaman <input type="checkbox"/> 2>Nadiren <input type="checkbox"/> 3> Bazen <input type="checkbox"/> 4>Sık sık <input type="checkbox"/> 5> Çoğunlukla <input type="checkbox"/> 6>Her zaman <input type="checkbox"/>
67	İnternette dolaşarak sorunlarımı unutuyorum	1>Hiç bir zaman <input type="checkbox"/> 2>Nadiren <input type="checkbox"/> 3> Bazen <input type="checkbox"/> 4>Sık sık <input type="checkbox"/> 5> Çoğunlukla <input type="checkbox"/> 6>Her zaman <input type="checkbox"/>
68	İnternette olmadığım zamanlar sınırlı oluyorum, internete döndüğümde bu duygu kayboluyor.	1>Hiç bir zaman <input type="checkbox"/> 2>Nadiren <input type="checkbox"/> 3> Bazen <input type="checkbox"/> 4>Sık sık <input type="checkbox"/> 5> Çoğunlukla <input type="checkbox"/> 6>Her zaman <input type="checkbox"/>

DEMOGRAFYA	
D1	Doğum yerinizi öğrenebilir miyim? Yazınız : .....
D2	Kaç yıldır İstanbul'da oturuyorsunuz? Yazınız : .....YIL
D3	Cinsiyet (Anketör Dikkat! Okumadan işaretleyiniz) 1> Erkek 2> Kadın
D4	En son bitirdiğiniz okul nedir? 1> Okur yazar değil 2> Okur Yazar 3> İlkokul 4> Orta okul 5> Lise 6> Üniversite ve üstü
D5	Siz dahil hanenizde yaşayan kişi sayısını söyleyebilir misiniz? Yazınız:.....
D6	Hanenizde yaşayanlardan kaç kişi çalışarak gelir elde ediyor? Yazınız:.....
D7	Okuyacaklarımdan hangisi oturduğunuz evin durumunu en iyi anlatır? <b>(ŞIKLARI OKUYUN!!!)</b> 1> Kendi mülkü 2> Kiracı 3> Lojman 4> Ev başka birisine ait ancak kira ödemiyor
D8	Sizin ya da sizinle aynı hanede oturanlardan herhangi bir kişinin arabası var mı? Varsa marka ve modelini söyler misiniz? (birden fazla araba varsa en "değerli" olanı belirtiniz) Markası : ..... Model ve yılı : .....
D9	Aşağıda sayacaklarımdan hangileri evinizde veya sizinle aynı hanede yaşayanlardan birinde var? 1> Var 2> Yok Ev telefonu Bulaşık Makinesi Otomatik çamaşır makinesi Bilgisayar (PC) Cep Telefonu Kredi kartı
D10	Hanenize bir ayda giren toplam gelir yaklaşık ne kadardır? Bunu söylerken maaş, faiz, kira vb. her türlü geliri dikkate alınız. 1>500 milyon TL'den az 2>500-750 milyon TL 3>750 milyon-1 milyar TL 4>1-1,5 milyar TL 5>1,5-2 milyar TL 6>2-3 milyar TL 7>3-4 milyar TL 8>4 milyar TL'den çok
D11	Tv izleme sıklığınız? Haftada ortalama ... .. saat TV izliyorum

<b>D12</b>	Radyo dinleme sıklığınız?	Haftada ortalama ..... saat dinliyorum
<b>D13</b>	Gazete okuma sıklığınız?	Haftada ortalama ..... adet gazete okuyorum.
<b>D14</b>	Kendinize ait e-posta adresiniz var mı?	1> Evet 2> Hayır
<b>D15</b>	Ebeveynin eğitim durumu-son bitirilen okul	Anne:..... Baba:.....
<b>D16</b>	Ebeveynin çalışma durumu -meslek	Anne:..... Baba:.....

<b>Sorularımıza verdiğiniz cevaplar için çok teşekkür ederiz.</b>	
Anketör Adı:	.....

## **APPENDIX 2**

### **Assesment of Internet Addiction**

The researches presented above were actualised by using a combination of inventories for assesing addiction, frame of Internet consumption and psychological consequencess of addiction. The most commonly used tests are discussed below:

#### **DSM-IV, Pathological Gambling / Internet Addiction Test**

The most commonly used scale is the one proposed by Young, that is called as Diagnostic and Statistical Manual of Mental Disorders - Fourth Edition (DSM-IV; American Psychiatric Association, 1994). Of all the diagnoses referenced in the DSM-IV, Pathological Gambling was viewed as most akin to the pathological nature of Internet use. By using Pathological Gambling as a model, Internet addiction can be defined as an impulse-control disorder which does not involve an intoxicant. ([www.netaddiction.com](http://www.netaddiction.com)). She initially developed a short eight-item questionnaire that was a modification of the criteria for compulsive gambling. The significant findings from this questionnaire prompted the development of a larger and more comprehensive instrument called the “Internet Addiction Test,” consisting of 20 questions (See Table 2). The questionnaire was developed to help respondents in three ways. First, for those who already identify as being an Internet addict, the questionnaire helps to assess in what areas the problem has impacted the person’s life. Second, for those who are not sure if they are Internet addicted, the questionnaire will help them determine whether they meet Young’s criteriafor Internet addiction and assess the impact it has had on their daily living. Finally, Young’s questionnaire was developed to help those who believe that they know someone who is pathologically using the Internet by allowing that person to rate the Internet user or to give this questionnaire to the user (Beard 2005).

**Table A.1: DSM-IV, Pathological Gambling / Internet Addiction Test**

1. How often do you find that you stay on-line longer than you intended?
2. How often do you neglect household chores to spend more time on-line?
3. How often do you prefer the excitement of the Internet to intimacy with your partner?
4. How often do you form new relationships with fellow on-line users?
5. How often do others in your life complain to you about the amount of time you spend on-line?
6. How often do your grades or school work suffer because of the amount of time you spend on-line?
7. How often do you check your e-mail before something else that you need to do?
8. How often does your job performance or productivity suffer because of the Internet?
9. How often do you become defensive or secretive when anyone asks you what you do on-line?
10. How often do you block out disturbing thoughts about your life with soothing thoughts of the Internet?
11. How often do you find yourself anticipating when you will go on-line again?
12. How often do you fear that life without the Internet would be boring, empty, and joyless?
13. How often do you snap, yell, or act annoyed if someone bothers you while you are on-line?
14. How often do you lose sleep due to late-night log-ins?
15. How often do you feel preoccupied with the Internet when off-line, or fantasize about being on-line?
16. How often do you find yourself saying "just a few more minutes" when on-line?
17. How often do you try to cut down the amount of time you spend on-line and fail?
18. How often do you try to hide how long you've been on-line?
19. How often do you choose to spend more time on-line over going out with others?
20. How often do you feel depressed, moody, or nervous when you are off-line, which goes away once you are back on-line?

**Online Cognition Scale (OCS).**

The OCS is a 36-item questionnaire that measures problematic Internet use. This inventory measures addiction as well as the possible reasons of it (Davis M.A. , Flett G.L., Besse A., 2002). By using this instrument and other measures of procrastination, rejection, sensitivity, loneliness, depression, and impulsivity, it was concluded that problematic Internet use consists of four dimensions: diminished impulse control, loneliness/depression, social comfort, and distraction (See Table 3). Davis has recommended this instrument for clinical assessment of problematic Internet use and as an employment screening instrument.

**Table A.2: Online Cognition Scale (OCS).**

*Social comfort*

I am most comfortable online.  
I feel safest when I am on the Internet.  
You can get to know a person better on the Internet than in person.  
I often find it peaceful to be online.  
I can be myself online.  
I get more respect online than “in real life.”  
People accept me for who I am online.  
Online relationships can be more fulfilling than offline ones.  
I am at my best when I am online.  
I wish my friends and family knew how people regard me online.  
The Internet is more “real” than real life.  
I say or do things on the Internet that I could never do offline.  
When I am online, I can be carefree.

*Loneliness/depression*

Few people love me other than those I know online.  
I am less lonely when I am online.  
I cannot see myself ever without the Internet for too long.  
The Internet is an important part of my life.  
I feel helpless when I don’t have access to the Internet.  
I am bothered by my inability to stop using the Internet so much.

*Diminished impulse control*

I often keep thinking about something I experienced online well after I have logged off.  
When I am on the Internet, I often feel a kind of “rush” or emotional high.  
I use the Internet more than I ought to.  
People complain that I use the Internet too much.  
I never stay on longer than I had planned.  
When I am not online, I often think about the Internet.  
The offline world is less exciting than what you can do online.  
I can’t stop thinking about the Internet.  
Even though there are times when I would like to, I can’t cut down on my use of the Internet.  
My use of the Internet sometimes seems beyond my control.

*Distraction*

When I am online I don’t think about my responsibilities.  
When I have nothing better to do, I go online.  
I find that I go online more when I have something else I am supposed to do.  
When I am online, I don’t need to think about offline problems.  
I sometimes use the Internet to procrastinate.  
I often use the Internet to avoid doing unpleasant things.  
Using the Internet is a way to forget about the things I must do but don’t really want to do.

### **Generalized Problematic Internet Use Scale (GPIUS)**

Caplan (2002) described the Generalized Problematic Internet Use Scale (GPIUS). A factor analysis identified seven sub-dimensions, including mood alteration, perceived social benefits available online, negative outcomes associated with Internet use, compulsive Internet use, excessive amounts of time spent online, withdrawal symptoms when away from the Internet, and perceived social control available online (See Table 4). These subscales were correlated with psychosocial health variables including: depression, loneliness, shyness, and self-esteem. Several measures were included to operationalize these variables, all which are commonly used in the social sciences because of their high validity and reliability. Psychological health variables of interest included depression and self-esteem. Depression was measured with the Beck Depression Inventory-II , and self-esteem was assessed with the Rosenberg Self-Esteem Scale. Social well-being variables of interest were loneliness and shyness. Loneliness was measured with the UCLA Loneliness Scale and shyness was measured with the Social Reticence Scale (Beard 2005).

**Table A.3: Generalized Problematic Internet Use Scale (GPIUS)**

Use Internet to talk with others when I feel isolated  
 Seek others online when I feel isolated  
 Use Internet to make myself feel better when I'm down  
 Go online to make myself feel better when I'm down  
 Treated better online than in face-to-face relationships  
 Feel safer relating to others online rather than face-to-face  
 More confident socializing online than offline  
 More comfortable with computers than people  
 Treated better online than offline  
 Got in trouble work/school b/c online  
 Missed class or work because I was online  
 I feel worthless offline, but I am someone online  
 Missed soc event because of being online  
 Unsuccessful attempts to control use  
 Unable to reduce time online  
 Guilt about time online  
 Tried to stop using Internet for long periods of time  
 Lose track of time online  
 I use the Internet for longer time than I expect to  
 Spent a good deal of time online  
 Go online for longer time than I intended  
 Preoccupied with Internet if I can't connect for some time  
 Miss being online if I can't go on it  
 When not online, I wonder what is happening online  
 I feel lost of can't go online  
 Hard to stop thinking about what is waiting for me online  
 Don't worry about how I look when socializing online  
 Don't worry about relationship commitment when socializing online  
 Have control over how others perceive me online

### **Internet-Related Addictive Behavior Inventory (IRABI)**

The Internet-Related Addictive Behavior Inventory (IRABI) consists of 32 true-false questions ([www.slais.ubc.ca/courses/libr500/winter2000/WWW/s\\_green/Research.htm](http://www.slais.ubc.ca/courses/libr500/winter2000/WWW/s_green/Research.htm)) (See Table 5).

I have spent at least 3 h on the Net at least twice  
 More than once, I have gotten less than 4 h sleep in a night because I was using the Net.  
 I have never made arrangements to rendezvous with someone I knew only from the Net.  
 I have voluntarily gone more than 3 days without connecting in the past month.  
 I have been told that I spend too much time on the Net.  
 I have used Net resources intended for adults only.  
 If it has been a while since I last logged on, I find it hard to stop thinking about what will be waiting for me when I do.  
 I have attempted to spend less time connected but have been unable to.  
 I have gotten into hot water with my employer/school for Net-related activities.  
 I routinely cut short sleep to spend more time on-line.  
 If it weren't for my computer, I wouldn't have any fun at all.  
 My work and/or performance has not deteriorated since I started using the net.  
 I know most of my friends from the Net.  
 Given the choice between living where I do now but not having computer access and moving somewhere strange and far away but having a modem, I would choose to move.

**Table A.4: Selected Items from IRABI**

### **Mc Survey**

Another assesment inventory called McSurvey was developed by Steve Thompson (Thompson 1996). Questions address things such as the level of the respondents' physical distress, whether the Internet had a negative impact on their lives, and if they perceived a real life deficit in personal relationships (See Table 6).

**Table A.5:Mc Survey Test**

1. On average, how many days per week do you connect to the Internet?
2. On a typical day when you connect to the Internet, how many hours are you connected during such a day?
3. What is the maximum number of hours you were connected to the Internet on any single occasion during the last month?
- 4a. Have you ever felt that you should cut down on your Internet connectivity?
- 4b. If you answered yes, has this occurred during the past year?
- 5a. Have people annoyed you by criticizing your Internet connectivity habits?
- 5b. If you answered yes, has this occurred during the past year?
- 6a. Have you ever felt bad or guilty about your Internet connectivity?
- 6b. If you answered yes, has this occurred during the past year?
- 7a. Have you ever connected to the Internet first thing in the morning?
- 7b. If you answered yes, has this occurred during the past year?
8. How many total hours have you been on the Internet this month?
9. How many times in a week do you stay on the Internet for four or more hours on one occasion?
10. How many times in a month do you stay on the Internet for four or more hours on one occasion?
11. What is the most time in hours you have spent on the Internet on one occasion in the past year?
12. Has your computer use or Internet connectivity ever led to any of the following known distresses?
13. Have you or has anyone in your immediate family ever had an addiction problem?
14. Has your Internet connectivity ever caused you problems with your family?
15. Has your Internet connectivity ever caused you problems with work or school performance?
16. Has your Internet connectivity ever caused you any accidents or injuries?
17. Are there times when you are unable to disconnect from the Internet once you have connected?
18. Does it take more time connected than before to fulfill your time online for satisfaction?
19. Do you get a strong urge to connect to the Internet?
20. Do you change your plans so that you can get access to Internet connection?
21. Do you ever connect to the Internet first thing in your morning for fulfillment reasons?
22. Which of the following have you experienced on the Internet?
23. Which of the above experiences contributes the most to your decision to get or remain online?
24. Which of the following software technologies contributes the most to your choice in (#23)?
- 25a. What is the single most important technology which contributes to your desire to have an online experience?
- 25b. What is the single most important reason you can give for getting online?
- 25c. What is the single most important reason you can give for staying online?
- 26a. Addiction implies that you may have no will of your own concerning a particular habit. Dependency implies that you have a strong, compelling desire to continue a particular habit. With that in mind, how do you see yourself concerning your Internet connectivity habits?
- 26b. Overall, do you perceive your condition in (#26a) as a negative or positive state of affairs?
27. Do you feel that your level of socialization has altered itself to where it is now done mainly via the computer?
- 28a. Overall, do you consider yourself above-average in intelligence?
- 28b. In spite of your answer to (28a), do you consider yourself above-average in intelligence or more occupationally marketable due to computer skills you are constantly acquiring and employing through your Internet connectivity?
29. What do you eventually expect to happen to your current level of Internet connectivity?
- 30a. As you see things now, have your Internet connectivity habits enhanced or crippled your personal communication skills?
- 30b. As those who know you best may see things now, have your Internet connectivity habits enhanced or crippled your personal communication skills?
- 30c. Barring unforeseen circumstances, do you see any time between now and the time of your death when you would not have access to a computer and the Internet as part of the practical makeup of your everyday existence?

## **Internet Addiction: Computer Use Survey**

The survey was developed in 1997 by Praterelli and Brown. It includes demographic and computer use items that were either continuous, dichotomous, or categorical in nature. The remaining 74 items were all Likert scaled statements (See Table 7)

**Table A.6: Internet Addiction: Computer Use Survey**

<p><b>LIFE AND THE NET</b></p> <p><b>I tend to connect to the net and (select ONE each).</b></p> <p>from home e mornings and daytime</p> <p>from work e evenings and nighttime</p> <p>from school e as a night owl</p> <p><b>My primary reason for using the net is (check all that apply)</b></p> <p>to find resources for work or school</p> <p>for learning</p> <p>for software</p> <p>to talk to friends far away</p> <p>to meet new people</p> <p>to talk to others who share my interests</p> <p>to stay abreast of new developments in areas of interest (hobby, culture)</p> <p>to share ideas or fantasies</p> <p>cybersex</p> <p>other (specify)</p> <p><b>I consider myself hacker.</b></p> <p>not at all a</p> <p>a moderate</p> <p>an expert</p> <p><b>The amount of time I spend on computer(s) has caused me to</b></p> <p>gain weight</p> <p>lose weight</p> <p>no change</p>
---

**Table A.6 Continues**

1. My first computer experience was with video games.
2. I have spent more than three continuous hours on the net at least twice.
3. More than once, I have been late for appointments because of the net.
4. I know most of my friends from the net.
5. I would rather spend an evening on-line than going out with friends.
6. More than once, I have gotten less than 4 hours of sleep in a night because I using the net (not due to studying, deadlines, etc.).
7. More than once, I have missed a meal because I was using the net.
8. I have made arrangements to rendezvous with someone I knew only from the net.
9. I have used the net to help me feel better when I was down or depressed.
10. My grades have dropped since I have been communicating on-line.
11. There have been times when I have dialed a telephone number or attempted to connect to a remote site, only to find that the line was busy or the site was down.
12. I have used the net to talk to others at times when I was feeling alone.
13. I find it easier to talk to people on the net than in person.
14. I have attempted to resolve an interpersonal conflict electronically instead of face-to-face.
15. I have shared a deep, dark secret with a person I met on the net.
16. I have been misled for at least one month as to someone's gender on the net.
17. I have more fun with people I know on the net than those I know in person.
18. When I wake up, the first thing I want to do is get on the computer.
19. I cannot remember a single occasion when I have ridden in a car.
20. I spend so much time on the computer, that I lose track of time and forget to eat.
21. People say I am shy.
22. Social relationships are important to me.
23. I have voluntarily gone more than 3 days without connecting in the past 3 months.
24. I have been told that I spend too much time on the net.
25. I have been accused of being a computer "nerd" or computer "junkie".

**Table A.6 Continues**

26. I have used net resources intended for adults only.
27. I have rearranged social plans to give myself time to connect.
28. I have always been more introverted than extroverted.
29. If it weren't for my computer, I would not have any fun at all.
30. I laugh, smile and feel the happiest when I am on the computer.
31. I have tried to hide from others the amount of time I am actually connected.
32. I never experience eye strain when using the computer.
33. I cannot remember the last time I talked to someone who wears glasses.
34. I have gotten a bill for on-line services that was at least twice what I expected.
35. I have gone into debt for connection fees.
36. I have gotten into trouble with my employer because of the net.
37. I have missed at least 3 classes that I intended to attend because of the net.
38. At times, I have noticed changes in my eating habits because of the net.
39. I have never gotten into arguments with my significant-other because of my NET use.
40. More than 3 days have passed since I last showered.
41. I have unsuccessfully attempted to spend less time on-line.
42. My exercise habits have changed since I found the net.
43. Net friends have introduced me to things I would never have done before.
44. More than once, I have gotten physically aroused while I was online.
45. People say my personality has changed since I went on-line.
46. I have gotten into trouble with my employer/school for net related activities.
47. Only my net friends really know who I really am.
48. I prefer to have an intimate on-line relationship with someone I met on the net than someone in person.
49. I have found information or software that I needed free on the net.
50. I have borrowed money to cover my connection fees.
51. I find the net to be impersonal.
52. My last girlfriend/boyfriend complained about my on-line usage.
53. I have had to buy a better computer since I found the net.
54. I feel I have an extroverted personality.
55. I routinely cut my sleep hours short to spend more time on-line.
56. I occasionally have dreams of being on-line.

## Table A.6 Continues

57. If it has been a while since I last logged on, I find it hard to stop thinking about what will be waiting for me when I do.
58. I am concerned that government attempts to control the Internet will impact negatively on the things I like to do on the net.
59. I find it easier to talk face-to-face to a person than to chat on the net.
60. My work and/or performance has not deteriorated since I started using the net.
61. I have no desire to meet my net friends in person.
62. I would not feel irritated if I could not use my computer today.
63. If computer access was shut down in my city for 48 hours, I would drive to the nearest city for access.
64. I have downloaded or viewed sexually oriented pictures on the net.
65. I have used the net for gambling purposes.
66. I often leave my computer connected to the net so I won't have difficulty getting on again later.
67. I write computer programs beyond what is required for my job or my studies.
68. I have attempted to hack my way into a system at least once.
69. After spending hours at a computer, I have sometimes experienced some disorientation or visual effects.
70. I like to discover new net features or activities and be among the first to use them.
71. I have ordered merchandise over the net.
72. I ask questions on the net that I could easily find the answers to in the library.
73. I have sent or received coded or encrypted messages over the net at least once.
74. Knowing something that no one else knows is something I enjoy a lot.

All the above presented tests have proven their validity and reliability.