BRIEF REPORT

NetGirls: The Internet, Facebook, and Body Image Concern in Adolescent Girls

Marika Tiggemann, PhD*
Amy Slater, PhD (Clin Psych)

ABSTRACT

Objective: The primary aim of the study was to examine the relationship between Internet exposure and body image concern in adolescent girls, with a particular focus on the social networking site of Facebook.

Method: A sample of 1,087 girls in the first two years (Years 8 and 9) of high school (aged 13–15 years) completed questionnaire measures of Internet consumption and body image concerns.

Results: The overwhelming majority of girls (95.9%) had access to the Internet in their home. Time spent on the Internet was significantly related to internalization of the thin ideal, body surveillance, and drive for thinness. Further, 75% of the girls had a Facebook profile, and spent an average of 1.5 hours there daily. Facebook users scored significantly more highly on all body image concern measures than non-users.

Discussion: It was concluded that the Internet represents a potent socio-cultural medium of relevance to the body image of adolescent girls. © 2013 Wiley Periodicals, Inc.

Keywords: Internet; media exposure; Facebook; body image; drive for thinness; adolescents

(Int J Eat Disord 2013; 46:630–633)

Introduction

Widespread body dissatisfaction, particularly with body shape and weight, has been well documented among adolescent girls. One widely accepted account, sociocultural theory,[1,2] contends that the current inordinately thin beauty ideal for women is transmitted by a number of sociocultural influences, of which the media are the most pervasive and powerful. In support, an extensive body of correlational research, including two meta-analyses,[3,4] has demonstrated links between fashion magazine or television consumption and various indices of body dissatisfaction or disordered eating.

However, Australian adolescents, like their counterparts elsewhere, are increasingly turning to other forms of media, most notably the Internet. Both Australian and US youth are reported to spend an average of more than 1.5 hours online per day outside of schoolwork.[5,6] Indeed, adolescents have been referred to as the "defining users" of the Internet.[7] Although young people use the Internet for a variety of purposes, there are a wide range of Internet sites that promulgate thin ideals of female beauty, often targeted at adolescent girls.[8,9] In addition, many adolescent girls access social networking sites, in particular Facebook.[6] These sites allow users to construct their own personal pages and to connect easily with people in their networks. While research on Facebook is increasing exponentially[10,11] and a number of risks (e.g., cyberbullying) have been identified,[12] there has been little consideration of any body image implications.

To our knowledge, only one study has specifically investigated the relationship between overall Internet exposure and body image concerns. In a small sample of adolescent girls recruited from one single-sex private high school, Tiggemann and Miller[13] reported that Internet exposure was correlated with body image concerns, including drive for thinness. Further analysis indicated that there were no relationships with time spent on YouTube, Google, or MSN, but that time spent on Facebook, and to a lesser extent MySpace, was related. The authors speculated that it was the interactiveness of social networking sites that distinguished them from other Internet sites.

Thus, the aim of the present study was to replicate and extend investigation of the relationship between Internet exposure and body image concern in a much larger and more diverse sample of adolescent girls. The major prediction was that amount of Internet exposure would be positively correlated with body image concerns, as would be Facebook use.

Accepted 13 April 2013

Supported by DP0986623 from Australian Research Council Discovery Project Grant.

Correspondence to: Dr Marika Tiggemann, School of Psychology, Flinders University, GPO Box 2100, Adelaide, South Australia 5001. E-mail: marika.tiggemann@flinders.edu.au

School of Psychology, Flinders University, Adelaide, South Australia

Published online 25 May 2013 in Wiley Online Library (wileyonlinelibrary.com). DOI: 10.1002/eat.22141

Method

Participants

Participants were 1,087 girls in Years 8 and 9 (the first two years of high school), with a mean age of 13.7 years (SD = 0.7). They were recruited from 18 schools across South Australia, selected by the Department of Education and Children's Services to cover metropolitan and rural, private and public, and a wide range of socioeconomic status. Mean socioeconomic status decile (based on postcode) was 5.6 (range = 1–10, SD = 2.9). A language other than English was regularly spoken in 14.6% of homes, with the most common languages being Greek (2.7%), followed by Vietnamese (2.1%).

Measures

Internet Exposure. After some general questions, participants reported how long on average they spent on the Internet each day (not for homework) during the week and on the weekend separately (none, 30 min or less, about 1 h, about 2 h, about 3 h, about 4 h, about 5 h, 6 h or more) [recoded to represent hours, i.e., 0, 0.5, 1, 2, 3, 4, 5, 6, respectively]. They then indicated on a list which Internet services/sites they used and their three favorite websites.

In the final section, girls were asked whether or not they had a MySpace profile, and if so, how much time they spent on MySpace, whether their profile was public or private, and how many "friends" they had. These questions were repeated for Facebook.

Body Image Concerns. Internalization of beauty ideals was measured by three items from the Sociocultural Attitudes Toward Appearance Questionnaire.[14,15] Body surveillance was assessed by the Objectified Body Consciousness Scale—Youth.[16] These have both been suggested as precursors for drive for thinness, which was assessed by the Eating Disorder Inventory[17] as its primary behavioral indicator of the characteristics associated with anorexia nervosa.

Procedure

The protocol was approved by the Flinders University Research Ethics Committee. Active parental consent was required, as well as assent by the girls. Overall participation rate was 44.2%. The questionnaire, entitled "NetGirls," was completed in small groups during normal class time.

Results

Internet Exposure

The great majority of girls (95.9%) had access to the Internet in their home, with approaching half (43.4%) in their own bedroom. They indicated that their modal Internet use was "about 2 hours" each day for both during the week ($M = 2.23$, SD = 1.76) and on the weekend ($M = 2.47$, SD = 1.82). As these two indicators were highly correlated ($r = .63$), they were averaged to obtain a single measure of Internet usage. Many of the Internet services were highly endorsed. Those most used were email, instant messaging, social networking, and streaming media (all >80%). A sizable minority (all around 20%) also endorsed fashion, celebrity/gossip, shopping, and magazine websites. Their overwhelmingly favorite self-reported website was Facebook (54%).

TABLE 1. Correlations between time spent on the internet and the social networking sites of MySpace and Facebook, and body image concerns

	Internalization of Ideal	Body Surveillance	Drive for Thinness	Multiple *R*
Internet exposure	.11*	.17*	.12*	.18*
MySpace + Facebook	.16*	.24*	.16*	.26*

Note: *$p < .001$

Of the sample, 46.3% reported that they had a MySpace profile. These girls spent an average of 34.3 min (SD = 57.8) there per day. Many more (75.1%) had a Facebook profile, and spent an average of one and a half hours ($M = 92.3$ min, SD = 89.6) on Facebook daily. Most profiles (79.3%) were private, although 19.8% were public. They had an average of 214.5 (SD = 174.9) Facebook "friends."

Relationship between Internet Exposure and Body Image Concerns

The zero-order correlations between internet exposure and the outcome variables are provided in **Table 1**. It can be seen that internet exposure was significantly correlated with each of internalization, body surveillance, and drive for thinness. Results were formally analyzed by a series of multilevel (hierarchical linear) models, to take into account that observations were not independent, but rather that students (Level 1) were nested within schools (Level 2). Such adjustment for clustering reduces the possibility of Type I error.

For internalization of the thin ideal, only 3% of the variance in outcome was between schools (ICC = .035), and the (Level 2) effect of school was not significant (Wald $Z = 1.81$, $p > .05$). Importantly, however, the (Level 1) effect of internet exposure was statistically significant, $F(1, 1{,}064.78) = 13.21$, $p < .001$. The same pattern of results was observed for the other outcomes. The effect of Internet exposure was significant on both body surveillance, $F(1, 1{,}041.25) = 29.43$, $p < .001$, and drive for thinness, $F(1, 1{,}040.32) = 14.58$, $p < .001$. Thus the major prediction was confirmed.

Table 1 also provides the correlations between the total time reported spent on MySpace and Facebook (combined) and body image concern. Again all correlations were statistically significant, confirmed by

TABLE 2. Mean (SD) scores on body image concerns for Facebook non-users and users, and correlations with number of "friends"

	Range	Non-Users ($n = 269$)	Users ($n = 812$)	*t*-Value	No. Friends (Users) *r*
Internalization	3–15	7.45 (2.94)	8.07 (2.87)	3.02*	.13**
Body Surveillance	4–28	17.44 (6.27)	19.00 (5.73)	3.74**	.20**
Drive for Thinness	7–42	17.09 (9.18)	19.54 (9.64)	3.63**	.19**

Note: * $p < .01$; ** $p < .001$

significant multilevel analyses (respective Fs = 25.68, 56.53, 21.7, ps $< .001$).

Table 2 offers an examination of specifically Facebook users (the most common and popular Website). It can be seen that they scored significantly higher on all measures of body concern than their non-user counterparts. Among the subsample of Facebook users, number of Facebook friends was significantly correlated with each of internalization, body surveillance, and drive for thinness (all ps $< .001$).

Discussion

The major finding of the study is clear. As predicted, Internet exposure was associated with internalization of the thin ideal, body surveillance, and drive for thinness in this sample of adolescent girls. This finding replicates in a much larger and more diverse sample Tiggemann and Miller's preliminary result.[13] It also confirms the Internet as an additional form of media (beyond fashion magazines and television) associated with body image concerns,[3,4] with an equivalent (small) effect size.[4]

The modal time spent online of about 2 h per day is consistent with current statistics for young Australians.[5] The girls used the Internet for many purposes, including streaming media and visiting shopping, fashion, celebrity, and magazine websites, all likely to have an appearance focus and to promulgate thin beauty ideals.[8,9] Nevertheless, one of the most highly endorsed uses was for social networking, particularly Facebook, an activity associated with negative body image. Facebook users scored significantly higher on all indicators of body image concern than their non-user counterparts. In addition, across the whole sample, time spent on the social networking sites of MySpace and Facebook was correlated with higher levels of internalization of the thin ideal, body surveillance, and drive for thinness. It seems likely that appearance concerns are aroused as users construct their personal profile. Further, the speed and ease with which girls can connect with their peers (here Facebook users had on average over 200 'friends') may provide the opportunity for ready and multiple social comparisons, known to be associated with poorer body image.[18]

The study has practical implications for media literacy programs, which have shown some success in combating negative body image.[4] These should now also include consideration of the Internet (in addition to print and televised media). Adolescent girls could usefully be educated to become more critically aware of the idealized images that are presented to them online, as well as of the potential appearance and other pressures involved in participation in social networking sites.

As in all studies, the above findings need to be considered in the context of a number of limitations. The most obvious is that (like previous studies of traditional media exposure), measures of Internet usage were broad and self-report. Future research should use more sophisticated technologies, such as computer tracking, to obtain more precise and objective measures. In addition, the present study was correlational in design and thus firm causal conclusions cannot be drawn. While it is possible that Internet exposure impacts on body image concerns, the converse is equally plausible. Prospective designs that track both Internet exposure and body image concerns over some time are required.

In conclusion, the present study has demonstrated a link between the use of the increasingly important medium of the Internet, especially social networking sites, and body image concern in a large and diverse sample of adolescent girls. As such, it has extended knowledge about the role of the media in contemporary adolescent life.

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