Differences between motives for Internet use and life satisfaction among Hungarian and Israeli medical students

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Abstract

Objective: Life satisfaction is a global judgment of subjective well-being (SWB), which is the scientific name for how people evaluate their lives. On-line experiences can influence global constructs, including life satisfaction. Using the Internet can have an adverse affect on social involvement and psychological well-being, for instance life satisfaction has been negatively related to Internet uses. The aim of this current study was to compare the motives for Internet use and life satisfaction. We wanted to see for what reasons the students are using the Internet and how this is related to life satisfaction in general.

Method: 300 medical students filled out questionnaires connected to Internet motives and Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985). The sample consisted of 150 Hungarian (75 males and 75 females) and 150 Israeli (75 males and 75 females) medical students.

Results: There were significant nation-based and gendered-based differences between the Hungarian and Israeli students in Internet motives independently of age and gender. Hungarian and Israeli males were usually higher in the arousal and information-seeking motives than their female counterparts. Furthermore, there was a significant inverse association between life satisfaction and companionship motive in both the Hungarian and Israeli sample, although a stronger association could be found in the Israeli sample. This means that the higher the life satisfaction was, the less likely the students were to use the Internet for companionship purposes. A higher life satisfaction also predicted less frequent use of the Internet for the social interaction motive and those Israeli students who were satisfied with their lives were less likely to use the Internet as an escape motive. Our results suggest that there are nation- and gendered-based differences between life satisfaction and Internet motives.

1 General Internet Use

There was a time when the World Wide Web was considered as something unique, being accessible only to experts or nerds. Today the World Wide Web or the Internet is playing an important part in most people's lives, and they incorporate it into their communicational styles with other people. The Internet is a collection of communities and technologies, in which a person is constantly using phones, mobiles and computers interchangeably, and alternating these with face-to-face contacts (Boase, Horrigan, Wellman & Rainie, 2006). The most important reason why the Internet has become such a successful tool is that it is fulfilling essential societal desires at the same time as it is helping us to develop the community and society by advancing the communication forward. In the beginning, the Internet was a construct started up by an intimate group of devoted scientists and researchers, which today has developed into becoming an immensely successful and profitable tool. This shows how much the Internet has changed during 20 years of existence. It started to rise in the early 1980's and its rapid growth is continuing even

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today. The Internet was born at a time when communication was just uprising and in the beginning of its endless possibilities. It went on to exist at a time when people started owning their own computers, communicating with each other over the Internet and using faster and more accessible Internet connections. It was envisioned as supporting a range of functions from file sharing and remote login to resource sharing and collaboration, and has generated electronic mail and more recently the World Wide Web. People's desire for the Internet together with a society in the background supporting it, made it possible for the Internet Society to develop in 1991. The World Wide Web technology has allowed users to gain easy access to information linked throughout the globe but it should not be assumed that today the Internet has finished changing. The Internet should not be considered being a conventional system part of the TV or phone production. It will and must continue to change and grow at the speed of the computer industry, if it wants to remain important (Leiner, Vinton, Clark, Kahn, Kleinrock, Lynch, Postel, Roberts, & Wolff, 2003).

Fallows (2004) made a research about Internet in everyday life and showed that a majority of the American people (88%) who are using the Internet stated that it has an impact on their everyday life. The Internet has a positive social impact on most people's lives. The social impact might consist of for example staying in touch with family and friends. These social networks influence the social support of a person, how satisfying their relationships and life purposes are. Moreover, the Internet and these social networks have an impact on a person's psychological well-being" (e.g. Cohen & Wills, 1985; Diener, Suh, Lucas, & Smith, 1999; Gove & Geerken, 1977; Mirowsky & Ross, 1989, Thoits, 1983; Williams, Ware, & Donald, 1981).

Taken together it is mentioned that two-thirds of the American people are using the Internet (Madden & Rainie, 2003). As a group, those people who use the Internet frequently are more likely to be better educated, for instance 49% out of them are college graduates (op. cit.). Studies of home Internet use (Kraut, Mukhopadhyay, Szczypula, Kiesler, & Scherlis, 1998a) and campus Internet use (Anderson, 1999; Scherer, 1997) show that browsing on the Internet is one of the main activities people are using the Internet for (Kubey, Lavin & Barrows, 2001).

1.1 E-mailing

Looking at the literature (e.g. Boase et al., 2006; Fallows, 2004, Kraut, Kiesler, Boneva, Cummings, Helgeson & Crawford, 2002) it can be seen that e-mailing is a very popular Internet activity. Due to this reason, we are focusing on this specific Internet activity rather than on for example chatting, information gathering, or entertainment purposes. When we mention e-mailing, it refers to one specific activity that is done while on the Internet, thus these terms, Internet and e-mailing, are treated as two separate entities.

According to Madden and Rainie (2003), different people use the Internet for different activities. Within the online population, individuals have comparatively high frequency levels for certain online activities. Almost all who are online have sent or read e-mail. Fallows (2004) showed that the most dominant and popular communication activity is e-mailing. A research made in America showed that 79% of the people are using the Internet for communicating with family and friends (Rainie & Horrigan, 2005, Fallows, 2004). Thus, the use of the Internet for e-mailing with family and friends is well established (Katz & Aspden, 1997; Kraut, Mukhopadhyay, Szczpula, Kiesler & Scherlis, 1998b). Research done by Boase et al. (2006) showed that e-mailing is cultivating social networks as well as allowing a person to receive help from their social networks because e-mail lets them exchange information. ;ore precisely, the finding was that e-mail supplements, and is not replacing the interaction they have with other people who are very close to them, as well as with those whom they are not so close with. In addition, e-mail enables people to maintain more relationships easily because of its convenience as a communication tool and the control it gives in managing communication. E-mail makes it possible for people to carry on conversations at different times and whenever it suits them. Moreover, it is almost as easy to e-mail a message to many people, as it is to e-mail to only one.

E-mail is used in particular to keep in contact with geographically distant ties, both close significant others and less significant others. US research (e.g. Boase et al., 2006) showed that Americans actively use e-mail to contact close significant others and less significant others that do not live nearby. Those with higher percentages of close significant others and less significant others living more than an hour away are the most active e-mail users. However, even for those with Internet access, e-mailing is not engaged in as much as face-to-face interaction or using the phone to stay in touch with the most close significant others. Nevertheless, e-mail is used equally as often as mobile phones for connecting with less significant others. E-mail users contact 25% of their close significant others at least weekly as well as 15% of their less significant others. One might think that e-mailing is a way to stay in touch with less significant others in a shallow manner, however it is rather used for staying in contact with close significant others (Boase et al., 2006). People who are often e-mailing state that this activity has made the relationship with relatives stronger (Rainie & Kohut, 2000).

When it comes to e-mailing, women use it to enrich their important relationships and enlarge their networks.

They report that e-mail has helped them to improve their connections with relatives and friends. More than men, women say they are attached to e-mail and pleased with how it helps them. In the year of 2000, 65% of women using the Internet stated that they would be unhappy without the e-mail, a number, which can be compared to 55% males, who think the same (Rainie & Kohut, 2000).

2 Motives for Internet use

The motives for different media theories were first introduced in television studies (Greenburg, 1974; Rubin, 1983) and since that time it has emerged to involve other types of mediums, like for example the Internet (Song, LaRose, Eastin & Lin, 2004; Papacharissi & Rubin, 2000; Korgaonkar & Wolin, 1999). Research has found that the primary motives for using the Internet include *information seeking* (Katz & Aspden, 1997; Kaye, 1998, Papacharissi & Rubin, 2000) and *fulfilling interpersonal needs* (Papacharissi & Rubin, 2000). More recent studies have discovered that many of the same reasons for using television also apply to the Internet, such as using it to fulfil the need for entertainment or for social interaction (Ferguson & Perse, 2000). Ferguson and Perse (2000) found individuals visited particular websites to fulfil specific needs. For instance, visiting entertainment sites and sports sites were related to the following motives: for *entertainment* purposes, to *pass time*, for *relaxation* and for *social interaction*. Those who use Internet tend to use them in order to fulfil their motives for entertainment and for information seeking (Papacharissi & Rubin, 2000). Especially, those people who are feeling anxious and depressed are using the Internet for elevating their mood and to divert their attention away from hassles and stress in their life, which is leading to satisfaction of their needs (Kraut et al., 2002).

One of the motives for using the Internet is the *social utility motive*. In this motive, the Internet plays an important role in maintaining close or distant social networks (Boase et al., 2006) and it is not interfering with the societal networks that a person has. Instead the Internet is working well together with phone and face-to-face interactions. Those who lack or avoid personal interactions with others tend to use the Internet more as a type of face-to-face contact (Papacharissi & Rubin, 2000). Depending on how the Internet is balancing between the weak and strong social networks a person has, it will have either positive or negative consequences. Qualities associated with weak ties are for example infrequent contact, and superficial relationships, and qualities associated with strong ties are frequent contact and deep feelings of emotions. However, something which is associated with both weak and strong ties is that a person is receiving social support from both (Kraut et al., 1998b). Something which is rewarding for a person having weak ties, either in personal interaction or on-line, is that it is connecting a person to information and social networks which might not be available in the person's close social network (Constant, Sproull, & Kiesler, 1996). Having said this, it is still however considered that it is the strong social ties, which are usually protecting a person from daily hassles and other stresses in everyday life and which are having social and psychological benefits for a person (Cohen & Wills, 1985; Krackhardt, 1994). Social support for somebody is usually received from people they meet or see most frequently and usually a more robust support is offered by those people who one has stronger ties with (Wellman & Wortley, 1990). Internet is offering possibilities for interaction with people, which is not dependent on how far a person is living from you, not like for example personal interaction. Individuals often use the Internet to keep up with those whom they have pre-existing relationships, but they also develop new contacts through the Internet although most of these new relationships are weak (Kraut et al., 1998b).

No matter if the relationship is close or distant people still experience pleasure and relaxation while being in contact with others, therefore high satisfaction while communicating with others is present. Communication satisfaction is best predicted by gender as well as the *pleasure*, *relaxation*, and *escape* motives (Rubin, Perse & Barbato, 1988).

Finding *companionship* on the Internet is also a strong motivator to go online. The online relationships of young people reflect off-line interactions. The Internet offers the possibility to find off-line friendships and is often motivated by the need for companionship (McMillan & Morrison, 2006). However, other studies have found that online relationships are seldom resulting in off-line relations (Wolak, Mitchell, & Finkelhor, 2003).

3 Life Satisfaction

Life satisfaction is a **global judgment of subjective well-being**, shortly SWB, which stands for the way people are evaluating their lives. People can evaluate their lives in terms of life satisfaction or feelings of fulfilment. Life satisfaction can be more specifically assessed in areas of people's lives such as marriage, work, or in terms of their ongoing, pleasant and unpleasant, emotional feelings about the things which are occurring in their lives (Diener,

2000). According to Diener and Lucas (1998) the way we are evaluating subjective well-being are most of the times affected by how many times we are experiencing positive emotions and to a lesser degree by how intense those emotions are. According to Diener and Lucas (op. cit.) intense positive emotions are less important to the experience of long-term emotional well-being because intense emotions like that are so rare, and also because they often carry costs with them. In general, subjective well-being is measuring the internal experiences of people in the long run; therefore the person's mood over time is assessed (Diener, Suh, Lucas & Smith, 1997). When talking about the associations and possible causes for emotional well-being, researchers are mainly talking about aspects that make some people happier than others. The theory behind subjective well-being is pointing out that it is made up of somebody's own evaluation of his or her life (Diener & Lucas, 2000). SWB is concerned with the reasons behind depression and behind anxiety, and also with variables which are separating somewhat happy people from fairly and very happy people (Diener et al., 1997). According to Diener and Lucas (2000), psychological well-being focuses primarily on the negative aspects of people's lives but researchers have in the past decades begun to look at the positive side of emotional well-being. This is done in the field of subjective well-being, which is looking at areas such as satisfaction with life, confidence and happiness (Strack, Argyle, & Schwarz, 1991; Myers & Diener, 1995; Diener, Suh, Lucas, & Smith, 1997; Kahneman, Diener, Schwarz, 1997). The reason for studying more global levels of subjective well-being, such as life satisfaction, is that narrower levels such as marital satisfaction tend to co-occur. People experience similar levels of well-being across different aspects of their lives. However, SWB is just one aspect of psychological well-being but it is not equal with psychological well-being or mental health (Diener et al., 1997). According to Ryff (1989; Ryff & Keyes, 1995) there are other factors than SWB which are important for mental health, like for example mastering the environment, personal growth, and life purpose.

People appraise situations differently depending on their expectations, values, and previous experiences. Subjective well-being researchers allocate importance to this subjective factor and measure individual's thoughts and feelings about their lives (Diener & Lucas, 2000). To capture this subjective factor, subjective well-being researchers look at individuals' appraisals of their lives. These appraisals can be affective (e.g., the presence of joy) and cognitive (e.g., life satisfaction) (Andrews & Withey, 1976). The affective appraisals of well-being reflect people's ongoing evaluations of the conditions in their lives. This type of evaluation can be contrasted with global judgments about the quality of a person's life. Individuals can examine the conditions in their lives, and they can judge about the significance of these conditions, and then evaluate their lives on a scale ranging from dissatisfied to satisfied. This global, cognitive judgment is referred to as life satisfaction. It is assumed that this judgment requires cognitive processing and the focus is on how these judgments are made. Although one can separate these appraisals (e.g., Lucas, Diener & Suh, 1996), the appraisals might be associated with each other, which could point to the fact that there is a superior construct for subjective well-being (Kozma, 1996). Recent studies on the processes of satisfaction judgments have led to a greater understanding of the relation between affective and cognitive well-being. It appears that people do use their affective well-being as information when judging their life satisfaction, but this is only one piece of information. The power of this information is different across people and cultures (Diener, Scollon, Lucas, 2003).

Although measures such as crime statistics, health indices, and indicators of wealth certainly are related to quality of life, those external factors cannot capture what it truly means to be happy (Diener & Lucas, 2000). A way to capture true happiness and to measure SWB is by using the Satisfaction With Life Scale (SWLS), which was developed by Diener, Emmons, Larsen, & Griffin in 1985; and reviewed by Pavot & Diener in 1993. People can evaluate their life satisfaction in this self-report measure. Moreover, this survey assesses the occurrence of enjoyable or not enjoyable emotions. According to Diener and Lucas (2000) emotional well-being has often been measured by self-reports, distributed at one single occasion. These self-reports can include single-item or multiple-item scales that ask individuals to consider how happy they are. These self-report surveys are valid because most of these measures are stable and display a high internal consistency. The reliability scores for a 6-year interval ranged between .5 and .6 (Headey & Wearing, 1989). Values for single-item measures and for affective variables of subjective well-being might be lower, whereas multiple-item scales and instruments of the cognitive variables (e.g., life satisfaction) have usually increased reliabilities (Larson, Diener, & Emmons, 1985). Well-being measures show structural stability across time and cultures (Andrews, 1991; Balatsky & Diener, 1993; MacKinnon & Keating, 1989; Lawrence & Liang, 1988). Furthermore, subjective well-being represents a major way to assess quality of life in addition to economic and social indicators such as Gross National Product (GNP) and levels of health or crime (Diener, Suh, Lucas & Smith, 1997). Instruments of subjective well-being are affected by altering circumstances in life (Diener & Lucas, 2000). Diener (2000) found that life satisfaction was regarded as important among all college students from 17 countries, whereas money was not mentioned to be of that importance, although there were minor differences among the nations. Furthermore, respondents from all samples indicated that they thought about happiness from time to time. Thus, even those from relatively unhappy societies value happiness

to some extent. When looking at Diener's (2000) survey about life satisfaction in 17 countries, it can be seen that Hungary and Israel scored differently on life satisfaction. Below is a table extract of life satisfaction scores for the Hungarian and Israeli population.

Table 1: Life Satisfaction in two different countries (1999-2006)

Nation*	Year	LS
Israel	2001	7.03
Hungary	1999	5.80
Nation**	**Year**	**SWLS**
Israel	2006	223
Hungary	2006	190

* Veenhoven (2002), LS = Life Satisfaction

** Marks, Abdallah, Simms & Thompson (2006), SWLS = Satisfaction With Life Scale

As seen in the Table 1 above, life satisfaction of the Israeli population is slightly higher than that of the Hungarian population measured in two studies (i.e. Veenhoven, 2002; Marks, Abdallah, Simms & Thompson, 2006) within different years (1999, 2001, 2006).

Factor analyses on the Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) confirmed that a one-factor model could be used in 41 nations (Vitterso, Roysamb & Diener, 2002). "In all nations, the comparative fit index was above .90. This finding suggests that the SWLS measures a single construct and that the concept of *life satisfaction* may be **similarly understood across a wide range of cultures**" (Diener & Tov, 2005: p.15). From this the authors conclude that the construct of life satisfaction (LS) is **universal** and that people from different nations respond in a similar way to the life satisfaction inventory (Diener & Tov, 2005).

4 Internet and Life satisfaction

Kraut et al. (1998b) found that using the Internet had a negative influence on psychological well-being and social involvement. The results of a research done by Papacharissi and Rubin (2000) about the motives for Internet use showed that life satisfaction is negatively related to Internet dependency. Other analyses showed that negative results were even linked to using the Internet for social purposes (Kraut et al., 1998b). For example, greater use of the Internet, especially e-mailing, was associated with decrease in psychological well-being.

This was confirmed by a longitudinal study among American University students in which a significant negative relation was found between the amount of Internet usage for personal reasons and life satisfaction (Weiser, 2001). In a more current study, Kraut et al. (2002) found opposite associations in which the authors showed an overall positive effect between Internet uses and communication, social involvement, as well as well-being. On-line experiences can influence global constructs, including life satisfaction. For example, a person who is continuously in a negative mood is most likely assessing his/her life as not fulfilling. However, the extents to which on-line emotions influence global constructs depend on people's memory of emotions (Diener, Scollon, Lucas, 2003). In support of this, Schimmack, Diener and Oishi (2002) found that not only did happy memories correlate with life satisfaction judgments, but changes in memories correlated with life satisfaction as well. Life satisfaction judgments include several other sources that vary across cultures and individuals, including cultural norms (Suh, Diener, Oishi & Triandis, 1998), and irrelevant but significant information (Schwarz & Clore, 1983). Life satisfaction, the meaning in life, and fulfilment, which are all global judgements, capture the unhappy meanings of happiness that were originally used by Democritus and Aristotle many years ago (Diener, Scollon, Lucas, 2003).

According to the literature, there is a connection between using the Internet and psychosocial well-being including loneliness and depression (Caplan, 2003). Lonely and depressed people have a higher tendency to show an interest in online social relations. These people feel safer, more secure and happier with online relations and interactions than with face-to-face interactions (Caplan, 2003). Shy or introverted people use the Internet for communication, which is increasing their online social interaction and is therefore improving their well-being (Wastlund, Norlander & Archer, 2001).

In the field of Internet and life satisfaction, only a limited amount of research can be found. Current literature is missing concrete theories which are clarifying the reason someone might have either a positive or problematic interaction with the Internet (Caplan, 2003). Studies that can be found have for instance focused on adolescents' exposure to sexually explicit material on the Internet (Peter & Valkenburg, 2006), and creating an inventory of Internet well-being (Sirgy, Lee, & Bae, 2006).

5 Nation- and gendered-based differences in Internet use

Our purpose of this study is not to focus on the nation-based and gendered-based differences in the motives for Internet use between the Hungarian and Israeli medical students. However, since we have two nationalities, and both males and females in our sample, we found it worthwhile to examine the impact those two nationalities and genders might have on our data. Therefore, we are including different gendered-based information and data about Internet usage connected to Hungary and Israel in this study.

Depending on which demographic grouping we are looking at, we will find that different groups are incorporating Internet use in different ways. Gendered-based studies in Internet use are for example showing that women are generally using the Internet less for entertainment and for collecting information, than men, but are using the Internet generally more for communication (Fallows, 2004). Hence, the overall pattern which can be detected is that women are mainly appreciating the Internet for its communication possibilities with friends and family, and men are mainly appreciating the Internet for its broad possibilities (Fallows, 2005). There is also a difference in the number of women using the Internet compared to men, with 66% of the women being Internet users and 68% men using the Internet (Fallows, 2005). All and all it can however be said that both men and women who are using the Internet are staying in more frequent contact with more people, since it has made it possible for them to keep in contact with friends and family (Fallows, 2004).

The Internet use in Israel is growing rapidly. Altogether, 40% of Israelis are using the Internet, (i.e. 47% males and 34% female users) (European Survey of Information Society Projects and Actions, 2001). The number of people online has grown by 26% from 1999 to 2000. There are roughly 48,433 Internet Hosts in Israel, and around 29,834 web sites. One PC can be found in 57% Israeli households and 13% of Israeli homes have even multiple PCs (European Survey of Information Society Projects and Actions, 2001). When taking a look at from where the Israeli Internet users are gaining access to the Internet then 89% access the Internet from at home, 32% at work, 21% at school and 9% other (Nua Internet Surveys, 2001). Of all Internet users in Israel, approximately 75% of them use the Internet to search for information and 73% use it to e-mail. The Internet uses in Israel are increasing, for example the fastest growing uses are chat rooms and 39% of the Israelis use the Internet to join the chat rooms (European Survey of Information Society Projects and Actions, 2001).

The use of Internet services in Hungary is slightly different from that in Israel. According to the Hungarian TARKI Social Research Centre and their World Internet Project (WIP) survey, which started in 2001 and will last until 2010, it was found that 17% of the Hungarian population uses the Internet with certain regularity. Out of these, 35 % of the Hungarian young adult population between the ages 18 and 29 years uses the Internet regularly. Young men are more involved in spending time on the Internet: 20% of them use the Internet. The proportion of young women shows only 15%. The higher the education level one has achieved, the more likely it is that he or she uses the Internet. Almost half (45%) of people with College or University Degrees use the Internet.

65% of Hungarian Internet users say that the Internet has a positive impact on their daily lives. One personal PC can be found in 32% of the Hungarian homes and this percentage has not changed since 2003. The World Internet Project (WIP) study showed that 25% of adult Hungarians over 18 years are using the Internet in general. The Internet is used on a monthly basis by 21% of the Hungarians aged 18 and above, and by 19% on a weekly basis. The broadband technology in Hungary is on its rise since 2004 (TÁRKI Social Research Centre, 2004).

In general, e-mailing is considered to be a positive activity by Hungarian Internet users. As a consequence, e-mailing is a popular activity among the Hungarians. Approximately 19% of Hungarian Internet users are reading and sending e-mails on daily basis, while 26% are doing this activity a bit more often within one week (TÁRKI Social Research Centre, 2001). The majority thinks that using the e-mail doesn't take much time. E-mail is regarded as useful and it enables communication with people who are difficult to reach otherwise. One-fourth of e-mail users are certain that it is more likely for them to keep the contact with those who also have an e-mail address than with those who do not, and an additional 20% believe more or less the same. Hungarian men send and receive more e-mail, both work and private, than women. Searching and information gathering are activities users often choose, as opposed to using the Internet for pleasure, which seems to be less widespread. Chatting is not so trendy in Hungary and therefore less common among the Internet users. 50% of users never chat on the Internet. Out of chat users, only 23% use this service on a regular basis. Joining forums are also rare and only 14 % of the users are undertaking such activity on a regular basis (TÁRKI Social Research Centre, 2001).

Hypotheses:

The **aim** of the current study is to examine the associations between the motives for Internet use and life satisfaction in general. The sample consisted of 300 medical students, including 150 Hungarians (75 males & 75 females) and 150 Israelis (75 males & 75 females), both living in Budapest.

The **second aim** of the study is to look at the gendered-based differences between and among the two samples regarding Internet motives and life satisfaction.

The present research on the motives for Internet use and subjective well-being is based on well-known American studies (e.g. Kraut et al., 1998a; Rainie & Kohut, 2000; Papacharissi & Rubin, 2000; Kubey et al., 2001; Diener et al, 2003; Fallows, 2004; Boase et al., 2006) and we would like to apply the same theories on the Hungarian and Israeli medical students living in Budapest, Hungary. Please note that our results are only referring to Hungarian and Israeli medical students living in Budapest, Hungary. Thus, the sample cannot be generalized to the whole population living in Hungary and Israel.

1. (a) Will the Israelis on average spend more time on the Internet than the Hungarian students?
   (b) Will there be any difference in the frequency of checking and writing e-mails within and between the samples?
2. Is there a nation-based difference in the Internet motives between the Hungarian and Israeli students?
3. (a) Are there gender-based differences in Internet motives between the Hungarian and Israeli sample?
   (b) Are there gender-based differences in Internet motives within the Hungarian and Israeli sample?
4. (a) Is life satisfaction higher in the Israeli sample than in the Hungarian one?
   (b) Will life satisfaction be related to Internet motives between the Hungarian and Israeli sample?

Method

Subjects and Procedure:

The population study was Hungarian and Israeli medical students. We chose this population because as the literature mentions (Fallows, 2004), young adults such as college and university graduates are amongst the highest and most frequent Internet users. The data collection was done in May 2007 at Semmelweis Medical University (SOTE) in Budapest. This University is the biggest University for Medicine in Budapest and it is divided into different sections with lectures being given in different places all over Budapest. We used several sites of the SOTE University such as the NET building, and the Anatomy building for our data collection. First, second and third year medical students were used for both the Hungarian and the Israeli samples.

Hungarian population

We looked at the schedule of the medical students on the Internet (http://ora/sote.hu) and most convenient lectures were chosen for questionnaire distribution. The students were asked to fill out the questionnaire before the chosen lectures. Taken together, 150 Hungarian medical students filled out the questionnaires, 75 males and 75 females. The students were aged between 18-36 years, with the mean age of 20.89 years (SD = 2.97). The mean age of the males was 20.88 years (SD = 2.70) and the mean age of the females was 20.89 (SD = 3.24).

Israeli population

The first step in the Israeli data collection was to contact the Head of the Israeli medical student organization, in order to receive information about the medical student's schedule and the amount of Israeli medical students currently studying in Budapest. The method for collecting the subjects was the same as for the Hungarian sample. Altogether, 150 Israeli medical students filled out the questionnaires, 75 males and 75 females. The students were aged between 19-34 years, with the mean age of 24.98 years (SD = 3.10). The mean age of the males was 25.63 years (SD = 3.46) and the mean age of the females was 24.33 (SD = 2.56).

Instruments:

The same questionnaires were used for the Israeli and the Hungarian population. The questionnaires were originally in English and for the Hungarian population they had to be translated into Hungarian. A translator with a diploma specializing in Psychology terminology was contacted at the University of Eötvös Lórand (ELTE) in Budapest. She translated all the questionnaires for us and before distributing them; two impartial Hungarian English teachers checked them. They made some corrections to the questionnaires and after agreeing with them about the changes the questionnaires were considered to be ready for distribution. Before distributing to the whole Hungarian population, a small sample of students filled it out. After receiving those questionnaires, minor adjustments had to be made re-considering some of the fine aspects of the Hungarian language. After those alterations had been made, we distributed the questionnaires.

In this study we chose to collect the data using the following questionnaires:

In the first part of the questionnaire, there was a demographical part where the students had to fill in demographical background about themselves such as:

- Age
- Gender

- Level of education (Grammar, Middle School; High School; College Graduate (BA); Master Degree (MA)).
- With whom they are living together (alone; at home with parents or relatives; with my partner; with my own family; with my child(ren); with friends; with other person(s)).
- If they are working besides their studies. In part of this section of the questionnaire, the students also had to indicate their answers connected to general Internet use:
- How many hours they approximately spend on the Internet any given day (less than 1 hour; 1-2 hours; 2-3 hours; 3-4 hours; 4-5 hours; 5-6 hours; More than 6 hours).
- How many times they approximately check they e-mails during one day (Never; Once a week; Every 2-3 day; Once a day; 2-3 times/day; 3-4 times/day; 4-5 times/day; 5-6 times/day; More than 6 times/day).
- How many times they usually write e-mails during one day (Never; Once a month; Every 2-3 week; Every week; Every 2-3 day; Everyday).
- If / when they use chat rooms (I never use chat rooms; I am depressed; I am stressed out; I am happy; I am lonely; I am nervous; I am bored; I am angry; I am sad).

1) The Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985; Pavot & Diener, 1993) was used to measure to what degree Israeli and Hungarian students were satisfied with their lives in general. The Satisfaction with Life Scale is a scale developed to measure people's satisfaction with their lives as a whole; as such it is designed to measure global cognitive judgements of one's lives. The scale does not measure satisfaction with specific areas of life, such as health or finances, but gives the opportunity for subjects to integrate and weigh these domains in whatever way they wish. The scale is a short, 5-item instrument with a 1-7 number scale, indicating the agreement with each item from 1 (strongly disagree) to 7 (strongly agree). Measures of subjective well-being (which is the overall measure of life satisfaction) show moderate to high reliability. For example, life satisfaction correlates 0.58 over a four-year period, and this correlation remains strong (0.52) when subjects' reports of life satisfaction are replaced at the second testing. Findings suggest that subjective well-being is a changing construct, but it also shows that there is some constancy in it looking over a long-lasting period of time (Magnus, Diener, Fujita, & Pavot, 1993).

2) Motives for Internet Use Scale (Papacharissi & Rubin, 2000; Ferguson & Perse, 2000) was used to look at the student's different motives for using the Internet. This 27-item scale reflects reasons why people are using the internet. The students had to show their own feelings as to why they use the Internet on a 1-5 number scale, where the number 1 represents strong disagreement and the number 5 represents strong agreement with an item. When summarizing the answers of the items they can be grouped into 9 different clusters of Internet motives: entertainment, relaxation, companionship, pass time, habit, arousal, escape, social utility, and information- seeking. Each of the motivational subscales of the Motives for Internet Use Scale, has a documented reliability ranging from 0.68 to 0.87 (op. cit.).

Results

1. (a) Will the Israelis on average spend more time on the Internet than the Hungarian students? We wanted to see whether the Israeli students on average would spend more time on the Internet than the Hungarian students.

The Israeli students spent on a daily average approximately 3 hours on the Internet (N = 150; Mean = 3.33; SD = 1.75) while the Hungarian students are approximately 2 hours online (N = 150; Mean = 2.03; SD = 1.20). Taken together we can say that the Israelis are spending more time on the Internet than the Hungarians. The descriptive statistics showed that most of the students spent on average 1-2 hours on the Internet (N = 300; 29.7%). Taken the two nations separately, the descriptive statistics showed that 43 Israeli students on average are spending 1-2 hours on the Internet (N = 150; 14.3%) and 64 Hungarian students on average are spending less than 1 hour online (N = 150; 21.3%). When it comes to spending more than 6 hours online, we found that none of the Hungarian students filled out this option while 3.7% (n = 11) of the Israeli students marked this option.

It was interesting to notice that within the Hungarian sample, the gendered-based difference for hours spent on the Internet was that the majority of females spent less than 1 hour online (n = 75; 26.7%) while the majority of the Hungarian males spent less than 1 hour (n = 75; 16.0%) and 1-2 hours on the Internet (n = 75; 16.0%). Within the Israeli sample there were no major gender differences for hours spent online, thus the majority of students spent 1-2 hours online, altogether 19 males (n = 75; 12.7%) and 24 females (n = 75; 16.0%).

1. (b) Will there be any difference in the frequency of checking and writing e-mails within and between the samples? Israeli students in general are *checking* their e-mails 2-3 times per day (N = 150; 27.3%), and only

a few are checking their e-mails 5-6 times per day (N = 150; 2.0%) or more than 6 times per day (N = 150; 4.0%). The gendered-based difference within the sample showed that the majority of the Israeli males are checking their e-mails once a day (n = 75; 15.3%) and the Israeli females are checking their e-mails only every 2-3 days (n = 75; 15.3%).

The majority of the Hungarian students are *checking* their e-mails once a day (N = 150; 37.3%) and only a few of them are checking their e-mails 5-6 times per day (N = 150; 2.0%) or more than 6 times per day (N = 150; 1.3%). The gendered-based differences within the Hungarian sample showed that both males and females are checking their e-mails once a day (n = 75; 16.0% and n = 75; 21.3% respectively).

Israeli students in general are *writing* e-mails every 2-3 day (N = 150; 28.0%), and only a few are never writing e-mails (N = 150; 2.0%). The gendered-based difference within the sample showed that the majority of the Israeli males are writing e-mails every 2-3 day (n = 75; 15.3%) and the majority of the Israeli females are also writing e-mails every 2-3 days (n = 75; 12.7%).

The majority of the Hungarian students are *writing* e-mails every 2-3 day (N = 150; 31.3%) and only a few of them are never writing e-mails (N = 150; 1.3%). The gendered-based differences within the Hungarian sample showed that the majority of males are writing e-mails every 2-3 day (n = 75; 18.0%) and the majority of females are writing e-mails every day (n = 75; 14.0%).

2. Is there a nation-based difference in the Internet motives between the Hungarian and Israeli students?

The results of our univariate analyses (T-test for independent samples) indicate that there are significant differences in several Internet motives between Israeli and Hungarian students.

Motive for Internet usage	Israeli sample Mean (SD)	Hungarian sample Mean (SD)	p-value
Habit	3.06 (0.93)	2.44 (0.88)	0.000
Pass time	3,06 (1,02)	2.62 (0.97)	0.000
Entertainment	3.78 (0.86)	3.13 (0.98)	0.000
Arousal	2.83 (0.93)	2.76 (0.84)	0.000
Relaxation	3.17 (0.95)	2.52 (0.92)	0.000
Companionship	2.55 (1.10)	2.21 (0.91)	0.004
Information-seeking	2.69 (0.92)	2.57 (0.89)	0.000
Escape	2.54 (0.93)	2.10 (0.80)	0.000
Social Interaction	2.84 (0.87)	2.53 (0.81)	0.002

Table 1: Summary of means and significance for the Internet motives in the Hungarian and Israeli sample

As it can be seen in Table 1, there are significant nation-based differences between the Hungarian and Israeli students in Internet usage motives, independently of age and gender. These motives in which significant differences were found are: habit ($p = 0.000$), pass time (0.000), entertainment ($p = 0.000$), relaxation ($p = 0.000$), companionship ($p = 0.015$), escape ($p = 0.000$), and social interaction ($p = 0.000$).

Thus, the two motives where no significant differences could be found between the Hungarian and Israeli students, independently of age and gender, were arousal ($p > 0.05$) and information-seeking ($p > 0.05$).

The nation-based differences in the Internet motives between Israelis and Hungarians showed that the *entertainment motive* was rated the highest for both the Israelis (N = 150; Mean = 3.78; SD = 0.86) and Hungarians (N = 150; Mean = 3.13; SD = 1.00).The result also showed that the Israelis still scored somewhat higher on entertainment motive than the Hungarians. The between groups calculation in the one-way ANOVA displayed that this result was significant ($F = 36.515$; $p < 0.001$).

The highest differences could be found for the habit and relaxation motives. Israelis scored higher on both habit (N = 150; Mean = 3.06; SD = 0.93) and relaxation (N = 150; Mean = 3.17; SD = .95) while the Hungarian students scored lower for habit (N = 150; Mean = 2.44; SD = 0.88) and relaxation (N = 150; Mean = 2.52; SD = 0.92). These differences were significant for habit ($F = 35.977$; $p < 0.001$) and for relaxation ($F = 35.301$; $p < 0.001$) among the students.

The escape motive was the lowest rated motive for both the Israeli and Hungarian sample. A mean difference of 0.440 was found between the Hungarian students and Israeli students for this motive. This difference was found to be significant ($F = 19.236$; $p < 0.001$) with the Independent T-test.

The multivariate discriminant analysis showed that the association between Internet motives (independent variables) and the nationality (dependent variable) was significant, as indicated by the p-value corresponding to the Wilks"s lambda ($p < 0.001$).

The low Lambda indicated which Internet motives contributed to the discrimination between the two nationalities and the variables that discriminate the Internet motives between the Hungarian and Israeli students were: habit

(p ¡ 0.001), pass time($p < 0.001$), entertainment ($p< 0.001$), relaxation ($p < 0.001$), companionship ($p = 0.004$), escape ($p < 0.001$) and social interaction ($p = 0.002$). Thus, only the arousal motive and information-seeking did not discriminate the Hungarian and Israeli students when it comes to the Internet motives.

3. (a) Are there gender-based differences in Internet motives between the Hungarian and Israeli sample?

According to our results, gender is influencing the Internet usage in the whole sample, especially arousal ($F = 3.962$; $p = 0.047$) and information-seeking ($F = 5.216$; $p = 0.023$). For both of these motives, the Hungarian and Israeli males scored higher than the females. Therefore, males are using the Internet more often for arousal and information-seeking in comparison to females. There were no significant gender differences in the rest of the Internet usage motives.

There is also a significant interaction between nationality and gender on Internet motive for the females and this can be found for the pass time motive. For this motive, the Israeli females were higher (Mean = 3.187; SD = 0.114) and in the Hungarian sample, the males scored higher (Mean = 2.804; SD = 0.114) (see Table 2).

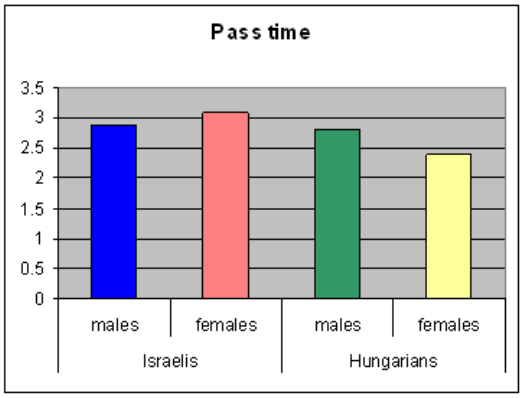

Table 2: Nationality- and gendered-based mean differences associated with pass time motive in the Hungarian and Israeli sample

3. (b) Are there gender-based differences in Internet motives within the Hungarian and Israeli sample?

There are significant differences according to the Independent Samples T-test between the Israeli male and female students in arousal ($p = 0.022$) and information-seeking ($p = 0.008$), but not for the other motives. There are significant differences according to the Independent Samples T-test between the Hungarian male and female students in pass time ($p = 0.021$), but not in the other motives.

4. (a) Is life satisfaction higher in the Israeli sample than in the Hungarian one?

There is a significant difference in life satisfaction between the two samples. Life satisfaction was higher in the Israeli sample (Mean = 5.25; SD = 0.98) than in the Hungarian one (Mean = 4.77; SD = 1.24) (see Table 3). This difference was significant as shown in the Independent Samples T-test ($t (298) = 3.644$; $p < 0.001$) and independent of the effect of gender and age.

There was an interesting gendered-based difference between the samples showing that life satisfaction was highest for the Israeli females (Mean = 5.48; SD = 0.96) while in the Hungarian sample it was higher for the males (Mean = 4.85; SD = 1.30).

Israeli males had the second highest score (Mean = 5.02; SD = 0.99) while the Hungarian females scored the lowest (Mean = 4.70; S = 1.19) in life satisfaction.

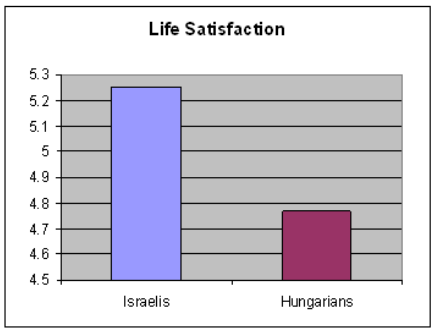

Table 3: Mean scores for Life Satisfaction between the Hungarian and Israeli students

4. (b) Will life satisfaction be related to Internet motives between the Hungarian and Israeli sample?

Linear regression model was used to look at the relationship between life satisfaction and Internet motives (see Table 4).

Dependent variable / Internet motives	Israeli students		Hungarian students	
	ß coefficients	p values	ß coefficients	p values
Habit	-0.110	0.191	-0.074	0.357
Pass time	-0.051	0.547	-0.016	0.047
Entertainment	-0.155	0.068	-0.059	0.472
Arousal	-0.033	0.694	-0.116	0.157
Relaxation	-0.118	0.164	-0.063	0.443
Companionship	-0.384	0.000	-0.207	0.010
Information-seeking	-0.277	0.001	-0.056	0.491
Escape	-0.364	0.000	-0.099	0.226
Social Interaction	-0.169	0.044	-0.183	0.021

* adjustment was made for age and gender

Table 4: Summary of Beta coefficients and significance for Life Satisfaction and Internet motives between the Hungarian and Israeli sample

Higher life satisfaction is associated with less frequent use of Internet in order to pass time in the Hungarian sample (β = -0.016; p = 0.047), but not in the Israeli sample where satisfaction with the life is not related to Internet usage for passing time.

In the Israeli sample there was a trend (β = -0.155; p = 0.068) towards that those more satisfied with their life use the Internet less frequently for entertainment. Life satisfaction and the entertainment motive were not associated among Hungarians.

In both samples life satisfaction was inversely associated with the companionship Internet motive, (i.e., the higher the life satisfaction is the less likely are the students to use the Internet for companionship purposes). However, the inverse association between life satisfaction and companionship motive is stronger in the Israeli sample (β = -0.384; $p < 0.001$ vs. β = -0.207; p = 0.010).

There is an inverse association between life satisfaction and the information-seeking motive in the Israeli sample (β = -0.277; p = 0.001). Life satisfaction and this motive were not associated in the Hungarian sample.

Israeli students who are less satisfied with their life are more likely to use the Internet as an escape motive (β = -0.36; $p < 0.001$). Life satisfaction and the escape motive were not associated in the Hungarian sample.

In both samples, a higher life satisfaction predicted less frequent use of the Internet for the social interaction motive in Israelis (β = -0.169; p = 0.044) and Hungarians (β = -0.183; p = 0.021). However, this is a very weak significant association between life satisfaction and social interaction Internet motive.

In the Hungarian and Israeli sample, life satisfaction was not associated with the following Internet motives: habit, (i.e. higher score on life satisfaction would not imply that one would more frequently use Internet as a habit), arousal and relaxation.

Discussion

1. (a) Will the Israelis on average spend more time on the Internet than the Hungarian students?

When it comes to how much the Israeli and Hungarian medical students on average are using the Internet, we found that the Israeli students spend somewhat more time online than the Hungarian students. With this finding our hypothesis is supported. The same results can be found in the literature in which 40% of the Israeli population are Internet users, out of these 47% are males and 34% are females (European Survey of Information Society Projects and Actions, 2001). In Hungary, the situation is slightly different. According to the TARKI Social Research Centre (2001) and their World Internet Project (WIP) survey, it was found that 17% of the Hungarian population is using the Internet with certain regularity.

An interesting finding is that none of the Hungarian students is spending more than 6 hours online, while 3.7% (n=11) Israeli students are spending more than 6 hours online. If we connect our results to the findings of the TÁRKI Social Research Centre (2001) in which only 17% of the Hungarians are using the Internet with certain regularity, we might assume that none of the Hungarian students are high Internet users.

It was interesting to see that for the Israeli students living in Hungary, there were no major gender differences for hours spent online. Taken together, the majority of the Israeli students (N = 150) said that they are spending 1-2 hours daily online, and out of these, more females (n = 24; 16.0%) are using the Internet than their male counterparts (n = 19; 12.7%). According to Fallows (2004) females are more likely than males to use the Internet for communication. Thus, we might assume that since the Israeli females were higher in Internet use than Israeli males, they are using the Internet more for communication such as writing e-mails but not for checking their e-mails. Thus, communication by us is interpreted as writing e-mails and not as checking e-mails. All-and-all, Israeli females like for instance to stay in contact with family and friends to a higher degree than Israeli males.

1. (b) Will there be any difference in the frequency of checking and writing e-mails within and between the samples?

Within the samples, the hypothesis was supported because the majority of the Israeli males are checking their e-mails once a day and this means that they are checking it more often than the majority of the Israeli females, who are checking it only every 2-3 day. In this research, checking e-mails and writing e-mails are considered to be two separate entities.

On the other hand, in the Hungarian sample it was interesting to see that the majority of both males and females are checking their e-mails once a day. Taken together, these results show that only the Israeli females are checking their e-mail the least. According to Rainie & Kohut (2000), women are more attached to e-mail than males. Since our result showed that Israeli female students are checking their e-mails less often than their fellow males and Hungarian students, it might be assumed that the Israeli female students living in Hungary are less attached to e-mails than males as well as the Hungarians in general.

Between the samples, the hypothesis was supported since the Israeli students are checking their e-mails every 2-3 day while the Hungarian students are checking it every day. According to the TÁRKI Social Research Centre (2001), Hungarians have generally a positive attitude towards the e-mail. Most of the Hungarians think that e-mailing is fast and useful because it makes it possible to communicate with people who are difficult to reach. Since our results showed that the Hungarian students are checking their e-mails more often than the Israelis, we might say that this can be due to the Hungarians general positive attitude towards e-mailing. For the Israeli sample, the hypothesis whether there is any difference in writing e-mails is not confirmed because both males and females are writing e-mails every 2-3 day.

For the Hungarian sample, the hypothesis is confirmed because the females are writing e-mails on a daily basis while the males are writing e-mails only every 2-3 day. According to the TÁRKI Social Research Centre (2001), the most popular Internet activity in Hungary is e-mailing. They found that 19% of users send or receive e-mails at least once a day. The Hungarian females, who are sending e-mails on a daily basis, confirm this finding in our results.

Between the Hungarian and Israeli samples the hypothesis was not confirmed because there is no difference in writing e-mails. Both of the samples are doing this activity every 2-3 day. Taking Boase et al., (2006) into consideration for people with Internet access, e-mailing is important for keeping in touch with both close family and fiends as well as with more distant acquaintances. It can therefore be suggested that keeping in contact via e-mailing with close and distant family and friends is equally important for both Israeli and Hungarian students.

2. Is there a nation-based difference in the Internet motives between the Hungarian and Israeli students?

The third hypothesis was supported because there are significant nation-based differences between the Hungarian and Israeli students in Internet motives independently of age and gender. Different demographic groups of Internet users incorporate the Internet differently into their everyday lives (Fallows, 2004). We found that both our samples are using the Internet mainly for entertainment motives. The Israelis scored somewhat higher on entertainment motive than the Hungarians and this nation-based difference was significant. Entertainment and social interaction are two frequently mentioned motives for using the Internet (Ferguson & Perse, 2000). However, the Israeli students living in Hungary scored higher on all motives, and this is implying that they make more use of the Internet in general and that they are using the Internet for a wider and broader spectrum. Our results also confirmed this since there were nation-based differences for habit, pass time, relaxation, companionship, escape, and social interaction motives. Thus, the Israeli students are mainly using the Internet for these motives.

The lowest scores were found for the escape motive within both samples. However, there was still a significant difference for this motive between the samples. The Internet might draw people away from family and friends, and in this sense the Internet would represent an escape motive (Nie, 2001; Nie, Hillygus, & Erbring, 2002). Yet, in our sample the escape motive scored the lowest and this might imply that a minority of the students across the samples is using the Internet in order to escape from family or fiends.

One of the more interesting results showed that the Israeli students are higher on the social interaction motive than the Hungarian students, however we hoped to find a bigger difference for this motive between the samples. According to Fallows (2004), the Internet has made people to stay more connected to other people so they can keep in more frequent touch with family and friends and since the Israelis are away from their home country, we hoped to find that the Israelis would use the Internet more than the Hungarians for social purposes.

3. (a) Are there gender-based differences in Internet motives between the Hungarian and Israeli sample?

This hypothesis was confirmed, because there were significant gendered-based differences in Internet motives between the samples. Hungarian and Israeli males were usually higher in the arousal and information-seeking motives than their female counterparts. Earlier studies have stated that one of the main motives for Internet use is searching for information (Katz & Aspden, 1997; Kaye, 1998, Papacharissi & Rubin, 2000). According to Nua Internet Surveys (2001) 75% of the people in Israel are using the Internet to look for information, which is showing

that the majority of the Israelis are using the Internet for this. Our finding showed that the majority of Israeli males are using the Internet for information-seeking and this is thus in accordance with the Nua Internet survey. A reason why we think that males might have scored higher on the arousal motive is that they may use the Internet more for accessing sports news, sports sites, match scores etc. and this might satisfy as well as arouse them.

For the Israeli and Hungarian females, it was shown that there was only a significant difference for the pass time motive. According to Ferguson and Perse (2000), people use the Internet in order to satisfy certain desires and an example of this might be a desire for passing time. This was true in our sample for the majority of the Israeli women.

3. (b) Are there gender-based differences in Internet motives within the Hungarian and Israeli sample?

This hypothesis was supported since there are gendered-based differences in Internet motives within the Hungarian and Israeli sample. The Israeli males scored higher on arousal and on information-seeking than the female students. According to Fallows (2004) is stating that it is men who have an increased probability of using the Internet to a higher extent for collecting information. Therefore, the American literature about who is using the information-seeking motive more is fitting onto our sample as well. The Hungarian males scored higher on passing time than their female counterparts in this sense, they are using the Internet more as a passive tool. We didn't find any supporting or contradicting research regarding this topic however, we suggest that since studying medicine is a tough job and the energy that the Hungarian male students might have left after studying hard is to hang on the Internet for hours in a passive way. Thus, refreshing their minds and regaining energy is done by surfing on the Internet in order to pass time.

4. (a) Is life satisfaction higher in the Israeli sample than in the Hungarian one?

The hypothesis for higher life satisfaction in the Israeli sample is supported. This is consistent with previous research (e.g. Diener, 2000; Veenhoven, 2002; Marks et al., 2006). People scoring high on life satisfaction, i.e., happy people, are prone to recognize more positive situations thought of as positive by the society, and they also look upon and memorize ambiguous situations as positive (Lyubomirsky & Ross, 1996; Seidlitz & Diener, 1993). Furthermore, a person scoring high on subjective well-being is to a higher degree expected to look upon neutral situations as pleasant, and therefore these people appear to look upon situations in a more positive way than a person scoring low on subjective well-being (Diener et al., 1997). These explanations might be true for the Israeli students who scored high on the life satisfaction scale.

There was an interesting gendered-based difference between the samples showing that life satisfaction was highest for the Israeli females while in the Hungarian sample it was higher for the males. Since we didn't find any information about this in the literature it is difficult for us to hypothesize what this difference might entail. It might mean that the Hungarian female students have to put in a bigger effort into their everyday life while the Israeli females are not experiencing the same difficulties in their daily lives in a foreign country. This might be a good topic for future research; to look into the different lifestyles and expectations from society and family for different nationalities. Future research could take a closer look at Israeli and Hungarian females, and also at Israeli and Hungarian students in general.

4. (b) Will life satisfaction be related to Internet motives between the Hungarian and Israeli sample?

There was a significant inverse association between life satisfaction and companionship motive in both Hungarian and Israeli sample, although a stronger association can be found in the Israeli sample. This means that the higher the life satisfaction is the less likely the students are to use the Internet for companionship purposes. So why are more happy people using the Internet less for companionship purpose? Our suggestion is that since using the Internet as a companionship motive is connected to loneliness, people high on the companionship motive would use the Internet to alleviate their loneliness and because of their loneliness they might be low on life satisfaction. Consequently, part of our sample higher on life satisfaction is using the Internet less for companionship motive because they are less lonely.

In both samples, a higher life satisfaction predicted less frequent use of the Internet for the social interaction motive. We assumed that even those students being high on life satisfaction would use the Internet more for social interaction, such as e-mailing and chatting, and to stay in contact with family and friends. However, since this was not the case in our sample, it might mean that both the Hungarian and Israelis are having a rich social life and they do not need the Internet for getting engaged in social interactions.

Israeli students who are satisfied with their life are less likely to use the Internet as an escape motive. As we mentioned before, people who are happy are presumably less lonely. However, students who are less happy feel lonelier and are escaping from their loneliness and problems by using the Internet more as an escape tool.

In sum, we found significant nation- and gendered-based differences between life satisfaction and Internet motives, independently of age and gender. The findings showed that the higher the life satisfaction was for the Hungarian and Israeli medical students, the less likely the students were to use the Internet for companionship purposes and social interaction.

Limitations

Due to the small sample size (N = 300) in our research we cannot generalize our findings to Hungarian and Israeli medical students in general and also not on the general population.

When looking at the comparison between the Hungarian and Israeli students, it is important to bear in mind the age difference between the two samples. The Israeli students were somewhat older in age than the Hungarian students and this might mean that they have more Internet experience. However, the same classes (first, second and third year medical students) were used for the questionnaire distribution. The age difference might be due to the reason that the Israeli students have to serve in the army until the age of 21 and only start studying at the university after finishing their military service.

Not much research has been done in the field of Internet and life satisfaction in general. Especially, when it comes to combined research about Internet motives and life satisfaction, the European literature is very limited.

For future research the relationship between life satisfaction and Internet motives might be an interesting topic to investigate further on. We hope to have contributed to existing research about Internet and subjective well-being, and maybe inspired other researchers to carry on doing research in this topic.

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