Addiction to technological devices: Its effect on an individual’s health, lifestyle and social skills.

A dissertation submitted in partial fulfilment of the requirements for the degree of Bachelor of Science (Honours) in Business Information Systems

Carys Parry
ST20040432

Department of Computing & Information Systems
Cardiff School of Management

Cardiff Metropolitan University

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Declaration

I hereby declare that this dissertation entitled Addiction to technological devices: Its effect on an individual’s health, lifestyle and social skills. is entirely my own work, and it has never been submitted nor is it currently being submitted for any other degree.

Candidate: Carys Parry

Signature: C.Parry

Date: 21st April 2016


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Abstract

Modern technological devices have captured the attention of the world. The degree of dependency that most individuals have is leading to addiction to technological devices. Technology addiction is a mostly recent psychological phenomenon that has attracted the attention of the media and medical community.

The study was designed to examine addiction to technological devices along with investigating its effect on an individual’s lifestyle, health and social skills. The aim of the study was to examine the time spent by individuals using technological devices, investigate the intentions behind the use of technological devices and services and to critically assess the impact of the addictive use of technological devices on individual’s health, lifestyle and social skills.

Using both structured questionnaires and a semi structured focus group, primary data was collected from 158 respondents, aged between 18 and 35. The findings of the study show that 71% of all participant’s use some kind of technological device for more than 6 hours a day. The study also found that the devices were being used for the individuals pleasure rather than for a necessity. Overall it was found that the level of technological device usage can affect an individual’s behaviours which in turn can affect their own lifestyle, health and social skills. The study has revealed that the addictive behavioural traits, that are linked with the device usage, can have many negative impacts on an individual. The results of study have been interpreted based on current studies and theories.

Key words: Technology, Addiction, Technological Devices and Services, Health
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Chapter 1
Introduction

1.0 Introduction

“The term technology comes from the Greek word “techne”, which means the art or skill used in order to solve a problem, improve a pre-existing solution to a problem, achieve a goal, handle an applied input/output relation or perform a specific function; technology is the making, modification, usage and knowledge of tools, machines, techniques and method of organisation” (Liddell et al., 1968). Woods (2001) states that “Technology is one trait that scientists use to distinguish humans from their prehuman ancestors. Experts say that our ancestors became fully human when they started using technology such as counting.” The 1980’s digital revolution has encouraged a change in the way that technology is defined. “The Digital Revolution refers to the advancement of technology from analogue, electronic and mechanical devices to the digital technology available today. The era started during the 1980s and is ongoing. The Digital Revolution also marks the beginning of the Information Era” (Techopedia.com, 2016).

Technological advancements have changed our relationship with information. This is not just the case in western countries, for example in "Nigeria there are more than 48 million people with access to the internet, almost a third of the population" (InternetWorldStats.com, 2016.) We can now access almost any information through the internet, anywhere in the world. Access to information has become easier than ever before and locations around the world are getting closer virtually. Technology is the result of creativity and innovations of humans. However, “there can be a negative side resulting from inappropriate or overuse of technology, and that negative side can have serious and long-term consequences” (DeLoatch, 2015).

“With each passing season, another wave of mobile devices is released that’s more capable and more powerful than the generation preceding it” (Bonnington, 2015). New state-of-the-art devices are being produced on a daily basis and are attracting the attention of the current generation. The youth of today are becoming the largest consumers of technological devices and services. "The use of technology in the home is ubiquitous among 10-15 year-olds and personal ownership is also high, as 59% own their own smartphone, 48% their own games console, 39% their own tablet and 37%
their own laptop. Use of social networks is also high, as 87% have used a social network or app in the last month” (Segal, 2014). “Addiction is defined as not having control over doing, taking or using something to the point where it could be harmful to you” (NHS Choices, 2015). The use of the word addiction can be used for many behaviour patterns such as drug addiction, food addiction, work addiction and technological addiction. “As computer and mobile phone use has increased, so too have computer and internet addictions. People may spend hours each day and night surfing the internet or gaming while neglecting other aspects of their lives” (NHS Choices, 2015). Many teenagers of today spend a lot of time using technological gadgets. According to Simmons (2008), some individuals may become as obsessed with obtaining the latest in technology as with using it. It becomes a status symbol, and long lines may form with people waiting for hours in inclement weather just to be the first through the doors as sales of the newest device begins. Teenagers are particularly vulnerable when it comes to technology addiction. “Teens tend to have poor coping mechanisms. In the face of stress, they often turn to what’s comforting to them, usually something easy to focus on, including online videos or social media sites” (Verial, no date). Due to the high level of availability of technology it enables teenagers to change their focus from the real world to the online and virtual world. “One attraction of technologies such as online video games and the Internet is the anonymity it brings, allowing teens to express themselves without putting their ego at risk” (Verial, no date). Research conducted by Segal (2014) shows that some 66% of children who use social media say they check their profile or app at least once each day, 57% fear being left out of their friendship group if they aren’t on social media and 42% say they feel more confident expressing themselves online than in real life.

1.1 Context of Study
This study is an empirical based research project designed to examine the impacts of addiction to technological devices. The study will look into the impact that addiction to technological devices has on health, lifestyle and social skills of individuals aged between 18 and 35. A gap has been identified in literature surrounding the topic. Current research tends to
focus on youths under the age of 18. As it stands the research into technology addiction in individuals between 18 and 35 tends to be ignored. The majority is focused on generation Z (1995 to Present) rather than the Millennial generation or generation Y (1977 to 1995). “The Millennial generation, also known as Generation Y, is the first to come of age with cable TV, the Internet and cell phones, so technology is essentially baked into every Millennial’s DNA. In fact, when asked what makes their generation unique, Millennial’s ranked “Technology Use” first” (Nielsen.com, 2014).

The researcher also had a particular interest into the topic of addiction to technological devices as the usage of devices was very prominent in their own daily life. A recent study, which involved 2000 members of the British public was designed to determine what qualifies as a modern day addiction. “Roughly 54 per cent of the people questioned considered the devices an addiction” (van den Bent-Kelly, 2014)

The researcher aimed to lessen the gap in knowledge between the use of technological devices in children and teenagers in comparison to adults.

1.2 Summary of Chapters

This research report will consist of several different chapters, these will include a methodology, a literature review, the results and findings, a discussion and conclusion.

Chapter 2: Methodology
This chapter will include the research methods that have been used throughout the study. There will also be a full justification of why each particular method was selected. The aims and objectives of the study will also be defined. An explanation into the chosen sample along with how it was selected will also be included. Ethical issues surrounding the research will also be included along with an explanation into how they will be addressed. How the data has been collected will also be explained along with the chosen methods of analysis.

Chapter 3: Literature Review
Chapter 3 will consist of a detailed discussion of the various literature on the topic of technology and its impacts. The literature presented will discuss both the positive and
negative impacts of technology.

Chapter 4: Results and Findings
The results and findings of all of the research will be presented in this chapter. Graphs and figures will be used to clearly display collected data. It will outline how the data from the research was processed and analysed to ensure the research questions are answered to the best ability.

Chapter 5: Discussion
Chapter 5 will be a critical analysis of the results and findings of the research and an analysis of the methodology that was used. It will discuss the results of the research with reference to the literature that has been discussed in the literature review. It will also reference to what the research initially set out to do and if it met the aims and objectives of the study.

Chapter 6: Conclusion
The conclusion will include a summary of the research results along with a discussion of the study aims and objectives. There will also be an explanation of each conclusion that has been drawn from the research. The results will also be linked with existing literature on the area.
Chapter 2
Methodology

2.1 Aims and Objectives
The aim of the research is to identify the effects that addiction to technological devices has on health, lifestyle and social skills of individuals between 18 and 35 years of age.

The objectives of this study are:

- To examine the time spent by individuals, aged between 18 and 35 years, using technological devices. Primary research methods of an online questionnaire and focus group will be used to gather research.

- To investigate the intentions behind the use of technological devices and services using both primary and secondary research methods. Online questionnaires, focus groups and academic papers will be used to gather research.

- To critically assess the impact of the addictive use of technological devices on individuals, aged between 18 and 35, health, lifestyle and social skills. Online questionnaires and academic papers will be used for both primary and secondary research methods.

2.2 Participants and sample
This is a study consisting of primary data collection using a mixed method approach. A questionnaire and focus groups have been completed by individuals aged between 18 and 35.

The questionnaire participants are any individuals aged between 18 and 35. Purposive sampling has been used within the study. "The purposive sampling technique, also called judgment sampling, is the deliberate choice of a participant due to the qualities the participant possesses. It is a nonrandom technique that does not need underlying
theories or a set number of participants” (Etikan, Musa, and Alkassim, 2015). Once the questionnaire had been produced and had ethical approval it was tested on a small sample in order to ensure that the questions were readable and that the correct area of research was received. The questionnaire became live at the start of February 2016. The questionnaire ran for as long as possible to maximise the number of participants. Each questionnaire was completed anonymously by the participants. The estimated sample size for the questionnaire was between 150 and 200 participants. The questionnaire has been administered through the use of social media platforms and an online survey questionnaire website. Over the time that the questionnaire was live, there were 158 responses. This is a high level of responses which will increase the reliability and accuracy of the research. The high level of respondents also allows for random error within the questionnaire responses. “Random error occurs because of natural and uncontrollable variations in the survey process, i.e., the mood of the respondent. With random error, the positive and negative influences on the survey measure balance out” (Researchconnections.org, 2013).

The semi-structured focus group enabled the researcher to generate qualitative data from the participants. The participants were all students studying at Cardiff Metropolitan University who were aged between 18 and 35. Although focus groups are time consuming there was an allocated 30-minute time slot for which the research was carried out. The benefits of carrying out the focus group outweighed the negatives as the focus group enabled complex research issues to be discussed. Students were approached to take part in the focus group during January 2016, once the ethics form had been approved. The focus group took part in a Cardiff Metropolitan University lecture room that was empty at the time of the research. There were 4 participants for the focus group.

2.3 Data Collection
This project set out to explore addiction to technological devices and its effect on an individual’s health, lifestyle and social skills. The research consisted of a questionnaire and a semi-structured focus group issued to individuals between the ages 18-35. Before the research had been conducted, the researcher had explored several different
methods. The researcher decided on the use of a questionnaire in order to provide mainly quantitative data with some qualitative. The questionnaire consisted of mainly closed questions. Crowther-Dowey and Fussey (2013) suggested that “surveys can be the best-known method of collecting data”. This method was chosen as questionnaires “have the ability to gain a large response rate within a short period of time” (Caulfield & Hill, 2014).

The use of a questionnaire was most suitable for this study as it enables a standard set of questions to be asked to all respondents. A large amount of individuals are also able to participate. Although there are both negative and positive aspects of each research method. A negative of using a questionnaire is that it may “not allow the participant to expand on their answer and fully express their view” (Crowther-Dowey and Fussey, 2013). Questionnaires that are “lengthy are linked to respondents suffering from questionnaire fatigue” (Schuman and Presser, 1996). The researcher ensured that the questionnaires were designed to engage the participants and therefore prevent fatigue. Another positive of using a questionnaire as part of the study is that the researcher was able to access a large sample extremely easy and cheaply. The positives outweighed the negatives for this research and a questionnaire has been deemed the most suitable research method.

An inductive research strategy was used throughout the study. “Inductive approach starts with the observations and theories are formulated towards the end of the research and as a result of observations” (Goddard and Melville, 2004).

The research conducted was a cross sectional design approach as it was “completed by a respondent at a single point in time” (Rindfleisch et al., 2008). Unlike a cross sectional design, the longitudinal design “employs repeated measures on the same group of people over a substantial period, often a number of years” (Coolican, 2014). This is in order to achieve an understanding of how the topic changes or develops over time. The researcher decided to conduct a cross sectional based approach due to the aim of wanting to gain data from one point in time. The benefits of using a cross sectional based approach within this particular research was due to the time scale provided to complete the research.

Due to the research being both qualitative and quantitative different analysis methods
have been used. The quantitative data collected from the questionnaires have been statistically analysed using Microsoft Excel. This type of analysis has enabled clear conclusions to be drawn from within the data. The qualitative data collected from the focus group has been labelled and coded enabling the researcher to carry out content analysis. Thematic analysis has also been used to analyse the results supported by spreadsheets and graphs to illustrate the analyses made. “Thematic analysis is a method for identifying, analysing, and reporting patterns (themes) within data. It minimally organises and describes your data set in (rich) detail. However, it also often goes further than this, and interprets various aspects of the research topic” (Boyatzis, 1998).

The focus group has been used to add significance to the conclusions drawn from the analysis of the questionnaire. The information collected from the focus group has provided qualitative information regarding the time spent by individuals using technology and the intentions behind the usage.

The questionnaire used in this study was clearly structured. The first part of the questionnaire consisted of information about the demographic profile of the individual, such as gender, age and whether they are a student. The questionnaire then goes on to contain both open and close ended questions regarding the individuals use of technology and technological devices along with the health status of the participant.

The semi-structured focus group was conducted with students regarding their own use of technology and technological devices along with the intentions of using these services and devices. The semi-structured focus group was chosen to enable “a form of strategy in qualitative research in which attitudes, opinions or perceptions towards an issue, product, service or programme are explored through a free and open discussion between members of the group and the researcher” (Kumar, 2011). The focus group consisted of an opening question followed by further questions drawn from the discussion. This enabled relaxed and natural responses from the participants rather than a highly structured focus group which some participants may have felt intimidating.

2.4 Ethical Considerations

There were many ethical considerations that needed to be addressed throughout the
research. A key ethical consideration is the issue of confidentiality and protecting the rights of those who participate. “Any individual participating in a research study has a reasonable expectation that information provided to the researcher will be treated in a confidential manner” (Lichtman, 2012). The ethical consideration were addressed as all participants were given a consent form (Appendix 2) explaining that the researcher will always comply with Cardiff Metropolitan University’s strict requirements for storing confidential data along with the Data Protection Act 1998. The consent form also explains to the respondents that all electronic data collected will be stored on a password protected laptop which only the researcher will only have access to. 

“Individuals participating in a research study have a reasonable expectation that they will be informed of the nature of the study and may choose whether or not to participate. They also have a reasonable expectation that they will not be coerced into participation” (Lichtman, 2012). To ensure this consideration was met, every participant was made aware of the study summary and that they had the right to withdraw at any stage during the research if they wished to do so. Participants were informed that their details will remain anonymous; any data provided will not be traceable back to specific people. Ethical approval was sought from, and granted by Cardiff Metropolitan University Ethics Committee 2015D0571 prior to data collection (see Appendix 1).
Chapter 3
Literature Review

3.0 Literature Review
There are many studies that consider the negative impacts that technology has on individuals. There are also studies which show the positive impacts of technology on individuals. Other studies take both sides into consideration and reveal a balanced approach regarding the impacts of technological services and devices.

3.1 Positive impacts of technology
“Technology has become important in our daily lives” (Ramey, 2012). Mobile technology allows individuals to talk to each other around the world. “The global smartphone audience surpassed the 1 billion mark in 2012 and will total 1.75 billion in 2014” (Srivastava, 2014). Technological devices may have positive effects on individuals as creativity skills and strategic thinking can be revealed. Technology also enables better sources for learning and encourages youth to enjoy learning. “It has provided opportunities for students all over the world to receive an education online, while still maintaining work schedules and family” (Walker, 2014). The following studies support the positive effects of technology and technological devices. The growth of the internet continues every second. “Almost 42% of the world’s population has access to the internet in January 2015, representing a significant jump in reported numbers since last years’ report, when the same figure was just 35%” (Kemp, 2015). In August 2014 the number of “worldwide social media users exceeded 2 billion” (Kemp, 2015). Research conducted by O’Keeffe and Clarke-Pearson (2011) shows that “Engaging in various forms of social media is a routine activity that research has shown to benefit children and adolescents by enhancing communication, social connection, and even technical skills”
“Online communication of all types is the most efficient yet, with email being a near-instantaneous version of the paper letter; webcams, paired with communication programs such as Skype, iChat or Google Video Chat, make it possible to see the person you are speaking with rather than just hear his voice” (Storm, no date).
“The more adolescents reported playing strategic video games, such as role-playing games, the more they improved in problem solving and school grades the following year” (Bowen, 2014).

3.2 Negative impacts of technology
The following studies highlight some of the negative factors accosted with technology and the use of technological devices.
“Keeping the kids busy during a long car ride is a cinch thanks to digital devices that will play apps, games, music, movies and TV shows. But children often wear earbuds and headphones, and in doing so, risk irreversible eardrum damage if the volume is too loud. Further, the Environmental Protection Agency (EPA) confirms that computer screens emit low levels of x-ray radiation. While there is no evidence that this radiation results in health problems, the EPA also advises that you limit your child’s time with a computer or tablet in on their laps and in front of their faces. Also, because enjoying digital devices tends to be a sedentary pastime, children may be more susceptible to weight gain” (Walsh, 2012).
“Teenagers spend, on average, 8.08 hours a day using various forms of media, not including time spent doing school work or talking or texting on a cell phone. This includes television, commercial or self-recorded video, movies, video games, print, radio, recorded music, computers, cell phones, and the Internet” (preventtogether.org, 2015). Gaming addicts will choose their game over responsibilities and people in their life. They will make excuses to stay home and play and may miss important events to do so. Their social life will no longer take place outside of the home, and they may “meet” friends online to interact rather than seeing friends in person. The game becomes their reality and consumes their life. The relationships built online through gaming will often become more important than those with family and close friends, leading the addict to isolate themselves even more” (Tyler, 2014).

3.3 Both positive and negative impacts of technology
“Technology is an essential need in everybody's life. Without technology, many things would not be able to materialize” (Moradi, 2016).
“The usage of technology for over exploitation of resources should be always avoided. If we use it for positive things, it will have positive effect of our lives and vice versa. Nobody would oppose the development of technologies in any sector but the developments should be in a positive way and they should not have any negative impact on present or future generations” (Mydailyalert.com, 2013). Taylor (2012) states that the relationship among technology, popular culture, and children’s development is complex and difficult to define. Because both our boots-on-the-ground experience and research studying this issue are still relatively limited, there continues to be little clarity on the role that they play in children’s development. As a result, we cannot easily label this influence “good” or “bad”, “healthy” or “unhealthy.”

“Raising children in a technology-infused world is more than understanding the ins and outs of Facebook, Twitter, and computer games – or about the digital habits of teens. It’s about understanding the relationship of technology, popular culture, and child development” (Price-Mitchell, 2012).

Technology is a double edged sword. The above reviews show a mixed set of research findings.

There is a high level of research work that is related to this area of study. Most of the research has been conducted in the US or Asia. Fewer studies have been conducted within Europe and the United Kingdom. In relation to the number of studies, the adult area of society seems to be overlooked.
Chapter 4
Results and Findings

4.1 Profile of respondents
Knowing the profile of the respondents is useful when analysing the data. Out of 158 respondents 53 were male and 105 were female. This gives a percentage of 34% and 66% respectively. The age category of the respondents was also asked. As you can see from Figure 1, 68% of the respondents were aged between 18-21, 24% aged between 22-25, 7% between 26-30 and just 1% aged 31-35. The respondents of the questionnaire were also asked whether they were students. 74% were currently students and 26% were not. The demographic of the respondents is due to the research being conducted by a female student. This can be linked to the higher percentage of female participants, student participants and participants aged between 18-21.

Figure 1. – Age of Respondents

4.2 Time spent using technological devices
To analyse the addictive use of different technological devices it is essential to determine the time spent using the devices. The respondents were asked ‘In a day how much time do you spend on the following devices?’ The devices were a Smart Phone, a
Tablet and a Laptop/Computer. The results can be seen in Figure 2. The results found that 37% of respondents used their Smart Phone for 2-4 hours a day. 22% of respondents used their Smart Phone between 4-6 hours and another 22% used their Smart Phone for over 6 hours a day. Only 3% of respondents use their Smart Phone less than 1 hour a day.

The next device was a Tablet. The results show that 42% of respondents do not use a tablet device at all. Out of the respondents that do use a tablet 48% of them use it for less than 2 hours a day. Only 9% of respondents use a tablet for more than 2 hours a day.

The last device was a Laptop/Computer. The results found that 26% of respondents use a Laptop or Computer between 1 and 2 hours a day. 14% used the device less than one hour a day and 5% did not use a laptop or computer at all. 21% of respondents use a laptop or computer 2-4 hours a day. The results also show that 18% use a laptop between 4 and 6 hours along with 15% of respondents spending over 6 hours a day on a laptop or computer.

The results determine that the use of both a tablet and laptop/computer is not as much as a Smart Phone. This may be due to the fact that a Smart Phone tends to always be closer to hand than a tablet. Analysis of the results also determined that out of the 70 respondents using a Smart Phone over 4 hours a day, 77% of these respondents were aged between 18 and 21. Out of the 7 respondents that use a tablet over 4 hours a day, 72% of the respondents were aged between 18 and 21 and out of the 51 respondents using a laptop/computer over 4 hours a day, 55% were aged between 18 and 21. This determines that individuals aged between 18 and 21 spend a much larger amount of time using technological devices. This could lead to the addiction of using these technological devices.
4.3 Purpose behind the use of device

The impacts of the device usage can also depend on the purpose of the usage. Before the usage can be claimed to be addictive there must be consideration into the purpose behind the use. The research conducted will determine whether the purpose behind the usage is for study, communication or own entertainment. The research has found that 90% of respondents use their devices for study, whereas 99% of respondents use their devices for communication and entertainment. The study has also shown that only 14% of individuals use their device for studying for more than 4 hours a day. 21% of respondents use their device to communicate for more than 4 hours a day and 28% of respondents use their device for entertainment for more than 4 hours a day. As you can see from Figure 3, the entertainment column is the most prominent throughout which indicated that this is the most common purpose of device use.
4.4 Time spend using different services

The next feature of the research was to determine the time an individual spends using different services. The services that the research looked into was calling, SMS messaging, Instant Messaging, Social Networking and streaming music and videos. The research shows that 6% of respondents do not use their device for calling or SMS messaging at all. 78% of respondents spend less than an hour calling per day along with 54% spending less than an hour SMS Messaging a day. Only 11% of respondents say that they spend less than an hour a day using social media. 32% of respondents say they spend between 2 and 4 hours a day using social media and 21% say that they spend over 4 hours a day.

The research also shows that 37% of respondent’s stream music and videos for between 1 and 2 hours a day. As you can see from Figure 4, the usage of social media is most prominent followed by streaming music and videos and then Instant Messaging.
4.5 The effect of technology on health

To help establish whether technology usage has an effect on an individual’s health the research looked into headphone use. The research asked the respondents “In a day how long do you spend using headphones/earphones?” As you can see in Figure 5, 56% use headphones for less than 2 hours a day. Although 9% use headphones for over 4 hours a day.

The research also looked into whether the respondents had any difficulty with hearing normal speech. As you can see in Figure 6, 11% of the respondents had some difficulty
with hearing normal speech.

Figure 6. – How well can you hear normal speech? (with or without a hearing aid)

Analysis of the results show that 33% of respondents that use headphones over 4 hours a day have some difficulty with their hearing. One respondent that used headphones for over 6 hours a day said that they had considerable difficulty hearing. This suggests that there is a link between the period of time that headphones are worn with the quality of hearing.

Another factor that can affect an individual’s health is how much sleep they have. The research looked into the average hours that the respondents slept each night. As you can see in Figure 7, 54% of the respondents slept for over 7 hours per night. Although 17% slept for less than 6 hours per night. Lisa Rapaport (2015) states that “People who get less than six hours of sleep a night may be more likely to have risk factors that increase their odds of diabetes, heart disease and strokes”

Analysis of the research findings also show that 50% of the respondents that have less than 5 hours sleep per night, use both their smart phone and laptop for more than 4 hours per day. This supports the argument that respondents engaged in addictive usage of technological devices have less sleep.
Figure 7. – On average how many hours do you sleep per night?

The respondents were also asked to ‘rate the following comments in whether you strongly disagree, disagree, are neutral, agree or strongly agree. The first comment was ‘I feel healthy and energetic.’ 50% of the respondents said they agreed or strongly agreed with the statement. This can be seen in Figure 8. Although 14% of the respondents either disagreed or strongly disagreed. Out of those respondents 91% of them used a device for at least 5 hours a day.

The next comment was ‘I feel slightly tired, weary or feeble.’ 47% of the respondents said they either agreed or strongly agreed with the statement and 23% said that they disagreed or strongly disagreed with the statement.

‘I feel moderately tired, weary or feeble’ was the next statement to be rated. 54% of the respondents said that they either disagreed or strongly disagreed with the statement. Although 21% said that they agreed or strongly agreed with the statement. Out of the 33 respondents that agreed or strongly agreed with the statement, 85% of them use a device for over 6 hours a day.

The last comment that was rated was ‘I feel extremely tired, weary, feeble and totally
exhausted.’ 81% of the individuals said that they disagreed or strongly disagreed with the statement. 7% said that they either agreed or strongly agreed with the statement. Out of these 11 respondents, 82% of the use a device for over 6 hours a day.

4.6 Staying online longer than expected

One question that was asked to the respondents was ‘Do you stay online longer than you expect more and more often?’ 48% said yes and 52% said no. The results are relatively close. Although further analysis shows that out of the 48% of respondents that said yes, 68% of them spend more than 6 hours a day on a technological device.

Out of the respondents that said yes, they were also asked to comment why they thought they were staying online longer than expected. 24% of all the comments were related to the individual loosing track of time when online. One respondent also felt that the reason they stay online longer than they expect is because they “Lose track of time due to distractions. Probably due to advertising.” Loosing track of time is a prominent reason throughout the comments. Promises Treatment Centers, (2012) state that a common sign of addictive behaviour is “spending time indulging in their addiction, losing track of time, or no longer caring about their responsibilities.” This suggests that the users who stay online longer than expected also display addictive behaviours with their devices.

Another respondent said “Sometimes, I get carried away with looking at things, so I click
on that and it starts like a cycle and I just carry on.” This suggests that the individual is unable to stop the cycle and cannot control themselves. A key sign of addictive behaviour is “A self-perpetuating cycle that reinforces itself” (Addictions.com, no date). This is also a trait of addictive behaviour. Another comment made by a respondent was “I feel addicted to certain sites e.g. Facebook.” This shows that the respondent themselves believes that the behaviour they express towards technological devices is of an addictive nature.

4.7 Ignoring other duties in order to spend more time on a device

The next feature of the research was to find out if the respondents ignore or avoid other work or activities in order to spend more time on a device. Only 35% of the respondents said that they do ignore or avoid other work or activities. The remaining 65% of the participants disagreed with the statement. The participants that agreed with the statement were asked to comment why they ignore or avoid work or activities in order to spend more time on a device. One respondent said that they spend more time on a device “To avoid the task that I have to do. Also, I have a thing with time, so if I go past the hour or half past the hour, I will carry on on my device until the next certain/specific time.” This suggests that the respondent is unable to control how long they use a device and is using specific time frames as an excuse to justify their actions to themselves. This may also suggest that they are in self denial. Lancer (2014) states that “Denial is a core symptom of codependency and addiction.”

Another respondent commented that “I tend to become bored so think to spend a little time watching entertainment but a lot of the time don’t notice how much time has been wasted until after the event.” This also suggests that the individual cannot control how much time they spend using the device. Using the device seems to stop the individual thinking about or focusing on other things such as the time. The research supports the argument that “We are creating and encouraging a culture of distraction where we are increasingly disconnected from the people and events around us and increasingly unable to engage in long-form thinking” (Kraus, 2012).

One respondent that said they did ignore and avoid work or activities to spend more time on a device but commented that the reason for this was “My partner works at sea
for 3 months at a time, this is our only source of communication.” This is an example of when technology is being used to in a positive and sociable way.

4.8 Annoyed or irritable if interrupted when using a device
Another part of the research asked the respondent ‘Do you frequently get annoyed or irritable if someone bothers you when you are trying to do something online or on your phone?’ This section of the research is trying to discover whether addictive traits are being shown by our respondents. The results show that only 19% of the respondents answered yes to the question compared to 81% that answered no.

One comment left by a respondent when asked why they get annoyed or irritable was “Lack of patience when I am busy on device.” This suggests that when the respondent is using the device they do not want to engage with other individuals. Another participant commented “It can become frustrating when you are interrupted. For example, if you are online gaming.” This also suggests that the participant has less tolerance for others when they are using a device. Ghose (2013) states that “withdrawal symptoms and cravings may seem like the province of hard-drug addiction, but increasingly, psychologists are noticing these same signs of addiction in people who use devices.” The results above support this argument as Ghose (2013) also states that “If your child is irritable, anxious or sad after having the device taken away, he or she may have an unhealthy attachment.” These behaviors can be seen by looking at the comments given by the participants that do get annoyed and irritable if someone bothers them when using a device.

4.9 Prefer to spend time with people online rather than face to face
The respondents were also asked ‘Do you prefer to spend time with people online or through messaging rather than being with them face to face?’ The research shows that only 6% of the respondents would rather spend time with people online rather than face to face.

Further analysis of the results show that 100% of the respondents that answered yes to the question, used a device for over 6 hours a day. The respondents that said yes also commented why. One respondent said “I am able to properly formulate my
point/problem or argument online that I may not otherwise. I fear of mistakes in face-to-face meetings that could be detrimental to relationships or causes or issues that I intend to improve.” This suggests that using a device can act as a barrier for the respondent. Another respondent also said that “It’s easier for me as I am more open and say more through online/messaging than face to face.” Both of the above comments suggest that the individual is shy and uses technology to combat this.

Another research question that was asked to the participants was ‘Would you rather use a technological device rather than talk to a stranger?’ 58% of the respondents answered no to the above question compared to 42% that answered yes. These results, compared to the results of the last question, show that the respondents would rather use technology in a situation with a stranger rather than any other individuals. One comment made by a respondent that answered yes to the question was “it’s easier and I feel more comfortable. I get nervous when I am face to face with people, especially strangers, therefore using a device would be better.” Another respondent commented that “Yes, due to being able to learn a bit more about a person online first. Everybody is a stranger to start off with. It takes time to be able to build up courage to chat to somebody. It can be interesting to chat to somebody online for a while to learn more before you actually see them in "real life." Some individuals may fear going out and making friends as it can be difficult and therefore can only do so with the use of technology. It can be risky though as some apps, where you can talk to strangers, can be deceiving.” This shows that the respondent believes that online methods of socializing can help aid meeting new people before face to face interaction takes place. One other respondent said that “I have social anxiety so feel more comfortable on my browsing the internet on my phone.” This shows that the respondent would rather use their phone in social situations to help with their social anxiety.

However, LaRose, Mastro and Easting (2001) suggest that online “surfing does not seem to have any long-term rewards usable in real-life, it does not seem to increase long-term gratification” and therefore may “lead to depressive and socially anxious feelings” (Morgan and Cotten, 2003). In short, the use of the internet may actually increase depression and social anxiety.
4.10 On screen activities rather than outdoor activities

Another trait of technology addiction is when the individual would “rather spend time interfacing with technology (e.g., playing games, using the Internet, text messaging, shopping online, or social networking, etc.) rather than pursuing outdoor activities” (netaddictionrecovery.com, 2009). Only 5% of the respondents answered yes to the question compared to 95% answering no. The results show that only a small number of respondents prefer on screen activities instead of going out. Although out of the 8 respondents that answered yes, 100% of them used a device for more than 6 hours a day.

The respondents that answered yes, were also asked to comment why they answered yes. One respondent stated that “I am quite introverted and not that social and also lazy - therefore on-screen activities easily more than compensate for off-screen activities. I can also vicariously live out the experience of going out through other people’s YouTube videos.” The comment shows that the respondent admits to being not that social and lazy and therefore finds it easier to undertake on screen activities rather than off screen activities. The respondent also feels that they can enjoy the experience of going out by watching a video online. Watching videos of other people and experiencing that person’s life can be addicting. Brahmstedt (2013) states that the “when you find someone like you who is out there posting new and great content everyday, you can’t help but be impressed. You found this stranger, and look at that, so did someone else, along with a couple thousand other people. When you find people who come from nothing and see that your support is the reason they succeed, you feel you have taken the journey along with them. It becomes addictive when you support someone because these people can become your friends, even if just for a moment.”

Another respondent commented “sometimes it can be easier just to stay in on your phone or laptop.” Both of the above comments can be linked to laziness. The respondents find it easier to sit inside using a device rather than pursuing other outdoor activities.

4.11 The effect of technology usage on productivity

The next area of research was looking into whether technology usage actually
decreases productivity. The results of the research discovered that 66% of the respondents agreed that their own use of technology reduced their productivity. This was compared to 34% of respondents that didn’t feel that it reduced productivity. The respondents commented on why they felt the usage of the devices reduced their productivity. Distraction was a key word used in a large amount of comments. The participants felt that the device is a distraction which in turn reduces the work time and therefore reduces productivity. One comment from a participant was “it’s distracting and often tempts me away from work, it can also be really easy to find inaccurate/unclear information if researching for work.” This suggests that using technology for work purposes can also reduce productivity as not all information online is accurate. Another comment made was “because my phone is always next to me when I am trying to do a task and its too tempting to pick up and use.” This shows that having a device that can be on your person at all times is a distraction in itself. “That itch you feel to reach for your pocket every time a phone buzzes or chirps is very real—and very damaging to our ability to pay attention to what we should be doing.” (Nisen, 2015) Using technological devices within the workplace can also be detrimental to productivity. “A Microsoft study suggests that it takes workers at least fifteen minutes before they are able to refocus after receiving an email or phone call. Once an employee gets distracted from their work, they will be less productive.” (Badat, 2013) One respondent also stated that “I spend a lot longer on Facebook than I realise, I’ve thought about deleting my account but I need to do know when social events or gatherings are happening and to stay in touch with friends and family.” Not realizing the time when using a social media site is a common occurrence. “This addiction to social networking sites makes one even unaware of the real time zones, creating a negative impact on people’s mindsets. This addiction to stay connected and noticed makes one prioritize these small things over many more important activities.” (Balasubramanian, 2012)

4.12 Online behaviour statements
The last area of the research was looking into whether the respondent disagreed or
agreed with a set of statements. The first statement was ‘Going online has made it easier for me to make friends.’ 49% of the respondents either strongly disagreed or disagreed with the statement. Although 25% either strongly agreed or agreed with the statement. Further analysis of the results show that out of the 39 respondents that agreed or strongly agreed, 69% of them used a device for more than 6 hours a day. The next statement was ‘I am friendlier online than in real life.’ As you can see in Figure 9, 73% of the respondents either strongly disagreed or disagreed with the statement. Only 14% either agreed or strongly agreed. Out of the 22 respondents that agreed or strongly agreed, 77% of them use a device for more than 6 hours a day. ‘I am more myself online than in real life’ was the next statement to be rated. Only 9% of the respondents strongly agreed or agreed with the statement. 75% either strongly disagreed or disagreed with it. This suggests that individuals do not tend to be themselves more online than in real life. Out of the 14 respondents that felt that they were more themselves online, 86% on average spend more than 6 hours a day on a device. The next statement was ‘I prefer communicating online to face to face communication.’ Only 11% of the participants agreed or strongly agreed. This is compared to 75% that either disagreed or strongly disagreed. Out of 18 respondents that either agreed or strongly agreed with the statement, 67% of them used a device for more than 6 hours a day. This result is similar to the previous as there tends to be a high percentage of the respondents who agree or strongly agree who use devices for long periods of time. The last statement was ‘Most of my friend I know from online.’ 91% of the respondents either disagreed with or strongly disagreed with the statement. Only 5% agreed or strongly agreed with the comment. 75% of the individuals who agreed or strongly disagreed with the statement use a device for more than 6 hours a day. Overall this part of the research has shown that the time an individual spends on a device can change the way they feel about certain things. The participants that use a device for the majority of a day tend to rely on the internet to make friends, are more themselves online and prefer online communication compared to being face to face with someone.
Another part of the research was conducting a focus group. The semi-structured focus group enabled the researcher to add significance to the results gathered from the questionnaire. The data from the focus group (Appendix 3) has been coded and analysed in order to gather the key data. The aim of the focus group was to gather more information regarding individuals use of technology and technological devices along with the intentions behind using the services and devices.

Terminologies and expressions reported through the focus group suggested that the individuals phone was the most used device. When asked ‘What technological device do you use the most?’ Participant one stated that “Definitely my phone! I’ve always got my phone on me, I even think its ringing when its not!” This also determines that the individual is experiencing Phantom Vibration Syndrome. This refers to “when a user, whose phone is set to vibrate if an incoming call or text is received, experiences the phone to vibrate when in fact it was not vibrating at all” (Rosenberger, 2015). In a recent study of undergraduates Drouin, Kaiser and Miller (2012) found that “89% of the 290 undergraduates in our sample had experienced phantom vibrations.” The website addiction.com (2015) states that “Constantly checking the phone even when it does not ring or vibrate? (Phantom vibration)’ is a key symptom of technology addiction.

Participant 2 also determined that a phone was the most used device as they commented, “I definitely use my phone the most out of all my devices. Its just so easy to...
have everything I need just in front of me, I don’t really need to use any other devices.” Participant 3 said that “I think that the device that I use the most is both my phone and my tablet! Although I use my phone a lot I use my tablet slightly more as it does most of the same things but with a much bigger screen! Its great for social media, playing games but also taking notes in lectures and things.” Although this was not the case for participant 4. Participant 4 stated that “I use my laptop the most I think, because I haven’t got the latest phone that does all of the tasks that my laptop does I still use my laptop for most things. It’s a much bigger screen and its just easier to use than a tablet and phone.” Overall the comments determine that out of the 4 participants, the phone was used the most out of all of the devices.

Next the respondents were asked ‘How long you think you spend on each device?’ The analysis of the results show that all of the 4 participants spend at least 6 hours a day on a device. This corresponds with the questionnaire data as 71% of the 158 respondents also used a device for over 6 hours a day. Participant 2 stated that “I probably use my phone around 7 hours a day! I know it sounds a lot and I probably should be ashamed of that but yes its probably around 7 hours a day. I use my laptop around 1-2 hours a day. Maybe more when I have university work to do but on average probably 2 hours a day.” This determines that the participant realises that the usage is high but does not intend on reducing it. Participant 1 also spends a high amount of time using technological devices. Participant 1 stated that “I think that I use my phone maybe 6 hours a day! I tend to use it all the time, even if its just to check something little. Its like my right arm! I would say that I use my laptop about 2 hours a day on top of that, then maybe less than 1 hour on my tablet.” Participant 3 uses their tablet for 6 hours per day and their mobile phone for 5 hours. Participant 4 stated that “I’d say on average that I spend less than 1 hour a day on my phone but around 6 hours per day on my laptop.” Although participant 4 does not use a mobile device for a large amount of time, the same level of usage as the other participants are reached as a different device is used for a long period of time. The high level of technological device usage among the participants may suggest that addiction is occurring. Key addictive behavioural traits can be seen within the research. The research also confirms the data from the questionnaires. Overall the smartphone is the most used device, followed by a laptop.
and then lastly a tablet.

The next part of the focus group aimed to find out the main services that are used on the device. This includes services such as social networks, messaging, calling, music etc. Participant 3 stated that “My tablet is mainly used for playing games and streaming videos. I also use it to send instant message via apps and to check social media. There are so many applications on the tablets that I could use it for anything! But social media, instant messaging and streaming videos are the key services that I use.” Participant 1 also said “I use my phone for mainly social media, music and Instant messaging. I don’t really use it to call or SMS message as all of my friends use an app to instant message.” The research from the participants show that the main service that is used is social networks. All 4 of the participants use social media on their device. This corresponds to the data from the questionnaire. Instant messaging along with streaming music or videos are also popular. 3 out of the 4 participants use both instant messaging and streaming music or videos as a regular service along on their devices. SMS messaging and calling were the services used the least on the participants devices. Only 1 out of the 4 participants said they regularly use their device to call or SMS message someone.

The last question of the focus group was ‘Do you use it for your own entertainment, to communicate or to study?’ This question was also asked in the questionnaire. The results from the questionnaire were supported by the findings from the focus group. The participants mainly use the devices for their own entertainment. Participant 1 stated that “I mainly use my phone for my own entertainment and communication with friends. I don’t at all use my phone to study as I sometimes feel that my phone stops me from studying. When I use my laptop that’s mainly for study rather than my phone.” Using the device to aid study was the next most common usage. Participant 2 stated that “When I do occasionally use my laptop I use it either for my own entertainment or to study. There are apps that you could use on your phone to help you study but I also feel that I become a bit distracted and start using it for other things.” This also corresponds to the research from the questionnaire.

Overall all of the findings from the questionnaire have been supported by the research from the focus group. This adds reliability to the research.
Chapter 5
Discussion

5.0 Discussion of results
It is evident that the results have provided a great insight into addiction of technological devices and what effects the usage of the device has on individuals. The study was conducted with 158 respondents. Among the participants 53 were male and 105 were female. The participants were mostly students. The age range of the respondents ranged from 18 to 35 years. The age range of 18 to 21 years was the most common.

5.1 Effect on lifestyle
The study set out to examine the effect of technology addiction on an individual’s lifestyle. Analysis of the data shows that out of all 158 respondents, 71% of them use some kind of technological device for more than 6 hours a day. Further analysis into the usage time of each single device has shown that 35 respondents spend over 6 hours a day on just a mobile phone. 23 respondents spend over 6 hours a day on just a laptop/computer and only 2 respondents spend over 6 hours a day on just a tablet. This suggest that mobile phone usage is much higher followed by laptops and computers and then tablets, although using several different devices for long periods of time per day seriously adds to the overall daily device usage. The research has shown that entertainment along with communication is the main purpose of device usage. 99% of respondents use their device for entertainment and communication, compared to 84% of respondents use their device to study. Both study and communication can be considered to be a necessity compared to entertainment being regarded as an individuals own sense of pleasure. Entertainment could be made up of social networking, watching videos and movies, gaming and generally roaming the internet etc. This suggests that the use of a device is mainly for an individuals own pleasure rather than being a necessity. The research into the purpose of the device usage that has been found, can be said to satisfy the characteristics of an addiction. The research also aimed to determine the time spend using different services on a
device. The research shows that the use of social networks is the highest followed by the streaming of music or videos, then instant messaging, then followed lastly by SMS messaging and calling. This also corresponds with the suggestion that the device is mainly used for the individuals own pleasure rather than for tasks that could be considered necessary such as calling and send SMS messages. This can also be determined from the findings of the focus group.

Another factor in addiction is when the activity becomes “compulsive and interferes with ordinary life responsibilities” (PsychologyToday.com, 1991). The research looked into whether the respondent found themselves staying online longer than expected. The findings were carefully analysed and the results found that the individuals with high level usage found themselves staying online longer than they expected. This supports traits of addiction.

The last part of the study looked at the effect technology usage had on an individuals productivity. The respondents felt that the device is a distraction which in turn reduces productivity. A key symptom of technology addiction is distraction. “People are more distracted and the resulting distractions can have deadly consequences e.g. when cellphone-wielding drivers cause major accidents or the text-walking phenomenon in which pedestrians glued to their screens walk off curbs into passing traffic or open manholes. The urge to text or check email is so powerful it overrides our survival instinct” (Marshall, 2013).

5.2 Effect on health

“General and excessive use of technology is associated with a variety of health risks. Users run the risk of developing e-Thrombosis, carpal tunnel syndrome, mouse elbow, repetitive use injuries, eye fatigue, migraines, obesity, sleep disturbances, drowsy driving, sleep deprivation, backaches, eating irregularities, and poor personal hygiene” (Netaddictionrecovery.com, 2009). The current study looked into the effect that technology has on hearing, sleeping pattern and overall health.

The research also found that 33% of respondents that use headphones for over 4 hours a day said they had some difficulty with their hearing. The findings support the argument that "Listening through headphones at a high volume for extended periods of time can
result in lifelong hearing loss” (Foy, 2016). The sleeping pattern of the individual was also recorded. Analysis of the data found that the individuals that had less than 5 hours sleep per night use both a smart phone and laptop for more than 4 hours a day. This supports the theory that technology usage effects your sleeping pattern. Hatfield (2005) states that “as your brain revs up, its electrical activity increases and neurons start to race -- the exact opposite of what should be happening before sleep. A second reason has to do with your body: The physical act of responding to a video game or even an email makes your body tense.” This would have a detrimental effect on the sleeping pattern of the individual.

The respondents also rated their health. The results found that the individuals that tend to be more tired, weary or feeble use technological devices for longer periods. This can also be linked to the sleeping pattern of the individual.

5.3 Effect on social skills
The study also set out to examine the effect of technology addiction on an individual’s social skills. The research looked into whether the respondents ignored other duties in order to spend more time on a device. The results found that only 35% of the respondents agreed with the statement. Although out of the respondents that did agree with the statement, further analysis determined that many of them had addictive behavioural traits such as self denial.

The results also show that the individuals who prefer to spend time with people online rather than face to face spend over 6 hours a day using a device. The comments from the respondents also show that the device can act as a social barrier to the respondent. This supports the argument that “People who are very shy and find it difficult to interact with others may develop an Internet addiction because meeting people online seems less intimidating than face-to-face communication. The desire for human connection is extremely powerful, even among people suffering from social anxiety. Visiting forums and chat rooms gives them a way to develop relationships without directly facing their fears” (Hinders, 2015). The research also found that 48% of the respondents would rather use a device than talk to a stranger. Further analysis found that shyness is a key factor behind why technology is being used instead of verbal communication. Some
studies indicate that misuse of the Internet is strongly associated to a number of psychological and behavioral problems. For instance, “there exist a great deal of relevance between the misuse of the Internet and issues such as anxiety, depression, loneliness, social isolation, low self-esteem, shyness, abnormal mood swings, precipitated behavior, and lack of social skills and support” (Beranuy et al., 2009). The study also found that those of the respondents who would rather spend time doing on screen activities rather than being outdoors have a high level of device usage. This suggests that the longer you spend on a device the more effect that it has on addictive behavior traits. Overall the level of technological device usage can affect an individual’s behaviours which in turn can affect their own lifestyle, health and social skills.
6.0 Conclusion

To conclude, the study set out to examine addiction to technological devices and its effect on an individual’s health, lifestyle and social skills. The study also set out to meet the aims of the research which were as follows;

- To examine the time spent by individuals, aged between 18 and 35 years, using technological devices. Primary research methods of an online questionnaire and focus group will be used to gather research.

- To investigate the intentions behind the use of technological devices and services using both primary and secondary research methods. Online questionnaires, focus groups and academic papers will be used to gather research.

- To critically assess the impact of the addictive use of technological devices on individuals, aged between 18 and 35, health, lifestyle and social skills. Online questionnaires and academic papers will be used for both primary and secondary research methods.

As presented throughout the study, it is evident that the usage of technological devices does have an effect on the health, social skills and lifestyle of an individual. There will always be a high level of technology at our fingertips as “all indications are that technological progress and use of information technology will continue at a rapid pace. Accompanying and supporting the dramatic increases in the power and use of new information technologies has been the declining cost of communications as a result of both technological improvements and increased competition” (Lee, 2009). The study showed that some respondents were unable to control their device usage which in turn affected their lifestyle. The level of device usage was also linked to a reduction in the
respondent’s productivity.

The research also determined the effect that the device usage had on the health of some respondents. The high level of usage of headphones was linked with difficulty hearing for some individuals. Sleep patterns were also connected with device usage. The findings suggest that those with a poor sleeping pattern had a high level of device usage.

The social skills of an individual were also affected by the addictive usage of technological devices. Respondents who were naturally shy used the device as a comfort barrier instead of speaking to others. 48% of the respondents would rather use a device than talk to a stranger. Overall the research determined several negative impacts that addictive device usage had on the respondents. Individuals must learn how to exercise control when it comes to the technology usage to help prevent addiction. Time management along with setting life priorities should guide an individual’s behavior when it comes to using technological devices. Overall to help prevent the high levels of technology usage, the use of any technological device should be driven by necessity rather than pleasure. This will ensure the overall pleasure and happiness of the individual.

6.1 Limitations and constraints of the study

The sample size of the study is not representative one. Due to time constraints along with the size of the study it is not possible to conduct a study of appropriate size. The results also only represent individuals from Great Britain and not any other countries. Conducting several studies throughout the globe would enable a wider research sample and more accurate and reliable results. Time constraints led the study to just focus on the questionnaire and focus group. Other methods of data collection could have been explored in order to increase the research field. The gender of the participants is also unbalanced. There may be other factors that might have influenced the health and social skills of the participant but could not be controlled.

6.2 Recommendations and future research

The current study cannot be generalised due to the study being conducted within Great
Britain. One recommendation would be to continue the research in European countries or less developed countries. There has already been research conducted in the US and Asia. This would give a much clearer view of the technology usage around the world. Another recommendation would be to look further into the purpose behind the usage of technological devices. Psychological problems along with health problems may have a link to the high usage of devices. Due to the sample size bring relatively small, any future studies should incorporate a large representative sample to increase the reliability and accuracy of the data. Any future studies should ensure that the gender of the participants is equal. Future researches may consider conducting a control group to enable a comparative to confirm the findings of the current study. Recommendations to help reduce the impact of technological device usage would be to encourage a low level of usage for all individuals. The level of the usage has an effect on the addictive behaviour of the individual which in turn impacts their lifestyle, health and social skills. The results have also shown that the individuals aged between 18 and 21 have an overall higher device usage level than the other age categories. Another recommendation would be to conduct further research into this age group in order to gain a better insight into the issue.
7.0 References


Nisen, M. (2015) ‘Study: Smartphones are distracting us even when we aren’t looking at them’, Quartz (July).


Promises Treatment Centers (2012) 10 signs that your loved One needs addiction treatment. Available at: https://www.promises.com/articles/signs-you-need-addiction-


8.0 Appendices

Appendix 1

CARDIFF METROPOLITAN UNIVERSITY
APPLICATION FOR ETHICS APPROVAL

When undertaking a research or enterprise project, Cardiff Met staff and students are obliged to complete this form in order that the ethics implications of that project may be considered.

If the project requires ethics approval from an external agency (e.g., NHS), you will not need to seek additional ethics approval from Cardiff Met. You should however complete Part One of this form and attach a copy of your ethics letter(s) of approval in order that your School has a record of the project.

The document Ethics application guidance notes will help you complete this form. It is available from the Cardiff Met website. The School or Unit in which you are based may also have produced some guidance documents, please consult your supervisor or School Ethics Coordinator.

Once you have completed the form, sign the declaration and forward to the appropriate person(s) in your School or Unit.

PLEASE NOTE:
Participant recruitment or data collection MUST NOT commence until ethics approval has been obtained.

**PART ONE**

<table>
<thead>
<tr>
<th>Name of applicant:</th>
<th>Carys Parry</th>
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<tbody>
<tr>
<td>Supervisor (if student project):</td>
<td>Dr Hilary Berger</td>
</tr>
<tr>
<td>School / Unit:</td>
<td>CSM</td>
</tr>
<tr>
<td>Student number (if applicable):</td>
<td>ST20040432</td>
</tr>
<tr>
<td>Programme enrolled on (if applicable):</td>
<td>BSc (Hons) Business Information Systems</td>
</tr>
<tr>
<td>Project Title:</td>
<td>Addiction to technological devices: its effect on an individual's health, lifestyle and social skills.</td>
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<tr>
<td>Expected start date of data collection:</td>
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<tr>
<td>Approximate duration of data collection:</td>
<td>4-6 weeks</td>
</tr>
<tr>
<td>Funding Body (if applicable):</td>
<td>N/A</td>
</tr>
<tr>
<td>Other researcher(s) working on the project:</td>
<td>None</td>
</tr>
<tr>
<td>Will the study involve NHS patients or staff?</td>
<td>No</td>
</tr>
<tr>
<td>Will the study involve taking samples of human origin from participants?</td>
<td>No</td>
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Does your project fall entirely within one of the following categories:

- Paper based, involving only documents in the public domain: No
- Laboratory based, not involving human participants or human tissue samples: No
Practice based not involving human participants (e.g. curatorial, practice audit) | No
Compulsory projects in professional practice (e.g. Initial Teacher Education) | No
A project for which external approval has been obtained (e.g., NHS) | No

If you have answered YES to any of these questions, expand on your answer in the non-technical summary. No further information regarding your project is required. If you have answered NO to all of these questions, you must complete Part 2 of this form.

In no more than 150 words, give a non-technical summary of the project:
Research will be conducted to determine the effect of technology addiction on the health, lifestyle and social skills of individuals. The research will also be looking into the time individuals spend using technology and the intentions behind it.

The proposed research will include a questionnaire and a semi-structured focus group issued to individuals aged 18-35. The questionnaire shall be administered through the use of social media platforms and an online survey questionnaire website, to any individuals that fit into the age bracket.

The semi-structured focus group will be used to generate qualitative data from the participants. The participants will be students studying at Cardiff Metropolitan University who fit into the proposed age bracket. Information collected from the focus group will provide qualitative information regarding the time spent by individuals using technology and the intentions behind the usage.

DECLARATION:
I confirm that this project conforms with the Cardiff Met Research Governance Framework.

I confirm that I will abide by the Cardiff Met requirements regarding confidentiality and anonymity when conducting this project.

STUDENTS: I confirm that I will not disseminate any material produced as a result of this project without the prior approval of my supervisor.

Signature of applicant: ___________________________ Date: 26/01/2016

FOR STUDENT PROJECTS ONLY
Name of supervisor: Dr Hilary Berger

Date: 26/01/2016

Signature of supervisor: ___________________________

Research Ethics Committee use only
Decision reached: Project approved X
PART TWO

A RESEARCH DESIGN

A1 Will you be using an approved protocol in your project?  No

A2 If yes, please state the name and code of the approved protocol to be used

N/A

A3 Describe the research design to be used in your project

This dissertation uses both qualitative and quantitative data to gain information to determine the effect of technology addiction on the health, lifestyle and social skills of individuals. Online questionnaires and a focus group will be used to collect primary data and will be developed from the analysis of current literature within the given domain.

Before any of the research takes place, all participants will be given a consent form. This will reassure the participants that there will be no discrimination against age, gender, race, disability act. The participants will also have the right to anonymity throughout the research and can withdraw at any point without penalty. All data will be confidential and stored securely in a password protected computer system.

The questionnaire will be distributed to a sample population of 100-150 individuals aged 18-35, to gain quantitative information on the individuals use of technology and technological devices along with the health status of the participant. The questionnaires will be distributed via social media platforms and forums. (E.g. Online technology forums and student forums, such as 'The Student Room' and Facebook groups.) The questionnaire design will include both open and closed questions. Random Sampling will be used along with thematic analysis to analyse the results with added Excel spreadsheets and graphs. Random sampling means that each member of the population has an equal chance of being selected.

The semi-structured focus group will be conducted with 4-6 students aged between 18-35 regarding their own use of technology and technological devices along with the intentions of using these services and devices. The focus group will take place on Cardiff Metropolitan University

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1 An Approved Protocol is one which has been approved by Cardiff Met to be used under supervision of designated members of staff; a list of approved protocols can be found on the Cardiff Met website here

Application for ethics approval v4 March 2015
campus at Llandaff and take 15-20 minutes. The results will be coded and themes developed, ensuring that the anonymity of the participant is maintained. Thematic analysis will also be used to analyse the results with added Excel spreadsheets and graphs.

A4 Will the project involve deceptive or covert research? No
A5 If yes, give a rationale for the use of deceptive or covert research
N/A
A6 Will the project have security sensitive implications? No
A7 If yes, please explain what they are and the measures that are proposed to address them
N/A

B PREVIOUS EXPERIENCE
B1 What previous experience of research involving human participants relevant to this project do you have?
None

B2 Student project only
What previous experience of research involving human participants relevant to this project does your supervisor have?
Dr Hilary Berger has over 12 years of research involving human participants.

C POTENTIAL RISKS
C1 What potential risks do you foresee?

Online Questionnaire
1. Questions may cause offence to participants
2. Personal information on the questionnaires.
3. A risk to the participants would be the confidentiality of the data they provide.
4. Personal information and data storage must be taken into account.
5. Risks of not meeting the research deadlines.
6. Risk of not getting enough participants.

Focus Group
1. Participants may be offended by discussion topic
2. Participants may feel uncomfortable voicing their opinion within a group
3. Members of the group may disagree and argue with each other
4. One participant may over shadow other members in the group resulting in biased research
5. Participants may get anxious about what they have said to the researcher leading to anger towards the researcher
6. Disorderly or aggressive behaviour
7. Risks of not meeting the research deadlines
8. A risk to the participants would be the confidentiality of the data they provide along with the secure storage of the data.

C2 How will you deal with the potential risks?

Online Questionnaire
1. Researcher will ensure that all questions are suitable and appropriate to ask participants.
2. Consent form at beginning of questionnaire, completion of the questionnaire is taken as consent and will be stated at the beginning.
3. Participant information sheet will be attached for them to read to ensure they are fully aware of what they are participating in.
4. Participant information sheet will contain information about personal information storage before they consent.
5. Researcher will ensure time is managed appropriately and project is planned and managed via Gantt charts.
6. Researcher will ensure maximum distribution of the questionnaire.

Focus Group
1. Researcher will ensure that all questions are suitable and appropriate to ask participants.
2. Participants will be notified that they can withdraw at any time. Participant information sheet will be given for them to read to ensure they are fully aware of what they are participating in.
3. Research will ensure calm environment and conduct the focus group in a professional manner.
4. Research will ensure all data collected is equal and all participants have a chance to express opinions.
5. Researcher will ensure professional manner throughout and be surrounded by students and staff on the campus.
6. The focus group will be held on the Cardiff Met Llandaff campus surrounded by other students and staff members.
7. Researcher will ensure time is managed appropriately and project is planned and managed via Gantt charts.
8. Participant information sheet will contain information about personal information storage before they consent. Audio recordings of the focus group will be transcribed and the participant will be referred to as a pseudonym.

Every effort will be made to complete the research phases in accordance with the anticipated research deadlines.

All participants will be noted that only the researchers will have access to the data collected. Data collected from online surveys and focus groups will remain anonymous. All data will be held on a secure password protected external hard drive and paper copies will be kept in a locked cupboard. Access to the data will be restricted to the contributor and supervisor. Questionnaires will have no trace back to the contributor.

When submitting your application you **MUST** attach a copy of the following:
- All information sheets
- Consent/assent form(s)

An exemplar information sheet and participant consent form are available from the Research section of the Cardiff Met website.
Participant Information Sheet

For Focus Group
Ethics Number: 2015D0571.

Addiction to technological devices: Its effect on an individual's health, lifestyle and social skills.

Project Summary
The purpose of the research to determine the affect of technology addiction on the health, lifestyle and social skills of individuals. I will also be looking into the time individuals spend using technology and the intentions behind it. Your participation will enable the collection of data which will form part of a study being undertaken at Cardiff Metropolitan University.

Why have you been asked to participate?
You have been asked to participate in the study as you fit the profile of the population being studied; that is that you are between the ages 18-35 and that you are a student.

The student focus groups will include topics such as the time spent by individuals using technological devices along with the intentions behind the use of technology.

Your participation is entirely voluntary and you withdraw at any time.

Project Risks
The research involves the completion of online surveys, participation in a focus group. All data will be recorded for later analysis. During this research we will not ask for any sensitive data, this study is based on addiction to technological devices and its affect on an individual's health, lifestyle and social skills. All questions are opinion based and do not ask for personal details and data will be logged anonymously. However, if you find any of the questions inappropriate then you can stop at any time. Furthermore, you can change your mind and withdraw from the study at any time – we will completely respect your decision.

How we protect your privacy
All the information and data you provide during online surveys and focus meetings will be held in confidence and logged anonymously. We have taken extra steps to ensure that there is no information on the online surveys and questionnaires’ that will identify you. All personal data provided (e.g. signature on the consent form) and your online survey and focus group will be kept in secure locations by the research team. Once the study is finished all the information provided and documents used to gather information will be destroyed. The recordings of the focus groups/ interview will also be held in a secure and confidential environment during the study and destroyed when it is complete.

YOU WILL BE OFFERED A COPY OF THIS INFORMATION SHEET TO KEEP

If you require any further information about this project then please contact:
CMU email: st200404325@outlook.cardiffmet.ac.uk
Supervisor email: HIsberger@cardiffmet.ac.uk
Online Consent Form

School of Management, Cardiff Metropolitan University

Title: Addiction to technological devices: Its affect on an individual's health, lifestyle and social skills.

Research into addiction to technological devices and its impact on an individual's health, lifestyle and social skills.

This project has received the approval of Cardiff School of Managements’ Ethics Committee, Cardiff Metropolitan University. Ethics Number: 2015D0571.

I understand that my participation in this project will involve completing an online questionnaire about the use of technological devices along with the affects on health lifestyle and social skills which will take approximately 10 minutes of my time.

I understand that participation in this study is entirely voluntary and that I can withdraw from the study at any time without giving a reason or I can discuss my concerns with Carys Parry, st20040432@outlook.cardiffmet.ac.uk or her supervisor HBerger@cardiffmet.ac.uk.

I understand that any identifying information provided by me will be held confidentially, such that only Carys Parry can trace this information back to me individually.

I understand that my data will be stored on password protected computers, anonymised after completion of the questionnaire and that no one will be able to trace my information back to me. The raw data will be retained for up to three years when it will be deleted/destroyed.

If you are between 18 and 35 years of age, understand the statement above and freely consent to participate in this questionnaire please continue with the questionnaire.

By continuing with the questionnaire you have agreed to the terms and conditions stated above.

Thank you very much for helping us with this project and participating in the research.
Participant Consent Form

Cardiff Metropolitan University Ethics Reference Number: 2015D0571.
Participant name or Study ID Number: 
Title of Project: Research into the affect of technology addiction on the health, lifestyle and social skills of individuals
Name of Researcher: Carys Parry

Participant to complete this section: Please initial each box.

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

3. I agree to the focus group / consultation being audio recorded

4. I agree to the use of anonymised quotes in publications

5. I agree to take part in the above study.

Signature of Participant ________________________ Date ________________________

Name of person taking consent ________________________ Date ________________________

Signature of person taking consent ________________________
Online Survey Questions

Addiction to technological devices

School of Management, Cardiff Metropolitan University

Title: Addiction to technological devices: Its affect on an individual's health, lifestyle and social skills.

Research into addiction to technological devices and its impact on an individual's health, lifestyle and social skills.

This project has received the approval of Cardiff School of Managements' Ethics Committee, Cardiff Metropolitan University. Ethics Number: 2015D0571.

I understand that my participation in this project will involve completing an online questionnaire about the use of technological devices along with the affects on health lifestyle and social skills which will take approximately 10 minutes of my time.

I understand that participation in this study is entirely voluntary and that I can withdraw from the study at any time without giving a reason or I can discuss my concerns with Carys Parry, st20040432@outlook.cardiffmet.ac.uk

I understand that any identifying information provided by me will be held confidentially, such that only Carys Parry can trace this information back to me individually.

I understand that my data will be stored on password protected computers, anonymised after completion of the questionnaire and that no one will be able to trace my information back to me. The raw data will be retained for up to three years when it will be deleted/destroyed.

If you are between 18 and 35 years of age, understand the statement above and freely consent to participate in this questionnaire please continue with the questionnaire.

By continuing with the questionnaire you have agreed to the terms and conditions stated above.
1. Gender?
   - Male
   - Female

2. Age Category?
   - 18-21
   - 22-25
   - 26-30
   - 31-35

3. Are you currently a student?
   - Yes
   - No

4. In a day how much time do you spend on the following devices?

<table>
<thead>
<tr>
<th>Device</th>
<th>Less than 1 hour</th>
<th>1-2 Hours</th>
<th>2-4 Hours</th>
<th>4-6 Hours</th>
<th>6+ Hours</th>
<th>Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smart Phone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tablet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laptop/Computer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. What is the purpose of using the above devices?

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Less than 1 hour</th>
<th>1-2 Hours</th>
<th>2-4 Hours</th>
<th>4-6 Hours</th>
<th>6+ Hours</th>
<th>Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entertainment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**CARDIFF METROPOLITAN UNIVERSITY**
**APPLICATION FOR ETHICS APPROVAL**

6 In a day how much time do you spend using the following services?

<table>
<thead>
<tr>
<th>Service</th>
<th>Less than 1 hour</th>
<th>1-2 Hours</th>
<th>2-4 Hours</th>
<th>4-6 Hours</th>
<th>6+ Hours</th>
<th>Not at all</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMS Messaging</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instant Messaging</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Networks</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music / Video</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

7 In a day how long do you spend using headphones/earphones?

- Less than 1 hour
- 1-2 Hours
- 2-4 Hours
- 4-6 Hours
- 6+ Hours
- Not at all

8 How well can you hear normal speech? (with or without a hearing aid)

- No difficulty
- Little difficulty
- Considerable difficulty

9 Do you stay online longer than you expected more and more often?

- Yes
- No

10 If answer to Q9 was yes, please comment why?

---

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APPLICATION FOR ETHICS APPROVAL

11. Do you ignore and avoid other work or activities to spend more time on a device?
   - Yes
   - No

12. If answer to Q11 was yes, please comment why?
   

13. Do you frequently get annoyed or irritable if someone bothers you when you are trying to
    do something online or on your phone?
   - Yes
   - No

14. If answer to Q13 was yes, please comment why?
   

15. Do you prefer to spend time with people on-line or through messaging rather than being
    with them face to face?
   - Yes
   - No

16. If answer to Q15 was yes, please comment why?
   

17. Do you prefer on-screen activities now to going out and doing something else?
   - Yes
   - No

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CARDIFF METROPOLITAN UNIVERSITY
APPLICATION FOR ETHICS APPROVAL

18 If answer to Q17 was yes, please comment why?

---

19 Do you feel your use of technology actually decreases your productivity at times?

Yes
No

20 If answer to Q19 was yes, please comment why?

---

21 On average how many hours do you sleep per night?

Less than 5 hours
5-6 Hours
6-7 Hours
7-8 Hours
8-9 Hours
9+ Hours

22 Please rate the following comments on whether you strongly disagree, disagree, are neutral, agree or strongly agree.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;I feel healthy and energetic&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;I feel slightly tired, weary or feeble&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;I feel moderately tired, weary or feeble&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;I feel extremely tired, weary, feeble and totally exhausted&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
23. Would you rather use a technological device rather than talk to a stranger?
   
   - Yes
   - No

24. If answer to Q23 was yes, please comment why?

25. Please rate the following comments on whether you strongly disagree, disagree, are neutral, agree or strongly agree.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Going online has made it easier for me to make friends&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;I am friendlier online than in real life&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;I am more myself online than in real life&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;I prefer communicating online to face-to-face communication&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;Most of my friends I know from online&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Focus Group Questions
(For Focus Group With Students)
Ethics Number: 2015D0571.

<table>
<thead>
<tr>
<th>Focus Group (Semi Structured)</th>
<th>DISCUSSED</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome all of the participants and introduce myself and the project title.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ask all participants to sign and acknowledge consent form. Make participant information sheet available to read.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What technological devices do you use the most?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>On average how long do you spend on each of these devices?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What are the main services that you use on your technological devices? (Messaging, Calling, Social Networks etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What are your main intentions when using your technological devices?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Entertainment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Study</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Communication</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thank all students for participating.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix 2

Participant Consent Form

Cardiff Metropolitan University Ethics Reference Number: 2015D0571.
Participant name or Study ID Number:
Title of Project: Research into the affect of technology addiction on the health, lifestyle and social skills of individuals
Name of Researcher: Carys Parry

Participant to complete this section: Please initial each box.

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.

3. I agree to the focus group/consultation being audio recorded

4. I agree to the use of anonymised quotes in publications

5. I agree to take part in the above study.

Signature of Participant: [Signature] Date: 5.02.16

Name of person taking consent: Carys Parry Date: 5.02.16

Signature of person taking consent: [Signature]

Application for ethics approval 4 March 2015
Participant Consent Form

Cardiff Metropolitan University Ethics Reference Number: 2015D0571.
Participant name or Study ID Number: 
Title of Project: Research into the affect of technology addiction on the health, lifestyle and social skills of individuals
Name of Researcher: Carys Parry

Participant to complete this section: Please initial each box.

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. [ ]

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason. [ ]

3. I agree to the focus group / consultation being audio recorded [ ]

4. I agree to the use of anonymised quotes in publications [ ]

5. I agree to take part in the above study.

[Signature of Participant] [5.02.16] Date

[Carys Parry] [5.02.16] Date

Name of person taking consent

[Signature of person taking consent]

Application for ethics approval v4 March 2015
Participant Consent Form

Cardiff Metropolitan University Ethics Reference Number: 2015D0571.
Participant name or Study ID Number:
Title of Project: Research into the affect of technology addiction on the health, lifestyle and social skills of individuals
Name of Researcher: Carys Parry

Participant to complete this section:  Please initial each box.

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.  ✔

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason.  ✔

3. I agree to the focus group / consultation being audio recorded  ✔

4. I agree to the use of anonymised quotes in publications  ✔

5. I agree to take part in the above study.

Signature of Participant  5/02/16  Date

Name of person taking consent  5/02/16  Date

Signature of person taking consent

Application for ethics approval v4 March 2015
Participant Consent Form

Cardiff Metropolitan University Ethics Reference Number: 2015D0571.

Participant name or Study ID Number: 

Title of Project: Research into the affect of technology addiction on the health, lifestyle and social skills of individuals 

Name of Researcher: Carys Parry 

Participant to complete this section:  

Please initial each box. 

1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.  

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason. 

3. I agree to the focus group / consultation being audio recorded 

4. I agree to the use of anonymised quotes in publications 

5. I agree to take part in the above study. 

[Signature]

Signature of Participant

5/02/16  

Date

[Name]

Name of person taking consent

5/02/16  

Date

[Signature]

Signature of person taking consent

Application for ethics approval v4 March 2015
Appendix 3

Focus group notes

Me: Hi guys, thanks for taking part in my focus group today. I'm Carys Parry and a BIS student here at Cardiff Met. The title of my project is addiction to technological devices: Its effect on an individual's health, lifestyle and social skills. If possible could you all fill in one of these participant consent forms please. Please make sure you read all of the information and sign on the line. There's also an information sheet there to have a read of.

*Forms Filled In and Collected*

Me: Thanks for that. Now we can start. Let's start with the first question! What technological device do you use the most?

P1: Definitely my phone! I've always got my phone on me, I even think its ringing when its not! Then probably my laptop, although I use my laptop less and less now as I use my phone to do whatever I was going to do instead. I use my laptop for mainly uni work and my phone for everything else really. I have a tablet but don't tend to really use it.

P2: Yeah I agree! I definitely use my phone the most out of all my devices. Its just so easy to have everything I need just in front of me, I don't really need to use any other devices. Also like *P1* said I only really use a laptop or desktop computer to do university work or maybe online shopping.

P3: I think that the device that I use the most is both my phone and my tablet! Although I use my phone a lot I use my tablet slightly more as it does most of the same things but with a much bigger screen! Its great for social media, playing games but also taking notes in lectures and things.

P4: I use my laptop the most I think, because I haven't got the latest phone that does all of the tasks that my laptop does I still use my laptop for most things. It's a much bigger screen and its just easier to use than a tablet and phone.

Me: Ok that's really good thanks! The next question that I'm going to ask is how long you think you spend on each device?

P2: I probably use my phone around 7 hours a day! I know it sounds loads and I probably should be ashamed of that but yeah its probably around 7 hours a day. I use my laptop around 1-2 hours a day. Maybe more when I have university work to do but on average probably 2 hours a day.

P1: I think that I use my phone maybe 6 hours a day! I tend to use it all the time, even if its just to check something little. Its like my right arm! I'd say that I use my laptop about 2 hours a day on top of that, then maybe less than 1 hour on my tablet.

P3: I use my tablet about 6 hours a day and my phone about 5 hours.

P4: I'd say on average that I spend less than 1 hour a day on my phone but around 6 hours per day on my laptop.
Me: Thanks again for those answers. The next question is what are the main services that you use on your devices? This means things like social networks, messaging, calling, music etc.

P4: I just use my phone for calling and messaging. Then my laptop, which I use the most, for social media, gaming and watching videos etc.

P1: I use my phone for mainly social media, music and Instant messaging. I don’t really use it to call or SMS message as all of my friends use an app to instant message.

P2: Yeah same, I rarely actually call people as Instant messaging is free. Social media is another service that I use on my phone. I occasionally use my laptop for online shopping too along with playing music.

P3: My tablet is mainly used for playing games and streaming videos. I also use it to send instant message via apps and to check social media. There are so many applications on the tablets that I could use it for anything! But social media, instant messaging and streaming videos are the key services that I use.

Me: Yeah that sounds good! Its all very interesting! The next question that I have for you is to find out your main intentions when using your devices. Do you use it for your own entertainment, to communicate or to maybe study?

P1: I mainly use my phone for my own entertainment and communication with friends. I don’t at all use my phone to study as I sometimes feel that my phone stops me from studying. When I use my laptop that’s mainly for study rather than my phone.

P2: Yeah I’m the same as P1 and mainly use my phone for my own entertainment but not study. When I do occasionally use my laptop I use it either for my own entertainment or to study. There are apps that you could use on your phone to help you study but I also feel that I become a bit distracted and start using it for other things.

Me: Yeah! I know what you mean!

P3: I use my tablet for everything really! Mainly study and my own entertainment rather than communication but when I occasionally instant message I suppose I’m communicating.

P4: When I use my laptop I use it for my own entertainment or occasionally study. I don’t use it to communicate. I’m a bit old school when it comes to that and just stick to using my phone.

Me: Ok guys, that’s all of the questions that I have and I think I’ve got some great information. Thank you very much again for taking part in the group and helping with my project.