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Heavy Media Use, Whether Old or New, Associated with Poorer Mental Health in U.S. Young People

Results released today from the National Annenberg Survey of Youth (NASY) indicate that although concerns about excessive Internet use may be justified, heavy use of television may be an even larger concern. In one of the most extensive national surveys of media habits over a two-year period, six different types of media use were identified in young people ages 14 to 24. Among these types, a small group of *Heavy Internet and TV* users was projected to represent about 10% of American youth. This group uses the Internet much more than others but also uses TV at a higher rate. The group tends to report more recent experiences of hopelessness than other young people (51% vs. 39% on average). At the same time, a much larger group of *Heavy TV* using youth (17%) uses television at a very high rate but only average amounts of the Internet. Nevertheless, this group also reports high levels of hopelessness (49%).

The results of the study conducted by the Annenberg Public Policy Center are being presented at the meetings of the International Communication Association in Boston this weekend. The study involved over 700 young people interviewed in each of years 2008 and 2009. The six patterns of media use were found across both years of the study, indicating that they are quite characteristic of young people's media use. The current report focuses on the types found in 2009. However, a more recent survey in 2010 found the same types as in the prior years.

"Old media, such as TV, may be just as problematic as new media," said Dan Romer who directs the NASY. "Many of the concerns about heavy Internet use may just be the reaction to a newer form of media. To understand the role of media, one has to look at the entire pattern of media use and not just the Internet."

The survey identified the different types of media use patterns after controlling for differences in age and gender. That we are able to classify young people solely in regard to their media use suggests the importance of media use in the lives of young people. The *Heavy Internet & TV* group and *Heavy TV* group only stood out from the other groups demographically by being somewhat less populated by non-Hispanic white youth (50% and 46%) than average (62%) (see Table 1 below for demographic differences).

The *Heavy Internet/TV* group tends to use the Internet for blogging, social networking, and video game playing (see Figure 1 below for differences in indices of media use). It also tends to get lower grades in school than other groups (see Figure 2 below for indices of outcomes) and to participate less in sports and other extracurricular activities. The *Heavy TV* group tends to watch TV primarily for entertainment purposes but also reports above average use of magazines, movies, and news programming. The group does manage, however, to participate in sports and clubs at about average levels.

The largest group*, The Information Seekers*, is projected to account for nearly a quarter of young people. This group was quite well adjusted with lower rates of hopelessness (33% reported having such experience). This group tends to use media in moderate amounts with greater emphasis on consumption of news, books, and other information. In addition, these youth are physically and socially active and tend to get high grades in school. Not surprisingly, this group also tends to live in the wealthier and suburban neighborhoods.

At the other end of the spectrum, a large group of young people (about 21%) is relatively disengaged from all media use. This *Disengaged* group only tends to use social networking at an average level as well as the Internet for schoolwork. Otherwise, this group tends to stay away from TV, the Internet, and other forms of media. At the same time, the group is also physically active with above average levels of participation in sports. Nevertheless, the group also reports higher levels of hopelessness than youth comparable in age and gender (41%).

A not insignificant group of young people (about 14%) is still relatively dependent on TV without as much access to the Internet as others. Not surprisingly, this *TV Only* group tends to be more rural, where access is still relatively limited, and to live in neighborhoods with lower median incomes. It is also relatively low in hopelessness compared to others (28%).

A final group (about 14% in size) does not use the Internet at very high levels but scores high on indices of online communication uses, such as social networking and blogging sites. This *Online Communicator* group, not surprisingly, is also heavily involved in extracurricular activities. It also reports lower levels of hopelessness (34%).

Changes in Media Use Over Time

"Although parents may be concerned about their children's media use," noted Romer, "the good news is that what a young person does one year is often not likely to be the same a year later."

Despite the fact that the types of media use remain stable, membership in the groups is quite fluid. For example, we find that only 12% of the *Heavy Internet/TV* group remains in that cluster one year later. This is perhaps reassuring in that this type of media use is most disruptive of healthy adolescent adjustment. Similarly, only 12% of the *Heavy TV* group remains in that cluster one year later.

The most stable groups over time are the *TV Only* (63%) and the *Information Seekers* (48%). The high degree of movement across media patterns suggests that young people are still experimenting with their preferences for media.

Despite the large amounts of movement between the media types, there was relatively little change in overall levels of media use across the two years of the study. As seen in Table 2 below, mean levels of reported daily TV and Internet use changed little with a small increase in Internet and decline in TV over time. Nevertheless, social networking activity increased with a jump from 51% to 61% who said they use these platforms most days of the week. Also, video game use increased with 77% saying they have used them compared with 68% the year before. About a quarter of the panel said they played video games most days of the week in 2009.

Media Use May Reflect Problems Rather Than Create Them

It is important to note that one cannot attribute outcomes, such as mental health status, to the use of any or all of the media that characterize the six different groups. The groupings show that young people can be classified by the way they use media. But the groupings only show associations with those media use patterns. They do not imply that those uses caused the association. For example, youth who are depressed may gravitate to TV use or the Internet as a means of coping with their problems. Thus, although media use may be a marker of underlying problems, it may not be a cause.

Methodology

The survey was conducted by telephone in the summer and early fall of 2008 and 2009 by Abt SRBI, Inc., using random-digit dialing procedures. The survey is designed by the Adolescent Communication Institute of the Annenberg Public Policy Center of the University of Pennsylvania. The survey included 715 respondents across both years with young people ages 14 to 24 across the 48 contiguous states. The response rate for the 2008 survey was approximately 50 percent, which is comparable to the rate obtained by the CDC in its national telephone surveys of behavioral risk factors in adults. Of those interviewed in 2008, 58% were reinterviewed in 2009. Results are presented for the 2009 sample and are weighted to represent national proportions for age, gender, education, and region of the country. Respondents receive $10 in appreciation for their participation, and $25 for participation in the follow-up survey. Error ranges for the survey vary with the question and subgroup examined. For the entire sample of 715 respondents, the maximum error is +/- 3.7%.

Questions in the Survey

Internet access was measured by an item that asked if respondents had "access to the internet at home or somewhere else?" If respondents reported having access, they were asked about hours typically spent online, as well as specific uses of the Internet, such as social networking, blogging, entertainment, and online information acquisition.

Hours online was determined by asking respondents how many hours they spend online on average for "a typical weekday. " Values were coded as "Less than one hour" = .5, "one to two hours" = 1.5, "three to five hours" = 4, "six to eight hours" = 7, and "more than eight hours" = 10 hours. Respondents without access to the Internet were coded as 0.

Hours of television viewing was determined by asking respondents how many hours on average they spend viewing TV for "a typical weekday." Values were coded as "Less than one hour" = .5, "one to two hours" = 1.5, "three to five hours" = 4, "six to eight hours" = 7, and "more than eight hours" = 10 hours.

Hours of music listening was determined by asking respondents how many hours on average they spend a day listening to music. Responses were coded as "Less than one hour" = .5, "one to two hours" = 1.5, "three to five hours" = 4, "six to eight hours" = 7, and "more than eight hours" = 10 hours. This question was only asked in 2009.

Use of social media was measured by items that asked how often respondents a) "use the Internet to IM or chat with friends", b) "update an online journal or blog using journals like Blogger or Xanga", and c) "use online social network sites like Myspace or Facebook." Responses ranged from 0 (*Never*) to 2 (*Most days*). A factor analysis indicated that items (a) and (c) could be collapsed into a single score representing online socializing.

Online information seeking was measured by four items that asked "how often, if ever, do you use the Internet to find information about the following: a) local, national or international news, b) politics or government, c) entertainment like music, movies, or television, and d) something for schoolwork?" Responses to these questions ranged from 0 (*Never*) to 2 (*Most days*). Based on a factor analysis, items (a) and (b) were averaged to form an online information seeking composite, while items (c) and (d) remained separate.

Traditional news media. To measure use of traditional news media, participants were asked to report how often they: a) "read an actual copy of a newspaper", b) "watch national nightly TV news or a cable station such as CNN", c) "watch local TV news that comes on before the national news or again at 10 or 11 p.m.", d) "listen to a radio news show dealing with the events of the day?" Response categories ranged from 0 (*Never*) to 2 (*Most days*). Based on a factor analysis, items (b) and (c) were averaged to form a composite variable representing use of television news, while the remaining items remained separate.

Entertainment media use was measured by asking how often respondents do the following: a) "watch a movie at home on TV, using a DVD or VHS player, or on a computer", b) "watch a movie at a theatre", c) "watch a TV show that you are following", d) "read a book", e) "read a magazine", and f) "play video games on a computer or some other device." Responses to these questions ranged from 0 (*Never*) to 2 (*Most days*).

Academic performance was measured by a question that asked those respondents who were enrolled in school during the last spring to report "the approximate letter grade average received." This item was coded into a five-point scale with higher values indicating higher GPA (F = 0, D = 1, C = 2, B = 3, and A = 4).

Extracurricular activity. Involvement in extracurricular activities was measured by asking how often respondents "participate in a club or other extra-curricular activity." Responses were coded on a three-point scale ranging from 0 (*Never*) to 2 (*Most days*).

Sports participation was measured by asking "How often do you participate in a sport?" Responses ranged from 0 (*Never)* to 2 (*Most days*).

Experiences of Hopelessness. All respondents were also asked about their experiences of depressive symptoms in the past 12 months. This question is commonly used in major mental health surveys with adolescents. "During the past 12 months, how often, if ever, did you feel so sad or hopeless for two weeks or more in a row that you stopped doing your usual activities?" Answers were recorded as "never, once, twice, three or more times." Any answer in the affirmative was taken as yes for the purposes of this study.

The Adolescent Communication Institute (ACI) was created by the Annenberg Foundation in 2002 as part of the Annenberg Public Policy Center at the University of Pennsylvania. ACI aims to inform researchers, policymakers, and the public regarding strategies to prevent risks to healthy adolescent development and to enhance the well-being of youth. It conducts the annual National Annenberg Survey of Youth, the Annenberg Coding of Health and Media Project, and sponsors reviews of research regarding adolescent mental and behavioral health by panels of experts.

See http://www.annenbergpublicpolicycenter.org/ for more information.

Table 1: Demographic Characteristics of Media-Use Groups

	Information Seekers	Heavy TV	Disengaged	TV only	Heavy Internet & TV	Online Communicators	Total
	n = 173 (24%)	*n* = 119 (17%)	*n* = 152 (21%)	*n* = 97 (14%)	*n* = 69 (10%)	*n* = 103 (14%)	(*N* = 713)
Mean Age	17.9	17.4	18.2	18.6	18.0	17.8	18.0
Male	0.54	0.47	0.52	0.53	0.55	0.45	0.51
Hispanic	0.15	0.15	0.18	0.23	0.24	0.13	0.17
Non-Hispanic White	0.69	0.46	0.68	0.66	0.50	0.62	0.62
Non-Hispanic Black	0.10	0.32	0.06	0.10	0.16	0.17	0.14
Non-Hispanic Other	0.06	0.07	0.08	0.01	0.11	0.07	0.07
Urban	0.22	0.37	0.38	0.17	0.28	0.27	0.29
Suburban	0.64	0.44	0.46	0.45	0.54	0.51	0.51
Rural	0.14	0.19	0.16	0.38	0.18	0.23	0.20
Currently in school	0.89	0.92	0.89	0.61	0.80	0.88	0.85
Lives with parents	0.88	0.92	0.83	0.89	0.89	0.85	0.87
Working full/part time	0.55	0.34	0.54	0.42	0.33	0.44	0.46
Has Internet access at home	0.96	0.83	0.90	0.69	0.84	0.94	0.87
Has Internet access elsewhere	0.04	0.17	0.10	0.17	0.16	0.06	0.11
Neighborhood Income ($1,000)	51.8	43.9	46.7	40.3	48.0	45.0	46.5

Note: Other than age and income, all values are proportions of the group with the characteristic.

Table 2: Use and Change of Various Media from 2008 to 2009

	2008		2009		Change
Mean hours spent watching TV per day	2.7		2.4		¬
Mean hours spent online per day	2.6		2.8		--
	at least weekly %	**most days %**	**at least weekly %**	**most days %**	
Online:					
Social Networking	70	51	80	61	∨
Instant Messaging	57	40	59	37	--
Blogging	9	4	21	9	**NA**
Online Information:					
News	47	23	54	21	--
Politics	32	13	36	13	--
Schoolwork	68	39	74	43	--
Entertainment	78	53	83	53	--
Reading:					
Books	57	28	56	29	--
Magazines	50	16	45	13	¬
Newspapers	46	17	38	11	¬
Radio News	43	21	36	18	¬
TV News:					
Local	57	31	54	24	¬
National	48	22	40	14	¬
TV Shows	76	43	75	38	--
Movies:					
At Home	80	39	75	31	¬
At Theatre	23	4	20	4	--
Video Games	ever: 68		ever: 77		∨
			51	26	**NA**

Note: All variables are correlated between the two years ($p < .001$)
∨: increased from 2008 to 2009 ($p < .05$)
¬: descreased from 2008 to 2009 ($p < .05$)
--: no significant change between years
NA: not applicable due to a change in the question's wording

Figure 1. Indices of media use for each type of media user. Score of 0.0 is average for sample controlling for age and gender.

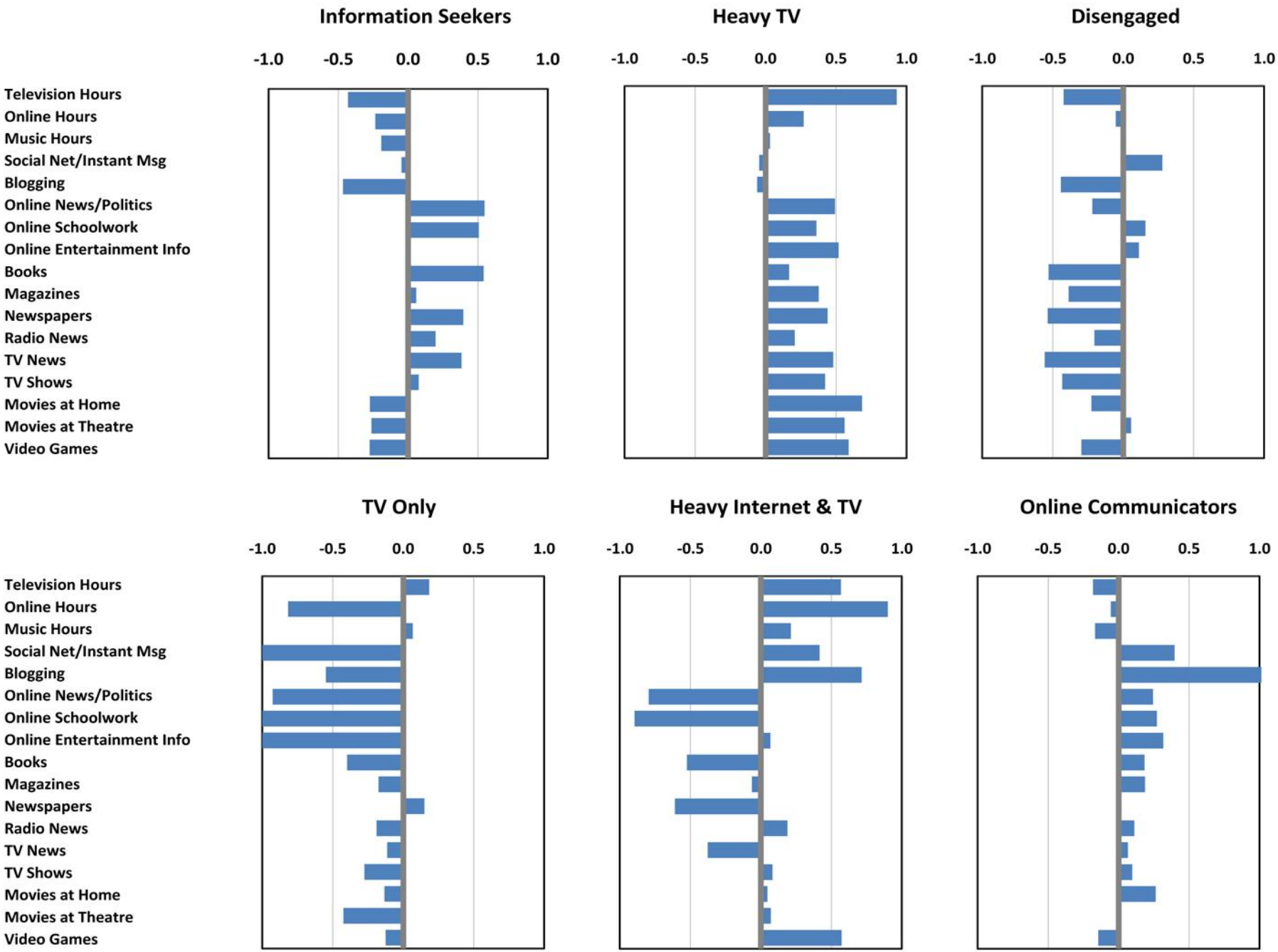

Figure 2. Indices of grade point average (GPA), participation in sports and clubs, and experiences of hopelessness in past 12 months. Score of 0.0 is average for sample controlling for age and gender.