

Using Subvertising to Build Families' Persuasion Knowledge in Jamaica

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ABSTRACT

Despite the importance of Persuasion Knowledge (PK) for understanding how individuals cope with persuasion, there is little research addressing how PK can be developed and sustained. We explore dispositional PK (consumers' confidence in their knowledge about marketer agents' persuasion tactics) and coping skills (i.e., critical thinking about media: skepticism, understanding bias, scrutinizing source) among families in Jamaica after an intervention *and* at a delay. Sixty-two mother-adolescent pairs were randomly assigned to an intervention (2 workshops) or control group: all participants completed questionnaires four times (baseline, after workshop 1, after workshop 2, 10-11 weeks after workshop 2). Workshop 1 provided information related to PK and then families completed 'subvertising' homework. Subvertising allows audiences to critically *evaluate* media content and to *construct* subversive narratives, often through parody. In Workshop 2, families discussed and presented their subvertisements. Results of the MANOVAs revealed Time x Condition interaction effects for skepticism (mothers, adolescents), bias (adolescents), and source (adolescents) offering support for the efficacy of the intervention. In addition, adolescents and mothers in the intervention group increased their PK after the intervention with mothers' PK sustained over time.

Keywords: dispositional persuasion knowledge, resistance, advertising literacy, skepticism, bias, subvertising, food advertising, remote acculturation

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“The doctor said KFC is no good for me, but KFC tells me’ *so good*’. KFC lyin’ to me.”
[mother-daughter subvertising song, gospel-style, Kingston, Jamaica]

Skepticism about the veracity of advertising claims is heard in the original lyrics above, written and performed by a family as part of a subvertising contest. Subvertisements (subvert + advertising) simultaneously allow audiences to critically *evaluate* media content and to *construct* subversive narratives, often through parody (Harold 2004). “So Good” was the Kentucky Fried Chicken advertising campaign in Jamaica. The subvertising song replaces the tagline “so good” with “no good” to highlight the deleterious effects of the food on health and the notion that this health effect information is missing from the message. These consumers are practicing and performing critical thinking about the product (Boerman, van Reijmersdal, and Neijens 2014) and message (Austin et al. 2015), thus showcasing consumer resistance (Kirmani and Campbell 2009). Such critical thinking employs cognitive defenses such as scrutiny and skepticism (tendency toward disbelief in advertising; Obermiller and Spangenberg 1998), which are coping mechanisms resulting from acquisition of persuasion knowledge (Kirmani and Campbell 2009). The Persuasion Knowledge Model (PKM) examines what people (as persuasion targets) know and believe about how persuasion agents (such as advertisers) operate and how targets cope with persuasion attempts (Friestad and Wright 1994). This model has become an important framework for helping researchers to explore “everyday” consumer knowledge of persuasion tactics and the influence of persuasion knowledge (PK) on persuasion (e.g., Boerman, van Reijmersdal and Neijens 2015; Panic et al. 2013). As a subdomain of overall PK, *advertising PK* or advertising literacy is knowledge about advertising related to how targets understand advertising persuasion tactics and learn to cope with tactics by, for example, building critical thinking skills. In our research, mother-adolescent pairs in Jamaica were taught the principles of

persuasion knowledge and (media) advertising literacy (i.e., “the ability to access, analyze, evaluate, create and act using all forms of communication”; NAMLE 2020) and then analyzed (e.g., *Who is the source? What is the purpose of the message?*), evaluated (e.g., assess bias and build skepticism: *What information is missing?*), and created subvertising as part of an innovative intervention.

Most studies investigating advertising PK/ advertising literacy assess situational knowledge (i.e., how PK is activated in a persuasion episode; An and Stern 2011) whereas relatively little research has assessed dispositional knowledge (Zarouali et al. 2019). Dispositional PK is often referred to as everyday knowledge about the way that people think about how persuasion operates (Wright et al. 2005). This knowledge is developmental, increasing with cognitive development and skills and with exposure and experience with persuasion tactics (Friestad and Wright 1994). Such knowledge of persuasion is regarded as essential to consumer life where people learn about the goals and tactics of persuasion agents, consider their own goals, and find ways to cope with persuasion episodes (Wright et al. 2005). Thus, embedded in the understanding of PK is the ability to develop coping responses.

Education programs (i.e., advertising literacy interventions, Hudders et al. 2015) have shown to be effective for increasing knowledge in the short term (see reviews by Hudders et al. 2017), most often among children (e.g., van Reijmersdal, Rozendaal, and Buijzen 2012). There is less attention on adolescents’ PK (Boush et al. 1994; DeJans, Hudder and Cauberghe 2018), yet there are substantial changes in early adolescence (ages 11-14) related to cognitive and social development (John 1999), and there is evidence that understanding of persuasive tactics is not fully developed at ages 11-12 (Rozendaal, Buijzen, and Valkenburg 2011). Around age 11 is when consumers are beginning to consider others’ ulterior motives and develop skepticism,

making them a key audience for interventions to build critical thinking, whereas adults continue to learn this concept with experiences (Kirmani and Campbell 2009). Even fewer studies examine PK among adults (Friestad and Wright 1995). Investigating persuasion knowledge *across age groups* is important as “people develop and refine persuasion knowledge continually over their life span” (Wright et al. 2005, p. 226). Researchers to date have not measured caregiver and children’s PK knowledge or assessed how coping strategies could be enhanced and sustained. Given that family is an important consumer socialization agent (Laczniak and Carlson 2012), and “comparisons between children and adults are crucial to understanding public policy and education programs,” it is important to fill this gap (Wright et al. 2005, p.166).

In addition to age differences, there are likely to be differences in persuasion knowledge across countries/cultures (Friestad and Wright 1994). Although advertising literacy and PK research has expanded across borders, the focus has been on consumers in higher income countries (e.g., Belgium: Panic et al. 2013; Netherlands; Boerman et al. 2015; South Korea: An, Jin and Park 2014; U.S.: Nelson 2016). There are no studies related to PK or advertising literacy in developing countries, which have different media landscapes, and perhaps less access to consumer education. Finally, although advertising literacy programs have shown promise in the short term, there are fewer studies that investigate the effects of interventions over time (Hudders et al. 2017). Therefore, our research addresses these gaps in persuasion knowledge research: we present findings from a family intervention (mothers and adolescents) to investigate if advertising PK and associated coping skills (e.g., critical thinking: bias, skepticism, source) can be developed and maintained in Jamaica, a middle-income developing country (United Nations 2014). Jamaica was chosen because of the mass media environment (i.e., influence of food advertising; Nelson et al. 2020) and associated health concerns experienced as a result of dietary

changes in the country (Hibbert 2018) with individuals eating more convenient, heavily processed and energy-dense foods. Teaching families about persuasion and advertising literacy in the context of food advertising was intended to help them develop coping skills and critical thinking about food messages. Our research is the first to explore what happens to persuasion knowledge and coping responses among mothers and their adolescents in a middle-income country after the intervention *and* after a 10-11-week delay.

Theoretical Framework: Persuasion Knowledge in Advertising

Persuasion knowledge (PK) is a form of marketplace metacognition - how target consumers think about how and when they or others are persuaded (Wright 2002). PK has been conceptualized as (1) *dispositional*, which is considered general or “everyday” marketplace knowledge on which we focus in this study (or “self-confidence of persuasion knowledge”; Bearden, Hardesty, and Rose 2001) that develops over time with exposure to persuasion, discussion about persuasion, and, for advertising PK, advertising literacy education; or (2) *situational*, when it is activated for a given persuasion event (Friestad and Wright 1994). Hudders et al. (2017) outline parallel concepts for advertising literacy, differentiating between dispositional and situational advertising literacy, based on the PK dichotomization (Friestad and Wright 1994). In order to activate PK (advertising literacy) in persuasion situations, targets must have developed general marketplace literacy and persuasion principles as dispositional knowledge. We are interested in building dispositional PK or consumers’ confidence in their knowledge about marketer agents’ persuasion tactics (Bearden et al. 2001).

PK has been measured and manipulated in multiple ways (Ham et al. 2015). In a given persuasion situation, the target should recognize the persuasion tactic, understand its persuasive intent and tactics and then use that knowledge and cognitive capacity to cope (e.g., counterargue

or resist, ignore, accept) with the particular persuasion attempt depending on the target's goals (Friestad and Wright 1994). Thus, one coping mechanism may be developing cognitive defense skills through critical processing (Buizen 2007) that build resistance strategies (Fransen et al. 2015). Attitudinal persuasion knowledge invokes critical processing to assess trust and discern how honest, credible, trustworthy, or biased the persuasion message is (Boerman et al. 2012).

Indeed, research has shown that when consumers activate their PK, they are able to infer an ulterior motive and bias in a source (e.g., Williams, Fitzsimons and Block 2004). It is likely that such critical thinking as a result of advertising education programs may invoke skepticism. For example, one study among adults showed that an educational program designed to enhance critical thinking about misleading advertising (Study 3: Gaeth and Heath 1987) induced skepticism. Another study among children and young adolescents demonstrated increased skepticism after watching a film designed to increase their knowledge and critical thinking ("Seeing Through Commercials"; Roberts et al. 1980). Skepticism, although sometimes conflated with PK (Ham et al. 2015), may be considered the negative result of critical thinking about persuasion due to PK. In our study, we are interested in both general PK (i.e., dispositional PK) and the development of cognitive defenses in the form of coping skills and critical processing to teach consumers how to evaluate messages and sources to recognize bias and invoke skepticism. Buijzen (2007) defines these as "cognitive advertising defenses" – which include both knowledge of the advertising and its intent (i.e., persuasion, selling) and skepticism. Wright et al. (2005) suggest that there has been little research that has examined the development of these coping and resistance strategies comparing adults and children/adolescents.

Adolescent and Adult PK

The dispositional view of PK presents a long-life developmental approach of acquiring and refining PK based on exposure to and experience with persuasion tactics, with conversations and social learning from parents, siblings, and friends and with more formal education programs (Wright et al. 2005). Friestad and Wright (1994) suggest that it is unknown if PK “...stabilizes in the life span or at what ages people go through significant learning-and-practice phases in which they try executing new coping tactics” (p.23). Based on theories of cognitive development (John 1999) and PK (Friestad and Wright 1994), adults’ dispositional PK *may be* fully developed (Friestad and Wright 1995), whereas adolescent PK is still developing (Wright, Friestad and Boush 2005). Participants in PK/advertising literacy studies vary from university students (Aguirre-Rodriguez 2013; Boerman, van Reijmersdal and Neijens 2015) to children of various ages (3-5 years old: McAlister and Cornwell 2009; 5-8 years old: Mallinckrodt and Mizerski 2007; 9-12 years old: Rozendaal et al. 2013; adolescents: Boush, Friestad and Rose 1994) and parents of young children (e.g., Evans, Hoy and Childers 2018).

How children develop dispositional PK, increase it during adolescence, and continue to bolster throughout life span has societal and theoretical significance (Wright 2002). Children in the *analytical stage (ages 7-11)* typically recognize advertising content, can start to understand persuasive intent, and have some knowledge of bias and deception, but it is not yet fully formed (John 1999); thus, their cognitive defenses are not completely developed. That is probably one reason why studies with children under age 12 have shown fairly good recognition and understanding of advertising (conceptual PK, e.g., Tarabashkina, Quester, and Tarabashkina 2018), yet this type of PK has not resulted in reduced persuasion (e.g., children 7-12 years old playing an advergaming; van Reijmersdal, Rozendaal and Buijzen 2012; Waiguny et al. 2014). It may be that the coping mechanisms or critical processing skills to help them in cognitive defense

(i.e., detection of bias) are not yet fully developed. However, adolescents at the *reflective stage of development (ages 11-16)* develop more critical thinking about persuasion (John 1999), start to identify specific tactics and message bias, and develop and practice skepticism towards messages (Boush et al. 1994). Thus, the younger end of this age group is particularly attractive for interventions which teach these critical thinking skills (see Roberts et al. 1980).

Our study investigates ways to enhance and develop these coping and critical thinking cognitive defense skills among adolescents who are developmentally ready (as analytical processors: John 1999) and their mothers in a two-session intervention. Media/advertising literacy interventions are designed to protect audiences against harmful media effects by arming them with information (Jeong, Cho and Hwang 2012). Instilling knowledge and building those critical thinking skills, the participants can better cope with, counter-argue, or practice resistance against the unwanted media effects.

In Jamaica, where food advertising and U.S. media are prevalent (Nelson et al. 2020), the persuasive impact of this advertising on youth and parents is likely to be especially great for those on the island who have already internalized a part-American identity through a process called “remote acculturation” (Ferguson and Bornstein 2012). Research has shown that approximately one in three adolescents and one in 10 of their mothers in Kingston, Jamaica have adopted a bicultural identity and lifestyle without ever emigrating to the United States – although they still feel strongly Jamaican, they also feel somewhat American in their identity, behaviors, and values (Ferguson and Bornstein 2012; Ferguson and Bornstein 2015). Moreover, a recent study demonstrated that these “Americanized” adolescents and mothers in Jamaica tend to watch more U.S. cable television every day (meaning that they are exposed to the embedded food advertising) and, in turn, eat more unhealthily (Ferguson, Muzaffar, Iturbide, Chu, and Gardner

2018). Our intervention was designed to build PK and critical thinking, which may help attenuate advertising effects, including less healthy food advertising. Adolescents were targeted in part because nearly one in three adolescents in Jamaica are overweight or obese and nearly three in four drink soda one or more times daily (Atkinson 2017). Mothers were selected for the study, given that matrilineal families are the norm in Jamaican culture and that mothers tend to be the primary socializing agent (e.g., Burke and Kuczynski 2018).

Investigating Long-Term Effects

In a review article of advertising literacy interventions, Hudders et al. (2017) recommend that researchers consider long-term effects of the training. Investigating whether these effects endure is important in gauging the value of the training (DeJans, Hudders, and Cauberghe 2017; Hwang et al. 2018). A growing number of media/advertising literacy studies have reported the effectiveness of interventions at a delay. Children and early adolescents from the U.S. who watched a film in class about advertising developed more skeptical attitudes toward advertising (as compared with control-group peers who watched a non-advertising film) and this skepticism remained when measured 7-10 days later (Roberts et al. 1980). Austin and Johnson (1997) demonstrated differential short- and long-term effects of their media literacy program about alcohol advertising for 8-9-year-olds (in the U.S.). In the short-term, children were able to understand the persuasive intent of advertising as well as perceptions of realism of the advertisements. However, after a three-month delay, the effects on understanding the persuasive intent of advertising disappeared, although understanding of the realism of messages remained. More recently, De Jans et al. (2017) showed that the effects of a 10-minute advertising literacy intervention to teach children in Belgium (ages 7-8, 10-11) about product placement resulted in increased ‘cognitive advertising literacy’ (e.g., advertising recognition, understanding) directly

after the intervention and at a one-week delay. Such effects were found, irrespective of age. Finally, Hwang et al. (2018) compared the short- and long-term effectiveness of a 60-minute media literacy intervention in the classroom among third and fifth grade students in South Korea. The researchers reported that advertising knowledge increased for both groups in the short-term, but was sustained only for the older children. The higher level of “criticism/skepticism” remained higher among both groups, even at a delay. Despite the different cultures, measures, interventions, and findings, it appears as though advertising literacy interventions (at least those in published studies) have generally been successful beyond the immediate assessment post-intervention. As such, longer-term interventions and measurement can serve as a boost in developing PK, and by bolstering critical coping skills they can also increase the likelihood of using such knowledge and skills in specific persuasion attempts (i.e., situational PK). In addition, we believe that the nature of our intervention will foster interaction, creativity, and discussion about the concepts related to PK and coping skills among our participating mother-adolescent dyads, which will result in long-term learning.

Our Hypotheses

There is experimental evidence that interventions can improve knowledge and criticism (e.g., Hudders et al. 2017; Jeong et al. 2012). Therefore, we expect that after the intervention, only those adolescents and their mothers in the experimental group should show increased dispositional PK (consumers’ confidence in their knowledge about marketer agents’ persuasion tactics) and coping strategies (critical thinking about media: skepticism, understanding bias, source) directly after the intervention as compared with their pre-intervention scores on these measures. We also expect the effects of the intervention to hold at delay. Given that there has been little research conducted among adults with respect to persuasion knowledge, and no

research that has compared adolescents and adults on resistance strategies and coping skills (Wright et al. 2005), we were interested in examining the effects of the intervention for each group separately.

H1: *Dispositional persuasion knowledge* will increase after the intervention workshops and at a delay for those mothers (H1a) and adolescents (H1b) in the intervention groups.

H2: *Skepticism* will increase after the intervention workshops and at a delay for those mothers (H2a) and adolescents (H2b) in the intervention groups.

H3: *Understanding Bias* will increase after the intervention workshops and at a delay for those mothers (H3a) and adolescents (H3b) in the intervention groups.

H4: *Critical thinking about the source* will increase after the intervention workshops and at a delay for those mothers (H4a) and adolescents (H4b) in the intervention groups.

Method

Study Design

This research is part of a larger transdisciplinary project (JUS Media? Programme). We report the results for the experimental group which received the intervention and the control group (no training). Thus, the intervention is the independent variable. Our focus in this study (i.e., the dependent variables) is on the development of dispositional PK (i.e., subjective measure of consumers' confidence in their knowledge about marketer agents' persuasion tactics) and the coping mechanisms such as critical thinking and cognitive resistance skills (i.e., about the source, understanding bias, and building skepticism), which we gauge by examining participants' ratings on a questionnaire that was administered to individuals in both groups four times during the five-month study: T1 (baseline immediately following enrollment); T2 (immediately following workshop session 1, approximately 3-4 weeks after T1); T3 (immediately following

workshop session 2, 1 week after T2); and T4 (about 10-11 weeks after workshop sessions).

Other quantitative data in this efficacy study are reported elsewhere (under review).

Intervention

Our three-part intervention focused on PK, advertising literacy, and nutrition in the context of food advertising: (1) workshop 1 (information delivery, small group activities: 90 minutes); (2) subvertising homework for mother-adolescent pairs during the subsequent week; and (3) workshop 2 (focus group discussion and subvertising presentations: 90 minutes). The intervention represents a mix of “factual” style content, intended to increase knowledge and skepticism (Buizen 2007), and interactive training. Wright et al. (2005, p.232) critique the use of “found materials” because they are not designed with theory or “how people develop marketplace persuasion knowledge.” Our transdisciplinary intervention was developed with cultural tailoring and theoretical concepts from PK (Ferguson et al. 2019; see Appendix 1-online).

Workshop 1 introduced food and nutrition standards in Jamaica; culture, identity and remote acculturation; persuasion (e.g., emotions and persuasion, mere exposure and repetition, etc.) and persuasion knowledge including multiple forms of food advertising messages and tactics. Advertising literacy components (e.g., attitudinal, moral, cognitive: Hudders et al. 2017) and counter-resistance strategies and coping skills (e.g., Fransen et al. 2015) were discussed.

The second part of the intervention asked mother-adolescent pairs to create a subvertisement during the week in between workshops. The activity was designed to foster interaction, discussion, and creativity between the mother-adolescent pair related to concepts learned in the first session. Beyond evaluation and analysis, creation and production are important aspects of media/advertising literacy (Potter 2010). In line with advice from Hudders

et al. (2017), we considered how to make our intervention suitable to our intended audience. In Jamaica, the process of skepticism and critique aligns with cultural resistance and autonomy in the face of oppressive influences (Ferguson and Iturbide 2013) and in adolescence, there is a shift toward more critical thinking and reasoning (John 1999). Thus, we tailored our hands-on activity to the developmental stage (12-year-olds) and cultural context of our audience.

Subvertising derives from the words ‘subvert’ + ‘advertising’ or the practice of making fun of ads. The idea is that the advertising message is transformed into commentary about or parody on the product, brand, or idea. Subvertising is a kind of “culture jamming” – “the appropriation of a brand identity or advertising for subversive, often political, intent” (Carducci 2006, p. 116). See Appendix 2 (online) for subvertising homework instructions.

The third part of the intervention (*Workshop 2*) occurred one week later, where the participant-created subvertisements were shared, first in focus groups and then in the larger group, which took the form of a competition in which participating adolescents and mothers voted for the best subvertisements. Workshop 2 represented a way to both gauge learning from workshop 1 through query and discussion and reinforce those principles through talking and performance. So, although it was a planned part of the entire intervention, we also are able to assess persuasion knowledge and coping (e.g., skepticism, critical thinking about message and source and understanding bias) by analyzing the subvertisements created and the content of these discussions. Interviews and focus groups are often used to gauge children and adults’ understanding of advertising and/or coping mechanisms (e.g., Bartholomew and O’Donohoe 2003 in Scotland; Lawlor and Prothero 2008 in Ireland; Mallalieu, Palan, and Laczniak 2005 in the U.S., Mehta et al. 2010 in Australia; Rose, Merchant, and Bakir 2012 in the U.S.). Workshop 2 was offered at four different times throughout the weekend; the room was set up with five

tables for participants to join. The focus group guide was semi-structured: it included three main questions with appropriate probing questions with flexibility for discussion. The questions were 1) *What was your subvertisement? Please show us and briefly tell us about it.* 2) *Can you tell us a little about your process? What did you do to critique the ad you chose?*, and 3) *What part of the workshop from last week did you remember when you were critiquing or creating your subvertisement?*

Recruitment and Participants

There were 150 seventh-graders (age 12) and their mothers who were screened from three high schools around Kingston, Jamaica. In all, 62 pairs (N=31 intervention group: 15 male, 16 female adolescents; N=31 control group: 15 male, 16 female adolescents) participated in this study.

Inclusion criteria were 1) some degree of self-reported unhealthy eating and 2) some degree of self-reported identification with American culture or daily U.S. media viewing. The sample consisted of mothers (mean age=39.45 years, SD=5.94) and adolescents (age range: 12-14; mean age=12.80 years, SD=.49). There was a wide range of socioeconomic backgrounds. Mothers' education ranged from "less than 7th grade" (1.8%) to "graduate professional degree (e.g., MS, MD, PhD)" (14.3%), with the mode being "Technical/vocational program or started university" (35.7%) (scale adapted from Hollingshead 1975).

Participants across conditions received parallel experiences to the extent possible (T1 and T4 involved questionnaires online or at school/home for all participants; T2 and T3 involved physically attending a session at a local university where participants checked in and were sent to one of two rooms.

The study was approved by the relevant university research ethics boards in Jamaica and in the U.S.. Each participating adolescent and mother received pre-paid phone credit as

incentives. Several families also received a small travel stipend for attending the two sessions at the local university.

Analysis of Subvertising and Focus Group Discussion in Workshop 2

Subvertisements were created by participants as part of the intervention and shared during focus group discussions and performance during workshop 2. These parts of the intervention represent opportunities for the participants to remember, apply, and discuss what they learned from the workshop 1 and for investigators to see how everyday PK and coping skills may be revealed in subvertising creations. Thus, we coded the subvertisements and focus group transcriptions of the intervention and present the findings here.

The first round of coding was inductive and deductive as we were looking for emerging themes (an extended phrase or sentence that identifies what a unit of data is about and/or what it means”; Saldana 2009, p. 175) with concepts of persuasion knowledge in mind. Two researchers read through the subvertisements and interview transcripts independently to develop a list of themes. The subvertisements were then analyzed for media type, brand, techniques (e.g., poems, play-on words) and content (e.g., health effects, advertising skepticism). The focus group discussions revealed two themes that largely reflected the workshops: 1) health consequences from the advertised foods/beverages and 2) persuasion and media (recognition, tactics, skepticism). Themes were compared, discussed, and combined and an initial codebook was co-created, tested, and used by research assistants. Themes are presented here.

Subvertisements. The mother-adolescent dyads submitted subvertising entries as print advertisements (35%), poems (19%), outdoor advertisements (15%), songs (15%), skits (1%), and other (0.6%). The most frequently critiqued brands were KFC (22%), Burger King (20%), and Pepsi (20%). Participants employed various techniques, spanning from play-on words to

clever rhymes to descriptions of the potential negative repercussions of junk food consumption. Two of the most common overall themes are described next.

Health Effects. Many of the subvertisements described health consequences as well as how advertisers use tactics to persuade audiences, which relates to workshop 1. Participants sang, drew, and wrote about the ‘missing information’ from the advertisements (i.e., health consequences of consumption) and presented the ‘real’ health reality. For instance, one mother-daughter pair created a Pepsi print ad where they made statements such as “Pepsi gains more money while we gain more cavities,” which also highlights their critical thinking about the message source (Pepsi) and “Say it with Pepsi - we give you diabetes,” demonstrating awareness of the long-term health implications of overconsuming Pepsi. The negative health consequences of sugary drinks were also reflected in the lyrics here (sung to the tune of Coca Cola’s “Taste the Feeling”): “Too much Coca-Cola then you have no feeling, all you need is healing, the sugar brings you down. Can’t taste the feeling.” A print ad spoofs Burger King’s slogan “Have it Your Way” with “Have Fat Your Way” with the brand name Big Burger Belly (see Figure 1).

Subvertisements can also be found on this You Tube site: “Subvertising Content Winners 2017 JUS Media” <https://www.youtube.com/watch?v=npw5GLAnpUQ&t=4s>

Place Figure 1 about here

Advertising skepticism. Advertising skepticism and critique were also frequently demonstrated. Here, participants freely voiced aspects of *moral* advertising literacy (“the skills, abilities, and propensity to morally evaluate advertising, as expressed by the beliefs and judgments people develop about the appropriateness of its tactics”; Zarouali et al. 2019, p.198). For example,

skepticism and questions about the veracity of advertising were captured in the gospel-styled mother-daughter duet hymnal related to KFC: “Bashing their fries, lies, and alibis, they did not tell me that eating KFC too often can kill me. My health, my wealth, my well being.

Hypertension and low self esteem, the doctor told me that greasy food is no good for me, but KFC said ‘So Good’. I don’t know who to believe....There must be something wrong with me. The Doctor he tellin’ the truth, but I know KFC lying to me...”.

Similarly, a mother-son pair chanted the following words, reflecting an understanding of bias and deception, to demonstrate their parody of a Burger King advertisement: “Big Beefy Bliss. Will actually put me on the obesity list. Trying to trick me with your size when this is what you *really* look like. You’re low in nutrients, high in sodium, you want to kill my tastebuds, you ain’t that delicious.” The accompanying image shows a small burger, which reinforces the visual tricks and photography that advertisers use to make their food look appealing. A few pairs used rhyming to critique persuasive advertising messages, such as the use of poetry set to rhythmic hand-clapping (e.g., “KFC nice but it’s not the wise choice”) to transform content or convey a message about healthy eating. In the Session, this mother-son pair led the entire group in song and clapping and cheering.

In summary, the participants’ subvertisements demonstrated the applied knowledge of the intervention from the first workshop to subverting the popular advertisements witnessed in the media, primarily from leading U.S. global brands. The participants provided ‘real’ information about health consequences and critiqued the truthfulness of advertising claims, invoking skepticism while exposing deceptive persuasion tactics and questioning corporate (source) motives. These subvertisements revealed a persuasion knowledge – of the common persuasion

tactics and coping mechanisms including skepticism, understanding of bias, and questioning the source of food and beverage advertising.

Focus Groups. Focus groups were audio-taped and transcribed by Jamaican research assistants to ensure that the transcripts were accurate and captured any local dialect. The final transcripts resulted in 249 pages of text. Only those in the intervention participated in focus groups (48% male adolescents). The analysis of the focus groups revealed three themes demonstrating evidence that participants were able to discuss (and thus listen and reinforce) their use of persuasion knowledge.

Advertising Recognition. Several of our mother and adolescent participants reported heightened awareness regarding the quantity and frequency of advertisements in their environments. The ability to discriminate advertising from programming and to recognize the sources of the messages are necessary for children to recognize the persuasive intention of advertisements (Robertson and Rossiter 1974; Nelson 2016). This ability is a key component of persuasion knowledge in general (Tutaj and Van Reijmersdal 2012), also referred to as the cognitive dimension of advertising literacy (e.g., Zarouali et al. 2019). The participants indicated that they were able to differentiate advertisements in their environments more than compared to before. For instance, one mother stated, “Is like you’re more aware, them use to just deh pan di road, but now is just like yah, okay look fi yuh see dem” [English translation: It’s like you are more aware, they just used to be displayed on the roadside, but now it’s just like, yes, okay, you look and see them.”]. Here, the mother described how she is more aware of the advertisements surrounding her and that if she simply “looks” for them, she sees ads filling the roads. This mother’s sentiments are shared by another pair, where both the mother and adolescent reported noticing advertisements in their community that they previously overlooked. This mother states,

“When we were coming [to the interview] we saw the Pepsi sign.” Her adolescent added to this comment with, “We saw Pepsi. Yesterday when I was coming home from school and I saw the big Popeyes sign in front ah me and in my mind I’m like ‘I see it.’”. Another adolescent also revealed that she was better able to recognize Pepsi ads and the source, in this case, Pepsi. She says “Even at the bus stop in front of my school, I did not notice that there was a Pepsi sign out there,” relaying that even though she frequents the bus stop, she never noticed the outdoor advertising prior to the intervention. Some participants even found it humorous how long advertising has been surrounding them, but how little they previously noticed it. For instance, an adolescent made a joke about KFC ads, stating “And across the road there was like KFC sign I’m like that was there a long time ago? {laughs}” In addition to greater ‘ad spotting,’ participants wondered out loud about the potential persuasive effects in line with Wright (2005), who suggests, “adults readily access psychological explanations for what they perceive as advertising tactics” (p.228). For example, one mother said, “It really cause you to think though. For the life of me I am wondering how much of an impact advertising has on me. Especially the ones that you drive past...Because I could not remember on a daily basis which ads I passed...Either is too many or I was just not paying attention.”

Persuasion Tactics. Beyond recognition, persuasion knowledge consists of audiences’ beliefs about the advertisers’ strategies, tactics, and motives (Friestand and Wright 1994). During the focus groups, many participants demonstrated they were able to describe various persuasion tactics that advertisers used to trick or persuade the audience; thus, they were practicing their cognitive defense. For example, one of the mothers commented on a Pepsi advertisement that made use of bright colors and emojis: “It’s very fun, so you find that more persons consume that. It’s a good choice and it’s a smiley face, it grabs you.” This mother demonstrated her awareness

and liking (attitudinal persuasion knowledge) of the persuasion tactics that the advertiser (Pepsi) is employing to attract consumers; specifically, she identified how the ad uses emojis to be “fun” and attention-grabbing. Adolescents also displayed increased persuasion knowledge in critical thinking skills related to detecting bias and building skepticism by making multiple comments on the types of tricks they saw in advertising. One particularly common method of persuasion appeal is the use of celebrities, or other individuals with socially desirable characteristics, in a commercial. One adolescent described how KFC uses these tactics while maintaining deceptive messages of the health of their products, “KFC has a lot more fat than people think. So when you on TV, all you see is people with abs or famous people like Chris Martin eating the chicken running up and down having fun and everything, but then when you think about it, like let’s say if you apply it to you, let’s say by the time you’re twenty you probably have diabetes, probably suffering from obesity...next thing you know you in a grave.”

Another trick related to how depictions in advertising are typically more attractive or different from reality, for example, when it comes to the quality or appearance of the food or of the people in the ads. For instance, one mother stated, “Most times when you see the picture of the food, the picture is what grabs you. When you get the actual food you’re just turned off.” Lastly, one adolescent recalled the previous week’s workshop: “We started to talk about how they only use skinny people in their ads” and questioned how the people could remain skinny if they were eating all of those foods.

The change in meaning principle in PK – where a target recognizes a persuasion attempt and starts to understand the tactics and potential effects (Friestad and Wright 1994) – was noted by participants when they said ‘their eyes were open’ now to advertising persuasion. For example, one mother reflected on how the workshop enhanced her knowledge, “[The workshop]

opened my eyes to looking at these ads...the ads are like to draw your appeal, because they know what you want ... they use that to mek you enhance the food and full up yuh brain that it can make you look better.” She stated that she sees Pepsi ads “every second, on the street, on the TV.” This mother not only disclosed how she was able to recognize ads more easily post-intervention, but she also alluded to an increased ability to understand advertising appeals and message sources, both of which are integral factors of building consumer resistance (Robertson and Rossiter 1974). Once a target begins to recognize persuasion and understand its tactics, s/he can figure out how to cope with that persuasion. In this part of the focus groups, participants naturally discussed their “personal experience with a persuasive attempt they encountered in the past” (Hudders et al. 2017, p. 346). The idea is that by “repeating and rehearsing this association over time” the participants could easily apply the concepts learned from the first workshop to their daily lives and then “activate their critical mind-set” (Hudders et al. 2017, p.346).

Advertising and Behavior. Participants discussed how advertising affects their own behaviors or the behavior of others. Several individuals discussed noticing the subtle messages embedded into advertising that work to persuade or influence the behavior of audiences in implicit ways, a technique commonly employed in product placement or other subtler forms of advertising (De Pauw et al. 2018). For example, one mother reflected on how advertising has influenced her and others: “Even though we think they are not influencing us, we are still getting the message. We’re still being influenced ... even when we ignore it, we still get something...They strategically place these messages to remind us, because we might forget about it. We saw it on the TV but we were more interested in the show than the commercial. Then we go on the road and see the commercial again. The commercial took more hold on us.”

An adolescent described what happens when that commercial takes hold, stating “Caz nuff Jamaican people ...as dey see a burga ...dem just wah go buy it..leave it and enjoy the burga.” [English translation: “Because a lot of Jamaican people...as they see a burger...they just want to go and buy it...leave it [the commercial] and enjoy the burger”].

In sum, the focus groups revealed evidence of the persuasion knowledge gained among the adolescents and their mothers in the week following the first workshop and after their subvertising homework. In particular, participants noted recognition of the advertising around them in their daily environment, discussed some persuasion tactics and wondered about the effects on behaviors. The focus groups were an important part of the intervention – in discussing the persuasion knowledge and tactics with others at the table, participants were learning from each other and discussing and reinforcing “their everyday persuasion knowledge.”

Questionnaire: Measure of Interest for our Dependent Variables

The set of dependent measures were selected to assess dispositional PK and associated coping skills and critical thinking. Full measures are provided in Table 1 (online).

Dispositional Persuasion Knowledge. Dispositional PK was measured with the six-item scale assessing consumers’ confidence in their knowledge about marketer agents’ persuasion tactics (Bearden, Hardesty and Rose 2001). As noted in Ham et al. (2015), this scale has been used consistently (e.g., Aguirre-Rodriguez 2013; Ahluwalia and Burnkrant 2004) due to the conceptual appropriateness to measure ‘overall knowledge of how persuasion works’ (Friestad and Wright 1994). Although the intervention focused on advertising PK, the persuasion concepts and examples extended beyond advertising. The intervention as a whole was designed to instill knowledge and build confidence in participants’ ability to recognize persuasion and cope with it in their daily lives, particularly in the context of food and nutrition. Reliability, according to

Cronbach's Alpha, was good for both adolescents (T1: .73, T2: .75, T3: .82, T4: .89) and mothers (T1: .83, T2: .84, T3: .85, T4: .92) so a mean was created at each measurement time (T1-T4) for adolescents and mothers; see Table 2.

Skepticism Toward Advertising. Two items for Skepticism (“the tendency toward disbelief of advertising”; Rozendaal et al. 2016, p. 75) from the Advertising Literacy Scale were used. Inter-item correlations were as follows, all were significant at $p < .05$ unless indicated: adolescents (T1, $r=.30$, T2, $r=.16$, T3, $r=.37$, T4, $r=.11$, n.s.); mothers (T1, $r=.42$, T2, $r=.36$, T3, $r=.15$, n.s., T4, $r=.11$, n.s.). A mean was created for each measurement time for adolescents and mothers.

Understanding Advertising Bias. Two items to assess understanding of Bias (“being aware of discrepancies between the advertised and the actual product”; Rozendaal et al. 2016, p. 74) from the Advertising Literacy Scale were used. Inter-item correlations were as follows: adolescents (T1, $r=.35$, T2, $r=.27$, T3, $r=.28$, T4, $r=.17$, n.s.); mothers (T1, $r=.29$, T2, $r=.20$, T3, $r=.22$, T4, $r=.14$, n.s.). All correlations were significant at $p < .05$ unless indicated. A mean was created for each measurement time for adolescents and mothers.

Critical thinking about media source. Two items for Source and Source intent were included from Austin et al. (2015). Inter-item correlations were: adolescents (T1, $r=.69$, T2, $r=.67$, T3, $r=.78$, T4, $r=.80$) and mothers (T1, $r=.86$, T2, $r=.95$, T3, $r=.81$, T4, $r=.90$); all correlations were significant at $p < .05$. A mean score was calculated at each measurement time

Tables 1 and 2 about here

Results

Preliminary Analyses

At T1, missing values for variables ranged from 0% to approximately 27% for adolescents and 20% for mothers, up to 28-30% at T2 and T3, and up to 16-17% at T4. Little's MCAR test was conducted for adolescent and mother data at each time point to ensure that values were missing at random. For adolescents, results at the four time points were, respectively: $\chi^2(2,925) = 148.32$, $\chi^2(3,099) = 34.35$, $\chi^2(2,607) = 1731.64$, and $\chi^2(2,911) = 1310.12$, all p 's $> .05$. For mothers, the values obtained were, respectively: $\chi^2(2,463) = 1729.56$, $\chi^2(3,869) = 1481.54$, $\chi^2(3,657) = 2223.56$, and $\chi^2(3,298) = 139.44$, all p 's $> .05$. Thus, missing values were multiply imputed and the resulting values were aggregated across five new datasets to perform analyses. The two groups (intervention, control) of mothers did not differ on age or education level. Therefore, these demographic variables were not included in the main analyses. There were no significant differences in (T1) scores for any of the measures for adolescents or mothers except for the intervention group of adolescents showed lower scores on bias, $t(60)=2.97$, $p < .05$ and on skepticism, $t(60)=3.15$, $p=.003$ at the time of the pre-test (T1) when compared with their control group adolescents.

Quantitative Approach. Mixed repeated measures analyses of variance (ANOVAs) and multivariate analyses of variance (MANOVAs) were conducted with within-subjects factors (Time X 4) and one between-subjects factor (Condition X 2) to test the hypotheses that participants in the intervention groups would show greater increases over time in persuasion knowledge, skepticism, understanding bias, and critical thinking about source and content compared to those in the Control group. Our hypotheses then focused on whether or not positive change occurred *within* the Intervention groups immediately after the intervention (T3) and at a delay (T4), so repeated measure analyses were also conducted within each group (control and intervention groups separately).

Dispositional Persuasion Knowledge: Immediate and Delayed Effects (H1)

Mothers. H1a predicted that only mothers in the intervention group would show increased persuasion knowledge immediately after the intervention (T3) and at a delay (T4). Results of the overall repeated measures MANOVA of PK across four time points with control vs. intervention group as the between subject factor revealed there was no significant Time effect on PK. There was no significant Time X Condition interaction effect either. However, when examining the intervention group only, results of the repeated measure MANOVA revealed a significant within-subject main effect, $F(3, 28)=2.958, p <.05$ in a linear fashion with the mean PK increasing at each measurement time (see Table 2). As expected, separate analyses with mothers in the intervention group only showed increased PK after the full intervention (2 workshops=T3) as compared with their initial PK scores at the time of the pre-test (T1): results of paired-sample t-tests showed significant differences between mean PK scores in the pre-test (T1) and (T3) ($t(30)=2.314, p<.05$) and between the pre-test (T1) and the two-month delay (T4), $t(30)=2.499, p<.05$. Mothers in the intervention group showed sustained, higher levels of persuasion knowledge even after a two-month delay. The same within-subject analyses were done for the control group with no significant differences between PK at any of the time periods. Given that only those mothers in the intervention group showed significant increases in PK after the intervention (i.e., both workshops, T3) and the higher PK remained significantly different from pre-test scores (T1) at the 2-month delay (T4), support is offered for H1a.

Adolescents. H1b predicted that only adolescents in the intervention group would show increased persuasion knowledge immediately after the intervention (T3) and at a delay (T4). For adolescents, results of the repeated measures (RM) MANOVA for PK across time and between control and experimental groups did not reveal a significant Time effect on PK, and there was no

significant Time X Condition interaction. Within the experimental group of adolescents results of the within-subject MANOVA contrasts (trend analysis) revealed a significant *quadratic* relationship $F(1,30)=5.793$, $p < .05$, where increases in PK occurred at T2 and T3 but reverted back to their original scores after the 10-11 week delay (T4). However, in line with expectations for the efficacy of the workshops and as predicted in H1b, adolescents in the intervention group showed increased persuasion knowledge after the full intervention (T3) as compared with their initial PK scores at the pre-test (T1); these differences were significant according to results of paired-sample t-tests $t(30)=2.021$, $p=.05$. However, there was no significant difference between T1 and T4; thus, the long-term effects were not found. There were no significant within-subject differences in PK for the control group of adolescents, according to repeated-measure MANOVA and paired-sample t-tests for PK across time. Thus, only adolescents in the intervention group showed increased PK and partial support is offered for H1b about immediate, but not delayed, effects.

Skepticism (H2): Immediate and Delayed Effects

Mothers. Results of the MANOVA revealed a significant main effect of Time on Skepticism, $F(3, 58)=6.322$, $p=.001$ and a significant Time X Condition interaction, $F(3,58)=5.256$, $p=.003$. Follow-up ANOVAs revealed mean differences across conditions at T2, $F(1, 61)=13.356$, $p=.001$; mothers in the Intervention group showed higher skepticism at T2 than those in the Control group. When examining the intervention group only (i.e., those who attended the two workshops), results of the repeated measure MANOVA revealed a significant within-subject main effect, $F(3, 28)=7.842$, $p=.001$; no significant effects were found within the Control group. Within the intervention group, paired-sample t-test analyses showed that mothers' skepticism scores improved significantly from T1 to T2 ($t(30)=4.92$, $p<.001$) and near significance from T1

to T3 $t(30)=1.80$, $p=.08$. T4 scores were not significantly different from T1. There were no significant differences between any skepticism scores across time within the control group of mothers. Thus, partial support is offered for immediate effects of the intervention (H2a) but not for the delayed effects.

Adolescents. There was a significant main effect of Time on Skepticism, $F(3, 58)=11.937$, $p < .001$ and a marginally significant Time X Condition interaction, $F(3,58)=2.289$, $p=.09$. Mean differences across conditions did not reach significance at any time point in follow-up ANOVAs; however, when examining the Intervention group only (i.e., those who attended the two workshops), results of the repeated measure MANOVA revealed a significant within-subject main effect, $F(3,28)=10.443$, $p < .001$; no significant effects were found within the Control group. Results of paired-sample t-tests for Intervention group adolescents showed evidence of success of the intervention both immediately after the intervention and over time: skepticism scores were significantly higher from T1 to T2, $t(30)=4.56$, $p < .001$, from T1 to T3, $t(30)=2.85$, $p=.008$, and T1 to T4, $t(30)=2.60$, $p < .05$. Interestingly, skepticism scores among those in the Control group also improved, from T1 to T2, $t(30)=2.00$, $p=.06$ and from T1 to T3, $t(30)=2.42$, $p < .05$. Thus, some support is offered for H2b.

Understanding Bias (H3): Immediate and Delayed Effects

Mothers. There were no significant main effects of Time on Bias, nor was the Time X Condition interaction significant. When examining the Intervention group only, results of the repeated measure MANOVA did not reveal any significant within-subject effects; no significant effects were found within the Control group either. None of the mean scores were significantly different across time periods according to paired-sample t-tests. Thus, H3a is not supported for immediate or delayed effects.

Adolescents. There was no significant main effect of Time on Bias. However, a significant Time X Condition interaction was found, $F(3,58)=2.977, p < .05$. Mean differences across conditions did not reach significance at any time point in follow-up ANOVAs; when examining the intervention group only, results of the repeated measure MANOVA revealed a significant within-subject main effect, $F(3, 28)=5.412, p =.005$; no significant effects were found within the Control group. Results of paired-sample t-tests among Intervention group adolescents showed that understanding bias increased significantly across all time periods: T1 to T2, $t(30)=3.32, p =.002$; T1 to T3, $t(30)=2.14, p=.004$; T1 to T4, $t(30)=3.90, p=.001$; thus, support is offered for H3b. There were no differences in bias scores among Control group adolescents.

Critical Thinking about Source (H4): Immediate and Delayed Effects

Mothers. There was a significant main effect of Time on thinking critically about the message source, $F(3, 58)=3.436, p=.023$, although there was no significant Time X Condition interaction. However, neither the within experimental group nor within-control group analyses revealed significant effects over time. There were not any significant differences in critical thinking across time points according to the paired sample t-test analyses among Intervention group mothers. Interestingly, among Control group mothers, there was a significant increase in understanding bias from T1 to T4, $t(30)=2.02, p < .05$. Thus, H4a is not supported.

Adolescents. There was a significant main effect of Time on thinking critically about the message source, $F(3, 58)=7.731, p < .001$; there was also a significant Time X Condition interaction $F(3,58) = 3.914, p < .05$. Follow-up ANOVAs revealed mean differences across conditions at T3, $F(1, 61)=4.033, p=.005$; adolescents in the Intervention group showed significantly higher critical thinking about source at T3 than those in the Control group. When examining the intervention group only, results of the repeated measure MANOVA revealed a

significant within-subject main effect, $F(3, 28)=10.341$, $p < .001$; significant effects were also found within the Control group $F(3,28)=3.163$, $p < .05$. Paired sample t-test analyses among Intervention group adolescents showed higher critical thinking about the source after Workshop 2 (T3) as compared with pre-test scores (T1), $t(30)=2.91$, $p=.007$. However, there were no significant differences between T1 and delayed scores (T4). Among Control group adolescents', their source scores *dropped* significantly from T1 to T2, $t(30)=2.99$, $p=.006$. Thus, partial support is offered for immediate effects of the intervention, H4b, but not for delayed effects. A summary of all results can be found in Table 3.

Table 3 about here

Discussion

Dr. Peter Wright, one of the authors of the Persuasion Knowledge Model seminal article (Friestad and Wright 1994), asked fellow consumer research scholars, "...wouldn't it be nice if a decade from now the field would be clearly acknowledged as a primary source for, participant in, and even a leader of the creation of egalitarian research-based marketplace education programs in society?" (2002, p.682). Nearly twenty years after this solicitation, there has been an increase in "research-based marketplace education programs" for *advertising* persuasion knowledge in the form of advertising literacy interventions in the advertising field (An et al. 2014; DeJans et al. 2018; Hudders et al. 2015; Hwang, Yum and Jeong 2018; Nelson 2016; Sekarasih et al. 2018). As a whole, this research uses principles of persuasion knowledge or advertising literacy to develop and test the training materials and shows promising results for increasing short-term knowledge and sustained effects (Hudders et al. 2017).

Our research was the first to explore what happens to dispositional persuasion knowledge (i.e., PK: everyday persuasion knowledge; Friestad and Wright 1994) as well as coping skills (e.g., critical thinking about source, understanding bias, developing skepticism) among families in a middle-income country after the initial intervention *and* after a delay. Overall, the evidence shows promise for our novel intervention, including the use of subvertising and discussion during each of the three parts of the intervention. Beyond information delivery and media critique, active cognitive defense and resistance as coping strategies were aptly practiced, rehearsed, discussed, and shared among families with the subvertising exercise. Indeed, a unique contribution of our research relates to the importance of tailoring the intervention to the audience and culture. Subvertising through cultural critique and subversion resonates well with the Jamaican culture, with cultural icons such as Bob Marley asking people to “Stand Up” and “Emancipate Yourself from Mental Slavery” (Ferguson et al. 2016). Jamaica also has a culture where music and performance are celebrated. Witnessing mothers and their teens working collaboratively to create songs and poems and then perform together in a contest shows the opportunity and promise for developing engaging and culturally appropriate interventions in the future. As a whole, subvertising lends itself to creativity: subvertising has been used, for example, in middle school art classes in the U.S. (Chung and Kirby 2009). Our intention with subvertising and the intervention as a whole was to arm mothers and adolescent participants with persuasion knowledge about advertising, cultivate their self-confidence in persuasion episodes, and increase their coping skills and resistance.

Overall, our results show promise for the efficacy of the intervention, especially for adolescents, in building their skepticism, understanding of bias, and being critical of the source and for mothers for skepticism. For these cognitive defense coping skills, there were significant

Condition X Time interactions, which suggested that the intervention worked. Further, within intervention group analyses revealed that these participants also increased their persuasion knowledge (but the control group did not), yet the Condition x Time interactions were not significant. This could be because of the relatively small sample size or may be due to the measure of dispositional persuasion knowledge used in our study. Findings from the questionnaire were reinforced with our analysis of the subvertisements created by the mothers and adolescents working together between workshops and discussed at workshop 2. Analysis of subvertising content highlighted the participants' critiques of advertising: demonstrating skepticism, uncovering bias, and questioning the source, using contemporary campaigns and offering parody, and knowledge of persuasion tactics. Focus groups at the second workshop also demonstrated, for both mothers and adolescents, the increased recognition, attention, and understanding of advertising in their everyday lives and acknowledged the possible effects of advertising on their behavior. Indeed, a key strength of our study is the use of multiple assessments of PK across time.

Most of the research on PK, including advertising persuasion knowledge or advertising literacy, has examined cognitive aspects (i.e., recognition of the advertising) in a given persuasion episode and how that recognition may impact persuasion processes in the short-term (i.e., situational PK; Ham et al. 2015; Hudders et al. 2017). Our research, with a focus on developing dispositional PK (i.e., general everyday knowledge of persuasion) *and* coping skills that help participants understand bias, critically examine the source motivations and effects, and develop skepticism for food advertising, fits within a growing body of research related to consumer resistance to advertising (e.g., Buizen 2007; De Jans, Hudders, and Cauberghe 2018; Fransen et al. 2015). Such strategies (e.g., avoidance, counterarguing or “contesting” the content

or source; Fransen et al. 2015) resemble the ways that persuasion targets may cope with persuasion attempts in the marketplace. Our intervention study demonstrates that such skills can be enhanced especially among adolescents *and* somewhat among their mothers.

Theoretically, one of these coping strategies is skepticism, which has been shown to relate to PK – as evidence of critical processing (Obermiller and Spangenberg 1998), yet there is inconclusive evidence as to when and how this coping skill develops. Some studies show variation in the ability of young adolescents to practice skepticism or critical thinking (e.g., Rose, Merchant and Baikir 2012 in the U.S.) whereas other research shows by age 12, young adolescents can easily discuss persuasion knowledge (understanding and liking of advertising) as well as demonstrate critical thinking (e.g., Mallalieu, Palan, and Laczniak 2005). In our study, we did not find “ceiling effects” for skepticism. Rather we show that skepticism increased after the interventions for both adolescents and mothers, but remained significantly higher than pre-intervention only for adolescents.

Overall, the contribution of our study to theory of the advertising PK/advertising literacy studies relates to the varying level of acquisition and retention of “dispositional” PK in participants’ self-confidence in their persuasion knowledge and coping skills (understanding bias, critical thinking about source, skepticism) over time and across members of the same family. Advertising PK/advertising literacy studies in general rarely measure non-student adults. Yet, new forms of advertising necessitate a “sustained intellectual interest” in the important topic of domain-specific persuasion knowledge (Wright et al. 2005), including advertising persuasion knowledge, for young adolescents and teens (De Jans, Cauberghe and Hudders 2018) as well as parents (Evans et al. 2018) and grandparents and adults in general. Given the constant changes in advertising persuasion tactics, it is now more important than ever to ensure that people of all

ages can build skills to recognize and cope with advertising in all forms. Further, despite the general agreement that PK varies across age and culture (Friestad and Wright 1994), there is not much data showing how people of different ages, social class, and cultures develop advertising persuasion knowledge.

Our PK scores at time 1 (pre-test) show that mothers' mean score was 4.01 (control) or 4.21 (experimental) and their adolescents' mean score was 3.80. As comparison, university students in business and journalism, in Ahluwalia and Burnkrant's (2004) Study 1, reveal a mean PK score in the "high PK" group of 4.48 (five-point scale) and in the "low PK group" of 3.78. Thus, although scores were higher among U.S. university students (who had presumably studied persuasion) than mothers in our sample, they were not wildly different across time, country, or age. Given the large variation in measurement of PK (Ham et al. 2015), we cannot compare if the PK among mothers and adolescents in Jamaica was lower than or on par with their same-age counterparts in other countries. Future research might conduct such cross-cultural comparisons across age groups.

Limitations and Future Research

The heightened dispositional persuasion knowledge and coping skills after the three-part intervention suggests that multiple 'doses' of education appear to be most effective in increasing persuasion knowledge and coping mechanisms. Although our intervention was not designed to test for the unique efficacy of each of the parts, it is interesting to see (Table 2) that mothers' and adolescents' scores on dispositional PK and skepticism increased after the first workshop. We also witnessed evidence of the application of persuasion knowledge during the second workshop in focus group discussions and analysis of the subvertisements. Future researchers should

consider examining which components of intervention programs are most effective, what is the optimal length of intervention and what is the best means of dissemination.

Interestingly, although the intervention appeared to show promise in enhancing dispositional PK and skepticism, the effects of the intervention for critical thinking about the source were not found for mothers and were not sustained over time for adolescents. This specific kind of coping skill or consumer resistance strategy is referred to as “contesting the source” (Fransen et al. 2015) or source derogation (i.e., questioning or critiquing the credibility or intent of the source). While it has been regarded as relatively low effort processing because it refers to only one cue (message source; Fransen et al. 2015), it may also be the case that the critical thinking about the source may conflict with pre-existing attitudes about the source. Although our study did not examine a specific advertisement or source, the sources highlighted in the intervention (e.g., KFC, Burger King, Pepsi) were also those that were most consumed and critiqued in subvertising by the participants. It could be the case that as participants gain persuasion knowledge and critical thinking about the source, they revert to their pre-existing attitudes (what Fransen et al. 2015) referred to as biased processing. Or it may be the case that source ambivalence is the result. Future research could study how source (brand) favorability may impact critical thinking and resistance skills. In addition, mothers’ understanding of bias appeared to be unaffected by the intervention. Whether this relates to the scale items (developed for children) or to the content or learning from the intervention is unknown. In addition, the scale items had not been previously used or validated for these populations, and indeed some of the inter-item correlations were low at least one of the time periods.

Although short-term effects were found, not all of these effects held over time. As Hwang et al. 2018 point out, “It is important to examine the delayed effects because the purpose of

media and advertising literacy education is to help audiences develop a long-term defense.” Our research adds to a scant body of research that has measured the longer-term effects of media education (e.g., Austin and Johnson 1997; De Jans, Hudders and Cauberghe 2017; Hwang et al. 2018). Thus far, the results are rather mixed for the efficacy of long-term positive effects. A deeper understanding of whether or how PK or resistance coping skills can be sustained for different age groups presents a new and interesting area of exploration in the future. What is it about the cognitive or social stage in adolescent development that may require additional methods for lasting PK? We believe that the nature of our intervention, which directly addressed the persuasion tactics in food advertising and then encouraged participants to work together to critique and create through their subvertising and then reflect on and discuss what they learned, enhanced longer term learning. Scholars should continue to investigate long-term methods and effects of training.

Our study did not specifically gauge whether or how persuasion knowledge or associated coping strategies (e.g., skepticism) may be used in specific contexts (i.e., situational persuasion knowledge). Future research could assess situational knowledge by examining the types of coping strategies used when experiencing a persuasion attempt (e.g., counterarguing, accepting). Although focus groups revealed participant discussion of persuasion recognition, tactics, and psychological processes, we do not know the full range of actual coping mechanisms in their daily lives. For example, if they are now better at ‘ad spotting,’ does this mean they were more or less vulnerable to the effects? To what degree would the critical insights, skepticism, and coping skills we heard in the focus groups or witnessed in the subvertising hold true in the marketplace? Further, although the intervention discussed many forms of advertising (e.g., advergames, social media sponsored posts) we did not measure for participants’ specific

knowledge of these tactics. Future researchers may gauge the PK about specific tactics among parents and their children (Boerman et al. 2018).

Although a unique contribution of our research is the measurement of PK for mothers and their adolescents in the same study and over time, as advocated by Boush, Friestad and Rose (1994), we did not ask and do not know how PK may be developed in the home or transferred from the mother (or father) to the child and adolescent. Future study could inquire about parental discussion or mediation and perceptions among adolescents and parents to more explicitly link family communication and advertising persuasion knowledge. Our research was conducted within a particular cultural context with a media environment that brings in local and global content, including advertising. Similar research may be valuable in other low/middle-income countries experiencing remote acculturation to U.S. culture and a glocal media atmosphere. Whether or how persuasion knowledge might vary for persuasion tactics hailing from outside cultural borders would be an interesting area of study. Overall, understanding the processes of PK development and coping skills in and across cultures offers an opportunity for future exploration. Several advertising/media literacy education programs have been developed and tested in the advertising field across several participants ages and cultural contexts (An et al. 2014; De Jans et al. 2018; Hudders et al. 2015). Some advertising literacy programs are created through governmental or self-regulatory bodies (e.g., Media Smart: UK). To what extent could we standardize certain lessons and share our collective knowledge? What aspects of these programs are culturally unique or unique to the medium or age group? Future scholars could consider developing and testing a repository of resources. We hope the online appendices are helpful for other scholars to use or adapt. Despite some limitations, we also hope our study spurs additional research on developing persuasion knowledge in and across cultures.

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Table 1
Measures Used in the Questionnaire

Persuasion Knowledge (Bearden, Hardesty and Rose 2001, 1=disagree very strongly; 5=agree very strongly)

I know when an offer is too good to be true

I can tell when an offer has strings attached

I have no trouble understanding the bargaining tactics used by salespersons

I know when a marketer is pressuring me to buy

I can see through sales gimmicks used to get consumers to buy

I can separate fact from fantasy in advertising

Advertising Literacy Scale: Understanding Bias Component (Rozendaal, Oprea, and Buijzen 2014, 1= Never, 2 = Sometimes, 3 = Often, and 4 = Very Often).

How often do you think television commercials are fake?

How often do you think that what you see in television commercials is like things are in reality?

Advertising Literacy Scale: Skepticism Component (Rozendaal, Oprea, and Buijzen 2014, 1= Never, 2 = Sometimes, 3 = Often, and 4 = Very Often).

How often do you think television commercials are truthful?

How often do you think television commercials tell things that are not true?

Critical Thinking about Media Source (Austin, Pinkleton, Radanielina-Hita, and Ran 2015, on 7-point scale from 1=disagree and 7=agree)

I think about why someone created a message I see

I think about how someone created a message I see on TV

I think about what the creator of a message wants me to think

Table 2

Persuasion Knowledge and Coping Skills for Mothers and Adolescents
Mean Scores and Standard Deviations

	T1	T2	T3	T4
<u>Persuasion Knowledge</u>				
<u>Mothers</u>				
Control	4.04(.82)	4.12(.72)	4.08(.70)	4.13(.98)
Experimental	4.21(.50)	4.38(.51)	4.45(.47)	4.52(.61)
<u>Adolescents</u>				
Control	3.80(.63)	3.83(.65)	3.86(.70)	3.75(.77)
Experimental	3.80(.58)	3.94(.55)	4.02(.60)	3.76(.99)
<u>Skepticism</u>				
<u>Mothers</u>				
Control	2.87(.46)	2.89(.38)	2.90(.40)	2.88(.46)
Experimental	2.76(.39)	3.31(.51)	2.94(.50)	2.87 (.59)
<u>Adolescents</u>				
Control	2.75(.48)	2.94(.47)	2.94(.37)	2.82(.46)
Experimental	2.51(.35)	3.02(.47)	3.00(.47)	2.81 (.60)
<u>Understanding Bias</u>				
<u>Mothers</u>				
Control	3.15(.64)	3.05(.53)	3.03(.52)	3.04(.54)
Experimental	2.88(.59)	3.06(.74)	2.98(.70)	2.94(.66)
<u>Adolescents</u>				
Control	3.06(.61)	2.99(.61)	3.02(.55)	2.98(.68)
Experimental	2.64(.50)	3.09(.56)	2.88(.54)	3.03(.53)
<u>Source</u>				
<u>Mothers</u>				
Control	4.90(1.4)	4.69(1.70)	5.17(1.06)	5.44(1.38)
Experimental	5.33(.99)	5.10(1.58)	5.51(1.12)	5.61(1.58)
<u>Adolescents</u>				
Control	5.16(.93)	4.62(1.22)	5.09(1.33)	5.16(1.28)
Experimental	5.12(1.37)	5.00(1.30)	5.67 (.91)	4.81(1.51)

Note: All measures were assessed four times (T1=pre-test, T2=after Workshop 1, T3=1 week later, after Workshop 2, T4, two months after Workshop 2). PK = Dispositional Persuasion Knowledge (Bearden, Hardesty and Rose 2001) measured on a 5-point scale (where 5=highest persuasion knowledge). Skepticism and Bias from Advertising Literacy scale (Rozendaal, Oprea, and Buijzen 2014) on 4-point scale from 1=Never to 4=Very Often. Source from Critical Thinking about Media scale (Austin, Pinkleton, Radanielina-Hita, and Ran 2015) on 7-point scale from 1=disagree and 7=agree.

Table 3

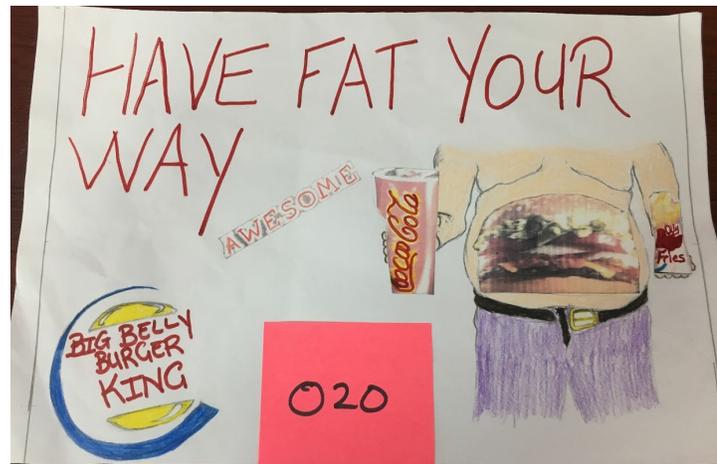
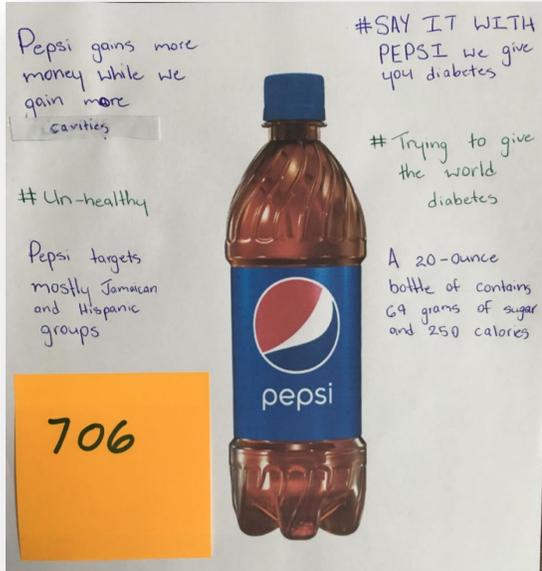
Increases in Persuasion Knowledge and Coping Skills Among Intervention Participants:
Summary of Findings

<u>Measure</u>	<u>After Intervention</u>	<u>Long-Term</u>
Dispositional Persuasion Knowledge	Mothers (T1-T2, T1-T3) Adolescents (T1-T2, T1-T3)	Mothers (T1-T4)
Skepticism	*Mothers (T1-T2, T1-T3) *Adolescents (T1-T2, T1-T3)	Adolescents (T1-T4)
Understanding Bias	*Adolescents (T1-T2, T1-T3)	Adolescents (T1-T4)
Critical thinking about Source**	*Adolescents (T1-T3)	<u>n/a</u>

* Note: The full repeated measures ANOVA (Condition: Intervention, Control) revealed significant interaction effects for Time X Condition showing evidence of efficacy for the intervention for this measure and group.

** Note: Control group mothers' scores from T1-T4 were significantly different, $t(30)=2.02$, $p<.05$. Control group adolescents' scores from T1-T2 were significantly different (lower), $t(30)=2.99$, $p=.006$. None of the other within-group mean scores across time periods were different for mothers or adolescents in the Control group.

Figure 1: A Subset of Subvertisements



Appendix 1 – Summary of Intervention Curriculum: Session 1

Concept and Content
Healthy Eating in Jamaica (Importance of a Healthy Diet; Changing Diets in Jamaica; Influences on Diet; Nutrition Standards – Food Plate; Usain Bolt diet; Food Plate Activity)
What is Advertising? (Ubiquity of Advertising; Purpose of Advertising as P(persuasion)-I(information)E(entertainment)+Selling intent; Local and Global Brand Examples of Advertising Across Media, including subtle forms such as advergaming and U.S. Cable TV; Persuasion Knowledge (Advertising Recognition; Affective and Attitudinal Advertising literacy)
US Influence and Remote Acculturation (Culture; Globalization and Identity; Remote Acculturation; Links between Culture, Media and Eating; Stages of Change framework)
Advertising/Media Literacy
Sources/Authors (Recognizing and Inferring a Persuasion Agent's Motives – Source - PKM; Understanding of Target Audience; Advertising and Values)
Understanding the Persuasion Agent's Tactics (Repetition: mere exposure effect; Feel good; emotion and affect transfer; Cool factor); Coping skills and resistance: Deception, Detecting Bias, Looking for Missing Information)
Persuasion Knowledge Model
Detecting bias, Developing Skepticism (Consideration of Appropriateness and Effectiveness: Several Examples); Moral Advertising Literacy
(For example: Showing advertising claims and then product labels)
Subvertising: Critique and Create (Definition and examples)
Subvertising: Critique and Create (Choose Ad, Critique, Change Meaning: Activity)
Assigned Homework to Create Subvertising (Mother-Adolescent) and bring back to Session 2 the following weekend.

Appendix 2: Subvertising Homework Assignment

Subvertising Contest

In the next week, each mother-student pair should work together to create a “Subvertisement.” As you know from the workshop, a subvertisement (subvert + advertising) is the practice of making fun of or spoofing advertising. You will choose, critique and change an existing food or beverage advertisement based on what was discussed at the workshop to create your own subvertisement. Make a subvertisement that tells the truth about what the commercials for unhealthy foods or drinks are REALLY saying.

Guidelines for How to Create Your Subvertisement

1. Choose an ad (from this handout or find your own)
2. Critique or think deeply about the messages in the ad
3. Change the original ad into a spoof ad, which makes fun of the deceptive messages
4. Submit your subvertisement by uploading online OR by bringing your subvertisement to the 2nd meeting on (Date).

Step-By-Step Breakdown

1. CHOOSE a food or beverage ad to critique. We have included some examples, but we encourage you to find other advertisements you see or know. The ad may be recent or from the past. The ad may be made in Jamaica or in the U.S. It may be a newspaper, outdoor, radio, television, Facebook, or other kind of advertisement.
2. CRITIQUE the ad. Think deeply about the ad and what it is saying (or not saying), and how. How is the advertisement trying to persuade you? Does the ad offer enough nutrition or product information for you to make smart choices? Is the ad telling the whole truth or leaving out important information? What kind of people are used in the ad?
3. CHANGE the ad. Thinking about your critique of the ad, how could you change the message or image? What can you do that will be creative, humorous, and make fun of it, but at the same time critique the food/beverage advertising? Here’s where you can be creative! Remember, you can use paper to subvertise by drawing a subvertisement for the newspaper or an outdoor billboard. Or, you can use a phone, digital camera, or other recording device online to record a radio or TV subvertisement. If you choose to make an

audio or video subvertisement, please limit your subvertisement to 3 minutes. Acceptable file formats for video/audio: .mov, .avi, .mp4, .wmv. If you wish to record a radio ad, this is a good website where it is easy to record your voice and then save the file as an mp3 file to upload: (website) Please ask us if you need help with this.

4. SUBMIT your “subvertisement” to the Team by uploading a digital copy online or bringing it with you when you come to the 2nd meeting next weekend. To upload, please name your file with your Family ID# and title of your subvertisement (e.g., ID201_KFCsubvertisement), then go to (website) and upload! The subvertisement file you upload could be a clear photo of your drawing, or a recording of your audio/video subvertisement, etc. After uploading, make sure that you see the message “File Uploaded: Your file has been successfully uploaded” before closing the browser. To submit your ad at the next meeting, simply bring it with you when you come.

Competition Rules

1. Only 1 subvertisement submission per student-mother pair is allowed.
2. If you subvertise a radio or TV ad, your subvertisement is limited to 3 minutes(MAXIMUM).
3. Your subvertisement must be your own original idea of how to make fun of the ad.

Reminders of Good Subvertising

1. Mimics the look and feel of the original ad (e.g., tune of song, look of the newspaper ad)
2. Is clear about the message
3. Easy to read and understand
4. Persuades people to believe the message
5. Conveys strong emotions
6. Challenges people’s perceptions
7. Is original and authentic (e.g., TV ad: use the tune of the old ad, but write new words;
Newspaper ad: change at least one key element in the ad to make fun of it)

Judging and Prizes

You will be the judges of this subvertisement competition during our 2nd workshop next week! Students and mothers in each session will vote for the best subvertisement. Winning subVERTISEMENTS for each session will get a prize of an additional ## phone credit and a chance to win the title of the “Best Subvertisement” for the entire Study. In addition, all winners, including the grand prize winner, will have an opportunity to give permission for their subvertisement to be posted on the Study website. Have fun! We can’t wait to see what you create!

Examples of Advertisements you Can Subvertise (or Pick a different ad to spoof)! (Examples

provided).

Have fun; we can't wait to see what subvertisements you create! If you have any questions, please text/call us at ##### (anytime), text call/whatsapp us at ##### (anytime), call ##### (daytime only), or send us an email at jusmediaprogramme@gmail.com.