Putting Young Children in Front of the Television: Antecedents and Outcomes of Parents'

Use of Television as a Babysitter

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Abstract

This study investigates predictors and consequences associated with the use of television as a babysitter for young children. Survey data of 844 children between the ages of six months and six years are analyzed using structural equation modeling. Parents' attitude toward television emerged as best predictor of using television as a babysitter, which in turn predicted increased time spent watching television. Children of parents with strong positive attitude toward television and, unexpectedly, children of parents with more education are at greater risk for increased television viewing if they are put in front of the television for being occupied.

Keywords: children, parents, parental education, parental television attitude, television

Putting young children in front of the television: Antecedents and outcomes of parents' use of television as a babysitter

Child television exposure has been repeatedly associated with negative health outcomes such as childhood obesity (Dennison and Edmunds 2008), sleep disorders (Thompson and Christakis 2005) and attention problems (Zimmerman and Christakis 2007). In spite of these and other adverse health outcomes, investigations have also found that watching television is strongly embedded in young children's lives (Lemish 1987; Livingstone 2002; Rideout and Hamel, 2006; Tandon et al. 2011). According to a recent study, preschoolers' daily screen time ranged between 3.2 and 5.6 hours (Tandon et al. 2011). Such findings are inconsistent with the American Academy of Pediatrics' (AAP) recommendations to limit screen time among young children (AAP 2009). This observation highlights a need for research into the reasons why parents have their child watch television. This study aims to investigate the predictors and consequences of one such reason, namely the use of television as a babysitter.

The use of television as a babysitter

Parents endorse various reasons for having their child watch television. Parents use television to calm down their moody child or to accompany bedtime (Zimmerman et al. 2007). Another often-heard reason among parents is babysitting the children (Evans et al. 2011; Götz et al. 2007; St. Peters et al. 1991). According to a recent study (Evans et al. 2011) almost half of the parents stated that they benefit from using television as a babysitter.

These investigations provide important insights in the use of television as a babysitter. However, a number of gaps remain. First, there has been relatively little analysis of parent and child characteristics that might predict the use of television as a babysitter. Second, it is not fully known whether the use of television as a babysitter predicts children's viewing time. Moreover, data in previous works were mostly collected in older and relatively small samples. To address these gaps, the present study aims to construct an integrative model to assess

relationships between the use of television as a babysitter, children's television viewing time and parent and child factors. The theoretical model that will be tested is presented in Figure 1.

[Figure 1 about here]

The impact of using television as a babysitter on children's television viewing time

Studies have identified several predictors of the time children watch television, including child age (Anand and Krosnick 2005), parental attitude toward television (Barr et al. 2010; Vandewater et al. 2005a), and having a television in the bedroom (Christakis et al. 2004). However, the impact of parents' use of television as a babysitter remains largely unexplored.

Studies grounded in uses and gratifications (U&G) theory have supported the assumption that individuals use television to fulfil particular needs (e.g., Aubrey et al. 2012; Rubin 1986). From this need satisfaction perspective, Krosnick and colleagues (2003) argue that satisfaction of needs by television results in an increased television viewing time. In terms of U&G theory (Rubin 1994), one could say then, that parents may have their children watch television in order to satisfy their need to occupy their children when they are unavailable. Parents who satisfy their need to supervise their children by having them watch television, might thus have children who watch more television. Taras and colleagues (1990), for instance, reported that three- to eight-year-olds whose parents used television as a distraction watched more television. Accordingly, we predict that:

H1: The use of television as a babysitter positively affects the time children spend watching television (Path 1 in Figure 1).

Models dealing with attitude-behavior relationships have shown that attitudes are important predictors of behaviors. The Bentler-Speckart model, for instance, assumes that attitudes directly influence behavior (Bagozzi and Yi 1989; Bentler and Speckart 1979). With respect to television use, parental attitude toward television has been repeatedly found to determine children's viewing time. Positive parental attitudes toward television content were

associated with higher television exposure among children (Valerio et al. 1997). Children are more likely to live in a household with heavy television exposure when their parents had positive attitudes toward television use (Vandewater et al. 2005a). Another explanation for the influence of parental attitudes on children's viewing time, may be that parental attitudes influence parents' use of television as a babysitter and, in turn, influence children's television exposure. As Austin and colleagues (1999) suggested, parents with negative attitudes toward television may be less likely to have their children watch television for babysitting. Parents with positive attitudes toward television, on the other hand, more often have their child watch television for babysitting (Gantz 1982), which in turn may increase children's television viewing time. In sum, it is expected that parental attitude toward television predicts the time children spend watching television directly (Path 2_a in Figure 1) as well as indirectly, through the use of television as a babysitter (Path 2_b in Figure 1). Hence, we predict that:

H2_a: Parents' attitude toward television positively affects the time children spend watching television.

H2_b: Parents' attitude toward television positively affects the use of television as a babysitter, which in turn positively affects the time children spend watching television.

Another factor that may account for the time children watch television is the time parents spend watching television. Grounded in social learning and modeling theories, studies on various child behaviors have shown that parents are important role models for their children. Parents' smoking and eating behaviors, for instance, are predictive for children's smoking (Gilman et al. 2009) and eating behaviors (Vereecken et al. 2004). In line with social learning theory (Bandura 1994), it can be expected that young children learn to watch television by observing their parents' viewing behavior. It has indeed been shown that the amount of time parents watch television is positively associated with the amount of time children spend watching television (Rideout and Hamel 2006). Therefore, it is hypothesized

that the more television parents watch, the more television children watch (Path 3_a in Figure 1). Parents' television viewing may influence children's viewing in another, yet indirect, way as well. According to self-perception theory (Bem 1972), individuals' behaviors have an impact on individuals' attitudes, and attitudes may become more positive after performing the behavior. In this study, this implies that parents' own experiences with television may influence their attitudes about television. More specifically, it can be expected that parents who watch more television have more positive attitudes toward television (Path 3_b in Figure 1), which in turn predicts children's viewing time. This leads to the following hypotheses:

H3_a: The time parents spend watching television positively affects the time children spend watching television.

H3_b: The time parents spend watching television positively affects parental attitude toward television, which in turn affects the time children spend watching television.

In addition to the attitudinal and behavioral factors, it appears that parents' educational level is also an important factor in child television exposure (Huston and Wright 1996). An explanation may be found in what Bourdieu calls "cultural capital" (Bourdieu 1984). From this perspective, it has been found that more educated parents attach more value to educational quality and so-called culturally appropriate activities for their children. More educated parents are found to be more critical television viewers (Warren 2005) and believe that watching television does not fit with being more educated (Notten and Kraaykamp 2010). Studies have reported a negative relationship between parents' educational level and children's television exposure (Anand & Krosnick, 2005; Certain & Kahn, 2002; Hesketh et al. 2007) (Path 4_a in Figure 1). Parents' level of education is also found to be related to parental mediation: More educated parents have been shown to place more time and content restrictions on their child's television use (Valkenburg et al. 1999; Vandewater et al. 2005b). Accordingly, more educated parents, who typically believe that watching television does not

fit with being more educated (Notten and Kraaykamp 2010), may be less likely to use television to babysit the child. Less educated parents, on the other hand, are more likely to use television as a babysitter according to studies by Gantz (1982) and Gantz and Masland (1986). Therefore, it is expected that parents' educational level indirectly predicts the time children spend watching television, through the use of television as a babysitter (Path 4_b in Figure 1). Furthermore, the relationship between parental education and the time children spend watching television may be mediated by parents' attitude toward television. According to the cultural capital perspective (Bourdieu 1984), higher educated parents have more critical attitudes toward watching television. In line with this assumption, a study among two- to eight-year-olds reported that more educated mothers were less likely to have positive attitudes toward television (Valerio et al. 1997). Based on these findings, it is expected that parents' educational level indirectly predicts the time children spend watching television, by directly and negatively predicting parents' attitude toward television (Path 4_c in Figure 1). Finally, it can be expected that the educational level of parents predicts the time parents spend watching television, which in turn predicts the time children spend watching television. More educated individuals typically prefer more highbrow activities (Bourdieu 1984), believe that television does not match with being higher educated (Notten and Kraaykamp 2010) and have been shown to spend less time watching television (Warren 2005). Combined with our third hypothesis (H3_a), suggesting that parents who spend more time watching television have children who watch more television, it is therefore hypothesized that parents' educational level indirectly predicts the time children spend watching television by directly and negatively predicting the time parents spend watching television (Path 4_d in Figure 1). These expectations lead to the following hypotheses:

H4_a: Parental education negatively affects the time children spend watching television.

H4_b: Parental education negatively affects the use of television as a babysitter, which in turn positively affects the time children spend watching television.

H4_c: Parental education negatively affects parental attitude toward television, which in turn positively affects the time children spend watching television.

H4_d: Parental education negatively affects the time parents spend watching television, which in turn positively affects the time children spend watching television.

Finally, studies have shown that children's television use increases as children age (Anand and Krosnick 2005; Christakis et al. 2004). Children's attention to television develops from short reactions toward auditory cues, over directing the eyes to the screen after being attracted by visual and auditory cues, and because of their interest in specific content types, to full attention to the screen and making regular use of television (Lemish 1987; Wartella et al. 2010). Accordingly, it is expected that child age directly predicts the time children spend watching television (Path 5_a in Figure 1). Furthermore, child age emerged as a significant predictor of child supervision (Morrongiello et al. 2006; Pollack-Nelson and Drago 2002). Four- to five-year-olds, for instance, were less supervised by their caregivers than two- to three-year-olds, although parents did leave their children unattended even at early ages (Morrongiello et al. 2006). Therefore, it might be expected that parents use television to replace parental supervision regardless of the child's age. However, because parents believe that younger children need more supervision (Peterson et al. 1993) and because older children are left unsupervised more often (Morrongiello et al. 2006; Pollack-Nelson and Drago 2002), it can be assumed that parents use television as a supervision tool more often among younger children. Early research provided evidence that parents with younger children are more likely to use television as a babysitter (Gantz 1982; Gantz and Masland 1986). Hence, our model starts with child age which directly predicts the use of television as a babysitter (Path 5_b in Figure 1), which in turn predicts the time children watch television. Our hypotheses state:

H5_a: Child age positively affects the time children spend watching television.

H5_b: Child age negatively affects the use of television as a babysitter, which in turn positively affects the time children spend watching television.

Moderator effects of parental attitude toward television and parental education

Apart from identifying predictors and consequences of using television as a babysitter, this study investigates whether the impact of using television to occupy the children differs by sociodemographic background. As it seems unlikely that the hypothesized associations will be universal across all children, two interactions are expected to be found. First, parental attitude toward television may well moderate the relationship between using television as a babysitter and television viewing time. Research has demonstrated that parents with concerns about the negative effects of television content on children were more inclined to control the impact of television on their children (Warren 2005). Likewise, parents with less positive attitudes toward child television viewing might make more efforts to restrict the viewing time if they put their children in front of the television for being occupied. Parents with strong positive attitudes toward child television viewing, on the contrary, might be less concerned about their children being occupied by the television as a babysitter and set fewer limits on these babysitting moments. Hence, it is expected that the impact of using television as a babysitter on the time children spend in front of the television is stronger among children whose parents have strong positive attitudes toward television.

Second, a moderator effect is expected for parental education. Bourdieu's cultural capital perspective (1984) assumes that children are socialized in a specific social class group. This socialization process might have an impact on the relationship between using television as a babysitter and children's total viewing time. More highly educated parents are better equipped with strategies to limit children's television viewing time. For instance, more educated parents enforce more television viewing rules (Vandewater et al. 2005b) and are less

likely to have a television set in the child's bedroom (Christakis et al. 2004). It can be assumed that more highly educated parents rely on television as a babysitter only to a limited extent, thus reducing the impact on the total amount of television viewing. Therefore, it may be that the relationship between using television as a babysitter and the amount of television viewing is less strong for highly educated parents compared to less educated parents.

Accordingly, parental attitude and parental education will be first included in our main model as a predictor variable, and subsequently be excluded from our main model and function as a moderator variables to test the following hypotheses:

H6_a: The use of television as a babysitter is a stronger predictor of the time children spend watching television among children of parents who have strong positive attitudes toward television.

H6_b: The use of television as a babysitter is a stronger predictor of the time children spend watching television among children of parents with less education.

Method

Data were collected in a cross-sectional survey among a sample of parents with children aged six months through six years in Belgium. The sample was recruited in public and private daycare centers and kindergartens situated in various regions in Belgium. After daycare centers and kindergartens were selected, invitation letters that informed parents about the study were distributed in all 47 kindergartens and child care centers of which day care administrators and school principals granted permission to the investigators. Surveys were sent home with each child and were collected in kindergartens and child care centers after completion. Informed consent was obtained for all participants and all study procedures were approved by the Institutional Review Board at the authors' university.

The sample comprised 844 parents. The overall response rate (42.2%) was similar to that achieved in similar studies among parents of young children (e.g., Hesketh et al. 2007; Vandewater et al. 2005a). Respondents were on average 36 years old ($M = 35.92$; $SD = 4.70$)

and most of them were mothers (88%). Children in the sample were fairly evenly divided by gender (47% boys and 53% girls), and were, on average, 3.94 years old ($SD = 1.23$).

Approximately one-third of parents had a high school degree or less; 65.7% of parents had a higher education (non-university) degree or university degree.

[Table 1 about here]

Measures

Parents' use of television as a babysitter. The measurement of using television as a babysitter was inspired by items used in previous, mainly qualitative, studies (Evans et al. 2011; Götz et al. 2007; Zimmerman et al. 2007). Parents were asked to indicate on a five-point scale ranging from 1 (*never*) to 5 (*very often*) how often they applied each of four uses of television as a babysitter (i.e. "I let my child watch television, a video or DVD because I can" (1) "prepare meals"; (2) "get dressed or go to the bathroom"; (3) "do chores"; (4) "get things done on my own"). A principal components analysis indicated that the four items loaded on one factor, explaining 59.98% of the variance (Cronbach's $\alpha = .776$). Likert-type scales anchored by these ratings have been frequently included in previously published media studies (e.g., Levy and Windahl 1984; Lin 1993; Taras et al. 1990; Truglio et al. 1996; Van den Bulck 1999). Truglio et al. (1996), for instance, measured parental encouragement of child television viewing by a five-point scale ranging from *never* to *very often*, and Taras and colleagues (1990) asked their respondents to rate the use of television as a distraction for children on a similar scale.

Time spent watching television by the child. The time children spend watching television was measured according to the procedure outlined by Van den Bulck and his colleagues (e.g., Van den Bulck 2006; Van den Bulck and Beullens 2005; Van den Bulck and Hofman 2009; Van den Bulck and Van Mierlo 2004). For each day of the week a timeline was presented ranging from 6 A.M. that day until 5 A.M. the next day. Each hour on the timeline was

divided into four quarters of an hour. Each timeline thus consisted of 96 checkboxes each representing a quarter of an hour. Parents were asked to mark all time periods in which their child usually watches television, videos or DVDs for each day of the week. Total weekly television viewing time (in hours) was calculated by adding up all marked checkboxes (i.e. all marked quarters) and dividing the total sum by four.

Time spent watching television by the parent. Parents were asked to indicate their own television viewing time on timelines consisting of 48 checkboxes of half an hour each. Consistent with the timelines for children, a timeline was presented for each day of the week ranging from 6 A.M. until 5 A.M. the next morning. For each day of the week, parents marked all time periods in which they normally watch television, videos or DVDs. Weekly television viewing time (in hours) was calculated by adding up the marked checkboxes (i.e. all marked half hours) and dividing the total sum by two.

Parental attitude toward television. Consistent with previous research (Austin et al. 1999; Valkenburg et al. 1999), parental attitude toward television was assessed by asking parents to indicate their attitude toward seven positive outcomes of television among young children (e.g., “Children who are heavy TV viewers learn a lot of new words”) using a five-point Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The summary score on the seven items was computed and used in the analyses ($\alpha = .773$).

Parental education. Parents were asked to indicate the highest level of education they have completed. Response options were *no education*, *grade school*, *high school*, *higher education (non-university) degree*, and *university degree* according to the Belgian school system.

Statistical analyses

The model was tested using AMOS. To evaluate whether the relationships were moderated by parental attitude and parental education, multigroup analyses were used. By means of median split, the parent sample was divided in parents with weak positive attitudes and parents with

strong positive attitudes toward television. With respect to parental education, parents were divided into three groups: parents with high school education or less, parents with higher education (non-university) degree, and parents with university degree. Model quality was measured using two measures of fit that have been proved to be reliable in large sample sizes (Byrne 2001): the Comparative Fit Index (CFI), and the Root-Mean-Square Error of Approximation (RMSEA). For multigroup models, a chi-square difference test was used.

Results

The majority of children watched television on a regular basis (96.3%). They spend an average of 11 hours a week ($M = 10.73$ hours; $SD = 7.35$) watching television, videos or DVDs. Parents watched on average 18 hours of television weekly ($M = 18.14$ hours; $SD = 9.81$). Results show that almost half of the parents (48.1%) admitted to using television with their child to get things done on their own. A little less than seven in ten parents sometimes (36.2%) or (very) often (31.3%) used television as a babysitter while they prepared meals. About 40% indicated that they sometimes (26.5%) or (very) often (14.1%) sat their child in front of the television to get dressed themselves. Finally, almost four out of ten parents (37.3%) sometimes and another 12.4% of parents often or very often used television for their child while cleaning.

Using television as a babysitter and time spent watching television

Structural equation modeling revealed that the hypothesized model yielded a good fit, $\chi^2(83, N = 839) = 315.361, p < .001$, CFI = .916, RMSEA = .059.

[Figure 2 about here]

Figure 2 shows the relationships among child and parent factors, the use of television as a babysitter, and the time children spend watching television. H1, stating that the use of television as a babysitter predicts the time children spend watching television, was confirmed by the model, $\beta = .175, B = 8.760, SE = 1.856, p < .001$. The path from parents' television

attitudes toward amount of viewing was significant, $\beta = .157$, $B = 12.098$, $SE = 2.883$, $p < .001$, confirming H2_a. Children of parents with strong positive attitudes toward television watched more television. The path from parental attitude to the use of television as a babysitter was significant as well, $\beta = .256$, $B = .393$, $SE = .074$, $p < .001$, indicating that parents who believed in the positive effects of television tended to use television more often as a babysitter. As such, parents' attitude toward television had both a direct positive effect on the time children spent watching television, as well as an indirect effect, through the use of television as a babysitter.

Parents' time spent watching television was the best predictor of the time children spent watching television, $\beta = .345$, $B = 1.032$, $SE = .099$, $p < .001$. Furthermore, parents' viewing time significantly predicted parents' attitude toward child television exposure, $\beta = .230$, $B = .009$, $SE = .002$, $p < .001$, which in turn predicted the time children spend watching television. Thus, support was found for both H3_a and H3_b.

As expected, parents' educational level negatively predicted the time children spent watching television, $\beta = -.104$, $B = -3.588$, $SE = 1.112$, $p < .01$. Children whose parents have a low educational level watch more television compared to children whose parents have a high educational level. The path from parental education to the use of television as a babysitter, testing H4_b, was not significant, $\beta = .007$, $B = .005$, $SE = .027$, $p = .864$. This finding indicates that using television to occupy the children is found among parents of each parental educational level. The path from parental education to parental attitude toward child television viewing was insignificant as well, $\beta = .039$, $B = .017$, $SE = .018$, $p = .341$. Thus, H4_c was not confirmed. Yet, parental education proved to be a significant negative predictor of the time parents spent watching television, $\beta = -.340$, $B = -3.917$, $SE = .384$, $p < .001$. Hence, parents' educational level indirectly predicted the time children spent in front of the television, by directly predicting the time parents spent watching television themselves.

Finally, child age only directly predicted the time children spent watching television, $\beta = .151$, $B = .301$, $SE = .061$, $p < .001$. This finding provides support for H5_a. No support was found for an indirect effect of child age on television viewing time mediated by television as a babysitter (H5_b), as the path from child age to the use of television as a babysitter was not significant, $\beta = .060$, $B = .002$, $SE = .002$, $p = .124$.

Moderator Analyses

Parental attitude toward television. Chi-square testing revealed that the relationship between the use of television as a babysitter and the time children spend watching television differed by parental attitude toward television. The fit of the unconstrained model was very good, $\chi^2(34, N = 771) = 68.015$, $p < .001$, CFI = .970, RMSEA = .036. Constraining the model changed the model fit significantly, $\Delta\chi^2(10) = 26,296$, $p < .01$. The effect of using television as a babysitter on the time children spent watching television was stronger among children whose parents had strong positive attitudes toward television, $\beta = .304$, $B = 16.914$, $SE = 2.990$, $p < .001$ than among children whose parents had weak positive attitudes, $\beta = .108$, $B = 4.274$, $SE = 2.110$, $p < .05$, confirming H6_a (See Figure 3).

[Figure 3 about here]

Parental education. Figure 4 presents the three-group model for parents with high school education or less, parents with higher (non-university) education, and parents with university education. Surprisingly, although the model provided an accurate fit for all groups, $\chi^2(219, N = 818) = 453.708$, $p < .001$, CFI = .911, RMSEA = .037, using television as a babysitter only was a predictor of children's time spent watching television among children of parents with higher (non-university) education, $\beta = .254$, $B = 12.140$, $SE = 2.910$, $p < .001$, and university education, $\beta = .362$, $B = 13.956$, $SE = 3.265$, $p < .001$, but not among children of parents with high school education or less, $\beta = .012$, $B = .641$, $SE = 3.481$, $p = .854$. The fit of the unconstrained model was good, $\chi^2(219, N = 818) = 453.708$, $p < .001$, CFI = .911, RMSEA =

.037. Constraining the model changed the model fit significantly, $\Delta\chi^2(32) = 53,351, p < .01$.

Thus, the moderating effect of parental education was significant. The more educated parents were, the more using television as a babysitter led to increased viewing among children.

[Figure 4 about here]

Discussion

Using television as a babysitter plays a central role in child television viewing (Evans et al. 2011; Götz et al. 2007; Rideout and Hamel 2006). Hence, thorough knowledge of the predictors of such use and of the potential effects on the time spent in front of the television is crucial to reduce young children's television viewing time. However, little attention has been paid to the impact of using television as a babysitter. This study sought to address this gap by investigating the associations between parent and child factors, the use of television as a babysitter, and the time children spend watching television.

Our study revealed three key findings. First, results showed that especially those children whose parents have a strong positive attitude toward child television viewing are put in front of the television while their parents are not able to supervise them. Second, the amount parents spend watching television was by far the most important predictor of child television viewing, followed by using television as a babysitter. Third, the impact of using television as a babysitter on children's viewing time is not universal: Children of parents with strong positive attitudes toward television and, unexpectedly, children of more highly educated parents are at greater risk for the impact of using television as a babysitter.

The use of television as a babysitter for young children

In contrast to our expectations, children's age did not predict the use of television as a babysitter. Yet, it is possible that parents' considerations for using television as a babysitter differ according to the child's age: Parents might consider television as a good alternative for very young children because the auditory cues keep them occupied and for older children

because they are interested in specific content types and television programs (Lemish 1987; Wartella et al. 2010). Secondly, parents' cultural capital did not have an impact either. Children of less educated parents were left in front of the television as often as children of more educated parents. An explanation might be that other factors that have not been included in our model are likely to contribute to the use of television as a babysitter. Although in terms of their cultural capital (Bourdieu 1984) more educated parents may well be more critical about using television as a babysitter, it may be that other forces, such as time constraints or parenting stress, urge parents to still use television with their children. More educated parents who do not experience such stresses might more easily hold on to their critical view, and in turn less often have their children watch television. Studies should investigate whether these structural forces indeed moderate the relationship between parents' educational level and the use of television as a babysitter.

The only factor in our model that contributed to the use of television as a babysitter was parents' attitude toward television. Parents with strong positive attitudes toward child television viewing are more likely to have their children watch television while they are not able to supervise them. While this finding is in line with the assumption of the Bentler-Speckart model that attitudes may have a direct influence on behavior (Bagozzi and Yi 1989; Bentler and Speckart 1979) additional research is needed to identify other factors that instigate this practice. For instance, it may be that parents find themselves in situations where they have a lack of time or energy and decide to occupy the children by sitting their children in front of the television. In this respect, the ecological systems theory (Bronfenbrenner 1979) provides a useful framework, because it looks at influences at the family's micro-, meso-, exo- and macro-system. Family factors that influence such time or energy constraints, such as parents' work hours or availability at home (Warren 2005), should be thoroughly investigated.

The use of television as a babysitter and time spent watching television

Consistent with prior research, the more parents used television to occupy their children, the more children watched television. This finding suggests that the recommendation that television should not be used as a babysitter for young children (AAP 1999) is legitimate. Future research should examine whether other parent motives for having children watch television increase children's actual viewing time.

Further analyses revealed that parents' time spent watching television appeared to be the best predictor of children's viewing time, lending support to the notion that parents' own television viewing behavior is reflected in children's viewing (Huston and Wright 1996; Salmon et al. 2005; Yalçın et al. 2002). In this context, it is also possible that parents who are heavy viewers offer their children few alternative activities. It is less likely that parents provide models of book reading or physical activity if they frequently watch television.

Although parental education did not predict the use of television as a babysitter, we found that children of parents with less education watched more television in general. This finding provides support to the assumption of cultural capital (Bourdieu, 1984), as it suggests that more educated parents believe that watching television does not match with the status of being more educated. This critical view toward television is also reflected in parents' own television consumption: Higher educated parents indicated to watch less television themselves. This means that one mechanism that accounts for the inverse relationship between parental education and child television viewing time, is the time parents spend watching television. Parents with less education watched more television themselves, which in turn resulted in increased television viewing among their children. The indirect effect was slightly larger ($\beta = -.124$) than the direct effect ($\beta = -.10$). Two other mechanisms that were tested, did not account for the association between parental education and child television viewing: Parental attitude toward television nor using television as a babysitter mediated the relationship. This suggests that other mechanisms might exist. In this respect, Hesketh and

colleagues (2007) showed that less educated parents set out fewer television rules and show less concern about the amount of television exposure, which, again, results in more viewing. Further investigation is needed to determine which factors mediate the effect of parental education on television viewing.

This study further revealed that parental attitude predicts children's television viewing, both in a direct and indirect way. Children of parents with strong positive attitudes toward child television viewing watch more television and are more often put in front of the television to keep them occupied, which in turn results in watching more television. Moreover, parents' attitude toward child television viewing seemed to reinforce the association between using television as a babysitter and children's viewing time. If parents strongly believe that young children benefit from watching television, using television to replace parental supervision has a stronger effect on exposure time. Interestingly, the relationship between using television as a babysitter and the time children spend watching television is nearly non-existent if parents have weak positive attitudes toward television. These findings indicate that the way parents look at child television exposure is important. Health care providers should therefore inform parents about the possible outcomes of child television exposure, so that parents become equipped with more sound knowledge.

Parental education level as well seems to reinforce the positive relationship between using television as a babysitter and children's viewing time. However, unexpectedly, it is children of highly-educated parents who are most vulnerable to spend more time watching television if television is used as a babysitter. One explanation could be that the factors that influence children's viewing time differ across parental education categories. A closer look at the predictors of children's television viewing time indicates that using television as a babysitter was the most important predictor for children whose parents have a university degree, followed by parents' time spent watching television and parents' attitude toward

television. For children of parents with high school education or less, the time parents spend watching television was the most important predictor of children's viewing time, followed by parental attitude toward television and child age. Children whose parents have a higher education (non-university) degree fall in between. Interventions aimed at reducing television viewing time in young children should therefore consider parents' educational level. It appears that reducing the use of television as a babysitter may be most effective among children of parents with a university degree, whereas reducing the time parents spend watching television may be most effective among children of parents with lower degrees.

Limitations

In investigating the relationships between child and parent factors, the use of television as an electronic babysitter, and young children's television viewing, this study has provided an important contribution. However, there are several limitations worth discussing. First, this study focused on the perceived parental benefit of using television to babysit the children. An in-depth investigation of all benefits associated with child television viewing was beyond the scope of the present study. Yet, consistent with prior research (Evans et al. 2011; Zimmerman et al. 2007), an exploratory analysis of our data revealed that parents used television for the perceived educational benefits or for family bonding time as well. Future research should examine other parental reasons for child television viewing and their impact on children's viewing time. To date, however, few quantitative studies are published that measure parents' reasons for child television viewing. Therefore, in this study, both the items included and the Likert-scale used to measure parents' use of television as a babysitter were adapted from and inspired by previous exploratory studies (e.g., Evans et al. 2011; Taras et al. 1990; Truglio et al. 1996; Zimmerman et al. 2007). Because the measure used in this study may not be optimal, future research should construct a more finely grained variable that fully captures the use of television as a babysitter, for instance by relating it to the total parent-child time. The

Likert-type frequency scale used in this study may be limited by the individual interpretation that parents assign to the response categories. Nonetheless, the use of this type of Likert-scale has been validated in several media studies (e.g., Taras et al. 1990; Truglio et al. 1996).

Second, this study found that using television as a babysitter increases children's total viewing time. However, this does not necessarily mean that it is harmful for children.

Although most studies found child television exposure to be associated with various negative health outcomes (e.g., Dennison and Edmunds 2008; Thompson and Christakis 2005), other research has shown that the impact of television on children is not always negative. It has for instance been found that educational television programming designed for young children is associated with better language and mathematical skills (MacBeth 1996). More research is needed to examine which content parents select when using television as a babysitter.

Third, the cross-sectional design of our study does not allow to determine the causality of the associations we found. The data of this study suggest that using television as a babysitter predicts the time children spend in front of television. However, longitudinal studies are needed to test whether our findings may be corroborated. It could be argued, for instance, that parents with children who spend more time in front of television will more often leave their children unsupervised in front of the television. Moreover, it might be that the associations between family factors and television use are not linear and causal, with a one-way effect, but circular, symbiotic and mutually sustaining (Jordan 1990). Alternatively, it is possible that other factors that have not been included in our models, such as the number of children in the home or the child's birth order, account for both the use of television as a babysitter and the total amount of television viewing.

Finally, although this study was among the first to extend our knowledge concerning the antecedents and outcomes of parents' use of television as a babysitter, the fact that data were collected in a sample of parents with children attending daycare centers and

kindergartens may raise concerns about the generalization of the findings. Future studies should investigate the phenomenon of using television as a babysitter in more representative samples. Yet, the sample is comparable to that used in previous research on the use of television among young children. For instance, the age distribution of the sample used in this study (i.e., six months to six years) was similar to that used in previous studies on young children's television use (e.g., Rideout & Hamel 2006; Vandewater et al. 2005). Moreover, the findings of our study are analogous to those reported in previous studies (e.g., Evans et al. 2011; Zimmerman et al. 2007) and provide a better understanding of the antecedents and outcomes of using television as a babysitter for young children. The relatively large sample size reinforces our findings and makes the data more generalizable.

Conclusion

Despite these limitations, this study provides greater insight into the use of television as a babysitter for young children. More specifically, the study findings mainly contribute to models dealing with attitude-behavior relationships and social learning theory, because attitudinal and behavioral factors were the most powerful predictors of using television as a babysitter. The results lend support to the assumption of the Bentler-Speckart model that attitudes directly influence behavior (Bagozzi and Yi 1989; Bentler and Speckart 1979). Parents' attitude toward television appears to be the only direct predictor of using television as a babysitter. The fact that the time parents spend watching television is by far the most important predictor of child television viewing, confirms that parents are important role models for their children. In line with social learning theory (Bandura 1994), it appears that young children learn to watch television by observing their parents' viewing behavior.

This study sheds light on several important factors that should be targeted in future interventions to reduce young children's television exposure. Future studies should continue to investigate the antecedents and outcomes of parents' reasons for child television viewing.

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Figures

Figure 1. Hypothesized Model for Predicting Children's Television Viewing From Television as a Babysitter

Figure 2. The Relationships Among Child and Parent Factors, the Use of Television as a Babysitter, and Time Spent Watching Television

Path coefficients are presented in standardized form. Ovals represent latent constructs.

All regression coefficients are significant at $p < .001$ level.

Figure 3. The Relationships Among Child and Parent Factors, the Use of Television as a Babysitter, and Time Spent Watching Television: A Two-Group Model for Parents With Strong Positive Attitudes Toward Television and Parents With Weak Positive Attitudes Toward Television. Path coefficients are presented in standardized form. Ovals represent latent constructs.

S = Strong positive attitudes, W = Weak positive attitudes

* $p < .05$, ** $p < .01$, *** $p < .001$; $R^2_S = .23$, $R^2_W = .26$

Figure 4. The Relationships Among Child and Parent Factors, the Use of Television as a Babysitter, and Time Spent Watching Television: A Three-Group Model for Parents With High School Education or Less, Parents With Higher (Non-University) Education, and Parents With University Education. Path coefficients are presented in standardized form. Ovals represent latent constructs.

HS = High school education or less, H = higher (non-university) education, U = university education

* $p < .05$, ** $p < .01$, *** $p < .001$; $R^2_{HS} = .18$, $R^2_H = .31$, $R^2_U = .26$