



# Internet Filtering Technology and Aversive Online Experiences in Adolescents

Andrew K. Przybylski, PhD<sup>1,2</sup>, and Victoria Nash, PhD<sup>1</sup>

**Objectives** To evaluate the effectiveness of Internet filtering tools designed to shield adolescents from aversive experiences online.

**Study design** A total of 1030 in-home interviews were conducted with early adolescents aged from 12 to 15 years ( $M = 13.50$ ,  $SD = 1.18$ ) and their caregivers. Caregivers were asked about their use of Internet filtering and adolescent participants were interviewed about their recent online experiences.

**Results** Contrary to our hypotheses, policy, and industry advice regarding the assumed benefits of filtering we found convincing evidence that Internet filters were not effective at shielding early adolescents from aversive online experiences.

**Conclusions** Preregistered prospective and randomised controlled trials are needed to determine the extent to which Internet filtering technology supports vs thwarts young people online and if their widespread use justifies their financial and informational costs. (*J Pediatr* 2017;184:215-9).

Between 2005 and 2015, the time 12- to 15-year-old British adolescents spent online increased from 8 to nearly 19 hours weekly,<sup>1,2</sup> raising concerns for parents, educators, and politicians about the possible negative experiences children may have online. Although much of the research literature categorizes such experiences as “risky” or “harmful,”<sup>3</sup> a focus on aversive online experiences, events that are judged subjectively as unpleasant by individuals experiencing them, may be more accurate.<sup>3</sup> Examples of aversive online experiences discussed in research literature include exposure to pornographic content, contact from strangers, bullying, or sexting. It can be difficult to classify such experiences as inherently positive or negative. “Being contacted by a stranger online,” for example, may be negative if that stranger is a bully or fraudster, or positive, if another adolescent sharing common interests.<sup>4</sup> A growing body of research provides varying accounts of aversive experiences.<sup>5-7</sup> Between 10% and 40% of adolescents experience online bullying,<sup>6</sup> whereas 10%-33% report receiving sexually explicit texts.<sup>7</sup> Although this sounds alarming, pronounced limitations hinder understanding of the wider scope of aversive online experiences. Existing work largely relies on self-report surveys, often without convergent reports.<sup>8</sup> Such data are liable to influence by so-called mischievous responders,<sup>9</sup> participants whose extreme patterns of responding drive spurious correlations<sup>10</sup> and inflate estimates of problematic technology use.<sup>11</sup>

Despite this, Internet-filtering technologies have long been used in schools and libraries as a means of mitigating adolescents’ experiences online.<sup>12</sup> In the United Kingdom, major British Internet service providers now filter new household connections by default. Such technology is costly to develop<sup>13</sup> and maintain<sup>14</sup> but also carries significant informational costs. Even sophisticated filters overblock legitimate content.<sup>15</sup> This is onerous for those seeking information about sexual health, relationships, or identity and might have a disproportionate effect on vulnerable groups such as lesbian, gay, bisexual, and transgender teens. Striking the right balance between protecting adolescents and respecting their rights to freedom of expression and information is a formidable challenge.<sup>16</sup>

Given the costs associated with Internet filtering, we might expect clear evidence for its efficacy. Previous studies, however, indicate that home Internet filtering is uncorrelated with adolescents encountering inappropriate material.<sup>17,18</sup> Other work reports only modest effects.<sup>19</sup> Given advances in filtering technology, we might now expect evidence affirming the efficacy of Internet filtering in preventing unwanted exposure to aversive online experiences. The present study assessed the effectiveness of network-level Internet filtering. We hypothesized that adolescents living in households in which caregivers use filtering will be less likely to report having aversive online experiences in the past year. Furthermore, given that some young Internet users are more technically skilled than others,<sup>20</sup> we predicted that effectiveness of filtering technology curbing aversive online experiences would be diminished for young people technically able to circumvent the technology.

## Methods

This study analyzed data from a total of 1030 in-home interviews with 515 adolescents (258 females) ranging in age from 12-15 years ( $M = 13.50$ ,  $SD = 1.18$ )

BF Bayes factor

From the <sup>1</sup>Oxford Internet Institute; and <sup>2</sup>Department of Experimental Psychology, University of Oxford, Oxford, United Kingdom

The authors declare no conflicts of interest.

0022-3476/\$ - see front matter. © 2017 Elsevier Inc. All rights reserved.

<http://dx.doi.org/10.1016/j.jpeds.2017.01.063>

and an equal number of caregiver respondents collected as part of Ofcom's Children and Parents Media Use and Attitudes Report.<sup>21,22</sup> Interviews were conducted between April and June of 2015, and participating households were selected, at random, by the use of a stratified sampling approach based on a joint distribution of UK census and geographic data. Sampling units were determined by defining the number of households present in a set geographic area, and participants were identified within these units by the use of stratified quotas based on age and sex of adolescents and the socioeconomic status of the households. Structured interviews were conducted separately for caregiver and children in their homes. All code and relevant study materials are available for download via the Open Science Framework.<sup>23</sup>

## Measures

### Internet Filtering

Parents were asked if they used technical tools to control or manage their child's access to online content. Specifically, they were asked if they use: "Content filters provided by your broadband Internet service provider (eg, BT, TalkTalk, Sky, and Virgin Media) where the filters apply to ALL of the computers or other devices using your home broadband service (also known as home network filtering)." One-third of parents (115, 34% of valid responses) parents said they used this technology and two-thirds (277, 66%) said they did not. A total of 123 parents (24%) did not know or were unaware of these technologies on the day of the interview. Exploratory analyses indicated that lack of knowledge about filtering use was not associated with children's age, sex, or whether they lived in an urban or rural area.

### Aversive Online Experiences

Adolescents were asked about their experiences online in the past year. A list of 7 negative experiences ranging from "seeing something of a sexual nature that made you feel uncomfortable" to "seeing or receiving something troubling online like a scary video or comment or something that makes you feel scared." Nearly 1 in 6 (71, 14.4%) reported at least one significant aversive experience online.

### Filter Circumvention

Adolescents also were asked about their technical competencies, whether they knew how to "Unset any filters or controls

that are there to stop certain websites being viewed" (49, 9.6% reported that they felt competent at being able to work around home network filtering).

## Results

### Preliminary Analyses

**Table I** presents the observed frequencies of 7 aversive online experiences for participants; **Table II** shows the results from zero-order bivariate analyses. Identifying as female (coded 1) was associated positively with reporting receiving troubling communication, being contacted by a stranger, or feeling under pressure to send photos or personal information online. Older adolescents reported at least one negative experience, yet analyses did not show any differences in filtering by sex or knowledge about how to circumvent Internet filters observed. In nearly all cases, save the interrelations between difference forms of aversive online experiences, these correlations were modest.

### Primary Analyses

**Internet Filtering.** The primary hypothesis concerned the effectiveness of network-level Internet filtering in reducing exposure to aversive online experience. Given dichotomous data, contingency tables to evaluate the effects of Internet filtering used 2 statistical methods. First, null-hypothesis significance testing (ie,  $\chi^2$ ) was used to determine whether there were statistically significant differences between filtered and nonfiltered households. Second, Bayesian hypothesis testing using the default prior quantified the extent to which our data supported our vs the null hypothesis (**Table III**; available at [www.jpeds.com](http://www.jpeds.com)). For each comparison, a Bayes factor (BF), a ratio of evidence supporting the null ( $BF_{01}$ ) and alternative ( $BF_{10}$ ) hypothesis, was computed. If observed BF for the alternative (ie,  $BF_{10}$ ) were 3.00 or greater, we considered the alternative hypotheses to be supported; if BFs were 0.33 or less, we considered the null hypothesis to be supported. If BFs fell between 0.33 and 3.00, we considered the results equivocal.<sup>24,25</sup> Results from these analyses did not support our hypothesis regarding Internet filtering. No  $\chi^2$  tests rejected the null in the direction predicted. Contrary to our prediction, adolescents were more (not less) likely to report feeling pressure to share if caregivers reported using filters ( $P = .035$ ). BF evidence provided equivocal to strong evidence supporting the null over what was hypothesized ( $BF_{01} = 1.44-12.29$ ).

**Table I.** Frequency of aversive online experiences reported by British adolescents

Questions	Overall	Sex		Age, y			
	Total	Boys	Girls	12	13	14	15
Another person pretending to be you online, %	4.3	4.7	4.0	4.2	5.1	3.3	4.8
Another person using your password to get at your information, %	3.9	3.4	4.4	3.2	2.9	2.0	7.6
Seeing something of a sexual nature that made you feel uncomfortable, %	2.0	1.3	2.6	3.1	0.9	1.2	2.7
Seeing or receiving something troubling online like a scary video or comment or something that makes you feel scared, %	3.2	1.3	5.0	1.8	2.9	5.1	2.8
Being cheated out of money online, %	1.5	1.4	1.7	0.6	1.9	1.0	2.7
Being contacted by someone you don't know online who wants to be your friend, %	8.1	5.3	10.9	4.8	5.6	9.1	12.9
Feeling under pressure to send photos or other information about yourself to someone, %	1.8	0.0	3.7	0.7	0.9	3.0	2.6
Had at least one significant negative experience online in past year, %	14.4	12.4	16.5	11.5	10.7	12.3	23.2

Percentages reflect adjusted and valid proportions of adolescents reporting significant aversive experiences online in the past year weighted by representativeness across the United Kingdom.

Download English Version:

<https://daneshyari.com/en/article/5719606>

Download Persian Version:

<https://daneshyari.com/article/5719606>

[Daneshyari.com](https://daneshyari.com)