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Adolescent Screen Time and Rules to Limit Screen Time in the Home

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Abstract

Purpose—To investigate associations among adolescent screen time behaviors and screen time rules and electronic media in adolescents' bedrooms.

Methods—Parents and adolescents (N = 160 dyads) from Boston, Cincinnati and San Diego completed demographic, screen time rules, availability of media devices, and screen time behavior questions. Separate multiple regression models for adolescent report and parent report tested correlates of adolescent TV watching, video game play, and computer use for entertainment.

Results—Data from adolescents indicated that rules for TV, computer use, and total number of screen time rules were significant correlates of time spent watching TV ($\beta = -.22, p < .01$), playing video or computer games ($\beta = -.18, p < .05$), and using the internet/computer for entertainment ($\beta = -.18, p < .05$), respectively. Data from parents indicated that TV rules were significantly associated with lower TV viewing, and parent/adolescent agreement on rules strengthened this relationship. Both parent and adolescent data indicated that having a TV in the bedroom was positively associated with TV viewing time ($\beta = .18$ and $.24, p < .05$, respectively). Adolescent data indicated a positive association between having at least one video game system in the bedroom with time spent playing video games ($\beta = .19, p < .05$).

Conclusion—Having clear rules, setting limits on screen time, and not having screen-based media in the bedroom were associated with fewer hours of screen time for adolescents.

Keywords

Sedentary behavior; Television; Obesity; Parents

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Introduction

The American Academy of Pediatrics recommends that children watch less than 2 hours of TV per day [1,2]; however, recent data suggest that over 35% of adolescents watch more than 3 hours per day [3]. Time spent viewing TV has been positively related to metabolic syndrome [3] and hypertension [5] among youth. There is abundant evidence that sedentary behavior is related to obesity [6–16] in children and adults and that the relationship is independent of physical activity [17–19]. Time spent TV watching in childhood predicts overweight and lower fitness in adulthood [20].

Most health-related studies in this area have focused only on TV watching as the primary sedentary behavior, ignoring a potentially large portion of time spent in other screen-related behaviors (e.g., computer, video games). While time spent watching TV comprises a significant amount of total sedentary time (Biddle) some studies document relationships between other sedentary behaviors and obesity, including videogame [16] and computer use [14] but evidence is mixed or lacking [19]. A recent review concluded that most studies combined estimates of TV, video games, and computer use, thus limiting the potential to understand independent relationships between these distinct behaviors and health status (e.g., obesity/overweight) [19].

The identification of factors related to sedentary time creates opportunities for intervention and there are numerous factors that likely influence children's sedentary time, including ethnicity, parent income, parent education and parent TV viewing habits [8]. Parental rules and availability of sedentary behavior devices have also been associated with children's sedentary time. Several studies have shown inverse relationships between parent rules and TV watching [21–23], but at least one previous study showed no such relationship for adolescents [24]. The latter null finding suggests parents may be more likely to have (and enforce) TV rules for younger rather than older children. Another study suggested that rules for eating while watching TV mediated the relationship between maternal education and children's TV watching [25]. Furthermore, previous studies typically assessed rules as a yes/no question and the type of rule or specific nature of the rules was not been examined. To our knowledge, no studies have examined parent rules for both TV-related and other screen-time related behaviors in relation to their adolescents' screen time. Addressing the type of rules for multiple screen-time behaviors is important for intervention development.

The first aim of the present study was to examine the reliability of a survey of time spent in different sedentary behaviors among adolescents that can be reported by parents or adolescents (age 12 or older). The second aim was to examine relationships between adolescents' sedentary behaviors and parent rules. We hypothesized that rules in the home would be associated with less sedentary behavior time, with specific rules (i.e., TV rules) related to corresponding specific behaviors (e.g., TV watching). We also hypothesized less time in sedentary behavior when there was parent-adolescent agreement on a rule.

Methods

Participants

Parent and adolescent pairs were recruited from three cities in the United States; Cincinnati, OH, Boston, MA and San Diego, CA [26]. Participants were recruited by mail, phone, and in-person. Participant sampling was conducted with the goal of obtaining a sample with variation in family income, race-ethnicity, geographic location, and neighborhood walkability. Response rates varied by location and by recruitment strategy with the highest response rate achieved in Cincinnati via phone recruitment (73%) and the lowest rate in San Diego via in-person recruitment at local community centers and events (15%).

Procedure

Participants completed surveys on two occasions separated by 2–4 weeks to evaluate test-retest reliability. The initial survey was distributed in-person or through standard mail with a prepaid return envelope. After the initial survey was returned the second survey was distributed to participants. The average response rate for the first survey across study sites was 47.3%, and 74% of parents and 62% of adolescents completed both surveys. On average the survey took between 30 and 45 minutes to complete. Participants received \$20 for completing both surveys. Only data obtained during the first survey was used for the present study, except for reliability analysis. Approval for research with human subjects was obtained from the all involved institutions. Informed consent/assent was obtained from all participants.

Survey Development

The survey was developed from existing measures [27], previous research [13,28–30], and through a formative research process. This formative process included phone and in-person interviews conducted with children and parents in San Diego and Cincinnati [31]. Participants in the formative process did not take part in the larger study. The survey was pilot tested to confirm comprehension and acceptability. All measures used the current study are available at <http://www.drjamesallis.sdsu.edu/measures.html>.

Measures

The sedentary behavior questionnaire consisted of 11 items (see Table 1), querying separately about time the adolescent spent on a usual weekday and weekend day engaged in each of the sedentary behaviors. Responses options were: none, 15 minutes, 30 minutes, 1 hour, 2 hours, 3 hours, or 4 or more hours. Responses were recoded into approximate duration of time spent on each sedentary behavior (e.g. 15 minutes recoded as .25 hours; 4 or more hours recoded as 4.0 hours). This measure was based on a measure originally developed by Robinson and colleagues [32] and has been used in previous studies [33,34].

A newly developed 8-item measure of the presence of home-based rules (see Table 2) for TV and other screen time sedentary behaviors was administered using a 3-point response scale (Yes, No, Sometimes). Responses of “sometimes” were recoded as a “no.” Only rules for screen time sedentary behaviors were assessed (e.g., not for phone use, etc). Four items pertained to rules about TV viewing and three items were specific to computer use. The eighth item, “no TV/computer unless exercised first,” had a low endorsement level and poor reliability and as a result was excluded from further analyses. Because rules pertaining specifically to video game use were not included, and video game playing could occur while using a TV-based system or a personal computer, all 7 rules were used to form a composite video games rule scale.

Additional survey items captured demographic information and the media environment (defined herein as the absence/presence of media devices in adolescents’ bedroom, including TV, video game system, desktop computer). These items are described in more detail elsewhere [34]. Media environment was recoded from the questions “Number of TVs/video game systems” and “number of desktop computers in the bedroom” into a dichotomous variable for the presence of these media items in the bedroom (Yes/No). Ethnicity was dichotomized as white or nonwhite. Income was recoded as a dichotomous variable indicating greater than or equal to \$50k/year.

Analysis

Test-retest reliability for each of the sedentary behavior items was assessed separately for weekday and weekend days with one-way, single measure intra-class correlations (ICC).

Parent-adolescent agreement on sedentary behavior items was also tested using ICCs. The Kappa statistic was used to assess reliability of the dichotomous responses for the rules items and agreement between parent and adolescent on rules. The ICCs and Kappas were interpreted following benchmarks of < .10 virtually no agreement, .11 to .40 slight, .41 to .60 fair, .61 to .80 moderate, .81 to 1.0 substantial [36]. Thus, coefficients > .60 were considered acceptable.

To examine correlates of screen-time related sedentary behaviors (weekly hours) a series of multiple regression models were specified for the three screen time behaviors of TV viewing, video game playing, and computer use for entertainment, as dependent variables. Screen time rules, rules agreement, media environment, site, and demographic variables were entered into the models as independent variables. Rules specific to TV viewing and computer use were used in the respective analyses. The 7-item composite rules scale was used in the analyses pertaining to video game use. This resulted in the inclusion of four TV rules, three computer rules, and a seven-rule composite variable.

Parent-adolescent rules agreements specific to the screen time behavior were entered into the respective analyses. For TV viewing, parent-adolescent pairs were considered in agreement when there was agreement on at least three of four rules for TV use. For computer use, parent-adolescent pairs were considered in agreement when there was agreement on at least two of three rules on computer use. Because models predicting video game use included the composite rules variable, if agreement existed for both TV and computer rules, rules agreement was coded as “Yes”.

Regression models were estimated separately for adolescent reported data and parent reported data. All independent variables were centered prior to estimating the models (dichotomous variables were recoded -0.5 and 0.5 for values of 0 and 1, respectively). All analyses were conducted using SPSS 15.0. P-values less than .05 were considered statistically significant for all main effects and p-values less than .10 for tests of inclusion of interaction effects. All tests were conducted as two-tailed with no adjustment to the alpha level for multiple statistical tests.

Results

One hundred sixty parent-adolescent dyads with complete data were included in the analysis (Boston: 32.3%, Cincinnati: 24.9%, San Diego: 42.9%). The adolescent sample was 51.9% female, with a mean age of 14.6 (SD = 1.7) and 41.9% identified themselves as a non Hispanic-white race/ethnicity. The mean age of the parents was 45.1 (SD = 6.8) years and 62% reported a household income greater than or equal to \$50k/year.

Table 1 shows hours/day adolescents spent doing each of the 11 sedentary behaviors during a typical weekday and weekend day as reported by parents and adolescents. Parents and adolescents both reported adolescents spending the most weekday sedentary time doing homework and watching TV/videos/DVDs during the weekend. Both reported that reading a book/magazine not for school was the least common behavior on both weekdays and the weekend (range: .61 – .71 hrs). Test-retest reliability ranged from 0.30 to 0.70 for parent-reported weekday behavior items and 0.29 to 0.85 for weekend behavior items. For adolescent reported sedentary behavior items, reliability ranged from 0.32 to 0.72 and 0.42 to 0.83 for weekday and weekend behavior items, respectively. Lower reliabilities from both parents and children (< .40) were found for more ambiguous items such as “sitting/hanging out/talking with friend” and “doing inactive hobbies”, with higher reliabilities for screen- or device-related behaviors (e.g., TV, calling/texting). Parent-adolescent agreement ranged from 0.32 to 0.63 for weekday activities and 0.29 to 0.66 for weekend sedentary time.

The reliability and agreement for the eight sedentary behavior rules are presented in Table 2. The most prevalent rule was “no TV/DVD while doing homework” with 66.2% of parents and 52.8% of adolescents reporting the rule was present. The least commonly endorsed rule (< 5% positive endorsement) was “no TV/computer unless exercised first”. Test-retest reliability coefficients were consistently higher on each item for parents (Kappa range: 0.44 – 0.70) compared to adolescents (Kappa range: 0.43 – 0.61). Agreement between parent and adolescent pairs on the individual rule items tended to be low, with no kappa exceeding 0.53. Composite estimates of parent-adolescent rule agreement were higher with 58.8% on at least five out of the seven rules, 62.5% of dyads having agreement on at least three out of four TV rules and 81.2% agreement on two out of three computer rules.

More than half of adolescents reported the presence of at least one TV in their bedroom (53.8%). Having a video game system or desktop computer in their bedroom was less common (25.8% and 32.3%, respectively). Adolescent report was found to be very similar to parent report for the presence of these items in the bedroom (Kappa > 0.70).

For adolescent report, models explaining TV viewing ($R^2 = .21, p < .001$) and video game use ($R^2 = .27, p < .001$) were significant (Table 3). Based on adolescent report, rules for TV, rules for computer use, and total number of screen time rules were significantly negative (more rules, less behavior) correlates of time adolescents spent watching TV ($\beta = -.22, p < .01$), playing video/computer games ($\beta = -.18, p < .05$), and using the internet/computer for entertainment ($\beta = -.18, p < .05$), respectively. Having a TV in the bedroom was related to more TV watching ($\beta = .24, p < .01$). A positive association was found between having at least one video game system in the bedroom with time the adolescent spent playing video games ($\beta = .19, p < .05$). Adolescent age and household income were negatively associated with video game time. Agreement on rules between parents and adolescents and the interaction between agreement and number of rules were not significantly related to any of the three screen time behaviors for the adolescent report models.

For parent report, models explaining TV viewing ($R^2 = .22, p < .001$), video game use ($R^2 = .23, p < .001$), and computer use ($R^2 = .21, p < .001$), were significant (Table 4). The parent reported models indicated that only rules for TV was associated with less TV viewing time ($\beta = -.22, p < .05$). Similar to adolescent report, parent report of a TV in their adolescents' bedroom was associated with more adolescent TV watching ($\beta = .18, p < .05$). Agreement on rules between parents and adolescents was significant only for using the internet/computer for entertainment ($\beta = -.23, p < .01$). The rules x agreement interaction was significant for parent report of adolescents' TV watching time ($\beta = -.15, p = .10$; Figure 1a) and for video/computer games use ($\beta = -.16, p < .05$; Figure 1b), but not for computer use.

The interaction between rules and availability of media devices in the bedroom was tested but did not reach statistical significance. Further analysis indicated that adolescents reporting the presence of a TV in their bedroom also reported significantly fewer TV rules than those without a TV ($F(1,155) = 24.84, p < .001$). This finding was replicated with parent reports ($F(1,155) = 9.84, p < .001$).

Discussion

The study findings indicated that adolescent report of household rules for watching TV, playing video games, or using the computer, were associated with lower levels of these behaviors. However, parent report of rules was only significantly associated with adolescent TV viewing. The inverse relationship between home rules for TV viewing and reported TV watching has been found previously for adolescents and supports the importance of setting

rules for this behavior [21,37]. The significant inverse relationship found for adolescent report between rules and behavior for video game and computer use found in the current study provides additional support for the implementation of rules for these behaviors.

The interaction between the number of rules and parent-adolescent agreement on rules for TV time and video game play found for parent report models suggests the importance of not only parents having rules for limiting screen time for their adolescents, but that these rules need to be sufficiently communicated to their children. For TV watching, the interaction indicated that when parents reported more rules, there were fewer hours of TV watching, and when there was agreement on the rules between the parent and adolescent, TV watching was even lower. For video game play, the interaction suggested that parent reported rules only related to fewer hours of adolescent video game play when there was agreement between the parent and adolescent. In fact, when there was not parent-adolescent agreement on rules we found that when parents reported more rules they also reported more hours of their child's video game play.

These results build on previous findings of inverse relationships between parent rule enforcement and TV watching behavior in youth [23]. The parent-adolescent agreement by rules interactions were not found to be significant for the three adolescent-report models. It is likely that in the adolescent report data, the significant main effect for the number of reported rules conveys the presence of rules communicated to adolescents by their parents. Thus, the parent-adolescent agreement by rules interaction term did not contribute to explaining the behaviors. Overall, the models suggest that agreement on the rules is important to behavioral outcomes. In future studies we recommend evaluating adolescents' reports of home rules, as was done in the present study, and not solely relying on parental report. Perceptions and differences in beliefs between adolescents and parents on home rules related risk behaviors can be targeted by health promotion interventions.

Access to media devices in the bedroom was a significant correlate of adolescent-reported time watching TV and playing video games. Presence of a TV in the bedroom was associated with an additional 36 min/day of TV viewing time. Access to a video game system in the bedroom was associated with about 30 min/day more video game playing. This finding is consistent with previous studies that used both subjective and objective measures of screen time behaviors [35,38]. This finding is significant for health, because previous studies reported consistent associations of TV time with overweight status and other chronic disease indicators [39].

Most items in the sedentary behavior scale showed fair to moderate test-retest reliability for both weekday and weekend day reports of adolescents' sedentary behavior based on adolescent- and parent-report. Meaningful differences in reliability of items between parents and adolescents were not observed, with the exception of 'sitting at work on the weekends' (parent ICC = 0.42, adolescent ICC = 0.85). These findings indicate the individual sedentary behavior items had moderate temporal stability.

Agreement between parents and adolescents varied across sedentary behavior items. Seven of the 11 items for both weekday and weekend day can be classified as fair or moderate according to the criteria set by Shrout [36]. The low agreement for the remaining four items may be attributed to the lower prevalence of the behavior, such as "reading a book/magazine not for school". The lack of high agreement may also be due to lack of parental oversight on behavior when access to those behaviors is available in the adolescent's bedroom. This relationship has been shown for children; with parents underreporting their child's time spent watching TV by approximately 3 hours when a TV was available in the child's bedroom [40]. Lack of agreement may also be due to the inclusion of some behaviors that

are more likely to occur outside the parent and home sphere (i.e., “sitting/hanging out/talking with friends” or “riding/driving in a car”).

The test-retest reliability estimates of the sedentary behavior rules were found to be consistently higher than 0.40 except for the item “no TV/computer unless exercise first”. Parent report of the presence of a rule was consistently higher than adolescent reports, and only modest test-retest reliabilities for these rules was found based on adolescent report. This may be due to household rules being set by the parent and then misinterpreted by the adolescent or a lack of clear and consistent communication about rules around these sedentary behaviors. The low parent-adolescent agreement on all eight rules indicated considerable discordance between parent and adolescent reports as to what rules were present in the home.

Strengths of the study included having parent-adolescent pairs complete the same survey measures which allowed the inclusion of parent-adolescent agreement in the statistical models. Factors that enhanced the generalizability of the findings included using data collected from three different US cities with an overall high percentage of non-white participants. However, given the convenience sampling, results may not be generalizable to the overall U.S. population. Other study limitations include a study participation rate below 50% and reliance on self-reported information. While reliability of the sedentary screen time behaviors and rules survey items was in the fair to moderate range (.40 to .80), items with reliability coefficients below .70 may have attenuated associations with other measures. Although the cross-sectional design precluded making inferences about temporal relationships among household rules and adolescent sedentary behaviors, the more plausible direction of the findings is that rules influenced behavior. Finally, we interpreted agreement on rules between parents and adolescents as an indication of rules being communicated, however we did not measure the extent to which rules were enforced by the parent and this is likely an important influence adolescent behavior [23].

Conclusions

Sedentary time is consistently linked with adolescent weight status [39], and the present results suggest some promising intervention approaches. Specific and clearly communicated rules in the home for limiting screen time behaviors and taking electronic devices out of bedrooms may help adolescents meet recommended screen time guidelines. It is notable that rules seemed to be more effective when both parents and adolescents agreed they were present, so teaching parents to clearly communicate rules and check the adolescents’ perception may make parents more effective in reducing obesity risk by limiting sedentary behaviors. Most of the measures of sedentary behaviors and household rules had adequate reliability for both adolescents and parents, so they may be used in future studies to evaluate family-based interventions.

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Figure 1. Model-based estimated interaction of number of rules and rules agreement on TV viewing (a) and video game use (b).

Table 1

Parent and adolescent test-retest reliability of reported time adolescents spent engaging in sedentary behaviors (hrs/day)

	Parent Report of Adolescent						Adolescent						Agreement	
	Weekday			Weekend Day			Weekday			Weekend Day			Wkd	Wkend
	M	SD	ICC	M	SD	ICC	M	SD	ICC	M	SD	ICC	ICC	ICC
Watching TV/Videos/DVDs	1.82	1.29	0.69	2.37	1.25	0.63	1.82	1.35	0.70	2.40	1.36	0.56	0.57	0.46
Playing computer or video games	.86	1.14	0.61	1.13	1.23	0.71	.87	1.17	0.50	1.07	1.30	0.49	0.44	0.52
Using internet, emailing, other for leisure	1.11	1.12	0.69	1.30	1.23	0.69	1.26	1.17	0.64	1.62	1.38	0.62	0.56	0.63
Doing homework	1.89	1.11	0.52	1.53	1.18	0.61	1.84	1.18	0.55	1.43	1.21	0.65	0.51	0.53
Sitting listening to music	1.15	1.10	0.59	1.30	1.15	0.64	1.38	1.35	0.55	1.49	1.34	0.58	0.41	0.52
Sitting talking on phone or texting	0.95	1.24	0.72	1.04	1.22	0.83	1.07	1.30	0.67	1.23	1.32	0.73	0.60	0.66
Sitting/hanging out/talking with friends	1.30	1.11	0.32	1.95	1.37	0.54	1.45	1.28	0.31	2.17	1.45	0.44	0.40	0.29
Reading a book/magazine not for school	0.61	0.86	0.56	0.70	.86	0.51	0.67	0.87	0.42	0.71	0.90	0.44	0.38	0.40
Doing inactive hobbies	0.65	0.87	0.36	0.99	1.04	0.56	1.06	1.19	0.30	1.20	1.23	0.29	0.40	0.28
Sitting at work	1.07	1.59	0.46	.89	1.40	0.42	1.32	1.58	0.35	1.22	1.58	0.85	0.63	0.40
Riding or driving in a car	0.81	0.88	0.41	1.09	0.93	0.55	1.02	1.08	0.43	1.40	1.20	0.56	0.32	0.35

Table 2

Parent and adolescent reliability and agreement for rules regarding sedentary behaviors

	Parents		Adolescents		Agreement	
	% Yes	Kappa	% Yes	Kappa	Kappa	
Not too much TV/DVDs	57.6	0.61	40.9	0.43	0.28	
No TV/DVD before homework	57.0	0.61	46.5	0.47	0.47	
No TV/DVD while doing homework	66.2	0.59	52.8	0.52	0.45	
Less than 2 hours TV/DVD per day	32.3	0.57	25.2	0.48	0.44	
No computer before homework	46.2	0.63	31.6	0.59	0.49	
Only 1 hour computer per day	20.9	0.44	13.2	0.42	0.17	
No internet without permission	31.2	0.70	17.1	0.49	0.53	
No TV/computer unless exercised first	4.4	0.43	3.1	-0.04	0.00	

Table 3

Regression models predicting sedentary behaviors – Adolescent report

Model	Variables	Constant	B	SE	β	F	R ²
TV Viewing	Constant		1.84	0.14		5.45***	0.21
	TV rules		-0.18	0.07	-0.22**		
	Rules Agreement		-0.07	0.19	-0.03		
	TV in bedroom		0.58	0.20	0.24**		
	Gender (male)		-0.08	0.19	-0.03		
	Ethnicity (white)		-0.40	0.23	-0.16		
	Age		0.05	0.06	0.06		
	Income (>50k)		-0.02	0.20	0.00		
	Site (Ref=San Diego)						
	Boston		0.42	0.30	0.13		
Video Games	Cincinnati		0.15	0.21	0.06		
	Constant		1.08	0.13		6.95***	0.27
	Total Rules		-0.10	0.04	-0.18*		
	Rules Agreement		-0.20	0.17	-0.09		
	Game in bedroom		0.48	0.19	0.19*		
	Gender (male)		0.90	0.17	0.40***		
	Ethnicity (white)		-0.04	0.20	-0.02		
	Age		-0.16	0.05	-0.23**		
	Income (>50k)		-0.42	0.18	-0.18*		
	Site (Ref=San Diego)						
Computer Use	Boston		0.36	0.26	0.12		
	Cincinnati		-0.08	0.19	0.03		
	Constant		1.23	0.17		1.18	0.02
	Computer rules		-0.23	0.12	-0.18*		
	Rules Agreement		0.28	0.24	0.10		
	Desktop computer in bedroom		0.07	0.20	0.03		
	Gender (male)		0.23	0.19	0.11		

Model	Variables	Constant	B	SE	β	F	R ²
	Ethnicity (white)		-0.05	0.23	-0.02		
	Age		0.05	0.06	0.07		
	Income (>50k)		0.16	0.20	0.07		
	Site (Ref=San Diego)						
	Boston		0.29	0.30	0.10		
	Cincinnati		-0.10	0.21	-0.04		

Note.

* = $p < .05$,

** = $p < .01$,

*** = $p < .001$.

Items in bedroom (TV, Game, Computer): 0 = not present, 1 = present.

Table 4

Regression models predicting sedentary behaviors – Parent report

Model	Variables	B	SE	β	F	Adjusted R ²
TV Viewing	Constant	1.79	0.14		5.30***	0.22
	TV rules	-0.18	0.08	-0.22*		
	Rules Agreement	-0.17	0.19	-0.07		
	Agreement x Rules Interaction	-0.25	0.15	-0.15†		
	TV in bedroom	0.43	0.18	0.18*		
	Gender (male)	-0.33	0.18	-0.14		
	Ethnicity (white)	-0.32	0.22	-0.13*		
	Age	0.04	0.06	0.06		
	Income (>50k)	0.17	0.19	0.07		
	Site (Ref=San Diego)					
Video Games	Boston	0.30	0.27	0.11		
	Cincinnati	.28	0.20	.11		
	Constant	0.95	0.13		5.46***	0.23
	Total Rules	0.00	0.04	0.01		
	Rules Agreement	-0.24	0.18	-0.11		
	Agreement x Rules Interaction	-0.17	0.08	-0.16*		
	Game in bedroom	0.30	0.19	0.12		
	Gender (male)	1.00	0.17	0.45***		
	Ethnicity (white)	-0.30	0.20	-0.13		
	Age	0.01	0.06	0.02		
Computer Use	Income (>50k)	-0.07	0.18	-0.03		
	Site (Ref=San Diego)					
	Boston	0.25	0.25	0.10		
	Cincinnati	0.10	0.19	-.04		
	Constant	1.16	0.15		5.60***	0.21
	Computer rules	-0.14	0.09	-0.14		
	Rules Agreement	-0.63	0.23	-0.23**		

Model	Variables	B	SE	β	F	Adjusted R ²
	Desktop computer in bedroom	0.04	0.17	0.02		
	Gender (male)	1.03	0.16	0.47***		
	Ethnicity (white)	-0.32	0.20	-0.15		
	Age	-0.01	0.05	-0.02		
	Income (>50k)	-0.18	0.17	-0.08		
	Site (Ref=San Diego)					
	Boston	0.16	0.25	0.06		
	Cincinnati	0.03	0.19	0.01		

Note.

* = $p < .05$,

** = $p < .01$,

* = $p < .001$.

[†] = $p < .10$.

Items in bedroom (TV, Game, Computer): 0 = not present, 1 = present.