

Reducing Media Viewing: Implications for Behaviorists

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Abstract

American children spend an average of 6 hours and 32 minutes each day using various forms of media. Research has suggested that this high level of exposure has a negative impact on children's attitudes and behaviors. For example, media violence increases aggression in children, especially video games which allows children to be the aggressor and obtain rewards for violent acts against others. In addition, media influences sexual behaviors and attitudes by sending contradictory messages that glamorize sexual activity and disregard the risks of such behaviors. Along with these negative behavioral influences, media also impacts children's health and is linked to the rise of childhood obesity. From 1980 to 2000, rates of children being overweight have doubled, while obesity continually is associated with higher rates of hypertension, asthma, type II diabetes, and cardiovascular disease. The majority of research has found a link between the amount of time children spend watching TV and their body weight. Given that 81% of children age 2-7 use media unsupervised (Kaiser Family Foundation, 1999), parents need to play a more active role in monitoring their children's use of electronic entertainment activities and structuring socialization activities. In this article, we will review behavioral technologies to assist parents in reducing their children's media use. Keywords: television, media violence, intervention strategies.

In a comprehensive examination of the literature over two decades, Comstock and Scharrer (1999) conclude that children who watch excessive television perform poorly on standardized achievement tests. Furthermore, it was discovered that excessive media usage negatively affects school performance because viewing replaces time that might otherwise be spent reading or engaged in alternate school-related activities. Practice time is lost, and as a result, children (particularly those with learning disabilities who are in need of the practice) lose fluency and automaticity in skills (Corteen & Williams, 1986). Researchers have also found that children's writing is often similar in style to television show scripts, which are often fragmented and disconnected without regard to logic. Henke (1999) found that 39% of children stated they would prefer to surf the Internet than to engage in their favorite after-school activity. Time spent in educational activities and social interactions are negatively related to time watching educational television (Huston, Wright, Marquis, & Green, 1999). Heavy viewers also are more likely to hold common cultural stereotypes, many of which are emphasized on television. In addition, those who watch excessive amounts of television and utilize other electronic media have little time for other critical life experiences, such as learning to play cooperatively with others.

Meanwhile, network television has tended to feature high levels of violence and other inappropriate programming. A five-year study by the American Psychological Association estimates that the average child has watched 100,000 acts of violence and 8,000 acts of murder by the time he or she leaves elementary school. Furthermore, by the conclusion of high school, the average child has been exposed to 200,000 acts of violence (Huston et al., 1992). Singer, Miller, Guo, Flanner, Frierson and Slovak (1999) found that 45% of the variance in students' violent behavior can be accounted for by demographics, parental monitoring, television-viewing habits, and exposure to violence. In a published longitudinal study, Johnson, Cohen, Smailes, Kasen, and Brook (2002) found a significant association between the amount of time spent watching television during adolescence and early childhood with the likelihood of aggressive acts against others, even when controlling for childhood neglect, family income, neighborhood violence, parental education, and psychiatric disorders. Huesmann, Moise-Titus, Podolski, and Eron (2003) also found that childhood exposure to violence predicts young adult aggressive behavior for both males and females. Children who achieve less tend to watch television more often, identify more strongly with aggressive television characters, and are more apt to believe that aggressive television content is real.

Whereas viewing television is a fairly passive experience, playing video games and Internet surfing are highly interactive. These new electronic media sources can often promote violence and hate (Sher, 2000). A large proportion of this media exposure includes acts of violence that are witnessed in the form of video games (Roberts, 2000). Video games set a child in the role of the aggressor and thus reward him or her for violent behavior. Griffiths and Hunt (1998) maintain that video games allow the player to rehearse an entire behavioral script and as a result, video games may very well produce dependency in children and adolescents. This holds true when children yearn to engage in games for long periods of time in order to advance to higher levels. Additionally, studies show that children in grades four through eight prefer video games that award points for violence against others (Funk & Buchman, 1996). Interactive media are relatively new, and consequently there has been little time to assess their influence. Nevertheless, several studies indicate that the effects from interactive media may be even more profound than those of passive media, such as television (Anderson & Dill, 2000; Irwin & Gross, 1995). For example, after playing violent video games, children exhibit measurable decreases in prosocial behaviors and increases in violent retaliation to provocation. In fact, playing violent video games has been found to account for a 13% to 22% increase in adolescents' violent behavior (The Impact of Interactive Violence on Children, 2000).

Media also plays a role in children's sexual behavior and attitudes. Greater exposure to television's sexual content has been associated with stronger endorsement of recreational attitudes toward sex (Ward & Rivadeneyra, 1999), and these types of findings have increased parental concerns about TV viewing among children. With a few notable exceptions, television, computer games and the Internet largely fail to address the issues of teen pregnancy and the incidence of sexually transmitted diseases, including AIDS, among teenagers. On the contrary, at a time when young people are being urged to restrain from sex for their own personal safety, television, computer games, and the Internet continue to emphasize the glamour of sex.

It is important to recognize that television, video games, and computer activities are not all bad. The Internet is frequently used for school-related tasks (LaFerle, Edwards, & Lee, 2000), and quality programs, games, software, and web sites can serve as an entertaining, informative part of a child's day. Educational television programs have little violence, and exposure to these shows (e.g., Sesame Street, Mr. Roger's Neighborhood) during early childhood is associated with later academic success and imaginative behavior during adolescence (Anderson, Huston, Schmitt, Linebarger, & Wright, 2001). Many educational programs on commercial stations have little violence (Jordan, Schmitt & Woodard, 2001). In addition, some children are able to divide their attention between viewing these electronic media and doing other activities without losing control. Modern theories of cognition support the notion that children are active viewers of television or other media. In other words, the seemingly simple act of watching television is not a completely passive experience. Calvert (1999) suggests that media can challenge stereotypes, educate, and foster nonviolent forms of dispute resolution. It is important for parents to become involved in steering their children toward viewing television series that promote positive outcomes (Sanders, Montgomery, & Brechman-Toussaint, 2000). These media programs should represent just one part of a child's day that is appropriately balanced with a mix of social, physical, and imaginative pursuits (Jason, Hanaway, & Brackshaw, 1999).

Media, Inactivity, and Obesity

Faith et al. (2001) maintain that elevated television viewing and resultant physical inactivity promote obesity in children. This is due to the fact that children are more likely to snack excessively and eat less healthy meals while viewing media (Van den Bulck, 2000), and children who watch more television are less likely to participate in rigorous physical activity (Anderson, Crespo, Bartlett, Cheskin, & Pratt, 1998). American children spend an average of 6 hours and 32 minutes each day using various forms of media (television, movies, video games, computer, and the Internet) (The Henry J. Kaiser Family Foundation,

1999). Children spend four times the amount watching TV as doing homework, and by age 18, the average American child has spent more time watching TV than engaging in any other activity except sleep (Roberts, Foehr, Rideout, & Brodie, 1999). The Kaiser Family Foundation (2004) found that watching TV and movies has a larger effect in lowering a child's metabolic rate than if they were sleeping.

Children's eating and nutritional habits play a role in the risk of obesity, and children's food intake has changed dramatically over the past 3 decades. According to surveys from the USDA, there has been an overall decrease in the consumption of milk, vegetables and eggs, and increase in foods such as chips, cheese, candy, fried potatoes, and soft drinks (Enns, Mickle, & Goldman, 2002). This is an important finding because in large quantities these foods create a risk for childhood obesity (Ludwig, Peterson, & Gortmaker, 2001). Furthermore, television watching may contribute to higher fat intake (French, Story, & Jeffery, 2001) as children snack more while watching television. Television viewing is also related to the intake of less nutrient-rich foods and time spent watching television is linked to the consumption of foods advertised on television (Kotz & Story, 1994). Advertisements in the media play a role in childhood obesity, as children watch an estimated 40,000 ads on television per year. Of the ads targeted to children, 32% featured candy, 31% cereal, and 9% fast food (Kaiser Family Foundation, 2004). The fast food industry alone will spend 3 billion dollars this year for ads aimed at children (Kaiser Family Foundation, 2004).

Because inactivity is significantly and positively related to total body fat in boys and girls (Crespo et al., 2001), children who become more active and reduce caloric intake will reduce weight. In addition, there is a link between the amount of time children spend watching TV and body weight, and interventions that reduced children's media time have resulted in weight loss (Kaiser Family Foundation, 2004). The odds of being overweight are 4.6 times greater for a child who watches more than 5 hours of television per day compared to a child who only watches 0-1 hours. Consequently, 29% of obesity incidence in children can be prevented by limiting television use to 0-1 hours per week. With obese children having a higher risk of developing Type II diabetes, hypertension, asthma, and heart disease, it is critical to find ways to decrease the amount of time children spend viewing media. Before reviewing studies that involve efforts to reduce media viewing, we will first examine traditional behavioral therapeutic methods to reduce obesity among youth.

Behavior Therapy

Over the past few years, behavior therapy has been successfully used to treat pediatric obesity (Epstein, Paluch, Gordy, Saelens, & Ernst, 2000; Epstein, Roemmich, & Raynor, 2001). Robinson (1999b) indicated that comprehensive behavioral treatment programs produce long-term weight control in up to one-third of pediatric participants. Aspects of the most successful programs include a group format with individualized behavioral counseling, parent participation, frequent sessions, and long treatment duration (Robinson, 1999a). As an example, Epstein and Squires (1987) used a family based behavioral treatment program to decrease obesity in children and found that parental involvement had a significant influence on Body Mass Index (BMI). Unfortunately, most families with children who are overweight or at risk of being overweight, particularly minority children, do not participate in these types of comprehensive treatment programs that so effectively reduce sedentary behaviors, cues, and opportunities associated with calorie intake and inactivity. It is critical to find new ways to involve children who are overweight or at risk of being overweight and their families in easy to implement and straightforward parent-child skill training programs. Such programs increase cues and opportunities for physical activity, self-monitoring, goal setting, contracting, and skills for maintenance and relapse prevention. One way this might be accomplished is to involve them in parent-child behavioral programs that reduce media use.

Dennison, Russo, Burdick, and Jenkins (2004) involved children aged 2.6 to 5.5 years of age in a seven-session program designed to reduce television viewing, whereas controls received a safety and injury

prevention program. Children in the intervention group decreased their television/video viewing by 3.1 hours per week, compared to the children in the control group who increased their viewing by 1.6 hours per week. In the 2nd Investigators Workshop on Innovative Approaches to Prevention of Obesity, Dr. Kumanyika referred to Dennison's study and mentioned that while there was no change in the BMI scores for the intervention group, there was a slight increase in the control group, suggesting that this intervention was beneficial. In a study by Robinson et al. (1999a), third- and fourth-grade students in one elementary school received an 18-lesson, 6-month classroom curriculum to reduce television, videotape, and video game use. Compared with students in a control school, children in the intervention group had statistically significant decreases in BMI, and these changes were accompanied by statistically significant decreases in children's reported television viewing as well as meals eaten in front of the television. In another study, Gortmaker et al. (1999) worked with five intervention and five control schools. A two year intervention involved working with middle school classroom teachers who incorporated lessons that worked on decreasing television viewing, increasing physical activity, reducing the consumption of high fat foods, and increasing the consumption of more servings of fruits and vegetables. The intervention reduced the prevalence of obesity for girls.

Faith et al. (2001) evaluated the effects of contingent TV with 10 obese children. Those in the experimental group were required to pedal a stationary cycle to view TV, whereas the controls' TV viewing was not contingent on pedaling. The study lasted 12 weeks following a two week baseline period. During the treatment phase, the experimental group pedaled 64.4 minutes per week compared with 8.3 minutes for controls. The experimental group watched 1.6 hours of TV per week as compared to the controls who watched 21 hours per week. In addition, those in the experimental group showed significantly greater reductions in total body fat and percent leg fat. The study suggests that contingencies in the home environment can significantly increase physical activity and reduce TV viewing, and therefore establishing TV viewing as contingent upon exercise may be one method to treat childhood obesity. Epstein, Paluch, Consalvi, Riordan, and Scholl (2002) investigated the effects of manipulating sedentary behavior on physical activity and food intake. Thirteen 8-12 year old non-obese children participated and results highlighted that increasing sedentary behavior had an influence on physical activity and energy intake. Epstein, Paluch, Gordy, and Dorn (2000) evaluated the effect of reducing television watching and other sedentary behaviors as a component of a comprehensive obesity treatment program. Ninety families with obese 8- to 12- year old children were provided a complete family-based behavioral weight control program, differing in whether sedentary or physically active behaviors were targeted. Both approaches were associated with significant decreases in percent overweight, body fat, and improved aerobic fitness. It appears that reducing sedentary behaviors is an important adjunct in treatment programs directed at pediatric obesity.

Devices on the Market

Devices to help parents manage content, such as the V-chip, have been unsuccessful in terms of their adoption and use, despite being available now in the majority of televisions (Jason, & Hanaway, 1997). Similarly, most parents have not adopted website filtering technologies despite their being readily available. Given the limited utilization of these approaches, a promising arena might involve developing social-learning programs for families that impact parent-child relations and socialization practices. Several products, such as computerized channel locks, are available on the market to deal with the problem of children's excessive media viewing; however, they can be expensive and can only be used on a small number of television sets. In addition, these computerized devices cannot be inserted on older sets. Because these systems rely on simple electricity to remain functional, if the set is unplugged, the programming can be cancelled. One limiting aspect of these systems is that they were designed to help block out undesirable channels, rather than reduce the amount of TV viewing or help children develop new interests. There are also several products on the market that enclose prongs on the TV cord into a lock, so that a child cannot watch any TV (Positive Impact, Electro-Lok, Plug-Lok, CPAC). The limitations with these systems are that

they completely prevent TV watching, as opposed to helping children reduce their watching and teaching time management and goal setting skills. Further, there are devices on the market to lock computers and to screen the content of the Internet. None of these devices aim to help parents re-socialize children's behaviors and activities. It is important to theorize beyond simple electronic devices that do not explicitly recognize the many parent-child social-learning manipulations that might be responsible for treatment effects and their maintenance over time. Rather, it is important to think of how a technology might enable parents to learn new management strategies for dealing with the electronic media use.

A large portion of the research published on problems involving media has focused on TV and computer games, neglecting the important topic of the Internet. Greenfield (1999) found that 6% of the 17,251 persons surveyed met criteria for compulsive Internet use, and over 30% reported using the Internet to escape from negative feelings. The vast majority admitted to feelings of time distortion and inhibition when on-line. Even though some youngsters are spending excessive amounts of time with these types of media, there have only been a few studies done in this area. Some people argue that over the next decade, television will be displaced by online media such as the Internet (Kayany & Yelsma, 2000); therefore, devices to help parents control media exposure will need to include these newer technologies (Coffey & Stipp, 1997).

Role of Parents

Clearly, parents do play an influential role in how their children interact with media (Nathanson & Botta, 2003). Valkenburg, Krmar, Peeters, and Marseille (1999) reviewed studies that have investigated the occurrence of television mediation in the home (how often parents restrict their children's television viewing, how often they discuss television shows with their children, and how often they co-view). Valkenburg, Krmar, Peeters, and Marseille (1999) found that parents of higher educational levels tended to restrict child viewing more often than parents of a lower educational level. For parents attempting to limit the negative impact of television, restricting what their children watch was the most direct way of accomplishing this. Comstock (1990) notes that parents determine, to a large degree, whether a child will be a light, moderate, or heavy user of different media sources through rules and structures. Nathanson (2001) found that parental mediation can inhibit negative media effects, and that parental mediation works by influencing how much attention they grant this medium (Nathanson, 1999). Smetana and Daddis (2002) found parental monitoring was associated with adolescents' belief that parents have a legitimate authority to regulate personal issues. Scott, Fabes, and Wilson (1989) have determined that parental attitudes about children's viewing are related to family interaction.

In a study conducted by the first author and his research team, 83 families were surveyed to assess the techniques they used to limit viewing (Sarlo, Jason, & Lonak, 1988). Results suggested that a significant proportion of the parents felt that their strategies were not effective. To successfully mediate children's media use, many parents require the assistance of a behavioral training program that would help them learn to better manage their children's interactions with and use of electronic media. Such a parent-child behavioral training program could help parents re-socialize their children's behaviors and activities and it can also teach children behavioral skills to use their time more effectively. Parent's monitoring and encouragement of other behaviors might cause children who are overweight or at risk of being overweight to gravitate toward more physical activity, increase the consumption of nutritious food, reduce exposure to commercials encouraging high sugar and fat content, and reduce sedentary behavior. Because supportive communications between parents and children do correlate positively with a child's self esteem and social competence (Harter, 1998; Howes, Hamilton, & Philipsen, 1998), it is important for parent-child training programs to include supportive communications and a sense of involvement for the child.

DePaul University Studies

Since the late 1970s, the first author and his team of researchers at DePaul University have developed several successful methods for reducing the amount of time children spend watching TV (Jason & Klich, 1982; Jason, 1983). In these studies to be reviewed below, our team had predicted that reduced media use would increase children's time to do other things. The actual aim of these interventions was to create a context in which parents and children can learn new behaviors.

Our parent-child training program has involved an electronic device that is used to create a context in which parents and children learn new behaviors, and parents re-socialize children's behaviors and activities through interactions that are encouraged by the device. Before starting the behavioral parent child training program, there is a one-hour instruction in the homes of the families. This intervention employs a standard behavioral contract that utilizes tokens earned by the child for positive, non-media activities that can be exchanged for short periods of access to various media sources. One of the true benefits of this intervention is that it is extremely straight forward and can be easily implemented.

Operant studies

In an earlier study that used behavioral contingencies, seven children in one African-American, inner-city family reduced their TV viewing by using a simple token exchange system whereby tokens were earned by engaging in a variety of school, play, or housework-related activities (Jason, 1984). In this study, the average amount of TV viewing for all children was initially 7.5 hours per day, but this was reduced to 3.7 hours per day with the contingency. Follow-up data indicated the improvements were maintained. The mother indicated that with the onset of the behavioral training program, her children began helping her with chores around the house. The program helped the children switch from having leisure time activities which were television dominated, to activities that were more interpersonal. The parents reported that the children played games with one another, developed new interests, and began using their time in more creative ways.

In order to automate this system, Durbin and Jason (1984) published an article that described a token-actuated timer for line-voltage devices. In his next set of studies, the first author and his research team used this device, which is almost identical to the Earn Time device. Using this device, parents were shown how they might create contingencies that would foster more productive leisure time activities. The first investigation involved an eight and a half-year old male who reduced his TV watching from 6.4 hours during baseline to .9 hours during follow-up. An operant ABAB design was used with a follow-up data collection phase (Jason & Rooney-Rebeck, 1984). The time log at the baseline indicated that the target child spent 7 hours watching TV, 3 hours playing games alone, 2 hours bowling and 2 hours alone per day. At the follow-up point, the target child spent 1 hour watching TV, 2.5 hours doing homework, 4 hours playing games with a friend, 3 hours playing games alone and with family members, 1 hour helping his mother do chores, and 2 hours at meals. The family had no difficulty complying with the directions, and training in the behavioral system and record keeping took only 1 hour.

In a replication operant study, similar positive findings were found with the automated token meter (Jason, 1985). In this study, a parent recorded daily the number of tokens deposited in the timer (only the parent had a key to open the timer and retrieve the tokens) and the light pattern for the tokens (the lights were in a binary pattern and the parent was unaware as to what the light pattern referred). The average reliability over an 18 day time period was 99%. For this second study, tokens were earned for participation in certain positive activities such as reading, doing chores, or playing with friends. The target child's average TV viewing was decreased from 7 hours at baseline to 1 hour at a 9-month follow-up. Moreover, consumer satisfaction ratings were extremely high for the target child and her mother. Again, training to use this behavioral system and training in record keeping took only 1 hour.

Another study using a similar token activated meter, conducted at DePaul University, involved three families. Results revealed that in addition to reductions in TV viewing, there were significant

increases for all participants in activities such as reading, sports, and homework (McCanna, 1987). The most significant gains, however, were in activities requiring interpersonal contact, i.e., playing with friends and parents. Reduced media use increased children's available time to do other things, and parent's monitoring and encouragement of other behaviors caused children to gravitate toward constructive educational and social activities. Training for this study took 1 hour, and the parents did not experience any difficulties in implementing the program.

In a subsequent study (Jason, 1987), two families were recruited and a multiple baseline design was employed. Similar to the procedure of the earlier study, each day a parent recorded the number of tokens deposited in the timer and the binary light patterns for the tokens (again, the parents did not know what the light pattern referred to). Average reliability over 35 days with the number of tokens deposited and the light pattern was 99%; inter-rater reliability on the dependent variable was 95%. Excessive TV viewing was reduced from an average of 5.3 hours and 7.7 hours at baseline, to 1.6 hours and .6 hours respectively at follow-up, which was approximately 200 days following the intervention. In addition, data from a time log used to replicate the prior study indicated that the children became more active and more involved in chores, playing with others, and completing homework. Once again, our research team found that reduced media usage translates into gains in other critical areas. Training in implementing the program and record keeping took only 1 hour.

A final study using the token activated meter employed another operant design (i.e., ABCBCB) and similar reductions in TV viewing were noted. Similar to the previously mentioned studies, a parent recorded the number of tokens deposited in the timer and binary light patterns for the tokens daily. Average reliability, over 61 days, with the number of tokens deposited and the light pattern was 97%. Once again, important positive changes were noted in homework and reading (Jason, 1987). Inter-rater reliability for the dependent variables was above 95% for TV viewing, minutes of homework and extracurricular reading. Consumer satisfaction ratings for children in all of the above studies using the token activated meter were extremely positive. Training for the parents took 1 hour, and no difficulties were encountered in implementing the program or in record keeping.

In the early 1990s, the first author and his research team began investigating several other types of devices that were being marketed for reducing children's excessive TV viewing. For example, one type of television locking device is called "The Switch". It can be attached to the cord of any TV set, allowing parents to "lock" the television with a key, thereby prohibiting television viewing. Jason, Johnson, and Jurs (1993) assessed the effectiveness of this device using an operant research design, and they found that it decreased the amount of television viewed by the two involved children. In another study, Johnson and Jason (1996) found that a computerized television lock, called "SuperVision," was effective in reducing the number of hours two children spent watching television. The above mentioned devices were limited in that they only prevented TV viewing, and therefore, did not re-structure the socialization activities or social learning experiences of parents and children. In contrast, parent-child behavioral programs using token activated meters do have the potential of creating a context in which parents and children learn new behaviors that are encouraged by the device.

During the 1990s, Jason and his team completed additional studies with another contingency device. In one study, a 9-year old male with Down's Syndrome was allowed to watch TV contingent upon exercising on a bicycle (Jason & Johnson, 1995). His mother reported that he was waking up in the middle of the night to watch television prior to beginning the program. He had been watching a daily average of 6.4 hours of TV during the 20-day baseline for the experiment (3.9 hours with TV; 2.5 hours with Nintendo). During the intervention, where the child was required to earn time to watch, he reduced his TV use to 2.7 hours a day (1.5 with TV; 1.2 with Nintendo). At a five-month follow-up, where the child again had free access to television, his total viewing was only 1.8 hours. Several family members mentioned that the target child had lost weight and began riding bikes even without rewards, as the child began enjoying the activity.

Adequate inter-rater reliability was found and consumer satisfaction ratings were once again extremely positive. Only 1 hour was needed to train the parent in the behavioral system and record keeping.

The next study (Jason & Brackshaw, 1999) involved an overweight child who was watching an excessive amount of TV (averaging over 4 hours per day). The parent indicated that her child previously had temper outbursts as a result of attempts to restrict TV viewing. The inner-city parent was provided instructions on behavioral parent training, contingency management, and record keeping in 1 hour, and no difficulties occurred in implementing the intervention or in collecting data. After collecting baseline data, the child was required to ride a bicycle for 60 minutes in order to watch an equivalent amount of TV, consequently, this program successfully reduced TV viewing. Once the behavioral parent training system was introduced, immediate reductions in TV viewing occurred, and the parent reported that the child did not object to exercising in order to earn the right to view TV. Paired with the child's increase in exercise and reduction of TV viewing, she became more active by getting involved in a variety of outside activity programs. With the time that she had previously dedicated to watching TV, she was now playing with friends and involved in several sport-related programs. These activities became self-reinforcing and along with the help of the parent, the re-socialization of the child's behaviors and activities, probably accounted for the maintenance of low TV viewing following the termination of the formal intervention. A 20 pound weight loss was maintained at the one year follow-up. This study along with the prior studies reviewed above suggest that children who begin to spend time playing active games and sports will likely find them rewarding in themselves.

Discussion

It is important to note that in the research cited in the introduction concerning the negative effects of high levels of media exposure, many of these investigations employed cross-sectional, non-longitudinal designs, which are unable to rule out important threats to internal validity, especially selection effects. In addition, the effect sizes of the negative outcomes of media exposure have sometimes been modest. Still, the evidence clearly indicate that media have effects on our youth. For example, in an important review article, Anderson et al. (2003) concluded that media violence has a modest direct effect on serious forms of violent behavior, and an even larger impact on aggression. For many, the negative effects of childhood exposure to media violence extend into adulthood.

Regardless of whether one believes that media has a negative influence on children's behavior, the majority of social scientists and parents feel that excessive viewing is not in the best interest of children. To solve this problem, parents need to become more involved in this issue, and our studies show one way this can be accomplished. The key in our parent child training program has been to use Earn TV as a mechanism to help parents re-structure the socialization activities or social learning experiences of their children. As has been stated earlier, changes in parenting management of media use are a critical mediator of the potential treatment effects for reducing children's weight. The parent-training programs described in this article can help reduce media use and as a consequence might increase children's time to do other things, however, parents' monitoring and encouragement of other behaviors is essential for the success of this intervention. Clearly, this training program can help set the context for changes in the parents' management of media use.

In summary, our research team has been working on parent-child behavioral training programs for over 20 years, and we have been effective in decreasing inappropriate media viewing, increasing academic performance, and re-structuring the socialization activities or social learning experiences of their children. The parent-child training program has also been used to reduce media use in children who are overweight or at risk of being overweight, and such a program encourages children to become more active and less sedentary. We believe that parents learn to better monitor electronic media use, consistently apply rules for children's media use, and encourage other non-media behaviors. Such a program can help children gravitate toward activities that result in higher activity levels, less exposure to commercials featuring high sugar and

high fat foods and drinks, less snacking in front of television, and consequent weight loss. As parents improve on implementing contingencies, they will also be better able to help their children decrease saturated fat and sugar intake and to eat healthier foods. However, until these findings are replicated with larger samples and with appropriate comparison conditions, we need to remain cautious about how these findings might be extended to larger groups and whether these types of positive outcomes can also occur in less controlled situations.

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