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Gender, Internet identification and Internet anxiety

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# Gender, Internet Experience Internet Identification and Internet Anxiety: A ten year follow up

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Gender, Internet identification and Internet anxiety

## Gender, Internet Experience Internet Identification and Internet Anxiety: A ten year follow up

### ABSTRACT

In 2002, we found gender differences in the use of the Internet. Since then, however, the Internet has changed considerably. We therefore conducted a follow up study in 2012. The study involved 501 students (389 females and 100 males, 12 participants unspecified gender) and we measured Internet use, Internet anxiety and Internet Identification. We found that males had a greater breadth of Internet use; they used the Internet more for games and entertainment than females. The differentiation between males and females in terms of Internet use is still evident, and in some ways is even more distinct than ten years ago. In our previous research we had found no gender differences in the use of the Internet for communication, whereas in the current study we have found that females use the Internet for communication than males and were using social network sites more than males. We also found, consistent with our previous study, that Internet Identification and Internet Anxiety were related to Internet use.

## INTRODUCTION

In a study conducted in 2002, we found gender differences in the use of the Internet<sup>1</sup>, which have been replicated by others<sup>2</sup>. Males used the Internet more than females; they were more likely to use game websites, other specialist websites and to download material from the Internet. The Internet has changed considerably since then, with the introduction of social network sites (Facebook was launched in 2004), microblogging (Twitter was created in 2006) and the development of smart phones (iPhone was introduced in 2007), which have integrated the Internet with mobile technology. These changes have led some people to suggest that the gender differences observed in 2002 would disappear<sup>3-5</sup> or even be reversed in 2012, because of the feminization of the Internet<sup>6</sup>. Others have suggested that gender differences in the use of the Internet are mere reflections of gender differences in wider society and as long as they remain, so will the gender differences in Internet use<sup>6</sup>. Thus the first aim of the study was to investigate whether the gender differences observed in 2002 remain a decade later in 2012.

At the time of our original study, researchers reported not only gender differences in Internet use, but also gender differences in attitudes towards the Internet<sup>10</sup>. In 2002, we therefore investigated two important factors that were thought to predict Internet use; Internet Anxiety and Internet Identification. Internet identification is defined as the importance of an individual's ability to use the Internet for their self-concept<sup>1</sup>. Internet anxiety can be defined as an irrational anticipation of fear evoked by the thought of using (or actually using) the Internet, the effects of which result in avoiding, or minimizing, Internet usage<sup>1</sup>. Internet identification was positively related to use of the Internet and

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Internet anxiety was negatively related to use of the Internet. Thus the second aim of the current study is to investigate whether the relationship between Internet experience, Internet anxiety and Internet identification observed in 2002 remain in 2012.

## METHOD

### *Participants*

The participants were 501 first year psychology undergraduate students from six UK universities. There were 389 females and 100 males (12 participants did not specify their gender) and the mean age was 20.1 (SD = 4.8). The sample was chosen to match as closely as possible the sample taken in the 2002 study.

### *Procedure*

The questionnaire was handed out during the first semester of the academic year and contained the following sections: (i) a measure of general Internet experience, (ii) an Internet anxiety scale and (iii) an Internet identification scale. Section 1 was updated from the 2002 questionnaire, to reflect the current and wider range of Internet activities available in 2012.

### *Measures*

The first section in the questionnaire measured students' general use of the Internet. We asked them: whether they owned a computer/laptop, tablet computer, smart phone, e-book, personal email address, a profile in a social network site and a micoblogging account; at what chronological age they started using the Internet using a 7 point scale (from 0='don't use' to 7='sixteen and above'); how many hours a day on average do they

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used the Internet using a 7 point scale (from 0 = ‘never’ to over 7 = ‘5 hours a day’); and what they used the Internet for. The latter scale was based on a questionnaire used by Helspar<sup>7</sup> and fell into the following categories: (i) health, (ii) adult, (iii) shopping, (iv) social network, (v) micoblogging, (vi) personal communication, (vii) playing, (viii) entertainment, (ix) leisure and (x) banking. Students were also asked to estimate the number of times they used the above in an average week, answered using a six point scale (from 0 = ‘never’ to 6 = ‘several times a day’). Total breadth of use of the Internet was the sum of all the students’ use of the specific activities above. Reliability was more than adequate (alpha = 0.90). The second section measured students Internet anxiety<sup>1</sup> (alpha = 0.80) and the third section was an Internet identification scale<sup>1</sup> (alpha = 0.74).

## RESULTS

The mean age students started using the Internet was 11 years old and they spent approximately 3.4 hours a day using the Internet. We examined the number and percentage of males and females who owned a computer, tablet computer, smart phone, e book, personal email address, a profile in a social network site and a microblogging account and found no gender differences on any of these items. There were no gender difference in terms of the age they started using the Internet ( $t = 0.5$ ,  $df = 485$ ,  $p = ns$ ) or the number of hours they used the Internet in a day ( $t = 1.3$ ,  $df = 486$ ,  $p = ns$ ).

Table 1: Gender differences in the participants’ use of the Internet

Internet Activities	Male	Female
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	M	SD	M	SD	t	
<b>Health</b>						
Health Information online	0.8	0.8	0.8	0.7	0.0	
<b>Adult</b>						
Sites with adult content	1.9	1.6	0.3	0.8	13.8	*
<b>Shopping</b>						
Get Information about a product or service	2.5	1.0	2.0	1.0	3.9	*
Buying a product or service online	1.8	1.0	1.7	0.9	0.9	
<b>Social Networking</b>						
Social Networking Site	4.2	1.3	4.5	1.0	2.2	
<b>Microblogging</b>						
Microblogging	1.3	1.9	1.1	1.7	1.2	
<b>Personal Communication</b>						
Newsgroups/Discussion Groups	1.6	1.5	0.9	1.1	5.2	*
Email	4.3	0.8	4.5	0.8	2.1	*
Chat	1.8	1.9	1.5	1.7	1.7	
Making telephone calls using the Internet	1.7	1.6	2.2	1.7	2.6	*
<b>Playing</b>						
Playing Games Online	1.6	1.6	0.7	1.0	7.2	*
Participating in betting and gambling online	0.5	1.0	0.1	0.4	5.8	*

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Virtual Worlds	0.1	0.6	0.1	0.4	1.3	
Entertainment						
Downloading music	2.1	1.5	1.8	1.2	2.5	*
Downloading videos	1.7	1.6	0.9	1.2	5.1	*
Watching television over the world wide web	2.5	1.6	2.5	1.4	0.1	
Listening to music over the world wide web	3.4	1.6	3.0	1.5	2.5	*
Leisure						
Making travel reservations/booking	0.8	0.7	1.0	0.7	2.7	*
Looking for information about what is on locally	1.2	1.1	1.3	0.9	0.9	
Looking for travel information	1.4	1.0	1.5	0.9	0.7	
Banking						
Paying bills online	0.8	0.9	0.7	0.9	0.7	
Using online banking services	1.8	1.4	2.0	1.3	1.1	
Checking investments	0.3	0.8	0.2	0.7	0.5	
Online Dating						
Online Dating	0.1	0.4	0.1	0.5	0.2	
Total Breadth of Internet Use	40.0	11.9	35.0	9.4	4.2	*

\*  $p < 0.05$

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Table 1 shows males' total breadth of use of the Internet was significantly higher than females'. There were also a number of gender differences in participants' pattern of use of the Internet. Males were more likely to use the Internet for games and entertainment than females. They were more likely to play games online and to bet online. They were also significantly more likely to use the Internet for entertainment. Males were significantly more likely to download music, download videos, and listen to music online. Males were more like to use websites with adult content and more likely to get information about a product. Females, on the other hand, were more likely to use the Internet for communication compared to males. They were significantly more likely to use email and telephone over the web than males, however males were more likely than females to use newsgroups. Females used social network sites significantly more than males. Females were more likely than males to make travel reservations online. There were no gender differences observed in terms of using the Internet for banking activities or health activities.

The second aim of the study was to examine the relationship between Internet identification, Internet anxiety and Internet use. Students had a mean of 2.0 (SD = 0.4) for Internet anxiety and 3.1 (SD = 0.4) for Internet identification. There was a significant positive relationship between Internet identification and total breadth of Internet use ( $r = 0.32, p < 0.05$ ) and between Internet identification and hours on the Internet ( $r = 0.32, p < 0.01$ ). There was a weak positive relationship between Internet anxiety and age the participants started using the Internet ( $r = 0.13, p < 0.05$ ) and a weak negative relationship between Internet anxiety and hours on the Internet ( $r = -0.10, p < 0.05$ ).

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There was no significant relationship between Internet anxiety and total Internet use ( $r = -0.06, p > 0.05$ ).

## CONCLUSION

The current study found that males had a greater breadth of Internet use than females; they used the Internet more for games and entertainment than females. The differentiation between males and females is more distinct in the current study than it was ten years ago, because in our previous research we found no gender differences in the use of the Internet for communication, whereas in the current study we found gender differences in communication and that females were using social network sites more than males. We also found, like the previous study, that Internet Identification and Internet Anxiety were both related to Internet use. Our findings indicate that rather than transcending or overcoming gender differences in wider society, Internet use by males and females seems to reflect, and in some instances even exacerbate, these broader trends. Thus we support the view put forward by Helspar<sup>7</sup> and others<sup>9</sup> that gender differences in the use of the Internet are more a reflection of gender differences in wider society and thus more resistant to change than some people have suggested<sup>3-5</sup>. Furthermore it's important to continue to investigate these differences because of the importance of the Internet in virtually every aspect of our lives and the erroneous assumption that all young people have similar and high levels of technology ability and experience<sup>10</sup>.

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