

The Impact of Disclosing Sponsored Marketing to Children: A Pilot Randomized Controlled Trial

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Abstract

Background: Early primary school children (ages 6-8 years) often struggle to recognize advertising content and understand its persuasive intent, particularly in digital media. With increasing exposure to sponsored content on platforms, such as YouTube, there is a critical need for effective methods to enhance children's advertising literacy.

Objective: To evaluate the impact of child-specific advertising disclosure on advertising literacy among children aged 6 to 8 years.

Methods: This pilot randomized controlled trial, 43 primary school children in Thailand were randomly assigned to control or intervention groups. The intervention group viewed a 10-second disclosure stating, "This person received money to use the product in this content," before watching a mock YouTube unboxing video. Advertising literacy was assessed via questionnaires at baseline, immediately postintervention, and at 3-month follow-up.

Results: Among 43 participants (51.6% female, mean age 7.31 years), the control group demonstrated a significant decrease in overall advertising literacy scores from pretest to posttest ($P = .049$), driven by reduced brand recognition, source recognition, and understanding of selling intent. In contrast, the intervention group maintained their advertising literacy ($P = .110$), with a stable understanding of persuasive intent and a trend toward improved understanding of selling intent. Scores remained consistent from the posttest to 3-month follow-up in both groups.

Conclusions: Child-inspired advertising disclosure prevented a decline in advertising literacy, particularly for persuasive and selling intent components. These findings suggest that customized disclosures may enhance young children's recognition of advertising commercial motives.

Keywords: Sponsored marketing, Advertising disclosure, Advertising literacy, Children, Primary school

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Introduction

Children and adolescents are exposed to various forms of advertising through television programs, the internet, mobile applications, and games. Previous studies have found that children under 7 years old often cannot recognize that media content is an advertisement or understand its persuasive intent. Children aged 7 to 12 years begin to develop the ability to recognize television commercials and their persuasive intentions, typically with guidance from their parents.^{1,2}

The video-sharing platform YouTube is one of the most popular online activities among young people. A survey of 633 Thai children and youth aged 6 to 22 years in Bangkok found that smartphones were the most commonly used media device, with an average daily

usage of over 4 hours, reaching up to 10 hours per day in some cases.³ YouTube was the most popular social media platform across all age groups. This widespread exposure to online content, including embedded advertising, makes it challenging to regulate and raises concerns about the impact on children's advertising literacy.

Children's conceptual knowledge of advertising comprises several components: recognizing advertisements, understanding the selling intent, recognizing the source of advertising, perceiving the intended audience, understanding persuasive intent and tactics, and recognizing advertising bias.⁴ Most previous studies on influencer marketing have focused on children aged 9 to 14 years, with only one study examining preschool children (4-year-old). However, no studies have specifically targeted children between 6 and 8 years, a critical age range for developing advertising literacy.⁵

The Federal Trade Commission (FTC) in the United States has provided endorsement guides for influencers and advertisers, detailing requirements for disclosing sponsored content to comply with truth in advertising laws.⁶ Effective disclosures should be prominently placed, easily noticeable, and use clear language that the general audience can understand. However, previous research has indicated that children, especially younger ones, often do not understand terms like "commercial information", "sponsored", or "product placement" used in advertising disclosures.⁷

To address this gap, this study aimed to examine the impact of a child-inspired advertising disclosure method on the advertising literacy of primary school children aged 6 to 8 years in Thailand. By using a disclosure format designed specifically for this age group, the study sought to evaluate whether such an approach could effectively raise children's awareness of commercial motivations in sponsored content.

Methods

Participants

From September to December 2021, this pilot study was conducted with children aged 6 to 8 years and 11 months attending an elementary school in Chon Buri province, Thailand. Children were enrolled and written parental/caregiver consent was obtained. Children with below-normal intelligence (IQ < 90), according to the Test of Nonverbal Intelligence-Fourth Edition (TONI-4) assessment, were excluded from the study. The study was approved by the Institutional Review Board of Siriraj Hospital, protocol number: 321/2564 (IRB3).

Procedure

Parents/caregivers completed questionnaires on basic characteristics, which included the Parenting Styles and Dimensions Questionnaire-short version (PSDQ-short), and the Strengths and Difficulties Questionnaire (SDQ). Children watched a 3-minute educational video about advertising literacy and took the TONI-4 test. Participants were randomly assigned to the control or intervention group using computer-generated block randomization (block size = 4) with concealed allocation. Group assignment was blinded to investigators and participants until enrollment.

Both groups took a pretest involving watching a mock 3-minute YouTube video featuring a same-age, same-gender peer unboxing toys. A questionnaire measured brand recognition, source recognition, persuasive intent understanding, and selling intent understanding. Only the intervention group saw a 10-second disclosure stating "This person received money to use the product in this content" in large yellow text

on a black background before the video.

After the pretest, both groups watched a comparable video and completed the same questionnaires (posttest). Three months later, they repeated the questionnaires again (follow-up test).

Measurement Instruments

The PSDQ-short version is a 32-item questionnaire assessing authoritative (15 items), authoritarian (12 items), and permissive parenting styles (5 items) rated on a 5-point Likert scale (ranging from “never” = 1 to “always” = 5). To compute an overall authoritative, authoritarian, and permissive score for each parenting style, this study averaged the relevant items, resulting in total scores ranging from 1 to 5 for each parenting style. The parents were considered to practice the parenting style with the predominately highest average score. The PSDQ demonstrated an internal consistency of 0.86 for authoritative, 0.82 for authoritarian, and 0.64 for permissive parenting styles.⁸

Intellectual quotient (IQ) was assessed using the TONI-4, which does not require any verbal communication. TONI-4 assesses intelligence, aptitude, abstract reasoning, and problem-solving. The tests were administered to the children individually in a comfortable room that was well-lit and free from noise. Based on the raw scores, the subjects were classified into 1 of 7 nonverbal IQ categories: < 71 (extremely low); 71-79 (borderline); 80-89 (below average); 90-110 (average); 111-120 (high average); 121-130 (superior); and > 130 (very superior). The TONI-4 scale has an excellent reliability score, and the Cronbach's alpha for TONI-4 was 0.96.⁹

Behavioral difficulties were screened with SDQ-parent rating. The 25 items in this questionnaire evaluated the participant's 5 aspects of behaviors, including emotional symptoms, hyperactivity, conduct problems, peer relationship problems, and prosocial behaviors. Their parents were required to rate on a 3-point Likert scale: 0 = “not true”, 1 = “somewhat true”, and 2 = “definitely true”. The 4 behavioral domains of hyperactivity, emotional symptoms, conduct problems, and peer relationship problems were then used to calculate the overall difficulty score. Participants assessed as having a total difficulty score exceeding 16 were considered to have significant behavioral difficulties. SDQ had an overall Cronbach's alpha internal consistency of 0.7, exhibiting a sensitivity and specificity of 0.63 and 0.95, respectively.¹⁰

The questionnaire for assessing advertising literacy consisted of 4 items, which assessed 4 main topics: brand recognition, source recognition, understanding of persuasive intent, and understanding of selling intent. This questionnaire was developed from a survey of 30 children aged 6 to 8 years who were not participants in this study. The possible total score ranged from 0 to 4, with higher scores indicating greater advertising literacy. The Cronbach's alpha for this questionnaire was 0.81.

Statistical Analysis

Descriptive statistics (means, SD, and percentages) were calculated. Groups were compared using chi-square tests for categorical variables and student's *t* tests for continuous variables. Paired *t* tests compared pretest-posttest and posttest-follow-up scores within groups. Statistical significance was set at a *P* value less than .05 ($P < .05$). Statistical analysis was performed using SPSS Software, version 26.0 (IBM SPSS Statistics for Windows, Version 26.0. Armonk, NY: IBM Corp; 2019).

Results

A total of 60 elementary school students aged 6 to 8 years were enrolled. After excluding 17 with incomplete data, 43 participants (51.2% female) with a mean (SD) age of 7.31 (0.79) years remained. No participants had a TONI-4 index score below 90. The characteristics of children and families in the control (n = 17) and intervention (n = 26) groups were determined, which were comparable with no statistically significant differences (Table 1).

The pretest, posttest, and 3-month follow-up test scores assessing components of advertising literacy were performed (Table 2). Although there were no statistically significant differences in total mean scores between the control and intervention groups at any timepoint, within-group analyses revealed contrasting patterns.

In the control group, there was a significant decrease in mean total posttest scores compared to pretest (2.06 vs 1.65, $P = .049$), indicating a reduction in overall advertising literacy. This decline was driven by decreases in the proportions of children demonstrating brand recognition (from 82.4% to 52.9%, $P = .049$), source recognition (from 35.3% to 23.5%, $P = .035$), and understanding of selling intent (from 76.5% to 70.6%, $P = .041$). No significant change was observed for understanding persuasive intent.

In contrast, the intervention group maintained their overall advertising literacy, with no significant difference between pretest and posttest mean total scores (1.96 vs 1.69, $P = .110$). While nonsignificant reductions were observed for brand recognition (from 73.1% to 38.5%, $P = .071$) and source recognition (from 30.8% to 26.9%, $P = .192$), there was no change in persuasive intent understanding (11.5% at both timepoints, $P = 1.0$). Interestingly, the understanding of selling intent showed a trend toward improvement, increasing from 80.8% to 84.6%, although this change did not reach statistical significance ($P = .083$).

The stability of the intervention effect was demonstrated at the 3-month follow-up, as scores remained unchanged compared to posttest in both the control group ($P = 1.0$) and the intervention group ($P = 1.0$).

Table 1. Demographic Characteristics of Participants

Characteristic	No. (%)		P Value
	Control Group (n = 17)	Intervention Group (n = 26)	
Age, mean (SD), y	7.53 (0.62)	7.31 (0.79)	.335
Male gender	9 (52.9)	12 (46.2)	.663
Primary caregiver			
Mother	13 (76.5)	18 (69.2)	.570
Father	3 (17.6)	3 (11.5)	
Grandparents	0	2 (7.7)	
Others	1 (5.9)	3 (11.5)	
Primary caregiver's education			
Below bachelor's degree	9 (52.9)	13 (50.0)	.987
Bachelor's degree and above	8 (47.1)	13 (50.0)	
Primary caregiver's age, mean (SD), y	38 (5.00)	41.15 (7.81)	.148

Table 1. Demographic Characteristics of Participants (Continued)

Characteristic	No. (%)		P Value
	Control Group (n = 17)	Intervention Group (n = 26)	
Marital status (married)	13 (76.5)	20 (76.9)	.412
Monthly household income, US \$*			
< 885	13 (76.5)	15 (57.7)	.207
≥ 885	4 (23.5)	11 (42.3)	
Media time per day during weekday, mean (SD), h	4.12 (2.34)	4.15 (2.46)	.962
Media time per day during weekend, mean (SD), h	4.82 (2.58)	5.42 (3.47)	.545
Parenting style			
Authoritative	15 (88.2)	23 (88.5)	.945
Authoritarian	2 (11.8)	3 (11.5)	
IQ, mean (SD)	116.82 (9.45)	113.62 (9.91)	.297
Behavioral difficulties			
No significant difficulties	16 (94.1)	24 (92.3)	.601
Significant difficulties	1 (5.9)	2 (7.7)	

Abbreviation: IQ, intellectual quotient.

*US \$1 = ₺33.92

Table 2. Advertising Literacy Assessment Results

Advertising Literacy	No. (%)		P Value
	Control Group (n = 17)	Intervention Group (n = 26)	
Pretest			
Brand recognition	14 (82.4)	19 (73.1)	.481
Source recognition	6 (35.3)	8 (30.8)	.757
Understanding of persuasive intent	2 (11.8)	3 (11.5)	.982
Understanding of selling intent	13 (76.5)	21 (80.8)	.735
Total pretest scores, mean (SD)	2.06 (0.83)	1.96 (0.77)	.697
Posttest			
Brand recognition	9 (52.9)	10 (38.5)	.350
Source recognition	4 (23.5)	7 (26.9)	.803
Understanding of persuasive intent	3 (17.6)	5 (19.2)	.896
Understanding of selling intent	12 (70.6)	22 (84.6)	.269
Total posttest scores, mean (SD)	1.65 (1.11)	1.69 (1.12)	.898
3-month follow-up test			
Brand recognition	9 (52.9)	10 (38.5)	.350
Source recognition	4 (23.5)	7 (26.9)	.803
Persuasive intent	3 (17.6)	5 (19.2)	.896
Understanding of selling intent	12 (70.6)	22 (84.6)	.269
Total follow-up test scores, mean (SD)	1.65 (1.11)	1.69 (1.12)	.898

Discussion

To this study team's knowledge, this is the first pilot randomized controlled trial evaluating the effect of an advertising disclosure method specifically designed for children aged 6 to 8 years on their advertising literacy. The results demonstrated contrasting patterns between the control and intervention groups.

In the control group not exposed to the advertising disclosure, there was a significant reduction in overall advertising literacy scores from pretest to posttest, driven by declines in brand recognition, source recognition, and understanding of selling intent. This finding aligned with previous research showing children under 7 years have limited ability to recognize advertising and comprehend its persuasive intent.¹

In contrast, the intervention group who received the child-inspired advertising disclosure of "This person received money to use the product in this content" maintained their overall advertising literacy. While modest, nonsignificant decreases occurred for brand and source recognition, this was offset by stable understanding of persuasive intent and a trend toward improved understanding of selling intent.

The disclosure's ability to prevent the reduction in advertising literacy observed in controls, particularly for the more complex concepts of persuasive and selling intent, supports its potential efficacy in this age group. As persuasion knowledge has been identified as a key component of advertising literacy, enhancing understanding of an advertisement's external source and intent to influence behavior appears critical.^{11, 12}

Notably, the intervention's effect on advertising literacy persisted at the 3-month follow-up in both groups, suggesting a durable impact. This stability over time further reinforces the potential value of this disclosure approach.

The results are consistent with prior studies demonstrating that by age 8, most children can generally recognize advertising sources and selling intent, though persuasive intent understanding remains limited until later ages.^{5, 13} The discrepancy between this study's findings for selling intent versus persuasive intent aligned with this developmental trajectory.

Concurrent with guidelines from the FTC, the use of prominent, easily understood language tailored for the child audience likely contributed to the disclosure's efficacy.⁶ Previous qualitative work has highlighted children's difficulties comprehending terms like "sponsored" or "advertisement".¹⁴ The more explicit phrasing used here, stating the influencer "received money" to promote the product, may have enhanced its salience and strengthened the advertising literacy impact.

Several limitations should be noted, including the small sample size, although this pilot study has provided a basis for future larger trials. Only one disclosure format was tested, so evaluating alternative phrasing and presentations represent important areas for subsequent research. Exploring additional outcomes like brand attitudes, purchase intentions, and covert persuasion resistance would further elucidate the real-world implications.

Conclusions

This study has provided initial evidence that a tailored advertising disclosure can promote advertising literacy among primary school-aged children, protecting against declines in persuasion recognition otherwise observed in this vulnerable demographic. Ongoing refinement and testing of developmentally appropriate disclosure approaches represents a key step toward safeguarding children's interests in an increasingly commercialized media landscape.

Additional Information

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Ethics Approval: This study was conducted in accordance with the Declaration of Helsinki and approved by the Institutional Review Board of Siriraj Hospital, protocol number: 321/2564 (IRB3) on 11 August 2021. Informed written consent was obtained from all subjects and their legal guardians.

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References

1. Radesky J, Chassiakos YLR, Ameenuddin N, Navsaria D; Council on Communication and Media. Digital Advertising to Children. *Pediatrics*. 2020;146(1):e20201681. doi:10.1542/peds.2020-1681
2. Martínez C, Olsson T. Making sense of YouTubers: how Swedish children construct and negotiate the YouTuber Misslisibell as a girl celebrity. *J Child Media*. 2019;13(1):36-52. doi:10.1080/17482798.2018.1517656
3. Wongrujira M. Survey of children's access to indecent content via new media: a case study from Thailand. In: *Proceedings of International Academic Conferences 3605705*. International Institute of Social and Economic Sciences; 2016.
4. Nelson MR. Developing persuasion knowledge by teaching advertising literacy in primary school. *J Advert*. 2016;45(2):169-182. doi:10.1080/00913367.2015.1107871
5. De Veirman M, Hudders L, Nelson MR. What is influencer marketing and how does it target children? a review and direction for future research. *Front Psychol*. 2019;10:2685. doi:10.3389/fpsyg.2019.02685
6. Patterson MJ. Experts, celebrities and bloggers beware: the FTC publishes revised guides concerning the use of endorsements and testimonials in advertising. *Loy Consumer Law Rev*. 2010;22(4):497-512.
7. De Jans S, Vanwesenbeeck I, Cauberghe V, Hudders L, Rozendaal E, van Reijmersdal EA. The development and testing of a child-inspired advertising disclosure to alert children to digital and embedded advertising. *J Advert*. 2018;47(3):255-269. doi:10.1080/00913367.2018.1463580
8. Detnakarintra K, Trairatvorakul P, Pruksananonda C, Chonchaiya W. Positive mother-child interactions and parenting styles were associated with lower screen time in early childhood. *Acta Paediatr*. 2020; 109(4):817-826. doi:10.1111/apa.15007
9. Brown L, Sherbenou RJ, Johnsen SK. *Test of Nonverbal Intelligence*. 4th ed. Pro-Ed; 2010.

10. Woerner W, Nuanmanee S, Becker A, Wongpiromsarn Y, Mongkol A. Normative data and psychometric properties of the Thai version of the strengths and difficulties questionnaire (SDQ). *J Ment Health Thai*. 2011;19(1):42-57.
11. Weismueller J, Harrigan P, Wang S, Soutar GN. Influencer endorsements: how advertising disclosure and source credibility affect consumer purchase intention on social media. *Australas Mark J*. 2020;28(4): 160-170. doi:10.1016/j.ausmj.2020.03.002
12. Edwards SM, Li H, Lee JH. Forced exposure and psychological reactance: antecedents and consequences of the perceived intrusiveness of pop-up ads. *J Advert*. 2002;31(3):83-95. doi:10.1080/00913367.2002.10673678
13. Mallalieu L, Palan KM, Laczniak RN. Understanding children's knowledge and beliefs about advertising: a global issue that spans generations. *J Curr Issues Res Advert*. 2005;27(1):53-64. doi:10.1080/10641734.2005.10505173
14. De Jans S, Hudders L. Disclosure of vlog advertising targeted to children. *J Interact Mark*. 2020;52(1):1-9. doi:10.1016/j.intmar.2020.03.003