

Life Without TV? Cultivation Theory and Psychosocial Health Characteristics of Television-Free Individuals and Their Television-Viewing Counterparts

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Much attention has been paid to the amount of time Americans spend watching television. Cultivation theory has been important in exploring behavioral effects of television viewing for many years. However, psychosocial health has received much less scrutiny in relation to television viewing time. This investigation examined the hypotheses that television-free individuals and viewers adhering to the American Academy of Pediatrics (AAP) recommendations (up to 2 hr of viewing per day) would display a more positive psychosocial health profile when compared with more frequent television viewers. Results confirmed the hypothesis for women, but not for men. Our analysis showed that moderate television viewing, as defined by the AAP, provides a similar relation with psychosocial health as being television-free. Results are discussed in a cultivation theory framework.

It is certainly a cliché to say that television has become a major part of American culture. Aside from occupational duties and sleep, the nation spends more time watch-

ing television than at any other activity (Comstock, Chaffee, & Kautzman, 1978; Kubey & Csikszentmihalyi, 2002). A typical American adult watches 3 to 4 hr of television per day (Comstock et al., 1978; Kubey & Csikszentmihalyi, 2002; Singer, 1983). Similarly, children spend more time watching television than at any other waking activity. Children and adolescents (ages 2–17) average 19 hr and 40 min of television viewing per week (Abelman & Atkin, 2000; AC Nielsen Company, 2000). By the time the average person reaches the age of 70, he or she will have spent the equivalent of 7 to 10 years watching television (Strasburger, 1993). This high volume of television represents a major source of information and entertainment for all Americans. Information gleaned from television, both accurate and inaccurate, is an important part of our knowledge of how individuals act, behave, look, and feel (Bandura, 1994; Gerbner, 1969; Gerbner, Gross, Morgan, & Signorielli, 1994). Time spent watching television also affects Americans by taking time away from other activities, such as social interaction, sport, and reading (Dietz, 1990).

Although there may be potential benefits from viewing some television shows, such as the promotion of positive aspects of social behavior (e.g., manners, friendship, cooperation, altruism, etc.), many adverse health conditions can also result. According to the cultivation hypothesis, mediated messages can help shape the behavior of individuals who interact with them on a frequent basis (Gerbner, 1969; Shanahan & Morgan, 1999). Given that violence, sexuality, and body image distortions are pervasive television messages, it is not surprising that a variety of negative health effects have been associated with excessive television viewing. These adverse effects range from violence and aggressive behavior (Strasburger, 1993), to distorted sexual images (Huston, Wartella, & Donnerstein, 1998; Strasburger, 1993), to body concept and self-image issues (Harrison & Cantor, 1997), to obesity and nutritional problems (Deitz & Gortmaker, 1985; Obarzanek et al., 1994; Page, Hammermeister, Scanlan & Allen, 1996; Tucker, 1986; Tucker & Bragwell, 1991; Tucker & Friedman, 1989; Williams, Sallis, Calfas, & Burke, 1999). Psychosocial decrements have also been documented with frequent television viewers (Dittmar, 1994; Page et al., 1996), however, there exist very little data examining the psychosocial health profiles of individuals who watch very little or no television. The purpose of this investigation is to utilize a cultivation theory framework to examine the psychosocial characteristics of individuals who are television-free in comparison to moderate and frequent television viewers.

CULTIVATION THEORY AND TELEVISION

Cultivation theory suggests that exposure to television messages can be an important factor influencing the behavior of individuals who spend a significant amount of time with the medium (Gerbner, 1969; Shanahan & Morgan, 1999). Further,

much of our knowledge about the world is indirect, not shaped by experiences but by accounts, both fictional and true, of others' experiences (Shanahan & Morgan, 1999). Television viewers today are exposed to a substantial number of examples of adverse health practices, which (according to cultivation theorists) may influence behavior (see Gerbner & Ozyegin, 1997, for references to cigarettes, alcohol, and illicit drugs on television; see DuRant et al., 1997, on alcohol and tobacco use in MTV videos). Other content analyses show that children and teenagers continue to be inundated with sexual imagery and innuendoes in programming and advertising (Brown & Steele, 1995; Huston et al., 1998; Kunkel, Cope, & Colvin, 1996). Although the prevalence of exposure to negative health practices among television viewers is well documented, interestingly, there are no data available (to date) to substantiate the behavioral impact of this exposure (Kunkel et al., 1996).

AMERICAN ACADEMY OF PEDIATRICS (AAP) RECOMMENDATIONS

Given the persistent negative findings in the health-related literature, it is not surprising that the AAP recently suggested that children limit total electronic media time (television viewing plus videos, video games, etc.) to <2 hr per day (Bar-on et al., 2001). There exist very little data supporting these guidelines; however, Gidwani, Sobol, DeJong, Perrin, & Gortmaker (2002) found that 10- to 15-year-olds who watch more than 2 hr of television per day were at least five times more likely to start smoking than their peers who watched less than the 2-hr per day.

The finding that television viewing is pervasive and related to negative health indicators is well established (Dittmar, 1994; McCreary & Sadaca, 1999; Obarzanek et al., 1994; Page et al., 1996; Tucker, 1986; Tucker & Bragwell, 1991; Tucker & Friedman, 1989; Williams et al., 1999). Given these conclusions, it follows that individuals who adhere to the AAP recommendations of 2 hr per day of television viewing, or better yet, watch no television, would present more positive health profiles than individuals who watch television. Interestingly, no peer-reviewed research exists that characterizes television-free individuals (i.e., who watch no television). Furthermore, the links between the frequency of television viewing and psychosocial health are not well established (Page et al., 1996). This investigation will be one of the first to examine television-free individuals and their psychosocial characteristics. Loneliness, shyness, self-esteem, depression, and hopelessness are examples of psychosocial conditions that may be distressful for Americans and represent important dimensions of wellness (Bullock, 1993; Page, 1991, 1990; Page et al., 1996). This study explores the hypothesis that television-free individuals, and those who limit their television to <2 hr per day (per

AAP recommendations), should present stronger associations with positive psychosocial profiles than individuals who watch more television.

METHOD

Respondents

Respondents for this study were viewers and nonviewers from all regions of the United States. Of the 430 individuals responding to the survey, 76% were White, 8% Black, 4% Asian American, 5% Latino, and 7% represented other racial/ethnic groups. Further, 75.6% of the study participants were women and 24.4% were men. The mean age of the respondents was 30.7 years ($SD = 11.6$). In terms of educational background, 16% had less than a high school degree, 5% had completed a high school degree, 21% had some college, 31.5% reported having completed a 4-year college degree, 21.5% completed a graduate or professional degree, and 5% graduated from a community college or trade school.

Procedure

Following institutional review board approval, respondents were recruited through the national media to take an online survey. Because television-free individuals comprise a very small percentage of the general population, advertisements were made in national media establishments likely to attract participants who do not watch television. These establishments included a large nationally syndicated popular magazine and the web site for the TV Turnoff Network. Potential respondents were informed that their participation was voluntary and confidential. The survey took approximately 25 min to complete. To ensure validity of the sample, participants were required to finish a substantial portion of the questionnaire before it could be submitted. Furthermore, multiple submissions from the same Internet provider (IP) address within a 20-min time frame were deleted from the analysis to minimize the ballot stuffer effect. Repeated submissions from the same IP address were allowed, with the aforementioned restrictions, to account for submissions from schools, libraries, and different individuals from the same families.

Instruments

We assessed television-viewing frequency by asking participants to report the number of hours and minutes they spent watching television per day. This measure was designed to be a generalization of the number of hours respondents tended to watch television during an average day, rather than any specific day, to reduce factors that could confound television-viewing frequency (e.g., weather, employment

status, illness). Respondents who reported never watching television were classified as television-free. Two other groups were formed from these responses and included a group that watched television up to 2 hr per day (the AAP group recommendation), and a group that watched more than 2 hr of television per day (frequent viewers).

In addition, to assess psychosocial health profiles, the questionnaire included the UCLA Loneliness Scale (Peplau & Perlman, 1982), the Beck Hopelessness Scale (Beck, Weissman, Lester, & Trexler, 1974), the Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), the Cheek and Buss (1981) Shyness Scale, and the Rosenberg (1965) Self-Esteem Scale. Higher scores on these scales indicate a greater degree of loneliness, hopelessness, depression, shyness, and self-esteem. Weight satisfaction and life satisfaction were assessed by having respondents indicate how they feel about their current weight and satisfaction with life on 4-point scales ranging from 1 (*satisfied*) to 4 (*very unsatisfied*). Perceived attractiveness was assessed in a manner consistent with other research using this construct (Feingold, 1992; Page, et. al., 1996) by employing a 7-point rating scale ranging from 1 (*not at all attractive*) to 7 (*very attractive*). A 12-item tendency-toward-eating-disorder index was also administered (Page, 1990). Higher scores on this index reflect greater tendency to participate in practices and maintain attitudes that are symptomatic of eating disorders, such as: having eating binges; trying to lose weight by inducing vomiting, using water pills (diuretics), and using laxatives; being terrified of gaining weight; worrying about having an eating disorder; eating in secrecy; feeling guilty after overeating; and eating moderately in front of others but stuffing oneself in private. The questionnaire also contained questions related to drug and alcohol use, exercise frequency, and other basic demographic information (e.g., age, marital status, income, years of education, etc.).

Data Analysis

Survey respondents were divided into three groups: (a) television-free, (b) viewers who watch in accordance with AAP recommendations (up to 2 hr per day) and (c) frequent viewers (over 2 hr per day). The dependent variables were the nine measures of psychosocial health. Multivariate analysis of variance (MANOVA) was used to determine if differences were evident on the dependent measures across the viewing groups. Discriminant analysis, examining both discriminant structure and discriminant function coefficients, was utilized to follow up significant MANOVA results to identify those psychosocial health characteristics that best discriminated between the television viewing groups. It should be noted that to interpret the discriminant function coefficients, guidelines suggested by Pedhazur (1982) were employed. Tukey's follow-up univariate analyses were also used to identify differences between the viewing groups on the dependent measures. In a comparison of television viewing groups on the dependent variables of interest, alphas were set at

.01 for MANOVA and Tukey's analyses to decrease the probability of Type I errors associated with multiple comparisons while not severely limiting statistical power.

RESULTS

Alpha Coefficients

Cronbach's alphas were calculated for the following scales using the responses from the survey participants: the Beck Depression Inventory ($\alpha = .91$), the Beck Hopelessness Scale ($\alpha = .87$), the Cheek and Buss Shyness Scale ($\alpha = .85$), the UCLA Loneliness Scale ($\alpha = .93$), Tendency Toward Eating Disorder ($\alpha = .77$), and the Rosenberg Self-Esteem Scale ($\alpha = .89$). Alpha coefficients were not assessed on the two scales consisting of one item (life satisfaction and weight satisfaction).

As the psychosocial subscales used in this study displayed good internal consistency (e.g., α coefficients $> .7$), further analysis using multivariate techniques was then possible to better examine the relation between television viewing and the other variables of interest.

MANOVA Results

A preliminary analysis was conducted examining gender effects on the variables of interest. The MANOVA for gender was significant, $\Lambda = .90$, $F(8, 249) = 3.32$; $p = .001$. Thus, separate analyses were conducted for male and female participants.

MANOVAs were conducted to examine differences on the key psychosocial variables across the viewing groups. Significant MANOVA results were then followed up with a forced-entry discriminant function analysis to determine which variables best discriminated between television viewing groups.

Television Viewing Frequency Results for Male Participants

MANOVA results confirmed no differences between viewing groups on the psychosocial health variables, $\Lambda = .83$, $F(16, 62) = .40$; $p = .98$.

Television Viewing Frequency Results for Female Participants

MANOVA results revealed significant main effects for the psychosocial health variables, $\Lambda = .78$, $F(16, 392) = 3.28$; $p = .0001$, $\eta^2 = .22$. Examination of the discriminant structure analysis results revealed a two-function solution; however, all nine psychosocial subscales significantly contributed to Function 1, with only perceived

attractiveness significantly contributing to Function 2. Furthermore, eigenvalue analysis shows Function 1 (coefficient = .253) accounting for considerably more variance than Function 2 (coefficient = .026). Thus, Function 1 was deemed the most useful for interpreting the results for this study. Examination of discriminant function coefficients on Function 1 showed that depression, hopelessness, self-esteem, and weight satisfaction were the best discriminators between the two groups. Post hoc Tukey means comparison tests showed that the >2 hr per day viewing group scored higher on loneliness, hopelessness, shyness, depression, and tendency toward eating disorders and lower on self-esteem, weight satisfaction, perceived attractiveness, and life satisfaction than did the other two groups (see Table 1).

DISCUSSION

This investigation is one of the first to examine the psychosocial characteristics of television-free individuals. Although cultivation theory has long been concerned with the cumulative influence of media contact, this investigation of television-free individuals is an important step in clarifying the as-yet ambiguous threshold at which this influence becomes detrimental. This study explored psychosocial differences across different levels of television viewing, with the hypothesis that television-free individuals and viewers adhering to the AAP recommendations would display a more positive psychosocial health profile when compared with more frequent television viewers.

TABLE 1
Means, Standard Deviations, and Tukey's Comparisons for Psychosocial Health Variables by Television Viewing Frequency Group For Females

<i>Psychosocial Variable</i>	<i>Television Viewing Frequency</i>					
	<i>TV-Free (n = 46)</i>		<i>Up to 2 Hr/Day (n = 161)</i>		<i>>2 Hr/Day (n = 124)</i>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Loneliness	33.00	10.34	34.39	8.71	40.93*	11.27
Hopelessness	1.38	1.31	1.94	2.03	3.18*	2.91
Shyness	21.02	8.38	22.89	7.64	26.07*	7.77
Self-esteem	31.51	3.47	30.85	4.08	27.32*	5.50
Depression	3.88	3.55	5.41	5.09	10.99*	9.69
Weight satisfaction	2.36	.83	2.26	.83	1.84*	.87
Perceived attractiveness	3.43	.95	3.49	.85	2.90*	1.17
Life satisfaction	3.66	.48	3.48	.60	3.04*	.61
Eating disorder tendency	12.02	2.34	12.00	2.06	13.57*	2.65

*Indicates significantly different from means in the same row ($p < .01$).

MANOVA results revealed nonsignificant effects for male participants, suggesting that television-viewing status has little impact on the psychosocial health of men. These results are incongruent with previous research on adolescent male participants (Page et al., 1996), which found that frequent male television viewers were more shy, lonely, hopeless, and had a higher tendency toward disordered eating than their less frequent viewing peers. Similarly, Williams et al. (1999) found that more frequent male television viewers were more dissatisfied with their body image and quality of life than less frequent male viewers. In this study, frequent male viewers (more than 2 hr per day) appear to be no different than the group who view according to AAP guidelines (up to 2 hr per day) and television-free individuals on the indicators of psychosocial health. Thus, for male viewers, the hypothesis that being television-free is associated with an enhanced psychosocial profile is not supported.

For female viewers, MANOVA results showed that differences do exist across the psychosocial variables of interest. Post hoc discriminant analysis results revealed that all the psychosocial variables examined in this study contributed significantly to the one function equation with depression, hopelessness, self-esteem, and weight satisfaction being the strongest discriminators. Follow-up Tukey comparisons shed even more light on these relations by showing that both the television-free group and the AAP viewing group differed, in the hypothesized direction, from the frequent viewing group on all of the dependent variables. Interestingly, the television-free group and the AAP group did not significantly differ on any of the dependent measures. These findings suggest that the female respondents in this sample who watch limited amounts of television (<2 hr per day—the AAP recommended “dose”), share similar psychosocial health profiles with individuals who do not watch television. Both groups, however, show an enhanced psychosocial profile versus study participants who watch more than 2 hr per day.

These results reflect previous research findings (Dittmar, 1994; McCreary & Sadaca, 1999; Page et al., 1996; Williams et al., 1999), which have shown strong associations between television viewing frequency and indicators of psychosocial health. Results of this study show a similar trend, with psychosocial decrement occurring with more frequent viewing. Too much television displaces time that otherwise could have been devoted to reading, problem solving, homework, hobby development, and interaction with family and friends. Too little time spent in social interaction could be a factor in explaining that heavier television viewers were found to be shier, lonelier, and more depressed than television-free or AAP television viewers.

In addition, the findings reported here further validate the cultivation hypothesis that prolonged exposure to a set of messages in the media can influence behaviors, beliefs, values, or attitudes. Social learning is an indirect process and a negative relation with psychosocial health and may take more than an average of 2 hr

per day to become apparent. Further, those who watch television <2 hr per day are more likely to have other (nontelevised) messages influencing them. Because cultivation theory can only account for a part of the influence on behavior or psychosocial health, individuals with more nonmediated experience or more sources of information can have the means to balance the messages they receive through television (Gerbner et al., 1994; Shanahan & Morgan, 1999). These factors can help explain why television-free individuals showed no significant difference in psychosocial health profile from those who watched up to 2 hr per day in this sample.

From a practical point of view, several interesting implications stand out for both researchers and clinicians. First, applied health promotion researchers examining the effects of television viewing on health-related issues should routinely check for viewing thresholds that do not cause further impairment. Most previous research in this area has identified health risks associated with frequent viewing; however, the precise number of viewing hours that result in health decrement has not been well defined. Results of this study suggest that the 2 hr per day mark, the AAP guideline, may be an important threshold. This mirrors other findings on television viewing (Gidwani et al., 2002), but future researchers should aim to clarify whether 2 hr per day really is safe in terms of its impact on psychosocial health. Furthermore, this investigation did not assess the content of the television viewed. Future research needs to address how specific content of shows individuals watch impacts psychosocial health as well.

Results of this study may also have implications for health promotion practitioners. Reducing television viewing frequency should be a goal of all health promoters, as it represents time not spent being physically, mentally, or socially active. Results of this study suggest that specifically reducing television frequency to 2 hr per day or less is associated with improved psychosocial health profiles. These findings may aid practitioners in getting clients to set more specific goals for reducing television viewing (i.e., reduce viewing to <2 hr per day), which in turn may increase time spent being physically, mentally, and socially active. Health promoters should adopt the strategy of addition through subtraction when it comes to television viewing.

Several limitations to this study need to be addressed. The results regarding the association between television viewing and psychosocial conditions raises some interesting questions. Does frequent television viewing predispose individuals to loneliness, low self-esteem, depression, and hopelessness? Or conversely, are loneliness, depression, and hopelessness conditions that prompt frequent television viewing? Although our findings indicate a strong relation between television viewing and these indicators of psychosocial health for female participants, readers should be careful not to assume a causal relation between these two factors. Additional research is needed to further elucidate and delineate the nature, direction, and meaning of these relations.

Also, although web-based data collections may be the wave of the future, they have some inherent limitations. First, the researcher can expect responses only from individuals who are online. Although this represents a growing portion of the American population, by definition it excludes a large percentage. Second, although validity of the sample was controlled for by placing content requirements on the survey and time limits on the responses from the same IP address, there is still no way of knowing if individuals submitted multiple surveys. The likelihood is quite low, especially given the aforementioned restrictions; however, it cannot be completely controlled. Third, online respondents were self-selected, implying that those who responded to the survey were already interested in the topic. As a result, some respondents may have given what they thought were socially desirable answers. This is a concern for all self-selected samples and this survey should be administered to a more representative sample to test the results found here. Last, the sample obtained for this investigation was predominately women (75.6%). This yielded small group sizes for the men, which may have contributed to the lack of mathematically significant findings for this group.

In summary, this study showed strong associations between psychosocial health variables among women who are frequent television viewers (>2 hr per day) and AAP television viewers (<2 hr per day). No statistically significant associations were found for male participants. The hypothesis that television-free individuals would show a stronger association with enhanced psychosocial health profiles than members of the moderate viewing group (i.e., the group following AAP guidelines) was not supported for men or women. Watching television <2 hr per day provides the same relation with psychosocial health as being television-free in this sample. This is consistent with cultivation studies examining behavioral effects of television viewing and suggests a need to further investigate the relation found here.

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