Collectible Toys as Marketing Tools: Understanding Preschool Children's Responses to Foods Paired with Premiums

Anna R. McAlister

Lecturer

Department of Consumer Science

University of Wisconsin - Madison

1305 Linden Drive

Madison WI 53706

Phone: 734 355 3758

Email: armcalister@wisc.edu

T. Bettina Cornwell

Edwin E. and June Woldt Cone Professor of Marketing

Research Director, Warsaw Sports Marketing Center

Lundquist College of Business

University of Oregon

Eugene OR 97403

Email: tbc@uoregon.edu

The authors acknowledge the parents and preschool teachers whose consent to the research project was fundamental to its success. The authors also thank Sean B. Cash (School of Nutrition Science and Policy, Tufts University) for his expertise and advice in preparing the final version of this paper.

Collectible Toys as Marketing Tools: Understanding Preschool Children's Responses to Foods Paired with Premiums

Concern over obesity finds policy makers struggling to understand marketing's role in food choice but with a limited empirical base to inform them. Because food patterns established in childhood influence life-long patterns, toy premiums that may sway food preference are being questioned. The motivational pull of collectible toys is of particular interest in this discussion since repeated exposure to foods engendered by frequent purchases to obtain collectibles may establish food preference. Thus, Study 1 addresses the role of collectible toys as premiums accompanying food offerings. These premiums are shown to influence children's attitudes toward both "unhealthy" and "healthy" meal offerings. In Study 2, a choice task finds that a healthy meal is favored when it is paired with a collectible toy premium and the unhealthy meal is presented with no premium. Findings are discussed in terms of providing an evidence base for policy decisions.

Keywords: child health, obesity, meals, taste perceptions, fast food

A strong argument can be made for change in children's food consumption behaviors. A review of the literature on food preferences finds that "the ready availability of energy-dense foods, high in sugar, fat and salt, provides an eating environment that fosters food preferences inconsistent with dietary guidelines" (Birch 1999, p. 41). Moreover, children like foods high in sugar, salt, and fat (Cooke 2007). Policy makers are under pressure to do something about the obesogenic environment that fosters overweight and obesity in children, and marketing practices that target children are center stage in many debates.

In response to mounting public pressure for change, Santa Clara County in California voted to ban the practice of pairing toys with high calorie meals targeted to children, while allowing toys to be paired with meals that meet certain nutritional guidelines (Bernstein 2010). San Francisco County has since adopted the same policy (Frumkin 2011). In a policy volley, restaurant lobbyists have supported state lawmakers in Florida and Arizona to prevent toy bans from reaching their states. These lobbyists explained that they felt the need to be proactive in helping to prepare legislation that would make it illegal "…to try to regulate any incentives that restaurants provide to entice customers" (Bernstein 2011).

At issue in the current policy debate is the appropriateness of government intervention. While restaurant owners assert that parents should decide what food their children will consume and whether or not they may have a toy (Bernstein 2011), parents are divided on the issue. Some parents argue that the proposed bans interfere with a consumer's right to choose, while others in 2010 chose to join the Center for Science in the Public Interest in filing a lawsuit against McDonald's (de Nies and Behrendt 2010). The lawsuit claimed that inclusion of toys in McDonald's Happy Meals is deceptive, predatory, and "downright illegal" (Parsons 2010).

Expenditure figures speak to the use of toys to promote foods. In 2006, for example, the

fast food industry spent approximately $350 million on advertising toy promotions (Bernstein 2011; Parsons 2010). The most recent Fast Food FACTS (Food Advertising to Children and Teens Score) Brief from the Rudd Center for Food Policy and Obesity concludes that youth oriented marketing is highly effective (Rudd Center 2010). The brief finds that 15% of parents of preschool children reported that their child asks them to visit McDonald's *every* day. Moreover, 15-19% of parents who went to McDonald's and Burger King reported that their child wanted the restaurant's toy.

History has shown that toys offered with kids' meals in quick service restaurants are highly sought after and occasionally the source of controversy. In 1997, for example, a Teenie Beanie Babies promotion at McDonald's became a "cult phenomenon" when 100 million stuffed toys proved insufficient to satisfy the number of people eager to take one home. Adults purchased the kids' meals, and in many cases the food was left to waste in overflowing trashcans (Altaner 1998). Balancing the popularity of kids' meal toys against concerns that the toys may encourage obesity through poor food choice, a compromise would be to allow toys, but only when they are used to promote meals meeting strict nutritional guidelines. This is the type of proposal discussed previously and currently being considered in New York (Daily Mail 2011).

Importantly in this policy battle, there is very little in the way of directly relevant research to inform the debate. One must question whether intervention is needed and, if so, what form it might take. Thus, this research examines children's responses to foods coupled with toys. We aim to determine whether nutritious meals could be effectively promoted through the inclusion of toys (collectible or non-collectible). Further, the current research explores the role toys may play in promoting exposure to foods by motivating preference. The current research seeks to advance understanding of how very young children choose more or less healthy foods

when these foods are offered with toys. This population, context, and choice behavior have not previously been investigated.

Marketing to Children and the Use of Premiums

Premiums are goods that are offered as a bonus to incentivize the purchase of a product (Kotler, Brown, Adam, Burton and Armstrong 2007). Examples that are popular with children include cereal box toys, trading cards, and toys paired with kids' meals at restaurants. The present research focuses particularly on collectible toys as premiums. We define "collectible toy premiums" as toys known to belong to part of a larger, pre-defined set, and that are offered as a bonus to promote the purchase of another product. Why are collectible toy premiums of particular interest? When paired with meals, collectible toy premiums may lead to repeat exposure to certain foods. Repeat exposure may, in turn, lead to increased preference for those foods (Birch and Marlin 1982; Harris 2008; Skinner et al. 2002). Further, many preferences developed in childhood persist, and preferences for unhealthy foods could result in both short-term and long-term negative health consequences (Kemm 1987).

Importantly, from the child's perspective, a toy premium paired with food facilitates an associative learning experience that may sway food preference. Parents complain that their in-home attempts to promote healthy eating cannot compare to the ways in which children's food preferences are shaped by marketing efforts (Health News 2011). Regarding fast food (much of which is considered unhealthy), toy premiums have been cited as the primary incentive used to attract children and McDonald's has been named as one of America's largest distributors of toys (Schlosser 2001). In one Australian survey, many of the 800 adult respondents regarded the pairing of collectible toy premiums with kids' meal deals as "pester power" used by restaurants (Obesity Policy Coalition 2009).

Premiums have been investigated for their potential to shape child preference for an advertised food, but findings are mixed. In the mid 1970s to early 1980s, studies emerged in response to the Federal Trade Commission's (FTC) proposed ban on child-directed television commercials using premiums (note that the discussion was not focused on collectible toy premiums per se). On the basis of findings reported by Shimp, Dyer, and Divita (1976), the FTC ban was rejected. These researchers tested first through sixth grade children's responses to advertisements in an experiment assessing the effectiveness of advertisement length and presence or absence of a NFL team patch offered with the cereal. They reported that greater liking of the premium did not necessarily translate to greater liking of the cereal. The researchers did, however, acknowledge that the non-significant result might have been affected by the lack of variance in children's liking of the premium (that was near ceiling).

Miller and Busch (1979) reported that inclusion of a premium in an advertisement for breakfast cereal did impact children's likelihood of selecting the cereal in a choice task. Similar to Shimp and colleagues (1976), Miller and Busch (1979) used a well-controlled experimental design to test first through fifth grade children. The premium used was a cartoon book and their findings were that "premium commercials showed a clear superiority over host-selling and announcer commercials as measured by the percentage of children who selected the advertised product" (Miller and Busch 1979, p. 330). While the mixed results across these studies are difficult to interpret, it can at the least be concluded that Miller and Busch's (1979) use of a gender neutral Tweety and Sylvester cartoon premium, with no known ceiling or floor effects in likeability, may have produced more meaningful results.

Observational research in the supermarket cereal aisle suggests children's purchase requests are frequently grounded in information about premiums learned from advertisements

(Atkin 1978). Moreover, premiums are prevalent in child-directed advertising. In a content analysis of child-directed food advertising, close to one third of all ads sampled included a premium offering (Roberts and Pettigrew 2007). Although some of the early data suggest that premiums were not effective in terms of encouraging food preference, the fact that premium advertising (which commonly includes collectible toy premiums) is still prevalent suggests that marketers believe otherwise.

Collectible Toy Premiums

Interestingly, studies examining the use of premiums as incentives for children's food purchase decisions have not examined collectible toy premiums. One point of importance regarding the use of collectible toy premiums to promote kids' meals is that once a child obtains the first toy from a collectible set, the desire to complete the set is so strong that children nag to obtain the remaining items (Roberts and Pettigrew 2007). In other words, what might have been a one-meal-purchase inspired by a young child's interest in a toy translates into four, five, or more purchases depending on the number of toys needed to complete the collectible set.

Recent research in developmental psychology has shown that the "motivational pull of collectible toys is very strong" (McAlister, Cornwell and Cornain 2011, p. 15). In two experiments, the researchers showed that the majority of preschool aged children have the requisite skills for collecting. For example, they are able to employ decision rules to categorize items as belonging (or not belonging) to a set and they are able to resist distracting options when building a set. Moreover, these researchers demonstrated that the desire to collect can be strong enough for a young child to be willing to "pay a cost" of sharing with a confederate child in an experiment in order to obtain a collectible toy. The researchers offered children either a packet containing two toys (one collectible and one distracter) with the condition that one must be

surrendered to another child, or a packet with two toys to keep (both non-collectible distracters). The majority of preschoolers in the sample chose the former option, surrendered the distracter toy to the confederate child, and kept the one collectible toy.

Due to the concern that collectible toy premiums exert a particularly powerful influence when paired with a meal option, the present research is designed to look at collectible toy premiums and to compare the allure of collectible toy premiums to that of non-collectibles. Hence, one of the contributions of the present research will be to provide an assessment of the "pull" of each type of premium using a repeated measures design. While current policy debates focus on the pairing of toys with food, we argue that this discussion should be enlarged to consider the motivational pull of a collectible as unique and different to non-collectible toy premiums. As a general contribution of the research, it is important to understand the potential of a collectible toy premium to motivate behavior differently than a single, non-collectible premium.

Given that the current policy debate allows the use of toy premiums with meals following health guidelines, we consider meals that match suggested guidelines, while also examining energy dense, high calorie meals. In the following two studies, we have chosen to compare a calorie dense meal (pizza, fries, soda) with a healthier alternative (vegetables, soup, low fat milk). For ease of reference, we label the calorie dense meal "fast food," though we acknowledge that either meal is potentially a quick service restaurant option. Study 1 employs a 2 (meal type: fast food, healthy meal) x 3 (premium: collectible toy premium, non-collectible toy premium, no premium) within-subjects design to assess children's attitudes toward different offerings. Each child rates the six meals arising from the 2 x 3 design. Study 2 has two aspects; one is a replication and extension of the within-subjects rating task from Study 1 that includes a

"superfluous" toy premium (a collectible, but one the child has already acquired) to further examine the motivational pull of collectible toy premiums. The second aspect of Study 2 is to examine choice in a 2 (meal type: fast food, healthy meal) x 2 (premium: collectible toy premium, no premium) within-subjects design where children see pictures of different meal offerings alongside each other. The purpose of the choice task in Study 2 is to determine whether a child's attitude ratings translate to the child's choice when given alternatives.

Pre-Test of Stimulus Materials

The tasks employed in Studies 1 and 2 require toys that are (a) equal in their average level of appeal to preschoolers, (b) equally appealing to boys and girls, and (c) novel (i.e., new to the participant). Hence, a pre-test of stimulus materials was first conducted to identify toys for use in each study. This pretest included 11 toys that the research team believed had the potential to meet all three criteria. All toys were comparable in size (roughly 1.5" tall).

For this pretest, parental consent was obtained to work with a sample of 46 children (24 boys, 22 girls) aged three years zero months to five years eight months. The experimenter met with each child individually. Children were shown each of the 11 toys one at a time, and gave responses via picture cards where a big smiling face meant "I like it a lot," a big frown meant "I really don't like it," and smaller smiles and frowns were used in between, with a question mark in the middle for "I don't know." The picture cards helped children to rate the appeal of each toy on a five-point scale, where five is most positive. Children rated each toy and were asked whether or not they already owned it. They were then invited to select one toy to keep.

Seven toys met the selection criteria, however, one of these was immediately dropped because it was decidedly more expensive and a large number needed to be purchased for children

to keep in Studies 1 and 2. A within-subjects ANOVA confirmed that the six remaining toys were equal in appeal, $F(5, 41) = 0.03$, *ns*. Independent samples t-tests were used to establish that each of these toys appealed equally to boys and girls. Moreover, children's selections when invited to choose one toy to keep reflected equal interest from boys and girls in relation to each of these six toys, $\chi^2(5) = 0.56$, *ns*. Finally, all toys met the criteria of being novel, since no child in the sample reported already owning any of them. This finding was not surprising, given that the researchers had purposely shopped for the toys online and out of the local area. On the basis of all three criteria having been met, these six types of toys were considered to be potential candidates for use as stimuli in Studies 1 and 2. Since only two types of toy were required, the most affordable were utilized. These included a truck and a monster.

Study 1: Collectible Toy Premiums in the Context of Food Marketing

Study 1 investigates whether the presence or absence of a collectible toy premium influences perceptions of the meals under examination. Further, a non-collectible toy premium is paired with each meal to determine whether perceptions of the meals are impacted differently when the paired toy premium is collectible or non-collectible. The influences of these different types of toy premiums are examined in relation to the marketing of a calorie dense "fast food" meal as well as a healthier meal option.

The purpose of Study 1 is twofold. First, it examines the influence of toy premiums (collectible and non-collectible) in the marketing of foods to very young children. Second, it investigates parents' likelihood of acceptance if the practice of pairing collectible toy premiums with meals were to be instituted by marketers of healthy foods. It is anticipated that children will judge foods paired with collectible toy premiums to be more likeable and tastier than foods

presented without any toy premium. Moreover, it is expected that foods paired with collectible toy premiums will be judged more favorably than those paired with non-collectible toy premiums. This prediction is based on recent findings showing that collectible toys are so attractive to preschoolers that many children would rather have one collectible toy than two non-collectible toys, even when the non-collectible toys are equal in terms of size, color, and general appeal to boys and girls (McAlister, et al. 2011).

H1: Foods paired with a collectible toy premium will be received more positively than foods paired with a non-collectible toy premium or without any premium. Specifically, the average attitude ratings for foods paired with a collectible toy premium will be significantly higher than the corresponding ratings of foods that are either (a) paired with a non-collectible toy premium or (b) presented as a meal option with no toy premium.

Hypothesis 1 examines whether children's preference for collectible toys over non-collectible toys transfers to their attitudes toward foods paired with these items as premiums. It is expected that stand-alone healthy foods will initially attract lower ratings than stand-alone fast foods, since children like energy dense foods (Cooke 2007). However, an interaction between type of premium and meal type seems likely. It is anticipated that any effect of premium type will be stronger for the healthy meal than for an energy dense "fast food" meal. This interaction is hypothesized because ratings of the fast food meal are expected to be high (possibly near ceiling) even when presented without any premium:

H2: There will be a significant interaction between meal type and type of premium. The effect of premium type will be more pronounced in relation to the healthy meal.

Finally, this study explores the issue of parents' receptiveness to the use of collectible toy

premiums in food marketing. Despite reports of parents objecting to the use of toy premiums (collectible or non-collectible) in fast food marketing, it is anticipated that parents may be receptive to the practice if it encourages their child's interest in healthier foods.

Study 1 Method

Participants

Participants were 85 children (43 boys and 42 girls) aged three years three months to five years four months (M = 4.25, SD = .48) and their mothers. Families were recruited from a middle-class preschool. While any parent or guardian was welcome to participate, only mothers participated. No child had participated in the pre-test.

Stimuli and Testing

A graphic designer created six "meal deal" images. These offerings were intentionally unfamiliar and unbranded to ensure children had no pre-existing attitudes toward them and to ensure that issues like brand loyalty would not influence children's ratings of the different meals. The images included three "fast food" depictions: one without any premium, one showing a toy truck, and one showing a toy monster. During the task, children learned that the truck was not collectible and that the monster was a member of a collectible set. Each of the three fast food images depicted the same food (a personal pizza, a side of fries, and a small soda). These three items were chosen because they are known to be popular energy dense foods (Skinner et al. 1998), however, they did not represent a familiar offering (i.e., pizza is not typically sold with fries). There were also three "healthy" meal images (one without any premium, one with a non-collectible truck, and one with a collectible monster). The healthy meal included a serving of soup, a side of mixed vegetables (no dressing or sauce), and a small carton of low fat milk. The food and drink depicted as "fast food" constituted an energy dense offering, while the "healthy"

food and drink were rich in nutrients, according to average nutrition data for the constituent items (www.nutritiondata.com). The depictions of these foods in the stimulus materials made the distinction clear: the pizza was made with white flour and heavily laden with toppings and in the manner of a fast food offering. By contrast, the soup and vegetables were not accompanied by soda, dressings, or condiments. See Figure 1 for sample stimuli.

Insert Figure 1 about here

In individual testing sessions, children were shown a picture depicting a set of three collectible monsters. Children were given two of the collectible monsters at the start of testing. This manipulation established the monster as a potentially collectible toy. Following, a distracter task was administered. The distracter task was a language assessment lasting approximately 20 minutes (data from this test are not used in this study). Children were then shown 18 food pictures and asked to rate how much they liked each one and how good they thought each would taste. These 18 pictures included a random presentation of the six meal deals, as well as 12 other foods (not relevant to either hypothesis) that were included to distract children from the manipulations of meal type and type of premium. The monster displayed in the meal deal offerings was the third monster that was not yet owned by the child. The truck displayed was the same color but was not introduced as collectible. The 12 additional foods showed no brand logos or packaging. Picture card response options were used to provide a five-item response scale for the likeability question (1 = big frown and thumbs down meaning "I *really* don't like it"; 2 = small frown meaning "I don't like it"; 3 = face with horizontal line for a mouth meaning "I don't really know if I like it or not"; 4 = small smile meaning "I like it"; 5 = big smile and thumbs up meaning "I *really* like it") and for the anticipated taste question (1 = big frown and tongue poked out downwards meaning "It tastes *disgusting*"; 2 = small frown and tongue poked out slightly

meaning “I don’t like the taste”; 3 = neutral face meaning “I’m not really sure if it tastes good or bad’; 4 = small smile and small tongue licking lips meaning “I like the taste”; 5 = big smile and licking lips meaning “It tastes *so* good”).

Finally, each mother completed a survey regarding their own attitudes toward the use of collectible toy premiums in the marketing of food to children. The survey employed five-point Likert scales (1 = strongly disagree, 5 = strongly agree) for mothers to indicate their level of agreement with two statements: “I feel comfortable with the use of collectible toys to promote fast food” and “I would feel comfortable with the use of collectible toys to promote healthier foods.” To minimize the contrast between the meal types mentioned in these items, several distracter items were also included (e.g., “My child is a fussy eater”). Comments were invited in an open-ended section.

Study 1 Results

Preliminary data screening revealed a high correlation between measures of likeability and anticipated taste. Across the three levels of premium, the correlation between likeability and anticipated taste ratings was significant for fast food ($r(85) = .85$, $p < .001$) and for the healthy meal ($r(85) = .69$, $p < .001$). Hence, we calculate an attitude score for each of the six meal deals by averaging across children’s likeability and anticipated taste ratings.

The expectation was that, when each meal was considered without any premium, the fast food meal would be more positively regarded than the healthier meal. This was justified. In the absence of any premiums, the fast food meal had a higher average attitude score ($M = 3.78$, $SD = 1.10$) than the healthier meal ($M = 2.25$, $SD = 1.18$), $F(1, 84) = 96.16$, $p < .001$.

Hypothesis 1 predicted that, for each meal, the highest ratings would be observed when the meal was paired with a collectible toy premium rather than being paired with a non-

collectible toy premium or being presented alone. Results of a 2 x 3 repeated measures ANOVA support hypothesis 1. As shown in Figure 2, there was a significant main effect of premium type on children's attitudes toward the meals, $F(2, 83) = 172.24$, $p < .001$, partial $\eta^2 = .81$. The results of planned comparison tests show that – for both fast food and the healthy meal – ratings are significantly higher for foods paired with a collectible toy premium than foods paired with a non-collectible toy premium ($F(1, 84) = 21.99$, $p < .001$ and $F(1, 84) = 92.22$, $p < .001$, respectively) .

Insert Figure 2 about here

Hypothesis 2 was also confirmed. The interaction between premium type and meal type was significant in the prediction of attitude ratings, $F(2, 83) = 27.94$, $p < .001$, partial $\eta^2 = .40$. This interaction is depicted in Figure 2. Attitudes toward the healthy meal are more dramatically affected by toy premiums than attitudes toward the fast food meal (which had a relatively high rating even when presented without the pairing of any toy premium). An important and critical finding is that, when paired with a set completing collectible toy premium, the fast food and the healthy meal are equally appealing ($F(1, 84) = 2.18$, *ns*). However, when a non-collectible toy premium is offered with each meal, the healthy meal remains inferior in terms of its average rating ($F(1, 84) = 30.65$, $p < .001$). Consistent findings emerged when the same analysis was conducted with age as a control variable.

Study 1 Discussion

The finding that children generally prefer low-nutrient, energy dense foods is not new (Drewnowski 1989; Skinner et al. 1998). What is learned here is that, consistent with the hypothesis, preschool children's attitudes are influenced by the use of a collectible toy as a premium in meal offerings. Our finding that children's attitudes toward a healthy meal can be

significantly influenced by the inclusion of a collectible toy premium is novel in the sense that prior studies of food-paired premiums looked only at sweetened breakfast cereals. We now also know that receptivity to healthy foods may be enhanced when the foods are paired with collectible toy premiums. When we consider parental views collected during Study 1, the policy of restricting the pairing of toy premiums to only those meals that are healthy seems that it would meet with little resistance. In response to the survey item "I would feel comfortable with the use of collectible toys to promote healthier foods," 62 parents (73%) strongly agreed, four parents agreed (5%), two circled the "unsure / uncertain" response option, and the remainder (20%) disagreed. The survey also found that 78 (92%) of the 85 parents surveyed strongly disagreed with the statement "I feel comfortable with the use of collectible toys to promote fast food." A further two parents (2%) disagreed with the statement, and the remaining parents (6%) agreed.

One finding, which is admittedly beyond what was anticipated with the hypotheses, is that the presence of a collectible toy premium eliminates any difference in attitude toward the energy dense fast food and the healthy meal. It had been predicted that attitude ratings for the healthy meal would be more favorable with a collectible toy premium included than without one, but it was not necessarily expected that the collectible toy premium would see the two types of meals rated on par with one another. To further examine the motivational pull of collectible toy premiums, we need to distinguish the appeal of furthering a collection (adding a toy that makes a meaningful contribution to a goal like set completion) from the general appeal of obtaining collectible toy premiums. This can be achieved by examining the appeal of acquiring a collectible toy premium that is already owned by the child. This will be addressed in the rating task of Study 2.

Another aspect to be addressed in Study 2 is what choice a child would make under

differing premium/meal combinations. Choice between alternatives adds to the understanding developed by ratings because it reveals preference not simply attitude. Hence, the second aspect of Study 2 employs a choice task to further assess the appeal of the healthy meal when it is paired with a collectible toy premium and presented alongside the fast food.

Study 2: Choice of Meal as Determined by Toy Pairing

This second study is conducted to determine if behavior (i.e., meal choice) is affected by collectible toy premiums paired with food offerings. In the current marketplace it is common to encounter energy dense fast food meals with toy premiums (frequently collectible) and to see healthier meals offered without any premium (as might be encountered in a food court). Is the pairing of a collectible toy premium with a healthy meal likely to result in children choosing the healthy meal? To address this question, we examine choice behavior when children are presented with images of various meal offerings. The present study builds on Study 1 by providing choice data to assess the extent to which meal choice is influenced by collectible toy premiums.

The hypotheses regarding the choice data are based on ratings obtained in Study 1. There it was observed that when meals are presented alone without any toy premium, fast food received higher ratings than the healthy meal. When each of the meals was paired with a collectible toy premium, both received equally positive ratings. Hence, we test the following four hypotheses:

H3: When the fast food meal and the healthy meal are presented side by side, each with no premium, a greater number of children will choose the fast food meal.

H4: When the fast food meal and healthy meal are both paired with a collectible toy premium and presented together, the number of children choosing each meal will be

equal.

H5: When the fast food meal is paired with a collectible toy premium and presented against the healthy meal on its own (no premium), a greater number of children will choose the fast food meal.

H6: When the fast food meal is presented alone (no premium) against the healthy meal that is paired with a collectible toy premium, a greater number of children will choose the healthy meal.

Further, the present study extends the findings of Study 1 to consider how children respond to the availability of a collectible toy premium that is not needed to complete their set. In an additional condition, we ask children to rate each type of meal (fast food versus healthy meal) when it is paired with a collectible toy premium that the child already owns (i.e., a collectible that is superfluous, not needed for set completion). We administer the Study 1 rating task and include a premium condition herein referred to as the "superfluous toy." In this condition, the collectible toy premium is said to be superfluous because it is already owned by the child and hence should be of no value in terms of any set completion goals the child might have.

In relation to the rating task, we expect that the superfluous toy will behave in much the same way as the non-collectible toy premium in terms of impacting children's ratings of the foods with which it is paired. That is, although we have evidence to suggest that collectible toy premiums are highly attractive to children, we anticipate that the appeal is less pronounced for collectible toy premiums that do not advance a child's goal (i.e., those that are not needed for set completion since their acquisition would be redundant). Since the superfluous toy is not needed for set completion, we anticipate that children will find it less appealing than the set completing collectible, but nevertheless more appealing than no premium at all.

H7a: Attitude ratings of the fast food meal will be lower when the meal is paired with the superfluous toy than when it is paired with the collectible toy premium.

H7b: Attitude ratings of the healthy meal will be lower when the meal is paired with the superfluous toy than when it is paired with the collectible toy premium.

Consistent with Study 1 findings, it is anticipated that the effect of premium type will be stronger for healthy foods than for fast foods that are known to start out with higher ratings:

H8: There will be a significant interaction between meal type and premium type. The effect of premium type will be more pronounced in relation to healthy foods.

Finally, this study explores frequency of fast food consumption as well as children's television viewing habits (including parentally supervised and unsupervised viewing time as reported by the parent/guardian of each child). Each of these variables will be assessed for significant correlation with children's food ratings.

Study 2 Method

Participants

Participants were 56 children (30 boys and 26 girls) aged three years zero months to five years two months (M = 4.09, SD = .56). One parent of each child completed a brief survey. Reponses were received from 52 parents (49 mothers and three fathers). Families were recruited from two campuses of an upper- to middle-class preschool. No child had participated in Study 1.

Stimuli and Testing

Children took part in two tasks. Task A involved choices with a 2 (meal type: fast food, healthy meal) x 2 (collectible toy premium: present, absent) design. Task B involved ratings of meal likeability and anticipated taste, and used a 2 (meal type: fast food, healthy meal) x 4 (premium: no premium, non-collectible toy premium, collectible toy premium, "superfluous" toy

premium) design. The order of administration of these tasks was counterbalanced across children. Irrespective of which task was administered first, the data collection session always commenced with the child being shown a picture of five collectible monsters and a picture of the toy truck on its own. The experimenter explained that the monsters were a collectible set and that the truck was not part of a set. Children were allowed to play briefly with the toys. The experimenter then explained that the child would receive four of the five monsters at the end of the study. In clear view, so that each child could see which four monsters they would later receive, the experimenter placed four monsters in an envelope that was then put out of sight. The toy truck was also put out of sight. A distracter task (block building) was used before the start of testing. A second distracter task (puzzle) was used to give a break between tasks. At no point were children reminded of the envelope containing the four monsters.

Task A was used to gather information on children's choices when meal options were presented visually side by side. We were interested in the four comparisons that arise from the 2 x 2 manipulation of meal type (fast food, healthy meal) and premium (collectible toy premium, no premium). For these, we used some of the same images that were used in Study 1 (except that they were presented two at a time on the same page). These four comparisons of meal deal offerings were interspersed among other comparisons of foods (e.g., cupcake versus ice cream) and objects (e.g., kitten versus puppy). In total there were four meal deal comparisons and eight distracter comparisons (that are of no relevance to this research). Children were shown each choice comparison and asked to point to which one they would most like to have. The order of presentation was randomized for each child. For comparisons of meal deals, the position of meals on the page (left versus right) was counterbalanced across children in case handedness played any role in which option a child was likely to choose.

Task B involved essentially the same rating task that had been used in Study 1. Children were shown 20 food pictures and asked to rate how much they liked each one and how good or bad they thought each would taste. The order of presentation of pictures was randomized for each child. The pictures included the 18 pictures used in Study 1 (i.e., six meal deals and 12 distracters), as well as two new pictures. The two new pictures included each type of meal (fast food meal and healthy meal) depicted with the superfluous toy. Children's ratings were recorded on the same five-point scales used in Study 1. As in Study 1, attitude scores were calculated for each of the eight meal deals by averaging across children's likeability and anticipated taste ratings for each meal.

Finally, each parent completed a survey that included items measuring the child's frequency of fast food consumption, as well as the child's television viewing habits (both supervised and unsupervised). The fast food question asked: "How many times in a typical week is this child served 'fast food' (e.g., Burger King, Taco Bell)?" Response options included 0; 1-2; 3-4; 5-6; 7 or more. Television viewing was measured with the question "Please write the average number of hours per week that your child spends watching network or cable TV (a) with parental supervision and (b) without parental supervision."

Study 2 Results

Preliminary Results

As a preliminary step, variables assessed via the parent survey were checked for any impact they might bear on the outcome measures of interest, namely, choice and attitude ratings. Neither frequency of fast food consumption, nor children's television viewing habits (supervised or unsupervised) impacted any of the outcome measures. These variables were assessed via correlations with the meal deal ratings, and through inclusion as covariates in the analysis of

choice data. These variables are not addressed further. Presented below are results from analyses of data obtained from the choice task and the ratings task. Prior to reporting these results, order effects were considered. For the sake of parsimony, the findings presented here are from analyses conducted without task order as a covariate because no significant order effects were found.

Choice Data

Hypotheses 3 through 6 were assessed using chi-square analyses of frequency. Marginal support was found for hypothesis 3. When the fast food and healthy meals were both presented without any toy premium, a slightly greater number of children chose the fast food meal (62.5%), $\chi^2 = 3.50$, $p = .06$. Support was found for hypothesis 4. When both meals were presented with the collectible toy premium, the number of children choosing the fast food meal (48.2%) was not significantly different from the number who chose the healthy meal (51.8%), $\chi^2 = 0.07$, *ns*. This finding is consistent with the Study 1 results that showed that children's ratings of the healthy meal were as positive as their ratings of the fast food meal when each meal was paired with a collectible toy premium.

Support was also found for hypotheses 5 and 6. When the fast food meal was paired with a collectible toy premium and the healthy meal was presented without a premium, a greater number of children chose the fast food meal (82.1%), $\chi^2 = 23.14$, $p < .001$. Alternatively, when the fast food meal was presented without a premium and the healthy meal was paired with a collectible toy premium, a greater number of children chose the healthy meal (71.4%), $\chi^2 = 10.29$, $p < .01$. These results give a strong indication that children's food choices are swayed by the presence or absence of a collectible toy premium. They provide evidence that children may choose a healthy meal over a fast food meal if the healthy meal is paired with a collectible toy premium and the fast food meal is not paired with any premium.

The choice data were also subjected to a conditional logit analysis to examine the unique role of each independent variable (meal type and premium). This multivariate analysis examines the contribution of each attribute simultaneously, while also accounting for shared error among the multiple observations per participant. In this analysis, each observation was a choice that could have been selected, the dependent variable was whether or not that choice was selected, and the independent variables were the characteristics of the choices. Dummy coding was used for meal type (0 = healthy, 1 = fast food) and premium (0 = no toy premium, 1 = collectible toy premium). The choice model estimates were significant (likelihood ratio $\chi^2 = 33.24$, $p < .001$). In the model, meal type was a significant predictor of choice ($z = 2.20$, $p < .05$), as was premium ($z = 5.29$, $p < .001$). Calculating marginal effects for discrete change of these dummy coded variables (i.e., from the absence to the presence of fast food, and from the absence to the presence of a collectible toy premium) implies that a particular meal option was 9.05% more likely to be selected by a child when it contained fast food items, and 21.25% more likely to be selected when it contained the collectible toy premium. Analysis of additional model specifications including interactions between age and each of the meal attributes (premium and meal type) showed that age did not interact significantly with either variable. Further, there was no significant interaction between meal type and premium.

Ratings

Results from the ratings task are summarized in Figure 3. Aside from the superfluous toy condition (which is new in this study), there is a direct replication of Study 1 findings. Similar to Study 1, the average attitude rating of the healthy meal when paired with a collectible toy premium (M = 4.44, SD = .76) is not significantly different to that of the fast food meal when paired with a collectible toy premium (M = 4.72, SD = .88), $F(1, 35) = 2.45$, *ns*. This finding

emphasizes the motivational pull associated with collectible toy premiums.

Ratings data were also examined to determine the extent to which meal ratings would be affected when meals were paired with the superfluous toy. In a repeated measures ANOVA comparing the attitude ratings of fast food and healthy meals across four levels of premium (no premium, non-collectible toy premium, collectible toy premium, and "superfluous" toy premium), there was a significant main effect of premium type on attitude toward the meals, $F = 67.52$, $p < .001$, partial $\eta^2 = .86$. Consistent with hypothesis 7a, the fast food meal received lower ratings when paired with the superfluous toy premium ($M = 3.67$, $SD = 1.01$) than when paired with the collectible toy premium ($M = 4.72$, $SD = .88$), $F(1, 35) = 41.42$, $p < .001$. Similarly, support was found for hypothesis 7b. The healthy meal received lower ratings when paired with the superfluous toy premium ($M = 2.90$, $SD = .92$) than when paired with the collectible toy premium ($M = 4.44$, $SD = .76$), $F(1, 35) = 64.33$, $p < .001$. Consistent with hypothesis 8, there was a significant interaction between meal type and premium type with a more pronounced effect of premiums occurring in relation to healthy foods, $F = 14.19$, $p < .001$, partial $\eta^2 = .56$. These findings were robust when the same analyses were conducted with age as a control variable.

Insert Figure 3 about here

Study 2 Discussion

The findings of Study 2 confirm and extend the findings of Study 1. We find that toy premiums (non-collectible and collectible) sway children's perceptions of food. The pairing of a non-collectible toy premium with each meal results in higher attitude scores than when the meals are not incentivized with any premiums. Moreover, collectible toy premiums exert a stronger influence on attitude such that ratings for both meals are highest when a collectible toy premium

is on offer. Findings from the superfluous toy condition indicate that the particular motivational pull of the collectible toy premium is not just that it is from a collectible set but that it helps a child complete the set. In addition to attitude, food choice may be influenced by the inclusion of a collectible toy premium with a meal. In this study, we observed that a significantly greater number of children chose the healthy meal when it was paired with a collectible toy premium and presented alongside the fast food meal without any paired premium. These are important findings for public policy makers, since they confirm the suspected influence that collectible toy premiums may have in product ratings and choice.

Findings from the choice task show that fast food paired with a toy premium is likely to encourage unhealthy food choices. The only situation where healthy food was chosen over fast food was when the collectible toy premium was available with the healthy meal and not the fast food meal. This finding lends support to the argument that one way of encouraging healthy eating among children is to restrict the use of premiums in food marketing such that collectible toy premiums may only be paired with meals meeting strict nutritional guidelines. The fact that numbers of children choosing the two food options are not significantly different when both are paired with collectible toy premiums suggests that this tactic, essentially, put the options on equal footing, which does not exist when neither food has a collectible premium.

General Discussion

From an applied perspective this research demonstrates the motivational power that collectible toy premiums hold for some young children. Our findings suggest, as citizens in California have argued, that the use of collectible toy premiums is a public policy concern,

especially when paired with calorie dense foods and when healthier meals are not paired with collectible toy premiums. The present findings may not be sufficient to warrant policy change, but they certainly do provide evidence of the need for additional research to understand the issue and inform ongoing policy debate.

Study 1 suggests that collectible toy premiums might be used successfully in the promotion of healthy food options. Findings from the Study 2 choice task provide additional evidence that healthy meals have the potential to be successfully marketed to young children, but perhaps only if regulations encourage their pairing with collectible toy premiums and restrict the pairing of collectible toy premiums with calorie-dense meals. Note, though, that we have no evidence to determine whether or not children would choose the healthy meal more than once. Actual physical consumption is more likely to occur when a child believes the food tastes good (Ton Nu, Macleod, and Barthelemy 1996). Of course, children's ratings of *anticipated* taste may differ from their ratings of *actual* taste after sampling the food. Nevertheless, our findings so far are promising because they clearly indicate a more positive attitude towards the healthy meal with the collectible toy premium, as opposed to the "baseline" attitude towards the same meal when it is offered alone. That positive attitude may be sufficient to encourage a child to try the food on one occasion. Even if the child has overestimated the appeal of the food, exposure to the taste of a particular food plays an important role in eventual acceptance of the food (Wardle et al. 2003).

We have no evidence from which to judge what might happen after an initial sampling of the healthy meal. One possibility is that a child might try the meal once, reject it, and choose never to eat it again. Alternatively, children may taste the food, accept the healthy meal, and this could in turn lead to preference for the foods sampled. Yet another possible outcome is that

children try the healthy meal and – despite not particularly liking the taste of the food – request the same meal on the next occasion because they like the collectible toy premium that came with it and they want to obtain more members of the collectible set. If pursuit of the collection leads a child to frequently sample nutrient rich foods, this sampling may be beneficial to the child's diet over time. Additional research is needed to learn more about the potential for collectible toy premiums to shape children's food preferences over time and exposures.

For control, unfamiliar toys were utilized in this research; nonetheless the influence of collectible toy premiums on children's attitudes toward each meal was significant. Future research should consider the motivational power of collectible toy premiums that are linked to well-known children's movies and characters. The passion that seems a hallmark of adult collecting (Belk 1995) was not explicitly measured nor was it likely fully developed in this experimental context.

Future research might also consider the timing of collectible toy premiums since this research did not examine the time frame of collecting or the motivational pressure of expiring premium availability. Moreover, some sets of collectible toys may offer additional motivational drive by functioning together to form a more meaningful set for play. By establishing a better understanding of the motivational influence that collectible toy premiums exert on young children's food choices, these findings open public policy questions regarding regulation of this promotional technique. For example, toy premiums (non-collectible and collectible) used in fast food marketing might be offered as a stand-alone purchase so that a child may acquire the toy without the food item (a practice that is currently in place in some fast food restaurants but is neither ubiquitous nor legally required).

Although the results suggest that toy premiums may be used in the promotion of healthy

foods, this paper would be remiss to conclude without noting some important methodological considerations. In Studies 1 and 2, children's interest in the meals paired with the collectible toy premium may not have been as high had they not recently received members of the collectible set. If additional studies were to find that children who have not already received "seed" items to start a collectible set show no greater attraction to meals paired with a collectible toy premium, then it might be possible to avoid being attracted to the paired meal by not allowing a set to be started. Conversely, when a preference for the meal is desired (as might be the case for a parent who wants to encourage their child's interest in a healthy meal), a finding that children's interest in meals paired with collectible toy premiums is sparked only after having received "seed" toys would suggest that allowing a child access to the first few items in a set of toys may be a critical factor in the ability of collectible toy premiums to inspire choices.

Another limitation of both studies is that children evaluated pictures and did not make actual choices in terms of physical consumption of either meal. Given the difficulty of obtaining consent from parents to feed their children without the parents present, the challenge of gaining parental agreement to sample soda in preschools, and the challenge of keeping hot foods warm and cold foods cool, a follow up study with actual food choices might better take place beyond the one-on-one lab setting with parents attending.

While children appear interested in the collectible toy premiums used in this research and, arguably, there are educational benefits of encouraging collecting behavior, collecting also has the potential to yield various negative outcomes. For instance, collecting can be financially taxing on parents and may lead a child to request particular foods that are marketed with collectible toy premiums to the exclusion of other foods. Children may feel excluded from their peers if all others in their group have collectible toys and they do not (Vasquez 2004). Moreover,

they may lack “cultural capital” if they are unable to join discussions regarding collectible toys (Bourdieu 1991). Collecting that encourages children to feel that they must obtain a large number of items may also result in the development of materialistic values in young consumers. It is concluded that marketers of any food type should consider the ways in which their promotional efforts shape the eating patterns and social perceptions of young people, and whether those effects are consistent with long-term health and nutrition goals as well as positive consumer relationships.

References

Altaner, David (1998), "Beanies Back on McDonald's Menu," *Sun Sentinel*, (accessed May 13, 2011), [available at http://articles.sun-sentinel.com/1998-05-20/business/9805190373_1_teenie-beanie-babies-happy-meals-mcdonald].

Atkin, Charles K. (1978), "Observation of Parent-Child Interaction in Supermarket Decision-Making," *Journal of Marketing*, 42 (4), 41- 45.

Belk, Russell W. (1995), *Collecting in a Consumer Society*, London: Routledge.

Bernstein, Sharon (2011), "Fast Food Industry is Quietly Defeating Happy Meal Bans," *Los Angeles Times*, (accessed June 15, 2011), [available at http://www.latimes.com/business/la-fi-happy-meal-backlash-20110518,0,7236630.story].

Bernstein, Sharon (2010), "It's a Sad Day for Happy Meals in Santa Clara County," *Los Angeles Times*, (accessed May 31, 2010), [available at http://articles.latimes.com/2010/apr/28/business/la-fi-happy-meals-20100428].

Birch, Leann L. (1999), "Development of Food Preferences," *Annual Review of Nutrition*, 19 (July), 41-62.

Birch, Leann L. and Diane W. Marlin (1982), "I Don't Like It; I Never Tried It: Effects of Exposure on Two-Year-Old Children's Food Preferences," *Appetite*, 3 (4), 353-60.

Bourdieu, Pierre (1991), *Language and Symbolic Power*. Cambridge, England: Polity Press.

Cooke, Lucy (2007), "The Importance of Exposure for Healthy Eating in Childhood: A Review," *Journal of Human Nutrition and Dietetics,* 20 (4), 294-301.

Daily Mail (2011), "'Don't End Up Like Me': Obese Councilman Urges New York City to Ban Fast Food Restaurants From Giving Away Free Toys to Children," (accessed June 16, 2011), [available at http://www.dailymail.co.uk/news/article-1373993/New-York-follow-San-Francisco-ban-fast-food-restaurants-giving-away-free-toys-children.html].

De Nies, Yunji and Taylor Behrendt (2010), "Mom to Sue McDonald's in Happy Meal Battle," (accessed June 26, 2011) [available at http://abcnews.go.com/US/mom-sue-mcdonalds-happy-meal-battle/story?id=12400445].

Drewnowski, Adam (1989), "Sensory Preferences for Fat and Sugar in Adolescence and Adult Life," *Annals of the New York Academy of Sciences*, 561 (1), 243-50.

Frumkin, Paul (2011), "NYSRA: Proposed Toy Ban is Micromanaging," (accessed June 16, 2011), [available at http://www.nrn.com/article/nysra-proposed-toy-ban-micromanaging].

Harris, Gillian (2008), "Development of Taste and Food Preferences in Children," *Current Opinion in Clinical Nutrition and Metabolic Care*, 11 (3), 315-19.

Health News (2011), "Ask Pam: Kids and Junk Food" (accessed May 16, 2011), [available at http://healthnews.ediets.com/diet-weight-loss/ask-pam-kids-and-junk-food.html].

Kemm, John R. (1987), "Eating Patterns in Childhood and Adult Health," *Nutrition and Health,* 4 (4), 205-15.

Kotler, Philip, Linden Brown, Stewart Adam, Suzan Burton, and Gary Armstrong (2007), *Marketing (7th edition)*, Frenchs Forest: Pearson.

McAlister, Anna R., T. Bettina Cornwell, and Emilita Krisanti Cornain (2011), "Collectible Toys and Decisions to Share: I'll Gift You One to Expand my Set," *British Journal of Developmental Psychology,* 29 (1), 1-17.

Miller, Joseph H. and Paul Busch (1979), "Host Selling vs. Premium TV Commercials: An Experimental Evaluation of Their Influence on Children," *Journal of Marketing Research*, 16 (3), 323-32.

Obesity Policy Coalition (2009), "Would you Like a Cartoon Character with that?" (accessed February 2, 2010), [available at http:// www.opc.org.au/latestnews/mediareleases/pages/mr20090609.aspx].

Parsons, Sarah (2010), "Battle of the Toys: Non-Profit Sues McDonald's for Predatory Marketing," (accessed June 26, 2011), [available at http://news.change.org/stories/battle-of-the-toys-non-profit-sues-mcdonalds-for-predatory-marketing].

Roberts, Michele and Simone Pettigrew (2007), "A Thematic Content Analysis of Children's Food Advertising," *International Journal of Advertising*, 26 (3), 357-67.

Rudd Center (2010), "Fast Food FACTS: Evaluating Fast Food Nutrition and Marketing to Youth," (accessed July 6, 2011), [available at http://www.fastfoodmarketing.org/media/FastFoodFACTS_Report.pdf].

Schlosser, Eric (2001), *Fast Food Nation: What the All-American Meal is Doing to the World,* London: Allen Lane.

Shimp, Terence, A., Robert F. Dyer, and Salvatore F. Divita (1976), "An Experimental Test of the Harmful Effects of Premium-Oriented Commercials on Children," *Journal of Consumer Research*, 3 (1), 1-11.

Skinner, Jean D., Betty R. Carruth, Wendy Bounds, and Paula J. Ziegler (2002), "Children's Food Preferences: A Longitudinal Analysis," *Journal of the American Dietetic Association*, 102 (11), 1638-47.

Skinner, Jean, Betty Ruth Carruth, James Moran, Kelly Houck, James Schmidhammer, Ann Reed, Frances Coletta, Richard Cotter, and Dana Ott (1998), "Toddlers' Food Preferences: Concordance with Family Members' Preferences," *Journal of Nutrition Education*, 30 (1), 17-22.

Ton Nu, Christine, Patrick MacLeod, and Jacques Barthelemy (1996), "Effects of Age and Gender on Adolescents' Food Habits and Preferences," *Food Quality and Preference*, 7 (3/4), 251-62.

Vasquez, Vivian Maria (2004), *Negotiating Critical Literacies with Young Children*. Mahwah, New Jersey: Lawrence Erlbaum Associates.

Wardle, Jane, Lucy J. Cooke, E. Leigh Gibson, Manuela Sapochnik, Aubrey Sheiham, and Margaret Lawson (2003), "Increasing Children's Acceptance of Vegetables: A Randomized Trial of Parent-Led Exposure," *Appetite*, 40 (2), 155-62.

Fast food, no toy

Fast food with non-collectible toy

Fast food with collectible toy

Healthy food, no toy

Healthy food with non-collectible toy

Healthy food with collectible toy

FIGURE 1

STIMULUS PICTURES USED IN STUDY 1

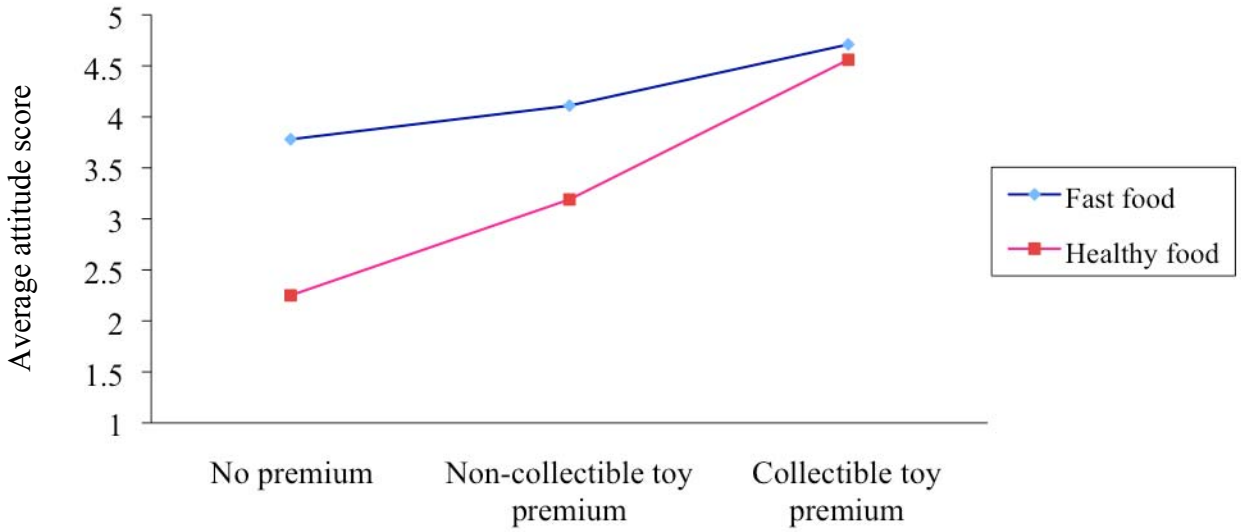

FIGURE 2

STUDY 1: AVERAGE ATTITUDE SCORES FOR FAST FOOD AND HEALTHY FOOD, ACCORDING TO TYPE OF PREMIUM PRESENT.

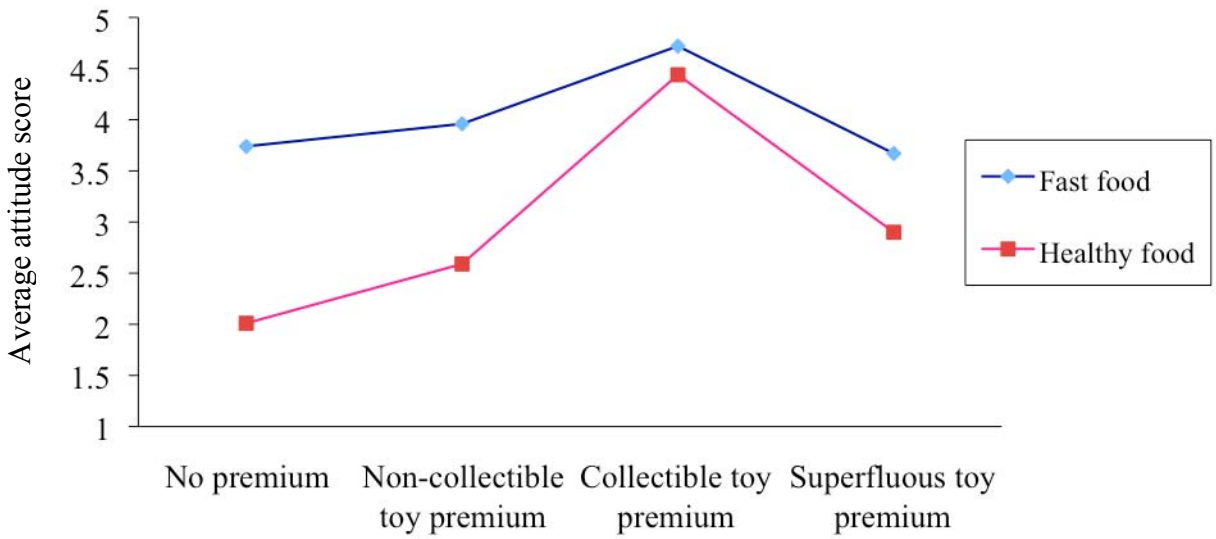

FIGURE 3

STUDY 2: AVERAGE ATTITUDE SCORES FOR FAST FOOD AND HEALTHY FOOD, ACCORDING TO TYPE OF PREMIUM PRESENT.