

Comparing Methodologies for Measuring Internet and Traditional Media Use

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Abstract

There has been considerable debate over the accuracy of self-reported media use measures. This study compares two methodologies for studying Internet and traditional media use: online surveys and diaries. Undergraduate students from two universities (N = 425) were asked to (a) complete a survey and (b) keep a diary over the course of one day. Both instruments assessed how frequently they engaged in various media use activities, including television viewing, radio listening, Web surfing, email sending and receiving, music listening, and video game playing. Results indicate that survey estimates of media use are consistently higher than diary use, but both methods are consistently, moderately correlated with each other, per medium. Given a lack of certainty about which method is more accurate, a third method of data collection -- electronic use tracking -- is described

Comparing Methodologies for Measuring Internet and Traditional Media Use

The research debate over the accuracy of self-reported media use is not new (Coffey & Stipp, 1997; Reagan, 1996; Sheehan & Hoy, 1999; Yun & Trumbo, 2000; Zillmann & Bryant, 1985). Recent technological advances and increasing Internet penetration have stimulated new forms of data collection and new methodological research questions. For example, the Internet has recently enabled some survey research to move from expensive phone or direct mail methods to faster, less expensive email or web-based surveys. Initially low penetration of home Internet access thwarted obtaining generalizable samples through the web. As Internet penetration continues upward, so does the realization that the Internet can be the source of valid, representative samples.

To date, the vast majority of research assessing online data collections has focused on response rates and generalizability. Little empirical research exists from which to understand response differences between retrospective self-report web-based data and such other measures as diaries or electronic measurement. Our own plan has been to concurrently study and compare all three methods – self-reports, diaries and electronic assessment. In that light, this report compares the method of online survey response with diary reports from the same individuals, leaving electronic assessment for the next phase of our research.

Web-Based Surveys

Web-based surveys can be used efficiently to collect demographic, behavioral and attitudinal data, among others. The notable benefits to using web-based surveys include design flexibility (Schillewaert, Langerak & Duhamel, 1998), large samples (Kehoe & Pitkow, 1996), efficient data collection from time and cost perspectives, (Eastin, 2002; Yun & Trumbo, 2000), increased anonymity (Kiesler & Sproull, 1986), minimized interviewer error and bias

(McCullough, 1998), as well as the relative novelty of it. Limitations also exist. Although the generalizability of online samples is improving, they continue to be problematic (Yun and Trumbo, 2000). Further, multiple responses and ethical considerations (Greenberg, Eastin & Garramone, 2002) present problems for online data collection. Although these issues are relevant in the overall assessment of web-based data collections, they do not address how the response patterns in web-based surveys may differ from alternative forms of data collection.

Generally speaking, how do people estimate behavior frequencies? Cognitive scientists such as Sudman, Bradburn and Schwarz (1996) posit that people expend cognitive effort only to the extent required to form a minimally satisfying response. In other words, when asked to complete a survey, people are “cognitive misers” when it comes to estimating behavior frequencies. As cognitive misers, people use such response strategies as estimating an ongoing rate of behavior, then approximating this to the time period specified by the question. This method of reasoning typically leads to overestimating the behavior. Diary entries, on the other hand, have been considered by some a more accurate representation of use (Anderson, Field, Collins, Lord & Nathan, 1985). However, completing the diary entries places a heavier burden on the user throughout the data collection period. They must remember to use it each time. In addition, it may require users to report engaging in sensitive behaviors such as viewing sexual content or visiting pornographic web sites, if that is the focus of the research.

While there is a tendency for respondents to over-report their use of traditional media, research has generally found a moderately high correlation between retrospective self-reports and other benchmark measures. Van der Voort & Voojjs (1990) found a correlation of .54 between diary data and self-reported television viewing. Further, this relationship increased to .77 for older children with higher education and family income. For the Internet, Yun and

Trunbo (2000) compared snail-mail survey responses on various types of email use to email and web-based responses. Results indicated that both web and email survey formats produced significantly higher response levels of email sent and received, social email use, and task email use. Finally, and most relevant to this research, LaRose, Eastin and Gregg, (2002) reported for general Internet use a significant correlation ($r = .65$) between retrospective recall and diary data.

This study includes both Internet use measures and traditional media use measures in a single effort to map out similarities and differences between retrospective and diary reports of these behaviors. In addition, it provides parameters of Internet and traditional media use for a segment of the population that is traditionally heavy in use of most media— University students.

Methods

Participants

In the spring and summer of 2002, undergraduate students ($N = 425$) from two large Midwestern U.S. universities who were enrolled in introductory communication and telecommunication classes were recruited to participate in this study, for which they received extra credit. The vast majority (96%) were between the ages of 18 and 25 ($M = 21$), and 50% were female. Approximately 17% of students were freshmen, with 27% sophomores, 31% juniors, and 26% seniors. They came from a variety of different academic disciplines, and 62% reported living off campus. In addition, 65% said they had some type of job.

Procedures

The data collection process was divided into three phases, each by a different method. The first phase required participants to complete an online survey about mass media use. In the second phase, participants kept a diary of their media activities for one day. For the final phase, students were asked to install Internet use tracking software on their computers.

For the first phase, a survey instrument was created in HTML and placed on the Web. When voluntary participants accessed the survey site, the survey provided instructions about how to complete and submit it. Students could complete the online survey from Tuesday through Friday of the first data collection week.

Immediately after submitting their survey, participants received a screen online with information about the second phase of the study, the media use diary. Researchers visited classes the following week and handed out the diaries. The four-page diaries, printed on heavy cardstock, each had a day identified on them ranging from Sunday to Saturday, with all days represented equally. Students were instructed to fill out their diary on one designated day, yielding a composite week of media use from the diary data. The first page of the diary contained instructions about how to fill it out, and the next three pages asked about general media use and Internet uses. Students returned completed diaries to their class.

The third phase of data collection, scheduled to take place the week after the diaries were filled out, would have students install software on their computers that would track their Internet use, both in terms of times and activities. However, due to technical and recruitment problems, this phase of data collection was postponed and will be included in a replication of this study.

Survey Variables

The survey instrument contained measures designed to tap how frequently students used different media. All *time-spent* items had a scale ranging either from “0” to “more than 3.5 hours” or “0” to “more than 5.5 hours.” The scale levels were displayed in half-hour increments.

Television use, radio use, and Web use were each measured with five items. Respondents indicated how many hours they used each medium yesterday in the morning, afternoon, and evening, and on Saturday and Sunday.

Additionally, respondents were asked about time spent engaging in *specific Internet activities* yesterday, including surfing for class research and for general news and information, shopping or buying things, surfing for entertainment, chatting, using Instant Messenger, posting on or reading message boards, and emailing.

Email use was measured by asking for the *number of emails sent and received*. Six separate items asked about number of emails received from (and sent to) friends, relatives, and for school or work. These measures used scales with increments of “0,” “1-9,” “10-19,” “20-29,” and “30 or more” messages.

Another set of measures asked respondents about their *use of movies* and *use of videos*. Movie viewing was assessed by asking the number of movies viewed in a theater over the past four weeks; video viewing was measured by asking about the number of videos (either rented, borrowed, or owned) watched in the last week. These measures used a “0” to “7 or more” scale.

Music listening was assessed with two items, one asking about hours spent listening to music on CDs or tapes yesterday and the other asking about hours spent listening to music in MP3 format yesterday.

Print media use was measured with items asking about use of newspapers, magazines, and books (not counting textbooks). For newspaper use, respondents indicated both number of newspapers read yesterday, on a “0” to “4 or more” scale, and number of days spent reading a newspaper in the past seven days. Two items asked about the number of magazines and number of books read in the past month, on scales ranging from “0” to “7 or more.”

Six items measured *video game use*. Four asked how many hours were spent yesterday playing video games on the Web, on a computer (but not the Web), on a console system, and on a handheld system. The last two asked about overall video game use on Saturday and Sunday.

A final section of the survey asked for age, sex, whether or not they had a job, class level, college, living location (on or off campus), and grade point average.

Diary Variables

The diary instrument required participants to keep track of and log their media use activities throughout the course of one specified day. That day was randomly assigned.

The *general media use* page of the diary had ten rows, each corresponding to a media use session. Columns enabled the participants to write down the start and end times for each media use session, and to identify each medium accessed. Options were provided for TV, movie, video, radio, magazine, newspaper, book, music player, off-line video game by oneself or with others. Diarists could check as many boxes as applied in a given session, to account for multiple simultaneous uses (i.e., media multi-tasking).

The *first Internet use page* was formatted exactly as the general media use page, except the “nature of use columns” contained different headings. They were (1) watched a movie or video clip, (2) listened to music, (3) work-related information gathering, (4) entertainment-related information gathering, (5) online video game by self, and (6) online video game with others. The *second Internet use page* asked diary keepers to write down their “number of contacts” for overall email sent, email sent to family, email sent to friends, email sent for work or school, and email sent for other reasons. The same options were offered for email received. Diary keepers also were asked to write down the number of chat rooms they entered, the number of discussion groups they contacted, and the number of different people they instant messaged during the course of that one day.

Constructed Measures

Several composite measures were created. From the survey, *total television time yesterday*, *total radio time yesterday*, and *total Web time yesterday* were constructed by summing the three yesterday daypart scores for these activities. *Total music listening time yesterday* is the sum of listening to music on tape/CDs and computer music listening. *Total video game time yesterday* summed the computer, console, and hand-held video game use items. These composites were then added to their respective weekend use items, for television, radio, Web, and video game use, to create *total TV use*, *total radio use*, *total Web use*, and *total video game use* variables.

With the diary data, the first transformation was to calculate the number of minutes spent with general media and the Internet. Trained coders used the start and end time information to determine the number of minutes during each use session, and then all use sessions were added to create *total media use* and *total Internet use* variables. The minutes' data for each session were also used to determine how many minutes were spent with each specific type of medium, such as *TV time*, *radio time*, etc. Once all were converted to minutes, *total video game use (offline)* was formed by summing the two general media video game items and *total online video game use* by adding the two Internet video game items.

All time figures were transformed into both hours and minutes to make appropriate comparisons. Since the survey items had “capped” maximums, e.g., “more than 5.5 hours,” the diary hour figures also were capped so that their unlimited ranges did not inflate variances or means when the survey and diary results were compared. This makes for a slightly more conservative estimate of Internet and media use.

Results

The primary comparisons between the survey and diary methods are in Table 1. Seven different media measures can be compared in terms of units of time spent ‘yesterday.’ In addition, two email measures can be assessed by both methods.

There are two key findings. First, self-estimates of Internet and traditional media use are consistently higher when reported on a survey than when reported in a diary. Despite these absolute differences in projected mean level of activity, the second is that the two methods of collecting this information are consistently moderately correlated with each other.

In Table 1, the hourly estimates of time spent on the Internet, with television, with both on line and off line music, and with off line video games are consistently and significantly higher on the survey results. For example, the average time estimate on the Internet is three fourths of an hour greater on the surveys; this is the largest discrepancy found between the two methods. Television is 30 minutes longer and music is listened to for an additional 30 minutes. Table 1a indicates that same pattern for email received from others, but not for email sent.

Between the survey and diary methods, correlations range from .20 for listening to music off line to .58 for email sent. Internet estimates are correlated .39 and television time estimates are correlated .35. These are relatively strong correlations for two methods of data gathering not completed concurrently. On the other hand, if we were applying reliability estimate standards, most fall short of that criterion. The reliability alphas were .56 for the Internet time measure, .52 for television, .73 for email sent, .64 for email received, .42 for radio, .56 for computer music, .34 for video games offline and .44 for video games online, and .33 for music from tapes/CDs.

On an absolute media use basis, the survey results would have us believe that these respondents gave 9.3 hours to the Internet, television, radio, and off line music and video games. Even the diary results report out 7.5 hours of use for these same activities. Neither result would

be plausible save for the expectation that multi-tasking across media is a common activity -- that listening to music or having the radio on while surfing the Internet is not unusual. There also may be categories of use that are not mutually exclusive, e.g., time on the Internet for information and/or entertainment. But the magnitude of the time estimates accentuates the need to determine whether any particular media use is a primary or secondary activity, as well as which estimate is more accurate.

Finally, it is important to derive from Table 1 that as much time is now given to the Internet as is given to mainstream television, and that listening to music in some form is a major preoccupation for this group.

Because print media use is typically weak among university students in the U.S., units of measurement on the survey did not match those in the diary. Table 2 describes print media use. On average, 1 newspaper was looked at yesterday, and it tended to be the freely distributed university paper. That it was looked at every other day, on average, conforms closely to its five days per week publication schedule. Magazines received similar attention time.

The question as to whether the Internet competes for time with traditional media has been examined primarily in terms of television as the most comprehensive traditional medium in the lives of these young respondents. Table 3 contains a subset of the findings. It reports the significant correlations obtained by the Internet and by television with other media elements. It also is important to note that there is no evidence that Internet time diminishes television time, or vice versa. In the survey data, the two behaviors were not significantly correlated, and in the diary study, the correlation was a meager .11, statistically significant, but unimpressive.

Web time typically is correlated positively with auxiliary uses of itself; it correlates with email sent and received, with on-line video games (a portion of video game time overall) and

with listening to computer music. Television time appears to impact negatively on the use of radio, as well as receiving email, while showing a positive relationship with music listening. Television use also is positively related to computer based music.

A more descriptive set of Internet usage activities is in Table 4 for this sampling of students from two major universities in the U.S. We have already acknowledged that the difference in Internet use estimates between the two methods is about 45 minutes. Internet use functions are not completely parallel in the two methods, but each accesses a similar concept and provides insights as to the division of Web time among the users.

From the survey data, Internet use for instant messaging was the runaway winner among these respondents, approaching one and one half hours of daily activity. Entertainment, email activity, general news seeking and homework efforts were all in the range of 48-36 minutes on a daily basis. Note again the likelihood of multi-tasking in these Internet efforts. Taken as a univariate group, they expand the average 3.3 hours of Internet use ‘yesterday,’ to 4.6 hours by simply summing their time estimates on individual Internet functions.

Similarly, the total Internet time of 149 minutes (2.4 hours) from yesterday’s diary is dwarfed by summing the 70 minutes of online listening, 68 of work efforts, 60 for entertainment, etc., adding up to 242 minutes if treated separately. Respondents averaged 4.4 different persons with whom they did instant messaging, nearly twice the number of emails they sent out. University students are extremely active on the Internet but still manage to spend as much time watching television and nearly as much time listening to music.

Our final analyses dealt with segmenting the role of a few demographic attributes that were expected to differentiate within the sample. For traditional media and for the Internet, the gender of the user has consistently been found to be a segmenting factor. Would this be the case

among university students as well? The answers are in Table 5 and the results are more striking than we could have anticipated. We begin with a non-finding. No measure of television use was impacted by the gender of the viewer. Virtually all other variables were. Among traditional media, radio was more strongly used by the women and newspapers were read for much longer periods by the men (23 minutes to 7 minutes, on a daily average).

For all Internet related activities, inclusive of computer-based music, on line video games, movies, instant messaging, chat room use, etc., as well as overall Web use yesterday or on the week end, the men report significantly higher usage than the women. Only for the use of email do records indicate that women are the more active group. These widespread differences occurred despite the fact that a personal computer is a mandatory item at one of the universities studied. Thus, it appears that personal inclination, rather than access, is a leading factor in the segmentation we see by gender.

Finally, we posited that media use would be impacted by the availability of leisure time and working students have less of it than non-working students. Results in table 6 support that notion. Working students had considerably more radio time, presumably some portion of that accumulating from their commute to work, as well as the availability of radio in their work environment. For all specific web time measures, inclusive of movies and instant messaging, students without jobs spent more time with those activities. There were no differences in any measures of TV viewing time.

Discussion

A nagging problem in the measurement of media use remains that of identifying a meaningful common scale unit. The choice of time, e.g., minutes or hours, is more a convenience than a psychologically or semantically meaningful decision. When you watch TV,

you watch programs, not minutes. When you go on the Internet, you are targeting web sites, games or a friend, not minutes. In addition, equating 15 minutes of reading with 15 minutes of TV viewing ignores the differences in complexity of these two behaviors. Nonetheless, until time can somehow be refined in measurement schemes, it remains the most common index of use.

These results beg the question of which method – survey or diary – is more accurate. The two methods are different and, in this study, the survey provides consistently higher estimates across most major media use items, and especially those media that have the highest use estimates within the population segment studied. In other words, the more the medium appears to be used, the larger the discrepancy between the survey and diary results. In addition, the two methods are positively correlated and significant, albeit not strongly correlated. In part, we will argue below that this is a function of study methods

Having earlier acknowledged the shortcomings of Web surveys in general, we can indicate that the diary suffers from problems of memory (when was it completed?), authorship (who really filled it out?), and mortality (for how long will a respondent be diligent?), among other issues. Claims of greater accuracy can be offset by these issues.

Clearly, the need for the proposed third leg of measurement – e-tracking assessment— seems crucial. Traditional tracking methods of media use (television, radio and Internet) have well-identified limitations. Even electronic television assessment, vis a vis Nielsen ratings, has significant flaws. So, it is not expected that e-tracking will be a panacea, but a new approach to be explored. E-tracking systems offer potentially accurate information on single-user machines. However, an indeterminate portion of Internet users share computers and/or access the Internet from multiple computers, and/or multiple user handles. As Internet penetration continues to increase in homes and the workplace, desire for the most accurate estimates of usage time (and

usage content) online is likely to intensify. In addition, more homes have dedicated broadband connections, e.g., cable modems, DSL, ISDN (Pew Internet for Life, 2002). For those with dedicated connections, tracking systems must be able to separate use time from idle connection time and from download time (e.g., large movie files). As e-tracking systems become more sophisticated, these problems can diminish. The situation for the Internet has an analogy in the Nielsen electronic TV ratings system. It can measure potential exposure (if the set is on, but no one is in the room?), but attention is not likely to be assessed.

So, the potential of e-tracking systems for Internet and computer use measurement is fraught with its own limitations. Arguments for its inclusion have been presented. One further point is that as a passive data collection device, we expect the user to 'forget about it' within a few days of its installation, and from that point on, to use the system in a more typical manner. This supposition requires testing.

Within the study conducted, there are several key findings to interpret as well as limitations. First, University students are a special group, not representative of the general population. They are more likely to be avid Internet users, videogame players, etc., and this is evident in the results provided. Their media day is expansive, even with multi-tasking as a partial explanation. Second, Web use by these respondents is essentially unrelated to television use, so that displacement is not evident. A negative correlation would have supported that position. Or if displacement occurred, it preceded their current levels of media activity. Retrospectively, it is possible that they spent six hours with television, and that was cut in half by Web activities, but that notion will be difficult to establish. Third, the gender differences in Web/Internet use remain striking, and they emerge equally strong from survey and diary estimates. This is somewhat surprising because it is expected that men and women attending a

university would have similar requirements for Web activity. They may well have similar requirements for class, research, etc. But the greater use of the Internet for entertainment purposes, e.g., video games, music, by the men continues to differentiate their media habits at this age and in this social context.

The most problematic issue for this study is the offset comparison between the diary and survey completions. All responded online about a weekday, and then completed a diary day during the next week. The assumption was that the behaviors examined would be relatively similar from one weekday to another. This remains an untested assumption and may have contributed some measurement error. On the other hand, if the diary and survey were done for the same day by the same respondents, there is reason to believe that the second set of responses (regardless of which method was implemented first) would have been tainted by the first set, yielding higher reliability estimates than warranted. This again is empirically testable by implementing both concurrent and offset time entries with these methods and comparing the results.

This study contributes to our understanding of how alternative methods of assessing media use can yield different results and poses still another method to examine. The triangulation of media usage methods – survey, diary and e-tracking –has yet to be accomplished successfully. This remains a challenge to the research community.

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Table 1

INTERNET AND TRADITIONAL MEDIA USE YESTERDAY IN HOURS
AS ASSESSED BY SURVEY AND DIARY METHODS
(n = 425)

	<u>On-Line Survey</u>	<u>Diary</u>	<u>t</u>	<u>r**</u>
Internet	3.26	2.39	6.26*	.389
Television	2.96	2.49	3.26*	.353
Radio	1.33	1.21	1.06	.284
Music (CD/Tape)	1.30	1.09	2.07*	.199
Music (Computer)	1.28	1.03	2.72*	.392
Video Games (off line)	.48	.30	2.71*	.207
On-line Video Games	.23	.28	-.91	.289

Table 1a

E-MAIL ACTIVITY IN SURVEY AND DIARY REPORTS

Email Received	1.59***	1.33	5.41*	.468
Email Sent	.79	.76	1.34	.579

* $p < .05$

** all correlations are $p < .001$

*** E-mail was grouped in numerical categories, e.g. 1 = 1-9 letters, 2 = 10-19 letters

Table 2

PRINT MEDIA USE BY U.S. UNIVERSITY STUDENTS
(n = 425)

	<u>Survey</u>
# newspapers read yesterday	1.0
# newspapers read last 7 days	3.4
# magazines read in month	2.7
# books (not texts) in month	.9

	<u>Diary</u>
# minutes yesterday with newspapers	16
# minutes yesterday with magazines	18
# minutes yesterday with books	33

Table 3

CORRELATIONS BETWEEN INTERNET TIME AND TV TIME
WITH OTHER MEDIA USE YESTERDAY

<u>Survey</u>		<u>r*</u>
Web time yesterday with	Email received	.196
	Email sent	.213
	Video games overall	.268
	Video games on line	.293
	Music (computer)	.502
 <u>Diary</u>		
Web time yesterday with	Email received	.188
	Email sent	.131
	Video games on line	.333
	Music on CDs/tapes	.173
	Music (computer)	.712
TV time yesterday with	Radio time	.134
	# Email received	-.179
	Music time on CDs/tapes	.195
	Music time (computer)	.217

* All correlations are $p < .05$

Table 4

INTERNET USE BY UNIVERISTY STUDENTS
(n = 425)

<u>Survey Measures</u>	(Hours)
On the Web yesterday	3.3
On the Web Saturday	3.1
On the Web Sunday	3.4
Web function:	
For classwork	.6
For general news	.6
For commerece	.2
For entertainment	.8
In chatrooms	.1
With instant messenger	1.4
On message boards	.2
On e-mail	.7
<u>Diary Measures</u>	
Total internet time	149 minutes
Watched movie	22
Listened to music	70
Work-related	68
Entertainment	60
On-line video games	22
<hr/>	
# chat rooms entered	.1
# discussion groups contacted	.2
# different persons sent instant messages	4.4
E-mail sent	2.3 messages
Family	.6
Friends	1.5
Work	1.2
Other	.3
E-mail received	9.1 messages
Family	1.0
Friends	2.6
Work	2.6
Other	8.1

Table 5

INTERNET AND MEDIA USE DIFFERENCES
BY GENDER

	<u>Men</u>	<u>Women</u>	<u>t*</u>	<u>r</u>
<u>Survey</u>				
	(hours)			
Radio use weekends	2.0	2.6	2.31	-.112
All radio use	3.1	4.1	2.36	-.114
Web use yesterday	3.8	2.7	-4.50	.214
Web use weekend	3.8	2.8	-3.37	.162
Web use overall	7.6	5	-4.26	.203
Music (computer)	1.6	.9	-4.57	.217
Video games on line	.4	0	-5.92	.277
Video games off line	.8	.2	-3.94	.188
Video games weekends	1.6	.3	-6.81	.314
Video games total	2.8	.6	-7.70	.350
<u>Diary</u>				
	(minutes)			
Newspaper time	23	7	-3.69	.182
Video games/self (off line)	17	6	-2.26	.109
Video games/others (off line)	11	1	-3.28	.158
Internet movies	35	8	-3.69	.183
Internet music	84	55	-2.34	.113
Total internet time	167	129	-2.15	.105
	(letters)			
E-mail sent to friends	1.3	1.7	1.99	-.098
E-mail received from family	.8	1.3	1.94	-.096
	(other units)			
Chat rooms entered	.18	0	-2.37	.120
Instant messaging (# people)	5.1	3.6	-2.39	.119

* All reported t's and r's all significant at $p < .05$

Table 6

INTERNET AND MEDIA USE DIFFERENCES
BY EMPLOYMENT STATUS

	<u>Work</u>	<u>No Work</u>	<u>t*</u>	<u>r</u>
	(hours)			
Survey				
Radio yesterday	1.6	.8	-4.19	.200
Radio weekend	2.5	1.8	-2.41	.117
Radio overall	4.1	2.6	-3.57	.171
Web use yesterday	2.8	4.0	4.71	-.224
Web use weekends	2.8	4.3	4.80	-.228
Web use overall	5.6	8.3	5.24	-.247
Video games weekends	.8	1.3	2.27	-.110
Video games total	1.4	2.1	2.18	-.105
	(minutes)			
Diary				
Radio time yesterday	88	55	-2.41	.170
Internet movies yesterday	14	34	2.73	-.138
Instant messaging (# people)	3.4	6.1	4.33	-.214
Total internet time	134	174	2.11	-.103

* All t's and r's are significant at $p < .01$

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