Adolescents, leisure time physical activity and the virtual world of Internet in Tehran

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Abstract

The purpose of this study was to determine the attitudes of adolescents towards leisure time physical activity in the virtual world of Internet, and examined the reason why some students are able to maintain regular participation in leisure time physical activity whereas others fail. This study investigated high school students’ positive and negative outcome belief, normative belief, and constrains towards internet-use and LTPA participation. Qualitative research method, which included semi-structured interviews, was used for this study. The sample included 40 high school students who have an internet-use habit in Tehran. They answered the questions from the investigators and expressed their own feeling about their leisure experiences. The data analysis was done by using the constant comparison technique using interview method and typed in Excel. The results showed that, there were both positive and negative attitudes of students towards leisure time physical activity participation (p<0.050).

Keywords: Internet, Leisure Time, Physical Activity, Adolescents.

Introduction

Internet use among teenagers has grown exponentially in the last 10 years (Becker, 2000). Using the internet is the norm for today’s youth. Many of them use internet for school-related work, such as major source for research project and homework. Also they use the internet for other reasons, such as communicating with friends through e-mail or instant messaging programs (Levin et al., 2002). Although the basic applications and guidelines that make the Internet possible had existed for almost a decade, the network did not get popular until the 1990s. Over the course of the decade, the Internet successfully accommodated the majority of previously existing public computer networks. During the 1990s, it was estimated that the Internet grew by 100% per year, with a brief period of explosive growth in 1996 and 1997 in North America (Coffman and Odlyzko, 1998).

Using computer is one of a screen based activities, teenagers use internet usually in their leisure time. The research of (Stratton et al., 2005) has addressed the amount of time children spend on screen-based activities such as watching television and using computer rather than more active recreational activities. Olds et al. (2004) also said that the main competitor for physical activity is screen time.

It can be easy to understand that there is a relationship between leisure-time physical activity and physical fitness levels. However, some research studies found that there is no relationship between internet use time and the physical fitness (Kerner et al., 2001; 2004). That is the time spend on leisure-time physical activity is unrelated to internet use time.

Although relationship has not confirmed by quantitative research studies, it is important to know if the teenagers are in habit to use internet, what are the factors affecting them in participating leisure time physical activities or not. Therefore, this study is used to investigate the reasons affecting teenagers who are in habit to use internet but have different attitudes in participating leisure time physical activities. The purpose of this study was to investigate the reasons affecting teenagers who are in a habit to use internet in participating leisure time physical activities. Why some of them can still have LTPA regularly while some cannot?
The role of computer and the Internet rise in the recent decade. On the other hand, the government also emphasize on the health of people. It may difficult for teenagers to get a balance in sharing their leisure time between using internet and participating physical activities. As some research studies stated that there are relationships between screen based activities and physical fitness of children, such as they indicated the incidence of obesity is highest among children who watch four or more hours of television a day and lowest among children watching an hour or less a day (Anderson, 2001).

While some research studies concluded that there is lack of correlation between internet use time and the time spent in leisure-time physical activity (Kerner et al., 2001). In other words, as the time spent on the internet increased, some students still managed to find the time to maintain their level of leisure-time physical activity, thus sedentary behavior and physical activity appear to co-exist as independent behaviors (Kerner et al., 2004). Therefore, it is important to understand the reasons affecting teenagers who are in habit to use internet in participating leisure time physical activities. Why some of them can still have LTPA regularly while some cannot? Furthermore, the factors motivate them in using internet and having physical activity, as well as the constraints they may face to, would also be considered in this study. Finally, this study can also stimulate students to think about that what are their satisfy life style, as well as how do they achieve this life style? Also awake those to get a well balance in distributing their leisure-time are very important. Many exercise and sport studies have investigated the individuals' reasons for non-participation in and withdrawal from active recreation (Allison et al., 1999). Some of common reasons had been concluded, such as lack of interest, other leisure interest or switching interest to other activities, lack of fun, lack of competence, lack of skills and ability, limited improvement in skill or no success, lack of time due to study and family responsibilities, injury, lack of energy, lack of money, facilities or inconvenient location, and unsatisfactory past experiences (Tsai and Coleman, 2007).

There are three determinants to represent the basic components of physical activity to define the activity level, which are frequency, duration and intensity. In addition, these determinants are used in a quantitative and analytical fashion during exercise prescription, as well as to define levels of physical activity requires achieving health-related benefits (Kerner, 2001). The theory of planned behavior was chosen to investigate these determinants as a theoretical model (Ajzen, 1985). Moreover, the reason for non-participation and withdrawal may be classified into conceptual components according to leisure constraint theories (Henderson and Bialeschki, 1993) and other social cognitive theories (Bandura, 1977). The attitude and social influence (subjective norm) components are unique to the theory of planned behavior (Fusilier and Durlabhjii, 2005). Also in a less individualistic culture, and social factors, such as being with friends or keeping connection with friends, might be an important factor on the influence of the behavior (Hofstede, 1991). The reason such as lack of fun, limited improvement in skill or no success, and competitive stress may be classified as negative outcome affecting the active participation in recreation, and the concept of the theory of planned behavior (Tsai and Coleman, 2007; Ajzen, 1985). Furthermore, reasons like lack of support from significant others, such as lack of money and facilities; can be seen as normative beliefs in the theory of planned behavior (Tsai and Coleman, 2007). Reason such as lack of competence, lack of skills and ability, lack of time due to study, lack of energy, and lack of facilities may be classified as perceived constraints to participation. These constraints were further classified according to leisure constraint theories (Crawford et al., 1991) into intrapersonal constraints, interpersonal constraints, and structural constraints. These constraints would also be classified based on factor analyses and other conceptual dimensions (Tsai and Coleman, 2007).

Adolescence is characterized as a period in which young people are seeking their personal and social identity (Kelly, 1996). Some research studies have pointed out that adolescents have various social tasks to achieve such as the establishment of personal significance, self-esteem, personal philosophy and values, the relationship with adults and peers (Hendry, 1983). Governments and health authorities in most of the countries continue to express concern about the increasing levels of obesity and physical inactivity in the child population and 30 the consequent long-term health problems as children develop into adulthood (Stratton et al., 2005). Many research studies have been conducted in many countries, such as Western, Asian and African countries. Most of the research has clearly indicated that the amount of time children spend on screen-based activities such as watching television and videos and playing computer and electronic games rather than participating in more active recreational activities (Stratton et al., 2005). For example, it has been reported in Australia that over half of all children aged 5-14 years are spending more time watching television and videos than in the school and classroom. The main competitor for physical activity is screen time (Olds et al., 2004). Therefore, The Australia government tried to provide many policies to promote physical activity for citizen especially youngster (Stratton et al., 2005).

To understand the reasons that are affecting the subjects in participating LTPA, the following research questions were asked:

1. What were the important factors that motivate the high school students in using internet almost every day?
2. What were the important factors that motivate the high school students to participate in LTPA regularly?
Materials and Methods

The study design was descriptive which was done in interview method. The purpose of this study was to investigate the reason which cause high school students who have a habit to use internet but with difference attitude towards leisure time physical activities. Qualitative research method, which included semi-structured interviews, was used in this study. This approach was chosen and it was good for understanding deeply in the attitude of teenagers towards leisure time physical activities because: (1) it can help to derive complex unstructured data from which new understandings (Richards and Morse, 2007), (2) it was useful to collect a great deal of ‘rich’ information about small convenience samples (Veal, 1997), and (3) in depth interviews allowed the researchers to understand deeply about experiences and the leisure pattern of interviewees from their points of view (Henderson, 1991). The method of this study was divided into the following sections: 1. Collection of Data, 2. The Sample, 3. Procedures, 4. Method of Analysis Semi-structured interviews were conducted with students who have a habit to use internet. A list of open-ended questions was asked, but participants were also encouraged to express their feelings and experiences if they wanted to do so. The list of interview questions was designed to explore both the habits and attitudes toward internet use and leisure-time physical activity participation among high school students. The questions focused on their positive and negative experiences in using internet and in participating leisure-time physical activity, the motivations to do both active and sedentary activities or not, the constraints they might face, the influence of people around them, and their expectation of their leisure-time activity. A convenience sampling method was used.

Participants were categorized into two types: male students with sedentary lifestyle (n = 20), female students with active lifestyle (n = 20). The age of the participants were ranged from 14 to 18 years old. Their internet using experiences were approximately from 4 to 7 years. The interview procedures were the same for all participants. Before the permission of the interview, an oral consent was granted from each interested participant. Some information of the study would be given to them, so they would gain more confidence in the study and the researcher. The content of the oral consent included: (1) a brief description on the purpose of the research and its content; (2) the participants’ rights in withdrawing the interview at any time; (3) confidentiality and anonymity of interviewees’ participation; and (4) the reason for tape recording the interviews. Prior to commencing the actual interview, written informed consent was sought from the study participants. This was an elaboration of the oral consent, but presented in a written format. All interviews were tape-recorded to preserve a complete record of the interview and to smooth the way of the interview process. This action had been explained and reminded to the participants before starting the interviews. The investigator should have every respect to the participants’ privacy during the process. In addition, all materials were kept confidential. During the interviews, participants were given a period of time to go over the set of semi-structured interview questions on their own. They could ask questions whenever appropriate. After they had gone through the questions, the investigator asked the questions verbally to the participants. The participants were encouraged to give detailed comments, with supporting facts when illustration their ideas.

All interviews’ data was tape-recorded and transcribed. The constant comparison technique was used for data analysis (Glaser and Strauss, 1987). It was a systematic method for recording, coding, and analyzing data. All interview transcripts were read carefully and typed in Excel. A series of initial codes was developed by open coding and axial coding to represent experiences and thoughts expressed by the interviewees. Open coding, which was used during a first pass through collected data, sought to locate themes and assigns initial codes or labels in a first attempt to condense the mass of data into categories, the data were broken down into discrete parts, closely examined, similarities and differences were compared, and questions were asked about the phenomena as reflected in the data. On the other hand, axial coding was a second pass through data to organize sets of initial codes or preliminary concepts into broader categories and themes (Neuman, 1997). After open coding, data were put back together in a new way, by making connections between categories (Corbin and Strauss, 1990). After that, the results of the analysis were presented by etic and emic descriptions (Henderson, 1991). Etic descriptions were used to communicate the summarized categories, themes or patterns, while emic descriptions were actual words from the study participants (Corbin and Strauss, 1990). These emic descriptions were used to demonstrate the examples and to further illustrate the findings. Finally, the results of the inductive content analysis of interview responses were presented. As a part of the process of verification, two of the interviewees were invited to check whether the researcher had interpreted their meanings properly by presenting parts of the coded to them. Also, inter-coder reliability checks were done with two of the researchers’ friends.
That is, three people coded a sample of the data separately and then compared the codes with each other. This process confirmed the reliability of the researcher’s coding process (Neuman, 1997).

Results

The results of analysis of the data are presented, according to the themes emerged from the interviews. The themes included: 1. Demographic Characteristics of the interviewees 2. Reasons of the high school students use internet as a habit, 3. Attitudes of sedentary lifestyle students towards internet-use and LTPA (Benefits and values of internet-use - Constrains and values of LTPA), 4. Attitudes of active lifestyle students towards internet-use and LTPA (Benefits and values of internet-use - Benefits and positive outcome of leisure-time activity). The results of the inductive content analysis of interviewees’ responses are presented here. This would start from axial coding, the broader themes of Etic description to the more specific descriptions from open coding. As well, Emic description, direct quotes from interviewees are presented to demonstrate the findings and to further illustrate the findings. Fictitious (false name) were used to protect the identities of the interviewees.

Reason of the high school students use internet as a habit

1. All of the interviewees have an internet-use habit. That is the subjects get into the habit of switching on the computer as soon as they get home. But different individuals have different purposes in using internet, their values toward Internet-use have some dissimilar. 2. A number of reasons and benefits of Internet-use were identified from the interviews, including: chatting with friends, communication, convenience, time killing, relaxation, personal interest, escape from work, and increased opportunities. 3. Expected outcome and normative belief, such as motivation and encouragement also were the factors affecting them in Internet-use. 4. These positive outcomes might strengthen participants’ motivation to sustain in their attitude towards using internet.

Attitudes of sedentary lifestyle students towards internet-use and LTPA

Benefits and values of internet-use:

1. The sedentary lifestyle interviewees reported some important benefits that they focus on, which include: chatting with friends, relaxation, and personal interest. 2. A similar background of these interviewees was found. Most of them do not have any other leisure skills. Therefore using Internet becomes their only leisure activity. Constrains and values of LTPA: 1. they can only simply concluded that the benefits of do exercise were for physical health and keep fit. Although they agree that do more exercise is benefit to their health, they cannot spend time to do it because of many other constrains. 2. Constrains that students were facing have a little bit difference. Some students focus more on the intra-personal constrains (lack of skills, dislike sports and feeling of tired). While other students were facing the physical constrains and structural constrains (lack of time). 3. The negative outcomes and experiences, together with different kinds of constrains, hinder their participations in LTPA.

Attitudes of active lifestyle students towards internet-use and LTPA

Benefits and values of internet-use:

1. The benefits of Internet-use that identified from the active lifestyle interviewees have a little bit difference from the sedentary group. Most of the times, they have a purpose to use Internet or want to achieve some intentions.

2. The most important factor they indicated was Internet is really convenience both on communication and technical, and sometime they use Internet in order to escape from work.

Benefits and positive outcome of leisure-time activity: 1. the interviewees in this group found many benefit from physical activities. Other than physical health and keep fit, they like sports because: being with friends, enjoyment, and enrichment of life. 2. Psychological and social benefits being more emphasized than physical health benefits. 3. Common background was found among these interviewees; they do have younger brothers or sisters, but seldom play together. Both their father and mother go out for work most of the time. This might explain why they enjoy staying at schools and play with schoolmates after school. 4. The motivation and encouragement from friends and teachers also cheer on their participation.

The findings were the conclusions of this study.

1-The study found that there were a number of benefits that could attract people (both sedentary and active lifestyle) to sustain their interest in using Internet. Such as it is a way to communicate and chat with friends, a kind of relaxation, searching information...etc. Among these, social benefits became the most important factor of Internet-use of the interviewees who have sedentary life style. While the crucial factors of Internet use of the interviewees who have active life style was convenience (both on communication and technical) and relaxation. 2. Besides, this study also found that lack of other leisure skills might be a factor of the interviewees who have sedentary life style addicted to use Internet but were unwilling to participate in LTPA. Due to the parental
influences, some of the interviewees had no opportunities to learn extra-curricular activities. Therefore, using Internet becomes their unique leisure activity. After bringing up an internet-use habit, they were reluctant to do other leisure-time activities. As time passes, participation in sports or LTPA becomes a difficult task for them. On the other hand, the active interviewees who have learnt other leisure skills could do other things such as playing music rather than just playing computers in their spare time. 3. This study found that there was some constrains on participating in sports or LTPA among the interviewees who have sedentary life style. For some students, they were facing the structural constrains (lack of time). While the some students were focus more on the intra-personal constrains (lack of skills, dislike sports and feeling of tired). Lack of encouragement from parents and seldom participation in PE lessons in schools become the important factors of affecting the attitudes and values towards physical activity of students. Although all students agreed that doing more exercise is benefit to their health, they found it difficult to step out because lack of time and sports skills and confidence. Moreover, some interviewees who disliked exercise usually felt bored in playing sports and scared of the feeling of sweating after doing exercise. Also, negative experiences, such as injuries make the interviewees afraid of participating in sports. Therefore many of them might choose to have sedentary lifestyle. That is to do something that is easier, more safe and enjoyable (internet-use). 4. Interviewees who have active life style pointed out that there were many benefits on participating physical activities. They indicated that physical activities not only provide physical health and fitness, but also give the opportunity for them to make friends, to enjoy and enrich their life. Besides, motivation and encouragement from friends and teachers also cheer on their participation. This showed that sports could probably give the participants good feelings, which might strengthen participants’ motivation to sustain in their attitude towards LTPA participation. Furthermore, interviewees who like sports usually have a positive outcome towards LTPA participation. They thought that sport is an important element in their life. Thus, despite of the tiredness after sports, they have a higher value of participating physical activities than using Internet.

Prior to consideration of why some students are able to maintain regular participation in leisure-time physical activity whereas others fail, an idea of investigating the attitudes of high school students who have an internet-use habit towards LTPA participation is essential. What are the factors affecting them in participation in LTPA? The findings from this study indicate that there are many reasons for high school students to take part in LTPA, while all of them have an internet-use habit. Although most of them spend at least four hours on internet every day, some of them can spend extra time on LTPA while some fail. Many positive and negative outcomes, normative belief, and constrains were indicated from the interviews to explain their preference of distributing time between internet-use and participation in LTPA.

To be concluded, it is hoped that the findings presented in this study will provide some insight in the study of the relationships between attitudes towards LTPA and Internet-use of students in Tehran in the future.

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Conflict of interest
The authors declare no conflict of interest

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