Original Investigation

Parental Cultural Attitudes and Beliefs Regarding Young Children and Television

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IMPORTANCE Research has shown that preschool-aged children spend considerable time with media, and risks and benefits for cognitive and behavioral outcomes exist depending on what is watched and how it is watched.

OBJECTIVE To examine the associations among child race/ethnicity, parental beliefs/attitudes about television (TV) and child development, and TV viewing habits of young children, and to assess reasons for existing racial/ethnic disparities in children's media use.

DESIGN, SETTING, AND PARTICIPANTS Parents completed demographic questionnaires, reported on attitudes regarding media's risks and benefits to their children, and completed 1-week media diaries where they recorded all of the programs their children watched. Enrollment was from March 13, 2009, to April 12, 2010. The study was conducted at 2 metropolitan Seattle pediatric clinics and an academic practice network, each serving a diverse population of patients, and involved a community-based sample of 596 parents of children aged 3 to 5 years.

MAIN OUTCOMES AND MEASURES Parental beliefs/attitudes regarding screen time and TV viewing habits of young children.

RESULTS Overall, children watched an average (SD) of 462.0 (315.5) minutes of TV per week. African American children watched more TV per week than non-Hispanic white children (mean [SD], 638.0 [450.9] vs 431.0 [282.6] minutes; $P < .01$); however, these differences were no longer statistically significant after controlling for attitudes and demographic covariates (eg, family socioeconomic status). It is important to note that socioeconomic status confounded the results for race/ethnicity, and the association between race/ethnicity and media time across the sample was no longer statistically significant after adjusting for family socioeconomic status. However, significant differences were found between parents of ethnically/racially diverse children and parents of non-Hispanic white children regarding the perceived positive effects of TV viewing, even when parental education and family income were taken into account.

CONCLUSIONS AND RELEVANCE Differences in parental beliefs/attitudes regarding the effects of media on early childhood development may help explain growing racial/ethnic disparities in child media viewing/habits, but more research is needed to understand the cultural nuances of the observed differences.

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Research has provided convincing evidence that preschool-aged children spend considerable time with media, and both risks and benefits for cognitive and behavioral outcomes exist depending on what is watched and how it is watched.[1-6] A 2006 Kaiser Family media study highlighted that ethnically/racially diverse children, specifically African American, Hispanic, and Asian American children, watch more television (TV) than non-Hispanic white children.[7-9] Some data suggest that low-income children of ethnically/racially diverse backgrounds who overconsume media[6,7] are at greater risk for negative developmental outcomes[10,11] including poorer school performance.[12,13]

Although national data reflect differences in the amounts of media used by different racial/ethnic groups,[7] the reasons for these differences, particularly insofar as they may reflect variability in attitudes or expectations of media (including TV/digital video discs [DVDs]) or socioeconomic status (SES), are not well understood. A body of research exists examining parents' mediation of children's TV viewing; however, to our knowledge, few studies have examined ethnically/racially and socioeconomically diverse parents' attitudes and beliefs regarding young children's TV/DVD screen time.[5,14,15] Differential exposure coupled with differential parental attitudes toward use of media in early childhood may augment both the potential positive and negative effects of actual media use at this age.[16-20]

This article addresses the context in which we might begin to critically examine the differences in media use across diverse families. We investigate multiple aspects of the relationships between race/ethnicity, family SES, and child TV/DVD viewing, highlighting differences in ethnically/racially diverse parents' beliefs and attitudes regarding the impact of TV/DVD viewing on early childhood development. This study is a preliminary investigation of the potential origins of variability in child media exposure (parental attitudes and beliefs regarding young children and TV) and is unique from research examining broad racial/ethnic or SES disparities in media use or research examining diverse parents' mediation strategies in this domain.

Methods

The sample was drawn from an ongoing randomized controlled trial of a 6-month intervention that aims to minimize viewing of violent TV content and to increase viewing of prosocial programming. Parents were recruited from 2 metropolitan Seattle pediatric clinics and a pediatric practice network. Letters describing the study were sent to families with age-eligible children (3-5 years) without regard to whether the child had been seen in their pediatric clinic recently.

To be eligible, children needed to consume at least some media each week and to have English-speaking parents. Families were given the opportunity to opt out or opt in by returning a postage-paid mailer prior to a recruitment phone call. Those who neither opted out nor in were contacted by telephone 2 weeks after the mailing of the initial recruitment mailer and asked to participate. Attempts were made to oversample low-income families, as identified by Medicaid status or zip code of residence. The study was described to primary caregivers and informed consent was obtained from all participants during a home visit before enrollment. After enrollment, during the same visit, study staff collected the baseline survey and 1-week media diary prior to the introduction of the intervention.

Of the 4805 families contacted and assessed for eligibility, 314 (7%) opted out, 2820 (59%) were unreachable by phone, 1054 (22%) declined to participate, and the remaining families were randomized to the control or intervention group. A total of 617 families (13%) completed both the survey and 1-week media diary at baseline. The 596 children categorized by parent report of race/ethnicity as non-Hispanic white, African American, Asian American/Pacific Islander/Hawaiian, or multiracial were included in this analysis. No additional data were available on the participants who opted out, were unreachable by phone, or declined to participate.[21] Seattle Children's Research Institute's institutional review board approved the research protocol.

Baseline Survey

Demographic information collected included child age and sex, child race/ethnicity, number of adults in the household, parental marital status, household income, parental education, number of TV sets in the household, presence of a TV in target child's bedroom, number and ages of all children living in the household (including the index child), parental attitudes related to TV viewing, child behavior, and child care information. Baseline surveys were collected from participants enrolled from March 13, 2009, to April 12, 2010. Parents were asked to complete the survey and media diary to be collected by study staff at the initial visit.

Family SES was measured using parents' self-reported annual family income and highest level of educational attainment; each was collected as categorical variables in the baseline survey. Low-income status was defined as 200% of the 2009 Federal Poverty Guidelines[22] and calculated from self-reported household incomes and the number of household members. Education level of the parent who completed the survey was categorized as follows: low education (high school or some college), medium education (4-year degree), and high education (graduate school). Given our a priori hypotheses regarding the potential for interaction between the effects of parental education and household income, a single categorical SES variable was created by combining parent education and low-income status into 5 categories: low education/not low income, medium education/not low income, high education/not low income, low education/low income, and medium-high education/low income.

Parents were also asked about their agreement with statements aimed at assessing their attitudes and beliefs about TV viewing in early childhood using a 5-point Likert scale (0 = strongly disagree to 4 = strongly agree). The construct called "Expect positive effects from educational TV" was created using parents' responses to the following 2 statements: (1) Educational TV programs can help preschoolers learn to recognize letters and numbers and (2) educational TV programs

Table 1. Participant Demographics

	No. (%)				
	Non-Hispanic White (n = 409)	African American (n = 41)	Asian American/ PI/Hawaiian (n = 49)	Multiracial/ Other (n = 97)	*P* Value
Time watching television or DVD, min	431 (282.6)	638 (450.9)	499 (343.8)	506 (337.7)	<.001[a]
Education-income matrix					
Low education/not low income	37 (9.3)	2 (5.1)	2 (4.2)	8 (8.5)	<.001[b]
Medium education/not low income	163 (41.0)	2 (5.1)	12 (25.0)	36 (38.3)	
High education/not low income	149 (37.4)	6 (15.4)	15 (31.3)	24 (25.5)	
Low education/low income	16 (4.0)	25 (64.1)	11 (22.9)	15 (16.0)	
Medium-high education/low income	33 (8.3)	4 (10.3)	8 (16.7)	11 (11.7)	
Child age at baseline, mean (SD), y	4.29 (6.43)	4.27 (0.68)	4.33 (0.70)	4.20 (0.65)	.57[a]
Girl	186 (45.6)	16 (39.0)	23 (46.9)	40 (41.1)	.75[b]
Only child	77 (18.9)	15 (26.6)	24 (49.0)	24 (24.7)	<.001[b]
Television in bedroom	11 (2.7)	15 (26.6)	12 (25.0)	15 (15.5)	<.001[b]
Average time in primary child care (SD), h/wk	21.9 (13.01)	30.0 (15.16)	23.0 (13.57)	23.3 (13.4)	.02[a]

Abbreviations: DVD, digital video disc; PI, Pacific Islander.

[a] One-way analysis of variance.

[b] χ^2 test.

can help preschoolers play better with each other. The construct called "Confidence in ability to limit exposure to TV" was created using parents' response to the following 2 statements: (1) "I feel confident that I can keep my child busy with activities that do not include exposure to TV" and (2) "I feel confident that I can make my child watch less than 1 hour of TV a day." Parents were also asked whether they felt that the spouse/partner of their child's other caregiver(s) supported them in reducing TV for their child. For these analyses, the answers were dichotomized to agree vs neutral or disagree.

Media Diary

All participating families were asked to keep a 1-week media diary at baseline and to record daily how much screen time (including TV, DVDs/videos, computer, and video games) the index child watched (or played), and the names of specific programs, films, video games, and computer games. Data on minutes of viewing per week, as well as shows viewed, were obtained from these diaries; however, only data on minutes of TV/DVD time per week were used for this analysis.

Statistical Analyses

We compared continuous variables across race/ethnicity categories using 1-way analysis of variance tests and categorical variables using χ^2 tests. We ran a series of multiple linear regression models to understand whether race/ethnicity and TV attitudes were significant predictors of the amount of TV/DVDs that the child watched, while sequentially controlling for other demographic variables such as sex, parental education and income, siblings, presence of TV in the child's bedroom, and attitudes about TV. To test the association between parental TV attitudes and race/ethnicity while controlling for parental education and income, we ran logistic regressions with each dichotomized TV attitude question as the outcome variable and race/ethnicity and family SES as predictor variables. In all the regression analyses, recruitment site was taken into account as a random effect variable. For categorical variables, the largest subgroup in each was chosen as the referent group; this was non-Hispanic white for race/ethnicity and medium education/not low income for SES. All analyses were conducted with Stata version 10.[23]

Results

Results are presented thematically, starting with an analysis of TV/DVD time by race/ethnicity and SES that reflects the group-level focus of national survey research on media use in early childhood. This transitioned to an examination of the understudied area of parental beliefs and attitudes about media use and concluded with our analysis of the relationship between race/ethnicity, SES, parental attitudes and beliefs about media use, and actual TV/DVD time in early childhood.

Children

The racial/ethnic makeup of our sample was 409 non-Hispanic white (68.6%), 41 African American (6.9%), 49 Asian American/Pacific Islander/Hawaiian (8.2%), and 97 multiracial/other (16.3%) children (**Table 1**). The 17 children who were excluded either did not give a clear indication of their race/ethnicity or were in racial/ethnic categories too few in numbers as a group to be included in the analyses.

African American children in our sample evidenced greater average homogeneity of SES than did children in other racial/ethnic groups: 64% of the African American children in our sample fell under the low-education/low-income classification, with 16% in the high-education/not-low-income classification. In contrast, only 4% of the non-Hispanic white children fell under the low-education/low-income classification, with 38% in the high-education/not-low-income classification. In the Asian American/Pacific Islander/Hawaiian sample, 23% fell under the low-education/low-income classification, with 31% in the high-education/not-low-income classification.

Table 2. Multiple Linear Regressions on TV/DVD

Variable	Time Watching TV/DVD (95% CI), min/wk			
	Model 1	Model 2	Model 3	Model 4
Race/ethnicity				
Non-Hispanic white	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
African American	207.2 (107.1 to 307.2)[a]	28.3 (−84.0 to 140.6)	−87.5 (−208.3 to 33.3)	−55.3 (−170.9 to 60.4)
Asian American/PI/Hawaiian	68.8 (−24.4 to 161.9)	8.8 (−83.2 to 100.7)	−38.1 (−133.3 to 57.1)	−59.8 (−150.0 to 30.4)
Multiracial/other	74.8 (5.9 to 143.8)[b]	34.1 (−34.4 to 102.6)	39.0 (−27.1 to 105.1)	13.1 (−49.4 to 75.6)
Education-income matrix				
Low education/not low income		48.2 (−45.0 to 141.5)	45.6 (−45.1 to 136.4)	61.9 (−23.2 to 146.9)
Medium education/not low income		1 [Reference]	1 [Reference]	1 [Reference]
High education/not low income		−81.0 (−139.6 to −22.4)[a]	−67.8 (−123.1 to −12.4)[b]	−47.6 (−100.6 to 5.4)
Low education/low income		272.7 (179.0 to 366.4)[a]	135.3 (31.1 to 239.5)[a]	91.3 (7.5 to 190.1)
Medium-high education/low income		37.6 (−51.6 to 126.7)	−9.4 (−107.9 to 89.0)	−26.4 (−120.8 to 68.0)
Girl			−36.5 (−85.1 to 12.1)	−35.1 (−81.3 to 11.0)
Child with TV in bedroom			200.5 (98.9 to 302.2)[a]	149.3 (51.3 to 247.4)[a]
Only child			105.3 (47.7 to 162.8)[a]	72.0 (17.2 to 126.8)[b]
Average time in primary child care, h/wk			−1.9 (−3.7 to 0.0)[b]	−1.4 (−3.2 to 0.4)
"My spouse/partner and/or my child's other caregivers support me in reducing TV for my child" and expects positive effects from educational TV				−70.6 (−129.2 to −12.0)[b]
Disagree/neutral to both statements				1 [Reference]
Agree to at least 1 statement				71.5 (−1.7 to 144.7)
Agree to both statements				100.5 (24.0 to 176.9)[a]
Confidence in ability to limit exposure to TV[c]				
Disagree/neutral to both statements				1 [Reference]
Agree to at least 1 statement				−82.3 (−162.3 to −2.3)[b]
Agree to both statements				−224.2 (−295.9 to −152.6)[a]
Observations, No.	596	580	511	507
No. of sites	3	3	3	3

Abbreviations: DVD, digital video disc; PI, Pacific Islander; TV, television.

[a] $P < .01$.

[b] $P < .05$.

[c] (1) "I feel confident that I can keep my child busy with activities that do not include exposure to TV" and (2) "I feel confident that I can make my child watch less than 1 hour of TV a day."

Child Race/Ethnicity and Child TV/DVD Time

Initial 1-way analyses of variance (before accounting for other demographic variables) revealed significant differences in media intake across racial/ethnic groups in our sample. On average, African American children in our sample spent more time watching TV/DVDs per week than did children of other racial/ethnic backgrounds. The mean (SD) weekly media viewing times (in minutes) were 638.0 (450.9) for African American children, 506.0 (337.7) for multiracial children, 499.0 (343.8) for Asian American/Pacific Islander/Hawaiian children, and 431.0 (282.6) for non-Hispanic white children (Table 1).

In our unadjusted linear regression model, differences in mean weekly media time for African American children and non-Hispanic white children were found to be statistically significant, with African American children watching an average of 207.2 more minutes of TV/DVDs per week (95% CI, 107.1-307.2) (**Table 2**).

Child Race/Ethnicity, Family Socioeconomic Status, and Child TV/DVD Time

To further evaluate the complex relationship of race/ethnicity and media use, we created models to take into account child race/ethnicity and family SES. The 2 constructs were strongly associated in this sample, a finding that may be in part owing to the study recruitment methods; while the protocol was designed to maximize participation by low-income families, recruitment was not stratified by race/ethnicity.

In a linear regression, the relationship between child race/ethnicity and mean weekly media time was no longer statistically significant after controlling for SES (parental educational attainment and reported annual family income), indicating that the observed relationship between race/ethnicity and media time was significantly confounded by SES. In this analysis, important differences emerged for the relationship between family SES and child media exposure. Children from families classified as high education/not low income watched an average of 81.0 fewer weekly minutes (−139.6 to −22.4 minutes) of TV/DVDs compared with children from families classified as medium education/not low income. Children from low-education/low-income families watched an average of 272.7 more minutes (179.0 to 366.4 minutes) of TV/DVDs than children in medium-education/not-low-income households.

The differences in child media exposure by family SES remained statistically significant after controlling for potential

Table 3. Adjusted Odds Ratios for Parental Endorsement of Beliefs/Attitudes about Child TV Use by Race/Ethnicity and SES

Variable	Odds Ratio (95% CI)			
	Expect Positive Effects From Educational TV		Confidence in Ability to Limit Exposure to TV	
	Educational TV Programs Can Help Preschoolers Learn to Recognize Numbers and Letters	Educational TV Programs Can Help Preschoolers to Play Better With Each Other	I Feel Confident That I Can Keep My Child Busy With Activities That Do Not Include Exposure to TV	I Feel Confident That I Can Make My Child Watch Less Than 1 h of TV/d
Race/ethnicity				
Non-Hispanic white	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
African American	1.43 (0.38-5.37)	4.16 (1.72-10.04)[a]	1.41 (0.58-3.44)	1.26 (0.54-2.91)
Asian American/PI/ Hawaiian	1.29 (0.48-3.47)	2.73 (1.42-5.24)[a]	0.64 (0.32-1.26)	0.68 (0.35-1.33)
Multiracial/other	0.99 (0.50-1.96)	1.17 (0.73-1.88)	0.58 (0.35-0.96)[b]	0.63 (0.38-1.04)
Education-income matrix				
Low education/not low income	1.06 (0.38-2.94)	1.25 (0.67-2.35)	1.63 (0.72-3.71)	0.96 (0.46-1.98)
Medium education/not low income	1 [Reference]	1 [Reference]	1 [Reference]	1 [Reference]
High education/not low income	0.52 (0.30-0.92)[b]	0.45 (0.30-0.69)[a]	1.25 (0.78-2.01)	1.26 (0.78-2.04)
Low education/low income	1.28 (0.43-3.85)	1.62 (0.83-3.15)	0.43 (0.22-0.84)[b]	0.32 (0.16-0.61)[a]
Medium-high education/low income	0.97 (0.37-2.53)	0.85 (0.46-1.56)	1.09 (0.54-2.21)	0.73 (0.38-1.41)
Observations, No.	577	576	577	575
No. of sites	3	3	3	3

Abbreviations: PI, Pacific Islander; SES, socioeconomic status; TV, television.

[a] $P < .01$.

[b] $P < .05$.

confounders, including child's sex, presence of a TV in the child's bedroom, only-child status, average hours per week spent in child care, and parental beliefs and attitudes about media use (Table 2).

Child Race/Ethnicity and Parental Beliefs and Attitudes About Media Use

Parental beliefs about the potential for educational programs to help preschoolers play better with each other was the only attitude measure that varied by race/ethnicity of the participating child (**Table 3**). Compared with parents of non-Hispanic white children, parents of both African American (odds ratio [OR], 4.16; 95% CI, 1.72-10.04) and Asian American/Pacific Islander/Hawaiian (OR, 2.73; 95% CI, 1.42-5.24) children had significantly higher odds of agreeing with the statement, "Educational TV programs can help preschoolers to play better with each other."

Family Socioeconomic Status and Parental Beliefs and Attitudes About Media Use

Family SES was significantly related to parental beliefs and attitudes about child media use across racial/ethnic groups. Families classified as low education/low income had significantly lower odds of agreeing with the statement examining parent beliefs around their self-efficacy, "I feel confident that I can keep my child busy with activities that do not include exposure to TV" (OR, 0.43; 95% CI, 0.22-0.84) and the statement, "I feel confident that I can make my child watch less than 1 hour of TV a day" (OR, 0.32; 95% CI, 0.16-0.61) compared with medium-education/not-low-income families. Children from families classified as low education/low income also watched an average of 272.7 more weekly minutes of TV/DVDs (95% CI, 179.0-366.4) with reference to their peers in medium-education/not-low-income families.

On statements pertaining to the possible positive effects of educational TV, parents classified as high education/not low income had significantly lower odds of agreeing that "educational TV programs can help preschoolers learn to recognize letters and numbers" (OR, 0.52; 95% CI, 0.30-0.92) and the statement that "educational TV programs can help preschoolers to play better with each other" (OR, 0.45; 95% CI, 0.30-0.69) compared with medium-education/not-low-income families.

Parental Beliefs and Attitudes About Media Use and Child TV/DVD Time

In a linear regression controlling for child race/ethnicity, SES, child's sex, presence of TV in bedroom, only-child status, and average hours per week in child care, a significant association emerged between parental attitudes about media use and weekly child media exposure. Children whose parents expected positive effects from educational TV (agreed with both statements in the construct) watched an average of 100.5 more minutes per week (95% CI, 254.0-176.9) relative to children whose parents did not. Children whose parents had confidence in their abilities to limit their children's exposure to TV (agreed with both statements in the construct) watched an average of 224.2 fewer minutes per week (95% CI, −295.0 to −152.6) than children whose parents were less confident. And

finally, children of parents who felt that their spouse/partner supported them in reducing TV for their child watched an average of 70.6 fewer minutes per week (95% CI, −129.2 to −12.0) than children of parents who did not.

Discussion

To our knowledge, research on media use to date has not rigorously investigated viewing habits using a cultural framework.[14,15] Given that preschool children spend more time with media than with any other single activity besides sleep[6,7,24-26] and that ethnically/racially diverse preschoolers are watching increasing amounts of television,[6,7,22] it is critical to investigate differences in the beliefs and assumptions regarding media use held by parents of ethnically/racially diverse children.[27] The extant literature examines parental behaviors with respect to mediating children's TV time, highlighting differences by race/ethnicity, but we wanted to understand why these ethnic/racial differences exist. This study introduces a number of key findings regarding the relationship between race/ethnicity, family SES, parental beliefs about media use, and preschool media exposure.

Initial analyses indicated that, on average, African American children in our sample spent 207.2 more minutes (3.45 more hours) per week watching TV/DVDs than their non-Hispanic white peers. However, in our sample, SES confounded the results for race/ethnicity, and the association between race/ethnicity and media time was no longer statistically significant after adjusting for family SES. Examining family SES as a predictor and controlling for race/ethnicity and parental attitudes toward TV revealed that children from lower SES families had more media use, on average, than children from higher SES families. These findings seem to echo recent national survey results indicating that TV viewing differs across race/ethnicity and SES.[6,7,22] Because of the acknowledged influence of both of these factors on parenting practices,[28] we assessed differences in parental attitudes about media use across racial/ethnic and socioeconomic groups.

Differences did emerge by race/ethnicity and SES with regard to parental attitudes regarding the possible prosocial effects of educational TV. Specifically, African American and Asian American/Pacific Islander/Hawaiian parents were more likely to endorse positive beliefs than non-Hispanic white parents. These results can be framed in the context of a 2009 survey by Zero to Three that highlighted African American and Hispanic parents' differing expectations with respect to the use of media and allowance of increased media viewing for their young children relative to non-Hispanic white parents.[29]

Also of interest in our sample was the decreased confidence of lower SES parents in their ability to limit their children's media exposure. Recent reports have shown that while 90% of parents had household rules regarding the type of TV programming their young children were allowed to watch, only 54% of parents reported that those rules were always enforced.[30] In the context of these surveys, our study helps to clarify the link between what parents think about the potential impact of TV/DVD time on their children's development, their own ability to control that time, and children's actual TV/DVD intake.

In analyses controlling for race/ethnicity and family SES, children whose parents expected positive effects from educational TV watched significantly more than their peers. Children whose parents felt confident in their abilities to limit media time and had spousal support for those limits watched significantly less than their peers. Our results reflect a relationship between parental attitudes/beliefs about media use and child media exposure; however, controlling for these beliefs did not eliminate the relationship between SES and media time.

The key limitation for this initial work in the understudied area of cultural differences in parental attitudes and beliefs about young children and TV is the uneven distribution of child race/ethnicity and family SES. Most ethnically/racially diverse children in this sample were recruited from a community-based clinic that serves low-income families. This recruitment strategy complicates the relationship between these 2 variables, particularly for the African American children in our sample because this group presented greater average homogeneity of SES than did children in other racial/ethnic groups. It is important to note that this study presents results based on small, nonrepresentative samples of African American, Asian American/Pacific Islander/Hawaiian, and multiracial children. The families who participated in this study were also recruited from pediatric clinics in a single geographic area; the extent to which these results can be generalized elsewhere is not known. The families were all also English speaking, limiting non-English speaking immigrant families.

Despite these limitations, these findings point to an important relationship between parental attitudes/beliefs about child media use and time that could be useful for intervention work. In future endeavors, researchers should use an integrated approach that takes into consideration the variability in beliefs, attitudes, and expectations of racially/ethnically diverse parents regarding media use for their young children, as well as barriers faced by parents of low SES in limiting their children's media use. Because of the strong relationship between SES and media exposure in our sample, future research with larger samples of children from diverse racial/ethnic backgrounds is warranted to better understand the complexities of race/ethnicity, family SES, and parental beliefs and attitudes on child media exposure.

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