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Formative Evaluation of a Booklet on Healthful Beverage Choices Written for Parents and Guardians of Young, School-age Children

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By

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Abstract

The purpose of this thesis study was to conduct a formative evaluation of educational material written for parents/guardians of young, school-age children age 6-12 on the topic of healthful beverage choices. The booklet was developed as a part of the *Rethink Your Drink Nevada* (RYD) Program. This study was conducted in two phases. Phase I consisted of a mail survey of 25 content experts to determine the extent to which the booklet achieved the stated instructional objectives and was suitable for parents and guardians of young school-aged children. The survey included the Suitability Assessment of Materials (SAM) Instrument. This standardized instrument assesses multiple characteristics that are organized in six categories: 1) content, 2) literacy demand, 3) graphics, 4) layout and typography, 5) learning stimulation and motivation, and 6) cultural appropriateness. Using the recommended method for the SAM instrument, the average score among the content experts was computed for each category and overall. Results revealed an average rating of "superior" for each category (85% to 95%) and for the booklet overall (92%) with some suggestions for improvement. In addition, a high proportion of content experts responded affirmatively that the booklet met the instructional objectives (68% to 88%), Phase II consisted of interviews with 25 parents/guardians of children aged 6-12 (i.e. the target audience) to determine the extent to which the booklet was relevant and appealing to them. The resulting qualitative data were then sorted and categorized into themes by independent coders with a coding agreement ranging from 61% to 100%. In general, parents'/guardians' comments revealed that the purpose of the booklet was understood, and that the content offered new

information consistent with the intent. Additionally, ways to improve the booklet (e.g. select graphics) were suggested. Both content experts and parents/guardians made recommendations about one specific page of the booklet to enhance its usefulness. One strength of this formative evaluation study was the inclusion of both content experts and members of the target audience. One limitation was the inability to use an audio-recording device during the interview with parents/guardians. In conclusion, the results of this study provided new information regarding a booklet on healthful beverages written for parents/guardians of young, school-age children including a number of ways to further strengthen this educational resource.

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Chapter 1
Introduction

This thesis includes an introduction and overview of the study (Chapter 1), a review of relevant literature (Chapter 2), as well as the purpose, aims and methods employed for both phases of this study (Chapter 3). Immediately following in Chapter 4 are the study results. Chapter 5 includes a thorough discussion of the study's findings in addition to the strengths and limitations, implications and conclusions of this thesis research.

This chapter provides an overview of the research problem including a brief summary of research related to the consumption of sugar-sweetened beverages (SSB) along with the associated health risks. Additionally, the purpose and aims of this thesis are articulated along with a brief description of the related methods.

Statement of the Problem

Research among US representative samples have noted a decrease in the consumption of SSB among both children and adults after years of steady increase.[1,2] Several of these studies have reported the decline of specific SSB among children such as soda and fruit drinks.[1] Despite this positive trend, the intake remains of concern since the consumption of added sugars exceeds recommendations and SSB are a significant contributor to total added sugar intake.[3] In addition, disparities exist among vulnerable populations such as heavy SSB consumers, low income households and racial/ethnic minorities.[4,5,6]

The consumption of SSB and added sugar can lead to several negative health outcomes including lower dietary quality and increased risk of obesity, diabetes,

cardiovascular disease and dental caries. Research has also shown that an increase in SSB consumption is inversely associated with dietary quality. For example, Fontes et al[7] reported SSB consumption was inversely associated with healthy dietary components such as whole grains and whole fruit in a study using the Brazilian Healthy Eating Index-Revised. Similarly, Leung et al[8] discussed the relationship of beverage intake to the Healthy Eating Index-2010 (HEI) and noted a similar pattern; HEI scores were inversely related to SSB intake. Consumption of SSB can also lead to greater energy intake and subsequent higher rates of obesity among children.[9,10] Additionally, dental caries are another health risk that may result from the consumption of SSB.[11,12] Interventions to reduce SSB consumption could not only lead to improved health, they could also lead to lower healthcare costs. For example, in a simulated study by Long et al[13] an SSB tax on a national level of $0.01 per ounce was estimated to lead to an estimated $23.6 billion savings in obesity related health care over a ten-year period of time.

Current recommendations regarding SSB have been issued by a number of health organizations. For example, the most recent version of the Dietary Guidelines for Americans[14] recommend that calories from the added sugars not exceed 10% of the daily caloric intake starting at age two. Infants and children younger than two should consume no added sugars. The World Health Organization recommends that calories from added sugars be reduced to less than 5% of total energy needs.[15] Lastly, the American Heart Association recommends > 36 grams/day of added sugar for men, and < 25grams/day for women and children.[16]

As a result of the SSB consumption patterns and the associated health risks, efforts have been underway worldwide to reduce consumption. These efforts include a

wide variety of approaches including education, as well as policy, system and environmental (PSE) interventions. To influence children's intake of SSB, educational interventions have been developed and implemented for both children and their parents.[17,18] Environmental changes have resulted from policies that impact schools[19] (e.g., School Wellness Policies) as well as the marketplace[20] (e.g., taxation of SSB). To influence children's intake, however, the role of the parents/guardians remains important since these adults influence children through their behavior and through what foods and beverages are available in the home. This is particularly true for younger children. Some interventions and policies have shown promising results. However, a need remains for cost-effective educational approaches that reflect the educational needs of those most vulnerable to the negative effects of SSB. This includes families living in impoverished households.

Formative research (aka: formative evaluation, aka: formative assessment) is utilized to create and pretest intervention materials before full implementation.[21] It can include quantitative and qualitative methods to identify areas of improvement in the message of the intervention reaching the target audience effectively and in a positive manner. Formative research has the potential, therefore, to ensure that intervention materials developed to reduce children's intake of SSB relevant and suitable for the target audience.

Context

This thesis study is a part of *Rethink Your Drink Nevada* (RYD). The goal of RYD is to promote healthful beverages and reduce the consumption of SSB among children who reside in low-income households. Rethink Your Drink Nevada is led by Dr.

Jamie Benedict from the Department of Nutrition at the University of Nevada Reno. In order to influence the beverage choices of young, school age children, the target audience of RYD is primarily parents/guardians of school-aged children (6-12) who are residing in households that participate in the Supplemental Nutrition Assistance Program (SNAP). The program was developed using the social ecological model and the principles of social marketing. It includes multiple components that reflect educational, and PSE approaches. One approach is the distribution of educational materials to parents/guardians via surface mail directly to SNAP eligible households. The goal of this thesis study was to conduct a formative evaluation of a booklet that was designed to be included in this direct-mail intervention.

Purpose and Methods

The purpose of this thesis was to conduct a formative evaluation of the Rethink Your Drink booklet. Both qualitative and quantitative approaches were used in this thesis study. Phase I consisted of a survey mailed to content experts and Phase II consisted of interviews with parents/guardians of school age children aged 6-12.

The following research questions were addressed in this thesis.

1) To what extent do content experts agree/disagree that the booklet on healthful beverage choices achieves the stated instructional objectives?

2) To what extent do content experts rate the booklet on healthful beverage choices to be suitable for parents/guardians of young, school-aged children?

3) To what extent do the parents/guardians of young, school-aged children perceive the booklet on healthful beverage choices to be relevant and appealing to their needs and preferences?

The purpose of Phase I was to determine the extent to which content experts found that the booklet achieved the stated instructional objectives and was suitable for parents and guardians of young school-age children. A mail survey was used to obtain this information (n=25). This survey included the Suitability Assessment of Materials (SAM) instrument. The purpose of Phase II was to determine the extent to which parents and guardians perceived the booklet to be relevant and appealing. Phase II was accomplished using face-to-face interviews with the parents and guardians of young school-age children (n=25).

The data resulting from Phase I was largely quantitative. Descriptive statistics were computed and interpreted in accordance with the authors of the SAM. Narrative responses were examined and summarized. The data resulting from Phase II was largely qualitative. After compiling responses for individual questions, responses were subjected to a systematic thematic analysis.

In summary, this chapter presented an overview of the research problem, the purpose and aims, and a brief description of the research methods of this thesis study.

Chapter 2

Literature Review

As a foundation of this thesis, this chapter includes a review of research associated with sugar-sweetened beverages (SSB), including consumption patterns as well as its impact on diet quality and health. Additionally, research on the environmental and behavioral correlates of SSB consumption among children are described. Finally, prior interventions and barriers to reduce the consumption of SSB are discussed.

Sugar-Sweetened Beverages

Within this study, sugar-sweetened beverages (SSB) are defined as any beverages with added sugars.[22] Some examples include sodas, fruit-flavored drinks, sports drinks, energy drinks, as well as sweetened coffee and teas.[14] Added sugars include brown sugar, corn sweetener, corn syrup, dextrose, fructose, glucose, high-fructose corn syrup, honey, invert sugar, lactose, malt syrup, maltose, molasses, raw sugar, sucrose, trehalose and turbinado sugar.[14]

Consumption Patterns of Sugar-Sweetened Beverages Among Children

SSB consumption trends can be traced through data collected by the National Health and Nutrition Examination Survey (NHANES). The NHANES program uses a combination of interviews and physical examinations to assess the nutrition and health status of adults and children through nationally representative samples of about 5,000 people each year. The NHANES program nutritional assessment component consists of two 24-hour dietary recall interviews for all participants.[23] The first interview is conducted in person by trained interviewers in a private room inside the Mobile

Examination Center that contains a standard set of measuring guides to assist with portion sizes. The second dietary recall is completed by phone three to ten days after the first dietary recall. Participants use measuring materials provided after their first interview to report food amounts during the second interview. Additionally, other studies of non-representative samples have included reports of consumption habits of SSB among adults and children. Both types of studies will be discussed in this review of the literature to provide a view of SSB consumption patterns including those of specific populations such as those residing in low income households.

As stated previously, SSB are any beverages with added sugars. According to the Center for Disease Control (CDC),[22] "Sugar-sweetened beverages (SSBs) or sugary drinks are leading sources of added sugars in the American diet." According to the Dietary Guidelines for Americans, added sugars account for more than 13% of calories per day in the U.S. population and of those added sugars, 39% are from SSB such as soft drinks (25%), fruit drinks (11%) and sport and energy drinks (3%).[14] Per the Dietary Guidelines for Americans, "A healthy dietary pattern limits added sugars to less than ten percent of calories per day."[24] For an average 2,000 kcal per day intake, this amounts to less than 200 kcal per day from added sugar, including both beverages and food.

With regard to SSB consumption patterns among youth, Miller et al[25] analyzed 2005-2008 NHANES data and found that intakes of added sugars from SSB increased with age. In the same study, male adolescents aged 12-19 were reported to have the highest mean intakes at 12% of total kcal per day. Similarly, a report from Rosinger et al[3] using data from the 2011-2014 NHANES showed that almost two-thirds of youth aged 2-19 years old consumed at least one SSB on a given day. The highest intake

reported for boys and girls was among the older youth. Rosinger et al[3] also showed a difference in consumption by race and Hispanic origin. For boys, non-Hispanic Asian had the lowest intake at 73 kcal/day followed by Hispanic (156 kcal/day), non-Hispanic black (167 kcal/day). The highest intake were among non-Hispanic white boys (176 kcal/day). For girls, non-Hispanic Asian also had the lowest intake at 156 kcal/day followed by Hispanic (115 kcal/day), non-Hispanic white (124 kcal/day). The highest intake was among non-Hispanic black girls (156 kcal/day).

Conversely, a study by Marriott et al[2] examined the consumption trends of SSB across seven consecutive cycles of NHANES data (2003-2016) and noted a steady decline. Using the first round of dietary intake data, one 24-hour recall, the authors identified SSBs as soft drinks, sports drinks, energy drinks and fruit drinks; excluding sports beverages with protein as well as sweetened teas and coffees. Results of this study showed the percentage of average energy intake from SSB (kcal/day) consumption decreasing from 2003 (9.8% kcal/day) to 2016 (5.0% kcal/day) among children aged 2-19. Additionally, authors focused on the consumption of soft drinks and noted and decrease in this consumption as well. Results showed the percentage of average energy intake from soft drinks (kcal/day) among children aged 2-19 in the US, decreased from the year 2003 (6.1% kcal/day) to 2016 (2.7% kcal/day).

Other studies using NHANES data have been conducted to examine the SSB consumption trends among children who were participants in the Supplemental Nutrition Assistance Program (SNAP).[1] Dietary data from the 2003-2014 NHANES of 2-19-year-old participants were analyzed by survey-weighted logistic regressions that estimated predicted probabilities of daily SSB consumption, and negative binomial regressions that

estimated predicted per capita daily consumption of SSB calories. Findings showed that consumption has declined over all SNAP categories as described below. However, the last reported intake (2013-2014) remains high. The categories were based on program participation and included the following: SNAP participant, income-eligible nonparticipant, lower income – ineligible nonparticipants and high income – ineligible nonparticipant. Results showed that children and adolescents participating in SNAP lived in households that reported low to very low food security, were more likely to be black or non-Hispanic and more likely to have obesity than nonparticipants. Results of this study also showed there were significant declines in the overall consumption of SSB among children and adolescents who participated in SNAP from 2003-2014 (84.2% to 75.6%).[1] Specifically, there was a decline in consumption of sodas (57.6% to 33.7%) and fruit drinks (30.6% to 24.8%). However, there was an increase in consumption of sports/energy drinks (2.6% to 8.4%) and low calorie SSB (0.5% to 10.3%). Overall the per capita intake of SSB was reduced from 267 kcal to 182 kcal per day from 2003 to 2014.

In other studies, heavy SSB intake, defined as consumption of ≥500 kcal per day (equivalent to 3.5 cans of 12 oz. soda) have been examined. One recent study examined the trends in heavy SSB intake among children (age 2-19 years old) using data from the 2003-2004 and the 2015-2016 NHANES.[26] Researchers found a significant decline in heavy SSB consumption among children (10.9% to 3.3%) across all age groups with the highest heavy SSB intake among those aged 12 to 19 years old. This study also showed a significant decrease in heavy SSB intake among non-Hispanic white (12.1% to 3.7%), non-Hispanic black (10.9% to 3.3%), Mexican American (10.7% to 2.5%) and non-

Mexican Hispanic children (8.0% to 2.8%).[26] A significant decrease was also noted for children from higher income homes (11.5% to 3.3%), and lower income homes (9.6% to 3.3%). Regarding gender, this study showed male children (3.6%) were more likely to be heavy SSB consumers compared to female children (2.6%) across all age groups. However, both showed a significant decrease from the 2003-2004 data to the 2015-2016 data; males (14.5% to 3.7%), females (7.1% to 2.8%).

A separate study examined trends of children's daily usual SSB intake in the median and 90th percentile (heavy consumers) using NHANES data from 2003-2014.[4] Results showed a decline in consumption trends during each wave of the NHANES. However, in the 2013-2014 cohort, usual intakes remained high among 6-11 year olds. Among heavy consumers, median intake was 100 kcal/day, heavy intake was 200 kcal/day. Consider for example, if these intakes were compared to the Dietary Guidelines for Americans[14] recommendation of less than 200 kcal per day from added sugar from both beverages and food. The median intake of 100 kcal/day met this recommendation by 50%, and the heavy consumption met it by 100% with SSB consumption alone.

In a non-representative sample, a serial cross-sectional study known as the California Health Interview Survey (CHIS) assessed the SSB consumption trends among children from California residents in 2013-2016.[6] The CHIS is a telephone survey of households that provides population level estimates of key health related behaviors. The survey questioned parents about their child's SSB habits on the day prior (24 h) to the interview. Latino children were found to consume more SSB relative to white children in the following ways: Latino 2-5 year olds were more likely to consume sweetened fruit drinks/sports drinks in 2013-2014, more likely to consume soda in 2015-2016 and more

likely to consume any SSB in 2013-2014 and 2015-2016. In comparison to white children, Latino 6-11 year olds had a higher consumption of soda in 2013-2014 and 2015-2016; as well as a higher consumption of any SSB in 2013-2014. African American 6-11 year olds also had higher intakes of soda, any fruit drink/sports drink and any SSB in comparison to white children in 2013-2014 and 2015-2016.

Another cross-sectional study, based in New York City, used the 2015 Child Health Emotional Wellness and Development Survey to analyze SSB consumption among children aged 6-12.[5] Data was collected through telephone surveys. The frequency of SSB by the child was assessed through an adult proxy with two open-ended questions; "How often does (child) usually drink sugar-sweetened soda?" and "How often does (child) usually drink other sweetened drinks like sweetened tea, sports drinks, fruit punch, or other fruit flavored drinks?".[5] Results from 2014 showed that children aged 6-12 consumed 1.05 SSB per day with males reporting greater intake compared to females (1.22 and .88 SSB/day respectively).[5] Consumption was also higher among black (1.55 SSB per day) and Latino (1.06 SSB per day) children when compared to white children (0.49 SSB per day). Additionally, consumption was higher among those children with caretakers that had less than high school education (1.66 SSB per day) compared to those with caretakers that had a college graduate education (0.63 SSB per day); and those who lived in high poverty neighborhoods (1.61 SSB per day) compared to those who lived in neighborhoods of low poverty (0.55 SSB per day).

In summary, while some studies have shown an indication of a decline in SSB consumption among children in the US., disparities remain among heavy SSB consumers

and vulnerable groups such as racial/ethnic minorities and children residing in low-income households where daily consumption of SSB remains frequent or considered heavy (>500 kcal/day).

Health Risks Associated with Sugar-Sweetened Beverages

Excess SSB consumption is associated with lower dietary quality and greater risk of obesity and dental caries as described below.

Intake of SSB has been associated with a lower diet quality as well as a higher daily intake of calories from discretionary foods. A study by Ruopeng,[27] defined discretionary foods as, energy dense, nutrient-poor food products that do not necessarily provide essential nutrients. Discretionary foods included items that were high in saturated fat, added sugar, salt and cholesterol. A study was conducted in São Paulo, Brazil with data drawn from cross-sectional population based research in 2008.[7] Dietary intake of SSB consumers was assessed through two 24-hour recalls and diet quality was assessed with the Brazilian Healthy Eating Index-Revised (BHEI-R) (adapted from the HEI-2005). This study had eight domains that categorized participants based on age and sex: 1) children under one year, 2) children between the ages of one and eleven, 3) adolescents between the ages of 12 and 19, 4) and adults between the ages of 20 and 59, as well as older adults aged 60 and older. This study reported that an increased SSB consumption was inversely associated with BHEI-R score for healthy dietary components such as, whole grains, whole fruit, total vegetables and milk and dairy. The authors stated, “Our results demonstrated that SSB consumption was associated with poorer dietary quality, regardless of age group.”

Additionally, a study using the NHANES data from 2009 – 2014 described beverage consumption patterns to determine diet quality.[28] They classified beverages into 14 categories, milk and milk beverages, citrus juices, apple juices, soda (regular and diet), fruit drinks (regular and diet), sports and energy drinks (regular & diet), vegetable juice, water, flavored and enhanced water, alcoholic beverages, coffee, tea and meal replacement beverages. The categories were then put into four patterns based on children's consumption, 1) milk and milk beverages (no 100% juice), 2) 100% juice (no milk), 3) milk and 100% juice, 4) other beverages. They examined the first day dietary intake from three cycles of NHANES data for 4-19 year olds and assessed all four beverage patterns. Results indicated children's consumption in the four patterns were exhibited as follows:100% juice (5.6%), milk and 100% juice (13.5%), milk (17.8%) and other beverages (63.2%). These beverage intakes were compared to the Healthy Eating Index 2010 (HEI-2010) which is a tool to measure diet quality by measuring compliance with the national dietary guidelines. Those children exhibiting the milk and 100% juice patterns scored the highest HEI scores of 55.70, compared to the other beverages pattern which scored a 44.36 on the HEI. This study also indicated that the majority (63.2%) of U.S. children consume other caloric beverages daily.

Another study compared SSB and water intake with HEI-2010 scores and total energy intake among the children aged 2-18 years using the mean of two dietary recalls from the 2009-2014 NHANES.[8] Results showed that, on average, participants consumed 1.3 servings of SSB per day and 2.3 servings of water per day. Additionally, water and SSB intake were inversely correlated and 22.5% of the population consumed more than two servings per day of SSB (referred to as heavy SSB drinkers). Results also showed the

mean HEI-2010 score was 49.7 and those meeting the criteria for the heavy SSB drinkers (> two servings/day) scored 9.5 points lower on the HEI-2010 than those who consumed zero SSB/day. This association was reflected in the age groups as well when heavy SSB consumption was compared to zero SSB consumption, with HEI-2010 scores ranging from 13.6 points lower among children aged 2-5, to 8.5 points lower among children 12-18. Furthermore, children who were heavy SSB drinkers consumed 394.4 more kcal per day than those who did not consume any SSB. These results showed that heavy SSB intake (>2servings/day) was inversely associated with the total HEI-2010 score (9.5 points lower), and positively associated with total energy intake (394 kcal higher than non SSB drinkers).

Increased energy intake from the consumption of SSB has been associated with measures of obesity such as increased body mass index (BMI), higher body fat content, and an increased waist circumference. For example, in a 19-month longitudinal study of middle school children in Massachusetts, an association was found between SSB consumption and measures of obesity.[29] There was a positive correlation between increased SSB consumption, BMI and frequency of obesity. Similarly, in another longitudinal study,[9] non-Hispanic white girls who were assessed biennially from age 5 to 15 years old, the consumption of SSB was found to be positively associated with obesity from age 5 to 15 years. Consumption of more than two servings per day of SSB was found to predict higher body fat content, weight status and waist circumference among the participants in this study.

Additionally, a cross-sectional study conducted in Ireland compared SSB intake of children aged 8-11, assessed through 3-day food diaries, and weight status measured

using body mass index (BMI).[10] This study reported that the majority of participants consumed SSB (82%) with an average intake of 328 mL per day; 330 mL was noted as the standard unit of SSB available. SSB contributed an average of 6% of total energy intake. Results noted a significant difference in consumption when compared by child's weight status. There was an increase in average energy intake from 448 kJ for normal weight children, compared to 649 kJ in overweight/obese children. Also reported was the increase in average volume of SSB consumed, 315.5 mL for normal weight children and 383.3 mL for overweight/obese children.

Dental caries caused by the fermentation of sugars by oral bacteria have also been shown to be related to SSB consumption[11]. One study noted that the consumption of SSB are known to be cariogenic and increased dramatically between 1977 and 1996 contributing to around 40% of children's total added sugar intake.[11] In a longitudinal study, the Iowa Fluoride Study,[30] associations between beverage intake during childhood and dental caries at the age of 17 were examined. Parents of the participants completed at least six beverage questionnaires for their child from the ages of 1-17 that was compared to a dental caries examination at the age of 17. The beverage questionnaire included descriptions of the participants average daily intake of milk, juice (100% juice and juice drinks before age 9), SSB (including juice drinks after age 9) as well as water and sugar free beverages. The questionnaire also included questions to determine the socioeconomic status of the parents and dental health habits including daily brushing habits and fluoride intake of the participants. Using trapezoidal area under the curve, this study determined the weighted averages of the participant daily beverage intakes, fluoride consumption and oral hygiene from the ages of 1-17. Dental caries were assessed by

trained dental examiners that calculated the number of decayed and filled surfaces (DFS) in participants at the age of 17. This was adjusted to DFS attack rate (DFSAR) to include those participants who did not have all 128 surfaces present at the time of examination. The DFSAR is the expected DFS count for an individual divided by the number of surfaces available to score in the participant. The results of this study showed that with the adjustments for oral hygiene habits, fluoride intake and other beverages, each additional 8oz serving of SSB intake increased the expected DFSAR by 42%, whereas each additional 8 oz serving of juice and water intake decreased the expected DFSAR by 53% and each 8 oz serving of sugar-free beverage decreased the expected DFSAR by 29%.

Another study based on NHANES data from the 2011 through 2014 examined the relationship between SSB intake and the frequency and severity of dental caries among children.[12] This study showed that SSB intake among children across all age groups was associated with an increase in dental caries; children aged 2- 5 years old showed an increase in untreated caries (7.3% to 12.2%), children aged 6-8 years old showed an increase in untreated caries (10.1% to 16.8%), children aged 9-19 years old showed an increase in untreated caries (12.5% to 16.9%). Authors of the study stated “Our findings suggest that in young children, consumption of SSB is associated with increased caries experience and with untreated caries in all age groups.”

Recommendations Regarding Sugar-Sweetened Beverages

As mentioned previously, recommendations regarding added sugars have been issued by health related organizations. The Dietary Guidelines for Americans recommendation is stated as, “Calories coming from added sugars should not exceed

10% of the daily calorie intake".[14] The World Health Organization recommends reducing the intake of added sugar to less than 5 percent of total energy intake to reduce children's risk of weight gain and dental caries (less than 16 grams of sugar for children aged 4–8).[15] The American Heart Association recommends that children and adolescents consume less than 25 grams of added sugar per day.[16]

Home Environment and Children's Intake of Sugar-Sweetened Beverages

There is evidence that consumption of SSB are consumed by children in the home, at school, in restaurants and in fast food restaurants. For example, one study examined consumption patterns of children between the ages of 6 months and 12 years of age through a self-report questionnaire filled out by parents or legal guardians.[31] Assessment was based on the consumption of the following beverages in the month prior: fruit juice (100%), soda and other SSB. This study found the most frequently consumed beverage was 100% fruit juice. Furthermore, 26.9% of those respondents exceeded the American Academy of Pediatrics (AAP) recommendations for fruit juice. Some parents (33.4%) reported providing fruit juice because they thought it was good for their child. Children's consumption in the prior month was reported as soda (62.2%), other SSB's (61.6%) and fruit juice (88.2%). On average, children in this study who drank SSB consumed an additional 116.8 kcal/day with no differences by age group. For children who drank soda, most did so in the home (51.6%), in fast food restaurants (49.5%) or other restaurants (31.7%). In this study, parents also reported on the frequency they had soda in the home. Twenty-one percent reported it was "always" in the home, 58.8% reported "once in a while" and 20.2% reported "never". The most common reported reason for serving SSB was as a treat (64.3%) and because the child requested it (37.7%).

Similarly, in a study mentioned previously about heavy SSB intake among children (age 2-19 years old) using data from NHANES,[26] the majority of children's energy intake from SSB was attained from stores (64%), followed by restaurants (22%) and other locations (14%). Also reported in this study was a comparison of children's energy intake from SSB consumption in the home and outside of the home. Results showed that children consumed near half of all energy intake from SSB in the home (46%).

Another study evaluated the association between SSB availability at home and in schools and consumption through a secondary data analysis of the 2014 cross-sectional Internet-based Family, Life, Activity, Sun, Health and Eating study of adolescents aged 12-17 years.[32] Within this study the household SSB availability was assessed with a survey question that included a respond range from "never" to "always", that later collapsed to "never", "rarely/sometimes" or "often/always". The school SSB availability was assessed through two survey questions regarding the presence or absence of vending machines within the school; and the inclusion of sodas, salty snacks and/or candy in the vending machines. The neighborhood SSB availability was also assessed through a survey question about the presence of four store types within walking distance (10-15 miles) of the school with an affirmative response being dichotomized as having "0 or at least 1 store available within walking distance of the school". Nearly half of adolescents (44.4%) reported SSB availability as "often/always" in the home. Similarly, 51.9% of adolescents reported SSB availability at school. In regards to the school neighborhood, 80.6% of adolescents reported SSB were available in the school neighborhood. Only 11% of adolescents reported SSB were not available at or near school. This study reported that 33.5% of adolescents consumed $\geq$2 SSB daily, 33.9% consumed 1-2 SSB daily and

32.6 % were nondaily consumers. Authors noted that those adolescents whose SSB availability in the home were reported as “rarely/sometimes” had a 3 fold greater odds (OR 2.88) of higher consumption of SSB when compared to those in the “never” available households. Those in “often/always” available households had a 5.5 fold greater odds (OR 5.62) compared to those in “never” available households. Associations were also found when comparing availability of SSB at home, in school, or in the school neighborhood. Those adolescents in households with “often/always” SSB availability had higher consumption of SSB whether the availability of SSB was present or not in the school or school neighborhood.

Income has been noted as a predictor of SSB consumption. For example, in a data brief by Ogden et al[33] it was reported that persons from low-income households consumed a greater percentage of kcals per day from SSB than those in high income households. Consumption of SSB was higher (8.2% of total kcal per day) among children and adolescents between the ages of 2-19 years in households with an income below 130% the poverty line, compared with those who lived in households at or above 350% of the poverty line (6.7%). Similarly, a study by Powell[34] reported that low social economic status was associated with higher odds of heavy consumption of SSB, and higher caloric intake from SSB among children aged 2-11years old. Additionally, in a previously mentioned study by Koma et al[1] SSB consumption among children by SNAP status was assessed. The primary goal of SNAP is to reduce food insecurity among low-income Americans, identified as those who are at or below the 130% of the federal poverty line. Koma et al[1] indicated that one of the most repeatedly proposed items for restrictions on permissible purchases with SNAP benefits are SSB. The authors notedthat

despite the recent decline, SSB consumption remains high among low-income and racial/ethnic minority populations, reporting that 61% of children consume an SSB on a typical day.

Parental consumption of SSB has also been associated with adolescent SSB intake. For example, the 2014 SummerStyles Survey was used to assess the association between adolescent, and parent consumption of SSB, in addition to the knowledge of related health risks.[35] The proportion of adolescents who reported SSB intake of ≥1 time/day was highest among males (33.6%), those who lived in the Midwest (36.4%), and those whose parent was not married (41.0%), had ≤ high school education (41.0%), and was overweight (34.1%) or obese (33.1%). Results also indicated that high parent SSB intake (≥ 2 times/day) was positively associated with higher adolescent SSB consumption (≥ 1 time/day). The study results for parental and adolescent knowledge show positive identification of SSB intake in relation to the following health risks, weight gain (parents 80.4%, adolescent 75.0%), diabetes (parents 71.4%, adolescents 60.7%) and dental caries (parents 68.7%, adolescents 77.5%). These findings indicated the majority of parents and adolescents were aware of health risks associated with SSB consumption.

Finally, focus groups with parents and their school aged children from Florida, New Jersey and West Virginia, were conducted to explore factors that affect SSB intake for the purpose of developing behavior change and obesity programs.[36] Parents and children completed surveys, pertaining to demographic characteristics (e.g., age, highest education level) and frequency of SSB consumption. Focus groups led to qualitative data that was analyzed and categorized into themes. The resulting data indicated that knowledge of health risks related to SSB consumption, such as health and weight control,

was present among both parents and children. Parents and children also reported awareness of parental influence resulting in a positive or negative affect on SSB intake. For example, if parents were consuming SSB, children wanted to as well. Similarly, if parents were consuming water, children wanted to as well. Parents also reported a number of barriers to reducing SSB consumption, including busy schedules, frequent social events and availability of SSB. Children reported similar barriers with the addition of taste; they reported enjoying the sweet taste of SSB. Additionally, parents reported the most successful strategy to limit SSB was through environmental control. Several strategies to overcome barriers suggested by children included; teaching kids about sugary drinks and why water is better for them, parental control of SSB, not having SSB in the house, having access to healthier options and serving smaller portions of SSB.

Interventions to Decrease the Consumption of Sugar-Sweetened Beverages

Many approaches have been developed to reduce added sugar and SSB in an effort to improve children's health and reduce related health risks. Some of these interventions address perceived barriers such as availability, while others provide education, modify policies, and/or involve parents.

Children in the US. spend most of their waking hours in school making schools an important location for health education and interventions.[37] For example, the Coordinated Approach to Child Health (CATCH) is a nationally recognized evidence-based intervention with physical activity and nutrition curricula that are used across the US.[17] The CATCH program includes components for the classroom and the cafeteria. Within the curriculum children are taught to classify foods using the Go, Slow, Whoa terminology; "Go" items are typically foods that are healthy with high nutritional value,

"Slow" items are foods that should be consumed with caution, and "Whoa" items are foods that lack nutritional value and should be consumed rarely. In this study, a Go, Slow Whoa module was implemented with second graders in a 12-week program based on a CATCH curriculum. Participant results were measured with a pre and post intervention Food Fury Quiz to distinguish between healthy and unhealthy foods. The Food Fury Quiz included 31 questions each with a drawing of a food item followed by the words go, slow and whoa. Participants were asked to circle the word that best described the health characteristic of the food item. There was a statistically significant improvement in participant measures indicating the intervention increased health knowledge among the participants.

Similarly, in a study by Grummon et al[18] children aged 2- 5 and their parents participated in pilot intervention to promote healthier beverage intake at-home, as well as improved weight status among young children. The12-week program was conducted in child care settings that promoted healthier beverage intake (water, unsweetened low or no fat milk) and discouraged the intake of less healthy beverages (juice, SSB, high fat or sweetened milk). The intervention included three main components: environmental changes, implementation of rules and policies, and educational activities. Four childcare centers in two northern California cities were randomly assigned to either a control (delayed-intervention) or a the 12-week intervention. The outcomes were assessed through a parental report at the beginning of the intervention (baseline) as well as immediately following the intervention (post follow-up) and included at home beverage consumption and weight status (overweight/obese versus not overweight/obese) that was measured through height and weight. Results of this study showed that participants in the

intervention group had a decreased intake of less healthy beverages (5.9 ounces per day), and an increased intake of healthy beverages (3.5 ounces per day). The baseline for children who were measured as overweight/obese in weight status was 43% for the intervention group and 39% for the control. Results showed that those participants in the overweight/obese weight status category in the intervention group had a decrease in the likelihood of being overweight by three percentage points, and those in the control group had an increase in likelihood of being overweight by three percentage points. This intervention showed a positive impact on children's beverage choice and suggests that interventions which encourage healthier beverage intake could improve nutritional intake as well as weight status among children aged 2-5 years.

The ability of policy to impact behavior change in regard to SSB has been researched as well. One example is a study conducted in California to estimate the impact of the Berkeley SSB tax on the consumption of SSB and water three years after its implementation.[20] Researchers used repeated annual cross-sectional beverage frequency questionnaires from 2014 to 2017 in select neighborhoods of Berkeley (n=1513), San Francisco and Oakland (n=3712). Neighborhoods were selected to be comparable to Berkeley neighborhoods based on shared factors that may affect SSB consumption such as culture, media and retail environments; as well as the combined proportion of residents who were African American and/or Hispanic. The baseline SSB consumption was assessed prior to the proposed SSB taxes on both the Berkeley and San Francisco November ballots. Berkeley's tax passed in 2014. Oakland and San Francisco's tax passed in 2016. The authors noted baseline consumption of SSB of 1.25 times per day for Berkeley and 1.27 times per day in the comparison neighborhoods of San Francisco and

Oakland. The authors adjusted for covariates and noted a decline of SSB consumption in Berkeley, 0.55 times per day more than in the comparison neighborhoods; and an increase of water consumption in Berkeley, 0.85 times per day more than in the comparison neighborhoods.

Another study used two online surveys to describe expert stakeholder recommendations of strategies to reduce SSB consumption and increase water access and intake in young children age 0-5years.[19] Survey 1 (n=276) prompted stakeholders to create a list of strategies to reduce SSB consumption and increase consumption and access to water. Survey 2 (n=182) prompted them to rank the strategies identified in Survey 1 as well as those from peer reviewed literature. The latter were discovered in a search of seven databases; PubMed, Web of Science, EMBASE, CINAHL, ERIC, CAB Abstracts, and the Cochrane Central Register of Controlled Trials. The results of Survey 1 revealed a large number of strategies that reflected six overarching themes; education, campaigns and contest, marketing and advertising, price changes, physical access, and improved capacity of settings to promote healthy beverages. Additionally, themes specific to SSB (labeling and repackaging, and decreasing sugar in SSB) and water (water quality and safety) were included. Survey 2 included the strategies identified in Survey 1 as well as strategies identified from the peer-reviewed literature. Stakeholders were asked to rank the strategies across five domains (feasibility, effectiveness, reach, health equity and overall importance) on a scale from 1 (“least likely”) to 5 (“most likely”). The top five strategies for the reduction of SSB consumption were: 1) prohibit serving, marketing, selling SSB in federally funded Early Childcare Centers (ECE), 2) increase price, 3) modify SSB advertising/promotion, 4) prohibit ECE from serving SSB

to children as a part of licensing, and 5) train partners to screen children and educate parents during office visits. The top five strategies to increase access and consumption of water were: 1) increase availability of safe drinking water 2) make water the default beverage in kids' meals, 3) policy for healthy beverages in ECE, 4) decrease price, and 5) organizational strategies in child oriented and public settings. Types of strategies that were most frequently recommended in Survey 1 were those that used policy, systems and or environmental changes; these suggestions received higher ratings from Survey 2 as well.

Lastly, given the role of parents in selecting/serving beverages for children, interventions have been developed and evaluated to assess the effectiveness of parental involvement in reducing children's SSB consumption. A study mentioned previously by Rader et al[31] included a 36-item questionnaire that assessed beverage consumption of children within the past month. The questionnaire was completed by the parents (n=830) of young children in their pediatricians' office. This study measured children's consumption of SSB and 100% fruit juice; and identified factors that may reduce excessive consumption. Results showed that the most frequently consumed beverage was fruit juice (88.2%) based on serving calculations and that 26.9% of fruit juice consumers exceeded the American Academy of Pediatrics recommended daily intake: 4 to 6 ounces for children 1 to 6 years of age and 8 to 12 ounces for children 7 to 18 years of age. The next highest intake was soda (62.2%), followed by other SSB (61.6%). Excessive number of calories from beverages (>200 kcal/day) were consumed by 18.9% of the children. Many parents (33.4%) stated they provided fruit juice because they thought it was good for them. For soda and other SSB, the most common reason for providing was as a treat

(64.3%). For opportunities to reduce SSB and fruit juice consumption, parents most commonly selected; “It was not healthy for the children” (57.9%), “If the doctor recommended limiting intake” (50.9%), “If it made their child over weight” (49.7%) or “If it damaged their child teeth” (47.7%). This study suggests that interventions that incorporated physician’s care and recommendations may be effective.

In summary, there are possibly hundreds of interventions present in the literature. For the scope of this thesis, only a small sample was selected and therefore the description here is not a complete representation of all interventions. That being said, interventions and approaches that are placed in educational settings, addressing policy, or those involving parents may be effective in lowering children’s consumption of SSB.

Description of Formative Evaluation

Formative evaluation, also known as formative research and formative assessment,[38] is one type of evaluation method used in research to help ensure a program’s success by pretesting materials or approaches prior to full implementation. Formative evaluation can be used to improve current and future efforts, certify the degree of change that has occurred, and identify programs or elements of programs, that are not working.[21,39] Formative evaluations are conducted to understand the requirements, needs and standards of the target audience prior to a programs implementation. According to Rice and Atkin,[21] formative evaluation is significant in closing the gap between program creators and their audience by increasing the understanding of beliefs, attitudes and level of involvement the audience has in the topic. Rice and Atkin also mention a two-step process to formative evaluation starting with preproduction information gathering to learn more about the relationship between the topic and target audience. This may include

qualitative data gathered through methods such as interviews and focus groups. The second step, involves pretesting the programs message to determine if the audience receives the programs message in a positive or negative manner. This may include quantitative data gathered through methods such as observations and custom surveys or questionnaires.

Formative evaluations can and have been used for many topics. This section will describe the use of the formative evaluation in nutrition education. A formative evaluation was conducted by Gabrielli et al[40] to pretest a mobile app intervention for families. The intervention was designed by behavior change experts, nutritionist and pediatricians, with knowledge generated from the Food Pyramid and Mediterranean Diet. Participants were members of the target audience for the intervention; six families with overweight children aged 7-12 years. They were asked to provide feedback on the user experience of the app over the course of six weeks. Results of this study showed high compliance with the intervention during the six weeks but a need to improve some of the app features in relation to behavior change techniques. The formative evaluation was conducted with three screening meetings held with participants using quantitative and qualitative methods. The quantitative data showed there was some knowledge in the beginning of the Mediterranean Diet that was slightly improved through the intervention. Additionally, the majority of parent participants (67%) were found to be in the stage of change “contemplation” in the beginning of the intervention but moved to the “action” post intervention. Furthermore, all of the parents reported a strong intent to use the mobile app. Qualitative data was reported as core themes from the post intervention interviews and placed in one of three groups; positive feedback, negative feedback and

recommendations for improvement. Results of this formative evaluation showed a positive association with the participants' awareness of dietary choices and app usage, a negative association with portion assessment and app usage, and a recommendation of improvement to include healthy recipes. This formative evaluation allowed researchers to identify areas for improvement in the app prior to the intervention being released through user feedback.

In another study, a formative evaluation was conducted to assess the engagement and usability of a mobile health app designed for students ages 9-12.[41] Brown et al[41] assessed the app with five user sessions and revisions. The assessment occurred during gameplay with observation and after gameplay with qualitative interviews and questionnaires that identified user satisfaction, engagement, usability and knowledge gained. Gameplay observations included notes taken on usability and engagement as well as an assessment of app dialogue using a 5-point Likert scale. One-on-one semi-structured interviews were conducted with participants, with a focus on obtaining feedback for revisions to the next iteration of the game app. Responses from the interviews led to identification of areas of improvement in the app and responses to nutrition knowledge questions were used to adjust nutrition knowledge content in the next session. This study used five sessions to assess engagement and usability of participants with the app. Results of each session were used to improve the app prior to the next session. The final session results indicated that many participants wanted to play again (71%), the app was reportedly easy to use (71%), and fun (88%) and that the goals were clearly presented (94%). Similar to the study mentioned previously, this study used participant feedback to identify areas of improvement prior to the implementation of the

intervention. Unique to this study was the inclusion of children age 9-12 as participants.

Next, Penn et al[42] conducted a formative evaluation of the National Health Service (NHS) Diabetes Prevention Program (DPP) in England. This study conducted a document review and program comparison of the NHS DPP to the National Institute for Health and Care Excellence public health guideline. Additionally, this study utilized interviews and focus groups with stake holders to obtain qualitative data. This formative evaluation was conducted to assess the first wave of the program including design, risk assessment and recruitment. This study was conducted in seven different NHS DPP sites and 27 first wave areas across England. To gather the qualitative data semi structured interviews were accomplished by phone, and focus groups were conducted through workshops with four stakeholder groups: local commissioners, referrers, intervention providers as well as deliverers, and service users. Both interviews and focus groups sessions resulted in themes such as; social factors, service specifications, and fidelity procedures. Results of this study found the program to be evidence-based and current with a clear framework for the intervention. The stakeholders identified limitations in the program and suggested improvements be made to the following areas: fidelity assessments, recruitment and retention, and type of intervention. The stakeholder responses also highlighted the importance of primary care in the recruitment and provision of resources for the intervention.

Lastly, a study conducted by Huye et al[43] used a qualitative formative evaluation to identify themes for planning a nutrition intervention with dietary and contextual factors related to the Lower Mississippi Delta culture using the Reach, Effectiveness, Adoption, Implementation, and Maintenance (RE-AIM) framework. This study utilized qualitative

methods including focus groups and key informant interviews with participants (n=37) from women's organizations (e.g. civic clubs, sororities and businesses). Semi-structured interview guides were created with 18 RE-AIM specific questions and six additional questions relating to communication preference, facilities and meeting schedules. The resulting key themes were as follows: Reach, when recruiting an organization "healthy eating focus" and "promoting a healthy lifestyle"; Effectiveness, result of an intervention "positive health changes"; Adoption, to initiate a program "logistics: time commitment, location and schedule"; Implementation, barriers to participation "expense of healthy foods" and "cooking and meal planning"; Maintenance, necessary for program continuation "resources and training" and "motivation".

To recap, formative evaluation can be conducted using quantitative or qualitative methods, and is useful in the planning and/or revision stages of nutrition education interventions. Specifically, participant feedback was useful in each of the studies discussed to either note areas of improvement or provide insight to the target population's thoughts and perceptions.

In summary**,** this chapter included an overview of SSB consumption among children, and the resulting effect on diet quality and health. Furthermore, select interventions and strategies to reduce the consumption of SSB were highlighted. Finally, an explanation of formative evaluation was provided with four corresponding examples specific to nutrition education.

Chapter 3

Methods

In this chapter, the research purpose and aims are provided, and the methods for this thesis study are described. Participant eligibility and recruitment along with the data collection procedures and analyses details are also explained.

Context

This study was a component of a larger public health effort to reduce sugar-sweetened beverage consumption by children. This effort directed by Dr. Jamie Benedict is titled *Rethink Your Drink Nevada.* The goal of this effort is to develop and implement community-based strategies that promote healthful beverage choices and reduce the intake of sugary drinks among young school-aged children. The program is funded by the Supplemental Nutrition Assistance Program (SNAP). This study focused on one facet of this ongoing campaign, an educational booklet for use with parents/guardians.

Research Purpose and Aims

The purpose of this study was to conduct a formative evaluation of a booklet written for the parents/guardians of young school-aged children on healthful beverage choices. This study addressed the following research questions:

1) To what extent do content experts agree/disagree that the booklet on healthful beverage choices achieves the stated instructional objectives?

2) To what extent do content experts rate the booklet on healthful beverage choices to be suitable for parents/guardians of young, school-aged children?

3) To what extent do the parents/guardians of young, school-aged children perceive the booklet on healthful beverage choices to be relevant and appealing to their needs and preferences?

A formative evaluation is research conducted during program development and used to pretest messages and materials with a target audience prior to program implementation.[39] Formative research results facilitate the development of interventions that are tailored to a groups' needs or preferences as well as the inclusion of components that are relevant and sensitive to the group in question.[44] Pretesting provides information that can assess comprehension, identify strong and weak points or concepts, determine personal relevance, as well as identify information that may be confusing or sensitive.[39]

Methods

This study occurred in two phases. Phase I of the study involved the inclusion of content experts to assess the suitability of the booklet content for the target audience, as well as the extent to which the booklet met the instructional objectives. Phase II of the study involved parents/guardians of young school-aged children to assess their perceptions of the booklet. Before initiating participant recruitment, requests for IRB approval were submitted to the Research Integrity Office at the University of Nevada, Reno. Approval for Phase I was received on 3/18/2019 (Appendix A). Approval for Phase II was received on 5/6/2019 (Appendix B). Details related to each phase are described below.

Phase I

As noted previously, this phase involved the inclusion of content experts to assess

the suitability of the booklet content, as well as the extent to which the booklet met the instructional objectives (corresponding to research questions 1 and 2 above). Data were obtained using a mail survey. First, a survey packet for content experts was created. This packet included: The Rethink Your Drink Booklet, a letter of invitation, an "Expert Review of the Rethink Your Drink Booklet" survey and a return envelope. It should be noted that a Spanish version of the booklet was sent to content experts who identified that they would be willing to review the Spanish version. Part I of the "Expert Review of the Rethink Your Drink Booklet" survey was based on the Suitability Assessment of Materials (SAM) instrument; Part II included a set of questions developed to assess the degree to which the experts perceived that the objectives of the booklet had been achieved.

The SAM instrument was developed at the Johns Hopkins School of Medicine, by Doak et al[45] as a method to conduct objective systematic assessments of educational materials by health care professionals. This instrument was originally designed for printed materials and addressed six categories through 22 factors that influence readability and comprehension. The six categories are 1) content, 2) literacy demand, 3) graphics, 4) layout and typography, 5) learning stimulation and motivation and 6) cultural appropriateness. Within each of these categories, there are a number of related factors. The content category consists of four factors: purpose, content topics, scope and summary and review. The literacy demand category consists of five factors: reading grade level, writing style, vocabulary, sentence construction and advanced organizers. The graphics category consists of five factors: cover graphics, type of illustrations, relevance of illustrations, graphics (lists, tables, charts and forms) and captions. The

layout and typography consists of three factors: layout, typography and subheadings. The learning stimulation and motivation category consists of three factors: interaction, desired behavior patterns and motivation. The cultural appropriateness category consists of two factors: cultural match as well as cultural images and examples.

The SAM instrument has been used extensively to assess educational print materials written for the general public.[46] The resulting findings have been used to strengthen materials and to guide the development of culturally and linguistically appropriate resources.[47] Printed materials assessed through the SAM instrument have included brochures, posters, pamphlets and instruction sheets for a variety of topics including: dietary guidelines, physical activity, diabetes education, patient education, drug court handbooks and occupational safety.[46-53]

There are two recent studies that have used the SAM instrument and subsequent ratings to improve the suitability of their educational materials. The first study was conducted by Garnweidner-Holme et al.[48] They used the SAM instrument to assess the suitability of 14 printed dietary guidelines for pregnant women and parents of children aged 0-6 from seven European countries. They employed a descriptive design and involved three public health nutritionists to conduct the assessment. Overall the ratings of the materials were "adequate" and deficiencies were most abundant in cultural appropriateness and learning stimulation. The authors stated, "Based on the SAM methodology, printed dietary guidelines may increase in suitability by emphasizing aspects related to health literacy and accommodating the needs of different food cultures within a population."

In the second study conducted by Wolf et al[46] the SAM instrument was used to

assess 30 modules in the Partnership to Improve Diabetes Education (PRIDE) toolkit. Each module was evaluated using the SAM instrument by two independent raters. All of the modules received a superior rating though there were some discrepancies noted in the summaries and graphics factors. Overall this study concluded the PRIDE toolkit modules to be sensitive to the needs of their diabetes patients with low literacy and numeracy skills.

For the purposes of this thesis, the SAM instrument was integrated into the content expert survey, "Expert Review of Rethink Your Drink Booklet" (Appendix C). A total of 21 factors from the original SAM instrument were included. It was necessary to modify the SAM instrument in a number of ways for this thesis. One factor of the "literacy demand" category, "reading level," was not used. The reading level calculation is very time consuming and was assessed by the authors of the booklet separately. Therefore, only 21 of the 22 original factors were used in this study. The second alteration was to combine the score sheet and instrument guide together to form the "Expert Review of the Rethink Your Drink Booklet" survey. The original SAM instrument had these sheets separated. The third alteration was the location of the comments section. For this thesis the "Additional Comments" section is located below the factors; and in the directions it was stated, "Please write comments in the space provided for *Not Suitable* ratings to help us address the short-comings". In the original SAM instrument, the comments are located on the score sheet which was separate from the score guide. The last two alterations were made to make scoring the survey more efficient.

Part II of the survey consisted of three items that addressed the specific

instructional objectives of the booklet, referred to as "outcomes" within the survey. After carefully reading the booklet, the content experts were asked to assess their opinion regarding the degree to which the outcomes were met by selecting one of the following responses, "No", "Somewhat" or "Yes". Content experts were also asked to write comments in the space provided for any "No" responses, to help the authors address any short comings. This part of the survey was developed by the research team with the intention of resembling the SAM instrument by including three response categories and a similar format to address factors.

Content Experts

As reported by Weiss[54] content experts are those with prior expertise in projects and programs that serve a target audience. Therefore, content experts can ideally provide an informed perspective or standard in regards to programs and projects as well as related educational materials. Content experts can ideally draw upon their knowledge of an audience to provide objective and unbiased assessments. Content experts for this thesis were chosen based on their residence in Nevada, their recognized knowledge of nutrition education, as well as their knowledge and experience with the target audience. A list of prospective content experts was identified by Dr. Jamie Benedict and Megan Wahrenburg, research faculty in the University of Nevada Reno, Department of Nutrition. Those who participated were registered dietitians who were or had previously been employed with Supplemental Nutrition Program for Women Infants and Children (WIC), the University of Nevada School of Medicine, or the University of Nevada Cooperative Extension.

Survey Procedures

Content experts (n=25) were recruited using the following procedure:

1. Each content expert was contacted by phone using a written script (Appendix D), provided with a brief explanation of the study and extended a request for permission to send a formal invitation to participate in the study.
2. Once permission was obtained from the content experts, the following items were mailed to them:
    a. Letter of invitation with a description of the study as well as the content expert role in the study. (Appendix E)
    b. A copy of the Rethink Your Drink Booklet to review (English or Spanish) (Appendix F)
    c. A numbered copy of the "Expert Review of Rethink Your Drink Booklet" survey (Appendix C)
    d. Postage paid self-addressed return envelope
3. In the letter of invitation, content experts were informed that participation was completely voluntary and that they could refuse to participate and return the entire packet in the prepaid envelope.

To enhance participation, all mailings used "live" postage stamps, and correspondence were printed on University of Nevada, Reno stationary, with personal salutations and hand signatures. In addition, content experts were informed that once their survey had been returned, they would receive a *Rethink Your Drink Nevada Recipe Book*, as a token of appreciation. In addition, if a survey was not returned in 14 days content experts were sent a reminder email to complete and return the survey packet. To maintain confidentiality, the surveys did not include participants' names and they were instructed

not to indicate names on the surveys. Instead, identification numbers were assigned and recorded on the cover page of each survey. Once completed surveys were received, the recipe book was mailed to the content experts with a personalized thank you note to show the researchers' appreciation of their participation.

Data analysis

Microsoft Excel® was used to manage and analyze the survey data. A member of the research team entered the data points with the SAM instrument instructions for each "Expert Review of the Rethink Your Drink Booklet" survey that was returned. For each of the 21 factors, a "Not Suitable" rating was entered as 0, an "Adequate" rating was entered as 1 point, and a "Superior" rating was entered as 2 points. If the participant did not provide a rating, 99 was entered for "No Response". Ratings for each factor were summed to create a category score for each individual. Then, all category scores were summed to determine a total score as described by Doak et al[45] using the functions in Microsoft Excel®. When calculating the mean sum ratings by category, if there was a "No Response" rating for a factor, that participant's data was excluded. That participant's total score was also excluded from mean total score, to ensure accurate scores for the booklet. Comments for "Not Suitable" ratings, were summarized and analyzed using qualitative data procedures to identify areas of improvements in the Rethink Your Drink Booklet.

Phase II

The purpose of the second phase of this study addressed the third research question, "To what extent do the parents/guardians of young school aged children perceive the booklet on healthful beverage choices to be relevant and appealing to their

needs and preferences?" This was accomplished by ascertaining the opinions and perceptions of parents/guardians of young school-aged children, the intended "end-user" or target audience of the booklet once it was completed. Information gained from this phase of the study will ideally identify ways to strengthen the booklet to better suit the needs of the target audience.[55] Data for Phase II was obtained by using a qualitative method, specifically by conducting interviews with the parents and guardians of school-aged children aged 6-12.

Target audience involvement in the development of materials for the public helps reduce the risk of relying too heavily on practitioner perceptions of the needs and preferences of their audience. By including members of the target audience, the author(s) can identify gaps, areas that may lack clarity, how the materials may be used (or not used), and the overall, appropriateness and relevance of the material to the intended user.[56]

As mentioned previously, interviews were conducted with parents/guardians of young school-age children to obtain their opinions of the Rethink Your Drink booklet. Interviews have been identified as a valuable way to pretest educational materials with target populations, allowing the researchers the ability to assess individual reactions, comprehension, personal relevance, and recall of information presented.[39] The common types of interviews noted in the literature for formative research include in-depth interviews, cognitive interviews and intercept interviews. For the purpose of this thesis a combination of in-depth and cognitive interviewing methods were used. In-depth interviews typically involve the use of multiple open-ended questions meant to elicit opinions, thoughts, and perceptions.[39] Cognitive interviews are used to specifically obtain

a participant's thoughts feelings and ideas after viewing/reading/examining an item.[56]

Interview Methods

For Phase II, an interview guide was created using *The National Cancer Institute's Guide Making Health Communication Programs Work* (US Department of Health and Human Services).[39] The interview guide included broad open-ended questions followed by probing questions to encourage participants to provide additional details about their responses as needed. The interview questions addressed the relevance, appeal, comprehension and meaning of the booklet. Before using the interview guide, it was reviewed and pretested by the research team through simulated interviews.

Participants for this phase of the study consisted of parents and guardians of school-aged children 6-12 years old. The goal was to recruit 15-20 Spanish-speaking and 15-20 English-speaking participants. Eligibility criteria included the following: a) 18 years or older, b) parent or guardian of at least one child between the ages of 6-12, c) ability to read and speak either English or Spanish and d) the ability to remain for an additional 20 minutes after appointment. Participant recruitment and data collection were conducted at two different locations, the Family Medicine Clinic at the University of Nevada School of Medicine, (English Speakers) and a Community Health Alliance Clinic (Spanish Speakers). At each interview, two nutrition researchers were present. One researcher conducted the interview and one assumed the role of note-taker. A note-taker was used rather than an audio-recording device due to ambient noise in the clinics and the perception that participants would be more comfortable with a note-taker.

Recruitment procedures

Participants were recruited and interviewed using the procedures described below.

1. Potential participants were approached and handed a flyer (Appendix G) after they had checked in with the receptionist for their appointment.
2. Once a participant had completed his or her appointment with the clinic and indicated an interest in the study, researchers would confirm eligibility by asking the participants if they met the criteria to participate: age 18 years or older, parent or guardian of at least one child between the ages of 6-12, ability to read and speak either English or Spanish and the ability to remain for an additional 20 minutes after appointment.
3. Once eligibility was confirmed, researchers provided the participant with a Rethink Your Drink Information Sheet (Appendix H), explained the study and asked the participant to take their time reading the information sheet.
4. After the participant had sufficient time to read the Information Sheet, researchers answered any questions or addressed any stated concerns regarding the study. Next, willingness to participate in the study was verbally confirmed.
5. Once participants gave verbal consent to participate they were directed to sit in a semi-private area of the waiting room. Then researchers introduced themselves and indicated who would be conducting the interview and who would be assisting by recording answers. The participant was then given a copy of the Rethink Your Drink booklet (English or Spanish) (Appendix F) and asked to read it.
6. After the participant had read the Rethink Your Drink booklet, the interview proceeded with the interviewer using the Interview Script (Appendix I), which lead the participant through the booklet page by page.

7. Upon completion of the interview, the researcher asked the participant to complete two short forms. The first was; the Participant Information Form (Appendix J), the second was the Receipt of Participant Gift Form (Appendix K). The Participant Information Form included items related to participants' household characteristics such as the number of children and ages, participant age, race/ethnicity, gender and SNAP participation. The Receipt of Participant Gift Form was used for accounting purposes for the gift card incentive. Each participant was asked to sign the form. It was later provided to the University of Nevada, Reno's controller's office.
8. Once the Participant Information Form and the Receipt of Participant Gift Form were completed, participants were given a $10 gift card for Walmart.

As noted previously, two researchers were present during all interviews. One researcher conducted the interview and one recorded answers onto an Interview Note Sheet (Appendix L) to ensure participant responses were collected accurately. Once the interview questions had been asked, the researchers took a moment to confer with each other to determine if anything was missed or if anything needed clarification.

Participants' names were not recorded on any of the forms with the exception of the Receipt of Participant Gift Form. Participant identification numbers were assigned and then recorded on hard copies of the Interview Note Sheets (Appendix L) and Participant Information Form. To the extent possible responses were kept confidential. However, as previously stated, the area in which the study was conducted was a semi-private area. Therefore, conversations were subject to being overheard by other occupants of the waiting rooms. Potential participants were informed of this possibility.

Data Analysis

The Interview Note Sheet served as the raw data for this study. Responses were analyzed by typing the relevant text from the interviews adjacent to each interview question from the Interview Note Sheet into a Microsoft Excel® spread sheet. First, a Spanish-speaking team member translated and entered the data resulting from the interviews conducted in Spanish into the spread sheet. Another member of the research team then entered the data resulting from the interviews conducted in English. Next, the responses for each individual question were analyzed and compared to identify common ideas and concepts through an inductive analysis. This was accomplished by two team members preparing hard copies of the responses for each question and manually sorting the responses (i.e., qualitative data) into smaller groups (i.e., categories) based on their similarity. Once this process was completed, a descriptive label was developed and recorded on an envelope. All corresponding data was placed adjacent to the envelope with the descriptive label and a photo was taken to record the data. This process was repeated for each interview question. Once all questions had been analyzed, all of the data were de-categorized and another team member independently analyzed the data once again in the same manner.

Inter-coder reliability of the coding was assessed by comparing the extent to which the results were similar between the two coding events described above and assigning a descriptive label (i.e., idea).[55] In comparing the results, the researchers came to a coding agreement by dividing the number of data points that were coded the same during each event by the total number of data points. There were twenty-one questions total; the percent agreement range was 68% to 100%.

In summary this chapter contains an explanation of the purpose, aims, and methods of this thesis. Results are presented in Chapter 4.

Chapter 4

Results

This chapter details results of the formative evaluation of a booklet on healthful beverage choices written for the parents/guardians of young school-aged children. The findings for Phase I describe results of a survey of content experts. The findings for Phase II describe results of interviews with parents/guardians of young school-aged children.

Phase I

As described in Chapter 3, content experts were surveyed to assess the suitability of the booklet, as well as the extent to which the booklet met the instructional objectives. Of the 27 content experts surveyed, 25 completed surveys were returned resulting in a response rate of 93%. Twenty-three content experts reviewed the English version of the booklet while two reviewed the Spanish version of the booklet.

Part I of the content expert survey consisted of questions from the Suitability Assessment of Materials (SAM) instrument and addressed 21 factors among six different categories including: 1) content, 2) literacy demand, 3) graphics, 4) layout and typography, 5) learning stimulation and motivation, and 6) cultural appropriateness. Possible responses for each factor were “Superior”, “Adequate” or “Not Suitable”. Data were entered in an Excel spreadsheet. Survey results were tabulated per the instructions for the SAM instrument prepared by Doak et al.[45] “Superior” responses were equivalent to 2 points, “Adequate” responses were equivalent to 1 point, and “Not Suitable” responses were equivalent to 0 points. A sum was then computed for each content expert’s responses across the factors for the six categories listed above. Next, the mean

sum and standard deviation for each category was computed. In several instances, content expert(s) did not provide a rating. This was treated as missing data.

Content experts' ratings for each factor are displayed by their respective categories in Tables 1 to 6. Table 1 displays the response ratings for the factors related to the content of the booklet: purpose, content topics, scope, as well as summary and review. Table 2 displays the response ratings for the factors related to the literacy demand of the booklet: writing style, vocabulary, sentence construction and advanced organizers. Table 3 displays the response ratings for the factors related to the graphics of the booklet: cover graphic, type of illustration, relevance of illustrations, graphics and captions. Table 4 displays the response ratings for factors related to the layout and typography of the booklet: layout, typography and subheadings. Table 5 displays the response ratings for factors related to the learning stimulations and motivation of the booklet: interaction, desired behavior and motivation. Table 6 displays the factors related to the cultural appropriateness of the booklet: cultural match and cultural image. Note that missing data is denoted in Tables 1-6 by the number of content experts with "No Response".

Overall, the ratings of the booklet were positive with factors rated as "Superior" or "Adequate" by most all content experts. There were only two factors rated as "Not Suitable" by one or more content experts; vocabulary in the category of literacy demand (n=1), and subheadings in the category of layout and typography (n=1) as noted in Tables 2 and 4 respectively. Content experts were asked to provide a comment for any factor that was rated as "Not Suitable". The comment recorded for the vocabulary factor was, "The English words Whoa, Slow and Go, need to be translated. Many words are incorrectly translated." The comment recorded for the subheadings factor was, "P1 step 1 and tear-

out p1." Presumably this content expert was referring to the number of choices available for Step One of the activity on page one of the booklet used to determine the amount of red, yellow and green drinks (11 choices) their child would consume on a typical day and the first side of the tear out page providing ideas for the Rethink Your Drink recipes to replace "Whoa" beverages (10 choices). The comment regarding the subheadings factor was "Few people can remember more than 7 independent items. For those with low literacy skill the limit may be 3 or 5 items. Longer lists need to be partitioned into smaller chunks." This content expert had also underlined the "more than 7 items" in the sentence next to the "Not Suitable" rating.

Experts' ratings were then summed across all factors for each category. Table 7 displays the mean sum and standard deviation for these ratings among the six categories. The mean sum represents the average score for each category of the content expert surveys, and the standard deviation indicates the variability among the ratings. It should be noted that sample sizes vary among the categories since some content experts did not rate all of the factors (i.e., missing data). In these instances, experts' ratings were not included in the computation of the mean sum, therefore sample size per category varies.

Next, a single score reflecting content experts' ratings of the booklet among all factors in every category was computed by summing the corresponding scores as described by Doak et al.[45] Next the mean and standard deviation were computed for the total score (maximum=42) and the percent score (maximum=100%). These results (see Table 8) were compared to the recommended interpretation.[45] A score of 70-100% is considered "Superior", a score of 40-69% is considered "Adequate", and a score of 0-39% is considered "Not Suitable".[45] Therefore, the content experts surveyed here

indicated a rating of "Superior" for the booklet based on the overall mean percent score of 92%. As mentioned previously, some content expert surveys were incomplete (i.e., did not answer all questions). For the purpose of computing the total score and total percent, none of their responses were included leaving a final sample of 20.

In addition, content experts were also instructed to consider the entire content of the booklet and the degree to which three specific outcomes were achieved. Possible responses were, "No", "Somewhat" and "Yes". Table 9 displays the results for each specified outcome. None of the experts responded "No". The highest number of affirmative responses (i.e. "Yes") were noted for the outcome, "Readers will have an awareness of their child's typical drink choices compared to recommendations" (88%). The next highest number of affirmative responses were recorded for the outcome, "Readers will be able to correctly assign select drinks to the "Go", "Slow" and "Whoa" categories" The lowest number of affirmative responses were recorded for the outcome, "Readers will be able to correctly list three health risks associated with "Whoa" drinks. Overall the content experts perceived that the booklet would likely result in the three intended outcomes included in the survey.

After completion of the survey, content experts were instructed to write any additional comments about the survey in the space provided. These comments are presented in Table 10.

Phase II

As described in Chapter 3, interviews with parents and guardians of young, school-age children (i.e., members of the target audience) were conducted for the purpose of ascertaining their opinions of the booklet. During the month of May, 2019 these

interviews were conducted in two Reno, NV locations, the University of Nevada, Reno Family Medicine Clinic, and the Community Health Alliance Clinic. A total of 25 parents/guardians participated; 15 participant interviews were conducted in English and 10 participant interviews were conducted in Spanish. Demographic characteristics of the participants are shown in Table 11.

The procedures used to code the qualitative data resulting from the interviews are described in Chapter 3. Inter-coder reliability of data coding was assessed for each interview question using the percent agreement method. In a study by Gray et al,[58] "moderate to good agreement" was reported as 69.8% to 84.8%. The results of this study are shown in Tables 12-18 and range from 68% to 100%.

Also included in Tables 12-18 are the concepts that emerged from the qualitative data analysis for each interview question. Note that some questions were very general (e.g., "In your own words, what would you say is the main idea of the booklet?") and some were very specific (e.g., "How can we make the cover more appealing?").

Table 12 shows the results of participants' responses to questions regarding the booklet as a whole. The responses are representative of themes that emerged from participant responses and showed that participants had an understanding that the booklet conveyed information on beverages and the importance of making healthy choices. There were also indications that some information in the booklet was new to them, and that additional information on other beverages was missing. There were also several reasons that participants perceived some suggestions included in the booklet may be difficult for families (e.g., cost).

Opinions about page 1 of the booklet are shown in Table 13. Overall, these results

showed that participants found the cover page to be about drinks and drink choices. There were also recommendations to improve the appeal of the cover with pictures of children and beverages, different text, and design modifications.

Table 14 shows the responses for questions about page 2 of the booklet. Results indicate participants' suggestions for additional beverages including culturally relevant beverages. All participants noted that the instructions for the beverage consumption questionnaire were clear.

Table 15 shows the responses that related to page 3 of the booklet. Findings revealed that some participants found the information about added sugars in beverages and the associated risks to be interesting or new.

Opinions regarding page four of the booklet are shown in Table 16. Results show that participants had an understanding of beverages associated with "Whoa" "Slow" and "Go" beverages after reading the information. In addition, some participants reported the suggestions in the booklet would be easy to do while others perceived difficulties.

Table 17 illustrates the participants' responses to page 5 of the booklet. The results provided many suggestions to improve this page including the addition of more information (e.g., health consequences, role modeling, cost of drinks). The results also reveal some confusion about the use of the Rethink Your Drink icon to denote the website. Lastly, a number of suggestions were offered to help families access the recipes.

Table 18 represents participants' responses to questions about page 6 of the booklet. In general, these results convey an understanding that the booklet was intended to be about healthy drink choices, and the usefulness of the traffic light approach to categorizing drinks (i.e., "Whoa"," Slow" and "Go" drinks). Some but not all thoughtthat

they would tear-out and post this page in a visible location in their home.

In addition to the qualitative data, participants were also presented with a series of close-ended questions to obtain their opinions of the booklet overall regarding the following eight characteristics: Interest, Informative, Accurate, Useful, Understandable and Completeness. Participants' responses are shown in Table 19. The only characteristic that received a negative rating was Completeness with 4% (1 out of 25) reporting they found the booklet to be incomplete. When asked a follow-up question, the participant reported they found the booklet to be incomplete in getting the message across about encouraging the population to alter their drinking habits.

In summary this chapter presented the results of the formative assessment of the Rethink Your Drink Booklet. Phase I results provided opinions of content experts, and Phase II provided opinions of parents/guardians (i.e., members of the target audience).

Table 1. Content Experts' Ratings of Booklet Content Using the Suitability Assessment of Materials Instrument (n=25)

	Responses			
Content Factors	Superior	Adequate	Not Suitable	No Response
Purpose (Q1)				
(Criteria to earn a superior rating: "Purpose is explicitly stated in the title, cover illustration or introduction")	16	9	0	0
Content Topics (Q2)				
(Criteria to earn a superior rating: "Thrust of the material is application of knowledge aimed at desirable reader behavior, rather than non-behavior facts")	23	2	0	0
Scope (Q3)				
(Criteria to earn a superior rating: "Scope limited to essential information directly related to purpose")	23	2	0	0
Summary and Review (Q4)				
(Criteria to earn a superior rating: "A summary is included and retells the key message in different words and examples")	20	5	0	0

Table 2. Content Experts' Ratings of Booklet Literacy Demand Using the Suitability Assessment of Materials Instrument (n=25)

	Responses			
Literacy Demand Factors	Superior	Adequate	Not Suitable	No Response
Writing Style (Q5) (Criteria to earn a superior rating: "Conversational Style, active voice and simple sentences used")	24	1	0	0
Vocabulary (Q6) (Criteria to earn a superior rating: "Common words used. Technical, concept, category, value judgement words (CCVJ) are explained and appropriate imagery words are used")	22	2	1	0
Sentence Construction (Q7) (Criteria to earn a superior rating: "Consistently provides context before presenting new information")	21	4	0	0
Advanced Organizers (Q8) (Criteria to earn a superior rating: "Nearly all topics are preceded by a header or topic caption")	22	3	0	0

Table 3. Content Experts' Ratings of Booklet Graphics Using the Suitability Assessment of Materials Instrument (n=25)

	Responses			
Graphics Factors	Superior	Adequate	Not Suitable	No Response
Cover Graphic (Q9) (Criteria to earn a superior rating: "The cover graphic is friendly, attracts attention, portrays purpose of the materials")	12	12	0	1
Type of Illustrations (Q10) (Criteria to earn a superior rating: "Simple adult-appropriate line drawings/sketches that are familiar to readers are used")	20	5	0	0
Relevance of Illustrations (Q11) (Criteria to earn a superior rating: "Illustrations present key messages visually so reader can grasp key ideas from illustration alone")	21	3	0	1
Graphics (Q12) (Criteria to earn a superior rating: "Provides step-by-step directions with an example that will build self-efficacy")	19	3	0	3
Captions (Q13) (Criteria to earn a superior rating: "Explanatory captions are used to announce or explain nearly all graphics")	22	2	0	1

Table 4. Content Experts' Ratings of Booklet Layout and Typography Using the Suitability Assessment of Materials Instrument (n=25)

	Responses			
Layout and Typography Factors	Superior	Adequate	Not Suitable	No Response
Layout (Q14) (Criteria to earn a superior rating: "Illustrations adjunct to related text, layout and sequence of information is consistent, visual cueing devices are used, pages do not appear cluttered, use of color supports and is not distracting to the message, line length is 30-50 characters and spaces, high contrast between type and paper, paper has non-gloss or low-gloss surface")	22	1	0	2
Typography (Q15) (Criteria to earn a superior rating: "Text is upper and lowercase, type size is at least 12 point, typographic cues emphasize key points, no ALL CAPS for long headers and running text")	22	3	0	0
Subheadings (Q16) (Criteria to earn a superior rating: "Lists are grouped under descriptive subheadings and no more than 5 items are presented without subheadings")	21	3	1	0

Table 5. Content Experts' Ratings of Booklet Learning Stimulation and Motivation Using the Suitability Assessment of Materials Instrument (n=25)

	Responses			
Learning Stimulations and Motivation Factors	Superior	Adequate	Not Suitable	No Response
Interaction (Q17) (Criteria to earn a superior rating: "Problems or questions are presented for response")	23	2	0	0
Desired Behavior (Q18) (Criteria to earn a superior rating: "Introduction models specific behavior and skills")	22	3	0	0
Motivation (Q19) (Criteria to earn a superior rating: "Complex topics are subdivided so that readers may experience small success in problem solving or understanding")	23	2	0	0

Table 6. Content Experts' Ratings of Booklet Cultural Appropriateness Using the Suitability Assessment of Materials Instrument (n=25)

	Responses			
Cultural Appropriateness Factors	Superior	Adequate	Not Suitable	No Response
Cultural Match (Q20) (Criteria to earn a superior rating: "Centrals concepts of the material appear to be similar to the target culture")	21	4	0	0
Cultural Images (Q21) (Criteria to earn a superior rating: "Images and examples present culture in positive ways")	12	11	0	2

Table 7. Mean Sum (SD) and Mean Percent (%) Content Experts' Ratings of Booklet by Category per the Suitability Assessment of Materials Instrument

Category	Booklet	
Content (Maximum Possible points = 8)	7.28 ± 0.94 (n=25)	91.00%
Literacy Demand (Maximum Possible points = 8)	7.52 ± 0.71 (n=25)	94.00%
Graphics (Maximum Possible points = 10)	8.95 ± 1.36 (n=22)	89.55%
Layout and Typography (Maximum Possible points = 6)	5.61 ± 0.89 (n=23)	93.48%
Learning Stimulation and Motivation (Maximum Possible points = 6)	5.72 ± 0.74 (n=25)	95.33%
Cultural Appropriateness (Maximum Possible points = 4)	3.39 ± 0.72 (n=23)	84.78%
Total		92.50%

Table 8. Mean Total Score, Mean Total Percent and Interpretation of the Score for the Booklet per the Suitability Assessment of Materials (n=20)

Mean total score ± SD **Maximum total points = 42**	**38.85 ± 2.89**
Mean Percent Score	92.50%
Interpretation of Percent Score	Superior

Recommended Score Interpretation: "Superior" = 70-100% "Adequate" = 40-69% "Not Suitable" = 0-39% [45]

Table 9. Content Experts' Responses to Survey Items Regarding the Extent to Which the Booklet Contributed to Specific Outcomes (n=25)

	Response Categories Frequency/Percentages			
Outcomes	No	Somewhat	Yes	No Response
Readers will be able to correctly assign select drinks to the "Go", "Slow", and "Whoa" categories. (Q1)	0	4	20	1
	0%	16%	80%	4%
Readers will be able to correctly list three health risks associated with "Whoa" drinks. (Q2)	0	7	17	1
	0%	28%	68%	4%
Readers will have awareness of their child's typical drink choices compared to recommendations. (Q3)	0	2	22	1
	0%	8%	88%	4%

Table 10. Content Experts' "Additional Comments" for "Expert Review of Rethink Your Drink Booklet" per the Suitability Assessment of Materials Instrument (n=25)

Comment
Step 1: Would it be easier to calculate step 2 if the drinks were separated by color/category? Or perhaps this is leading. Whoa and Slow: there is a cube, tsp-packet reference but nothing concrete in terms of relevance, to the drink, the person. It's possible a simplified nutrition facts panel visual would be valuable to include. Maybe an insert? Tear out: This specifies only orange soda and oranges. Why not "soda" and fresh fruit? Good Job - Nice resource!
I thought the materials were very well done and easy to understand. - I thought it might be nice to be able to tell how many teaspoons of sugar are in a drink by reading the nutrition facts label. - I enjoyed the recipes.
The quote, "see the next page for ideas to flavor milk and water with no added sugar" - It doesn't offer the actual recipes, but just the name of the recipes. I wonder if there would be room to include 1-2 actual recipes. Or you could state "see the Rethink Your Drink website for ideas to flavor milk and water with no sugar. - Also I think the "Take the PLEDGE! Rethink Your Drink" circle (icon pg.3) should be the same color as the aqua blue icon on pg.4 at the bottom instead of the blue color.
The booklet looks great, thanks for letting me review it. Some feedback I have: - The yummy ideas page is in the wrong order, the English is with the Spanish side & vice versa. Just need to reorder when packaging pages. - Is it possible to include an example of the recipe in the booklet after the yummy ideas page? It would be helpful for the parent to see it if they don't reference the website for the actual recipes. - group rethink your drink recipes together on the ideas page and maybe only use the logo once, indicating the drinks below can be found on the web. It's a lot to look at with the logo next to each one. Or maybe align the logos or put them before the name. - Aside from that, the booklet looks great. Informative & straight to the point! Good Job :)
The 4th page "Go from WHOA to SLOW to GO" needs work. At first glance I thought "is Mystery Mint a type of sparkling water?" - I see you give the web address for recipes. - Why not include them?
When I typed in your web address Rethinkyourdrink.com/recipes I got Go Daddy.com. Maybe change it to Rethinkyourdrinknevada.com. By the way the recipes look great for the drinks. You all did a fantastic job on this booklet well done!

Table 10 Continued. Content Experts' "Additional Comments" for "Expert Review of Rethink Your Drink Booklet" per the Suitability Assessment of Materials Instrument (n=25)

Comment
Page "Slow Drinks……use caution!" = bottom section: for consistency purpose, should energy drinks, sweetened tea or coffee, and whole or 2% milk be added to the list of *Buy WHOA drinks….? Only soda, sports drinks, and fruit - flavored drinks are included. - - This is a great booklet! Excellent Job Thank You!
1) Many of our families avoid cow's milk these days and serve soy or almond or rice milk. If you don't incorporate those "milks" in this your important message may be disregarded (and may be culturally biased). 2) I think you need to clarify that low fat is 1% to avoid confusion. Maybe list it as fat free or 1% milk. 3) The heading "Say No to these Whoa drinks" on page 2 is a bit inconsistent with the "once in a while" definition. Maybe "Say No to WHOA drinks almost all of the time (or "most of the time"). 4) It seems like a lot of the Hispanic families I see drink Horchata. Did youfind that as well in focus groups. Not sure if it is common enough that it should be included probably as a WHOA food.
1) "go" drinks are described as "almost anytime" on page 1- this make me wonder, what is an "anytime" drink? I'm assuming this language was chosen to account for milk, but it makes the message that milk and water are healthy a little fuzzy. 2) The inclusion of whole +2% milk in the "whoa" category goes unexplained. The purpose of the booklet is to limit sugary beverages, but whole/2% milk are "whoa" due to their fat content, not their sugar. I would reconsider their inclusion b/c they didn't really fit the message. Plus, in my opinion, having a glass of 2%, or even whole milk, trumps a bottle of soda.
Great Booklet!
The tear-out sheet focuses a choice between showing front and back on fridge, potentially lasting usage of content. Better to have 2 tear-outs with desired takeaway messaging on each. (i.e.: Separate "Whoa to Go" from "To Make Healthy food choices" graphic.) - The link to recipes on the website is tenuous, and the recipe names sound artificial (BRANDED TM) so may confuse readers who are being told to focus on natural/whole drink options. Low income users often don't have ready access to internet at home consider keeping focus on booklet education. - The STOPLIGHT graphic is great!
Overall the booklet is great. I think the only part that may conflict is when a child's doctor tells a parent their child should be drinking whole milk. This is not a huge percentage but it could confuse some parents. I do like that an age range is shown with limiting fruit juice.

Table 10 Continued. Content Experts' "Additional Comments" for "Expert Review of Rethink Your Drink Booklet" per the Suitability Assessment of Materials Instrument (n=25)

Comment
The booklet is attractive, informative and easy to understand and should serve as an effective nutrition education material for the target audience. 1. In STEP 3 on the bottom of page 2 of the booklet, it states "RED: These are WHOA Drinks. Too many can be harmful to kids ' health. Consider these "once in a while drinks." However, on the top of page 3, the heading states "Say "NO" to these drinks! and lists soda, sweetened tea or coffee, etc. I thought that these statements provided a mixed message and may be confusing to readers if they are told that WHOA drinks are "once in a while drinks" but then read that they should say "NO" to most all of the WHOA drinks (whole and 2% milk are the only WHOA drinks not listed under the Say "NO" heading). 2. Horchata is a beverage often consumed in Latino households and it is not referred to in any way (such as "rice beverage") in the booklet. 3. When I tried to look at the recipes for the beverages listed on page 5, the website listed at the bottom of the page was incorrect. It should read RethinkYourDrinkNevada.com/recipes.
• The Spanish translation is inadequate and will need to be corrected prior to its release. - Pg.2 should include what 1 sugar cube equals in terms of grams to help build skills in translation nutrition information, as a sugar is typically provided in grams and not teaspoons. - page 4 - need to offer relevant "GO" alternatives, otherwise you miss the mark on building self-efficacy. - Page 3 - juice recommendations need to be updated to reflect current AAP recommendations dated June 2017 "Fruit Juice in infants, children and adolescents: current recommendations."- 0 juice<1 yr old, 4oz/day 1-3 yr old, 4-6oz/d 4-6 yr old, 8oz/day 7-18 yr old. - Page 2 - Capri sun Fruit punch contains 13g sugar (14CHO) which equals 3.25 cubes. - I am including the marked up booklet so you may see how serious the errors are in translation. - I am happy to help bring this booklet up to par if you need assistance. =)
• *Page 1 - would like to see how often kids drink these too by placing number of times your child drinks these per day in step 1; for step 2 add them up- this may be more impactful although is still is great info in current form. *Page 2 - add Kool-Aid or powdered drink mixes to fruit flavored drink mixes. *Page 2 - Capri sun has 13g sugar or 3 1/4 cubes. *Page 2 add 4 g to the listing equivalents. *Page 3 should update limit 100% juice to current AAP recommendations (JUNE 2017) *Page 4 - Consider adding iced tea/lightly sweetened as a slow option on iced tea line *Page 4- Recipe available link omits "Nevada"! Oops *Page 4 -Under GO there are some options which are not beverages like orange slices or yogurt. I don't believe this is an adequate substitution. *Page 5 -Can we add "No more than" to once in a while and powdered drink mixes. *Love that the pages tear out! *Great Concept, nice info-really like it! *The Facebook icon is a bit large though on the cover - it should be 1/4 of that size.

Table 11. Demographic Characteristics of Parents and Guardians (n=25)

Characteristic	**Responses**	
	(n)	**%**
Gender		
Female	22	88%
Male	3	12%
Race		
American Indian/Alaskan Native	1	4%
Asian	0	0%
Black	1	4%
Caucasian	12	48%
Hawaiian/other Pacific Islander	1	4%
No Response	11	44%
Ethnicity		
I am Hispanic/Latino	12	48%
I am not Hispanic/Latino	12	48%
No Response	1	4%
SNAP Participant		
Yes	8	32%
Parent/Guardian Age (Range = 26-75 years old)		
Mean (SD)	40.4 (12.55)	
Number of Children in the Household Between the Ages 6-12 (Range = 0-6 children)		
Mean (SD)	1.88 (1.09)	

Table 12. Select Parent Guardian Responses to the Booklet as a Whole (n=25)

Interview Questions and responses from parent/guardian	**Coding Agreement**
"In your own words, what would you say is the main idea of the booklet?" (Q6)	
To educate parents on drink choices for kids. It is important to limit sugar. Parents should limit sugary drinks and encourage drinking water. The main idea of the booklet is children's health and nutrition.	68%
"In your own words, what is the booklet encouraging the reader to do?" (Q7)	
To serve their children less sugary drinks and more healthful drinks. Make healthy drink choices for their children. Understand what their child currently drinks.	81%
"Can you give an example of something you read in the booklet that was new to you?" (Q8)	
Different ideas for healthy alternatives. Some of the wording was unfamiliar. The sugar content of common drinks. The importance of limiting drinks such as milk (flavored, whole and 2%) and juice. Did not know certain drinks were healthy. Did not learn anything new. The "Go", "Slow", "Whoa" labeling. Did not know certain drinks were "Whoa" drinks.	78%

Table 12. Continued. Select Parent Guardian Responses to the Booklet as a Whole (n=25)

Interview Questions and responses from parent/guardian	**Coding Agreement**
"Do you have any questions about drinks for your children that were not answered in the booklet?" (Q9)	
No questions about drinks. Are seltzer waters healthy? Is caffeine in unsweetened beverages ok for children? More information on powdered drinks. Are fruit smoothies ok for children?	100%
"In your opinion was there anything in the booklet that was hard to believe?" (Q10)	
Nothing was hard to believe. Page 5 content was hard to understand (RYD recipe page). How much sugar there is in fruit flavored drinks. That 100% fruit juice should be limited.	100%
"Do you think there are any suggestions in the booklet that would be difficult for families?" (Q11)	
Yes, because some of the suggestions are difficult to understand. Yes, may be difficult for families to stop drinking sugary drinks. Yes, money can be an issue. Yes, booklet should have covered water. Yes, may be difficult for families to change behaviors in general. No, these are not difficult suggestions.	96%

Table 13. Select Parent Guardian Responses to Page 1 of the Booklet (n=25)

Interview Questions and responses from parent/guardian	**Coding Agreement**
"When you first saw the cover page what came to mind?" (Q12) Healthy food and drink choices. Drinking water, the importance of water to health. It made me thirsty. Drinks and the difference between them. Stoplight and Whoa, Slow, Go	74%
"How can we make the cover more appealing, more eye catching, more interesting?" (Q12b.) No recommendations. Change design; drawings and colors. Add pictures of children. Add information to Whoa, Slow, Go. Change the wording. Add more pictures of beverages.	100%

Table 14. Select Parent Guardian Responses to Page 2 of the Booklet (n=25)

Interview Questions and responses from parent/guardian	**Coding Agreement**
"Does your child routinely drink something during the day that is not on the list?" (Q13)	
No, all are listed. Seltzer water Milk shakes Culturally relevant beverages Kool aid Coffee	100%
"Were the instructions on this page clear?" (Q14)	
Yes, they were clear.	100%
"How can we make them easier to understand?" (Q14b.)	
No suggestions Add number score Add servings	100%

Table 15. Select Parent Guardian Responses to Page 3 of the Booklet (n=25)

Interview Questions and responses from parent/guardian	**Coding Agreement**
"Can you point to something on this page that you found interesting or that you did not know before?" (Q15)	
No, already knew the information. The fact that fruit nectar is a Whoa drink. The amount of sugar in fruit flavored drinks. The amount of sugar in drinks and the related health risks.	92%

Table 16. Select Parent Guardian Responses to Page 4 of the Booklet (n=25)

Interview Questions and responses from parent/guardian	**Coding Agreement**
"In your own words can you describe the difference between "Whoa", "Slow" and "Go" drinks?" (Q16)	
Whoa and Slow drinks are processed; Go drinks you make at home.	
Whoa drinks are unhealthy. Slow drinks are healthy but only in moderation. Go drinks are the best for health.	92%
Go drinks are water and low fat milk. Slow drinks are 100% juice and flavored milk. Whoa drinks are sugary drinks like soda.	
You should not drink Whoa drinks. Slow drinks should only be had once in a while. You should drink Go drinks all the time.	
"To what extent, do you think that parents such as yourself would find these suggestions easy to do?" (Q17)	
The suggestions would be easy to do. Difficult to change behavior in general. Household circumstances make it difficult to do some of the suggestions. Did not answer question.	80%

Table 17. Select Parent Guardian Responses to Page 5 of the Booklet (n=25)

Interview Questions and responses from parent/guardian	**Coding Agreement**
"What suggestions do you have that would make it easier to convey this message?" (Q18) * RYD recipes are confusing change them. Add information about health consequences. Add information about role modeling. Adjust format to something to use while grocery shopping. Add information on engaging child in the activity. Mention cost of drinks. Clarify drink names. No suggestions. Add visuals. Place emphasis on slowly integrating changes.	96%
"Would you find this helpful, or do you think families would find this helpful?" (Q19) ++ Yes, I would find it helpful. No, the icon is confusing. No, there is confusion about technology in general.	95%
"What suggestions do you have to help families access our recipes?" (Q19b) Have a class on healthy drinks. Distribute the recipes through digital means, e.g. online, Facebook, phone, apps. Move the URL to the top of the page. Make recipes accessible to the blind. Give families hard copies through mail or other venues. No suggestions.	89%
***Interviewers showed parent/guardians the Whoa, Slow, Go suggestions for orange soda on page 5 of booklet.** **++ Interviewers indicated the RYD icon on page 5, explaining the recipes could be found online to the parent/guardian.**	

Table 18. Select Parent Guardian Responses to Page 6 of the Booklet (n=25)

Interview Questions and responses from parent/guardian	**Coding Agreement**
"In your own words, what would you say is the key point of the booklet?" (Q20) Making healthy choices is important. Use Whoa, Slow, Go to make healthy choices. Water is good for health. Families should drink less sugary drinks.	88%
"In your opinion, is putting drinks into categories that correspond to a stoplight, an effective way to remember what drinks are healthy choices for your kids?" (Q20a) *	
Yes, but change wording. No, some beverages needed clarification Yes, this is an effective way to remember which drinks are healthy.	100%
"Would your family use it in this way?" (Q21) ++	
Yes, we would use it in this way. No, we would not use it in this way. We would possibly use it in this way. Yes, I would but my kids would not	90%
"If no, is there another way you would use this?" (Q21a) ++	
Yes, I would use the recipes No suggestions Yes, she would use it in general I would put it on the fridge	100%
***Parent/Guardian given information on the Stoplight approach within booklet.** **++Page 6 of the booklet is perforated and meant to be torn out and posted on the fridge.**	

Table 19. Parent Guardian Responses to Questions Regarding Booklet Characteristics (n=25)

Interview Question	**Parent/Guardian Response**	
"Did you find the booklet…..?"	**(n)**	**(%)**
Very Interesting	20	80%
Somewhat Interesting	5	20%
Not at all interesting	0	0%
Very Informative	20	80%
Somewhat Informative	5	20%
Not Informative	0	0%
Accurate	23	92%
Somewhat accurate	2	8%
Inaccurate	0	0%
Very Useful	20	80%
Somewhat Useful	5	20%
Not Useful	0	0%
Easy to Understand	19	76%
Understandable	6	24%
Hard to Understand	0	0%
Complete	19	76%
Somewhat Complete	5	20%
Incomplete	1	4%

Chapter 5

Discussion

The purpose of this thesis was to conduct a formative evaluation of an educational booklet created for the *Rethink Your Drink Nevada* program. This booklet was written for parents and guardians of young, school-age children to promote healthful beverage choices and to reduce the intake of sugar-sweetened beverages. The booklet was evaluated by content experts in northern Nevada using a mail survey (Phase I). Additionally, interviews with parents and guardians of school-age children were conducted at two local health clinics (Phase II). The related methods were developed to address the following research questions:

1) To what extent do content experts agree/disagree that the booklet on healthful beverage choices achieves the stated instructional objectives?

2) To what extent do content experts rate the booklet on healthful beverage choices to be suitable for parents/guardians of young, school-aged children?

3) To what extent do the parents/guardians of young, school-aged children perceive the booklet on healthful beverage choices to be relevant and appealing to their needs and preferences?

As described in Chapter 4, Phase 1 of this study pertained to the content expert survey and addressed research questions 1 and 2. Phase II pertained to the interviews with parents/guardians and addressed research question 3. The discussion that follows

begins with a brief summary of the use of formative research (aka: formative evaluation) to improve nutrition efforts. This is followed by a comparison of the opinions and perceptions of content experts (quantitative data) and parents/guardians (qualitative data) relative to the RYD booklet. Next, key results are compared to published studies that utilized methods similar to this study. Then, the implications of the results are discussed relative to each research objective. Finally, the strengths and weaknesses of this thesis research are described.

Use of Formative Research to Improve Nutrition Education Materials

Formative research (aka: formative evaluation) is used to help ensure the effectiveness of health and nutrition promotion efforts such as public campaigns.[21] According to Rice and Atkin,[21] the benefits of such efforts can result in knowledge about audience inclinations, usage patterns and usefulness in campaigns influencing health and prosocial behaviors. Published literature of formative research is somewhat limited. However, there are examples of investigations that used a process similar to this thesis research to evaluate, and ultimately to improve written educational materials. Examples include those that relate to nutrition,[46,48,59] nursing,[53,60] occupational health,[49] medicine,[61-65] audiology,[50] ophthalmology,[52] pharmacy[66] and public health.[67] Relevant details of these studies are described more fully later in this chapter. Briefly, most of these studies used the SAM instrument while others used a combination of the SAM with a complementary qualitative method (e.g., interview). Several studies conducted two assessments of materials; using findings from the first assessment to guide revisions and using the second to measure the extent to which the materials had improved. Nearly all studies relied on experts within the respective discipline for their opinions.

One of the three recently published formative research studies that was directly related to nutrition, Dave et al[59] used a combination of qualitative and quantitative methods to develop a nutrition education intervention for food bank clients. Participants included the food bank/pantry staff and pantry clients. The authors conducted interviews with staff to gather information on existing nutrition education materials and programs in place as well as information that was available to the clients. Next, focus groups were conducted with staff members at different pantry locations to gather information similar to the interviews in addition to perceived client need, ways to reach more clients, topics of interest, and types of foods distributed. Information from clients themselves was obtained from focus groups and individual interviews, in addition to a brief survey. Responses from the focus groups and interviews were combined and analyzed. Results were used to develop a nutrition education program. In comparing the results of their study to this thesis research, it is interesting to note that while many of the foodbank/pantry staff reported that pamphlets for their population (impoverished and food insecure) were not effective, most clients wanted handouts- in addition to face-to-face classes. The clients also expressed an interest in learning how to reduce their children's risk of developing obesity, in physical activity, and how to plan/prepare meals for a family member with diabetes or high blood pressure. In this thesis study, neither the content experts or parents/guardians voiced reservations about the overall usefulness of the RYD booklet. Both the quantitative and the qualitative results indicate positive opinions of the material overall. However, a direct question regarding usefulness of the booklet was not included in the survey or the interview. Another relevant comparison is the assessment of reading level. Neither this research study or the study by Dave et al[59]

assessed the reading demand of the printed materials. In this thesis study, this characteristic was omitted from the SAM instrument due to the time required to complete the task deemed excessive for the content experts. Lastly a notable difference, as mentioned previously was the purpose of the study by Dave et al[59] which was the development of nutrition education materials and programs. Formative research was conducted to assess the nutrition education needs prior to creating the program. Once the program and materials were created additional interviews were conducted to pretest the program materials. Revisions were made based on the findings of the additional interviews. Since a previous version of the booklet had already been in use, this thesis study did not include a needs assessment prior to the formative evaluation of the RYD booklet. Content experts and parents/guardians assessed an updated version of the RYD booklet one time only.

In another nutrition study by Wolff et al[46] the SAM instrument was used to assess educational materials for a toolkit designed for patients with diabetes. The materials (30 interactive modules) were evaluated by two independent raters. Results of this study showed the toolkit materials received an overall "superior" score by both raters (mean = 91%). The lowest score on a single module was 73% and the highest was 98%. The authors noted the ability of the SAM instrument to identify specific deficiencies in the materials including characteristics that related to graphics, typography and cultural appropriateness. Their results are similar to the study described herein in that the overall mean score of the RYD booklet by content experts was 92.50%, indicating a "superior" rating. Another similarity was the relative lower ratings for the cover graphic factor and the subheading factor compared to other factors. A final similarity noted related to the

cultural appropriateness category. Both studies pointed to additional opportunities for the adaption of the Spanish language versions. Some notable differences included the content, literacy demand and the graphics categories reflected in the SAM instrument. In this thesis study, not all content experts rated the purpose factor within the content category as "superior" noting the purpose was not clearly communicated. Relative to the literacy demand category, Wolff et al[46] utilized the Fry method to rate the reading grade level factor. The reading grade level factor was not assessed in this thesis study. Additionally, all modules received a "superior" rating for the vocabulary factor. In this thesis study, one content expert gave a "not suitable" rating for the vocabulary factor noting the lack of translation of the words "Whoa", "Slow" and "Go", from English to Spanish. A final difference was noted for the Graphics category. Raters in the study by Wolff et al[46] scored some modules as "not suitable" due to the over-use of charts and tables and a lack of graphic pictures. Content experts who reviewed the RYD booklet scored the graphic category as "superior" with a mean score of 89.55%.

The third nutrition study by Garnweidner-Holm et al[48] relied on the results of the SAM instrument alone to evaluate a select set of European printed dietary guidelines from pregnant women and parents of infants and toddlers. Three experts (public health nutritionists) were instructed to read and review all five languages of the printed guidelines independently and rate the materials (n=14). Similar to this thesis study, the reading grade level factor was not rated. Garnweidner-Holm et al[48] omitted this factor because the materials were in languages other than English. This thesis study omitted this factor because of the time required on behalf of the content experts to complete this task was deemed excessive. Another similarity was noted for the cultural appropriateness

category. Reviewers in both studies noted the lack of images and examples. There were some notable differences as well. As noted previously, the content experts' ratings of the RYD booklet indicated an overall rating of "superior" with a mean score of 92.50% compared to the ratings of the dietary guidelines that noted an overall rating of "adequate" with a mean score of 64%. Differences in the scored factors are also present. In the study by Garnweidner-Holm et al[48] reviewers noted the lack of captions and step-by-step instructions relative to the graphics and captions factors resulting in two "not suitable" ratings and a mean score of 56% in the graphics category. Content experts in this thesis study did not rate any factors within the graphics category as "not suitable". The mean score was 89.55%, indicating a rating of "superior". One other difference between this thesis study and that of Garnweidner-Holm et al[48] was noted for the results of the layout and typography category. The mean score for this category for the dietary guidelines was 75% (the highest of all categories) and 93.48% for the RYD booklet.

In summary, a comparison of the formative evaluation of the RYD booklet compared to recent evaluations of other nutrition education reveal some minor differences in methods (e.g., assessment of reading grade levels), but many more similarities. The use of qualitative methods, such as interviews were used to assess the target audience needs, interests, thoughts and perceptions; while the use of quantitative methods (i.e. SAM instrument) identified areas of improvement in materials specifically in the categories of graphics, layout and typography and cultural appropriateness.

Comparison of the Opinions from Content Experts and Parents/Guardians

Similar to several of the studies cited above,[50,59,66,67] a combination of quantitative and qualitative approaches were used in this thesis study to address the research

objectives. After reviewing the RYD booklet, the content experts completed a survey that incorporated the SAM instrument. As described in Chapter 4, the results were largely numeric scores with the exception of explanations, when offered, that were in narrative format. The opinions of the RYD booklet expressed by parents and guardians of young children obtained during interviews provided largely qualitative data. Content experts' perspective may not always match with that of the target audience (e.g., parents/guardians) since the education and experiences are likely to be different. With that said, the following is a description of the similarities and differences between the opinions of content experts (quantitative data) and parents/guardians (qualitative data) relative to the select booklet characteristics that were common to both.

With regard to the content of the RYD booklet, content experts rated this booklet as "superior". They did also offer suggestions to strengthen the content including making the purpose of the booklet more explicit on the cover. Several noted choosing healthy drinks was "implied" but not made explicit. In contrast, parents/guardians were able to correctly describe the general purpose of the booklet noting the concepts of limiting sugary drinks, encouraging water, focusing on children's health and nutrition, and making healthy drink choices using "Whoa" "Slow" and "Go" guidelines. However, when prompted for suggestions on making the cover more appealing, multiple parents/guardians suggested changing the images. Specific examples of comments included, "Add a picture of a child drinking a healthy drink," "A person or child drinking water would bring better attention, to make more attractive, or even eating a piece of fruit, a child eating fruit for example." Additionally, one of the two content experts that reviewed the Spanish version of the booklet had very strong reservations about the

translation of the words, “Whoa” “Slow” and “Go” as well as recipe names, stating this limited accessibility to Spanish-only readers. Conversely, only one of the ten parent/guardian participants mentioned the terminology in the Spanish version. Specifically, the participant suggested changing the words “Alto” (Whoa), “cuidado,” (Slow) and “Sigue/continua” (Go).

Another consideration of the RYD booklet assessed here related to graphics. Using the SAM instrument and prescribed scoring, the content experts rated this category as “superior”. As mentioned above, several also noted the need to make the purpose of the booklet more clear on the cover. Some content experts suggested the cover graphic was not “friendly” and provided suggestions to improve it. One such example was, “An image showing a child choosing a healthy drink would be nice.” As mentioned above there were some similar opinions among parents and guardians who suggested changing the cover image.

Characteristics that related to layout and typography were rated by content experts as “superior” based on the SAM instrument results. They did offer some suggestions to improve these qualities including making the font size and use of upper case consistent, and more effective use of color to provide contrast. Additionally, some content experts reported concern with the overall cramped layout of the text, and suggested separating some content. For example, “I find it interesting (and poor design) that “Whoa” and “Slow” have their own page headers, but “Go” does not.” Conversely, parents/guardians did not express the same opinion. In addition, the majority demonstrated the ability to describe the difference between “Whoa”, “Slow” and “Go” drinks as articulated by one participant. “Whoa: stop focus on what’s in it, Slow: not too much, Go: that’s okay.”

Finally, related to content and layout and typography categories, both content experts and parents/guardians indicated that improvements were needed for page 5 of the booklet. While some content experts noted the long list of drinks, busy, cramped font; the parents/guardians noted, a need to show visuals and recipes are hard to understand. For example, one content expert states, "Tear out with recipes too complex to process. Users won't go to website; many don't have access = waste of effort. Better: Simple 1-2 ingredient options on sheet." Similarly, a parent/guardian participant stated, "Put a recipe in the book, a sample so people will want to go to the website."

In general, a comparison of the quantitative and qualitative results of this study reveals that while content experts had some suggestions to better communicate the purpose and content of the booklet, parent/guardian results showed they understood the main idea and key points of the booklet. Also, both content experts and parents/guardians had suggestions to improve the graphics of the booklet to increase the overall appeal. Finally, both qualitative and quantitative results suggest that page 5 of the booklet was in need of revision.

Comparison of Results with Other Studies that Included the SAM Instrument

In addition to the nutrition studies discussed previously, the following is a brief overview of the results of this thesis study, in comparison to recent studies from other disciplines that included the SAM instrument. While there is no reason to expect that results would be similar since the materials examined were not, it may be useful to consider the range of scores and the number of raters. As a reminder, according to Doak et al[45] the final SAM instrument scores are reported as a percentage and are to be interpreted as "superior" for scores from 70-100%, "adequate" for scores from 40-69%,

and “not suitable” for scores from 0-39%.

Similar to this thesis study, there were several other studies that evaluated materials one time only. The results of two such studies revealed “superior” scores, four studies revealed scores corresponding to “adequate”, and the materials in one study were scored as “not suitable”. Among the 25 content experts in this study who evaluated the RYD booklet, the overall mean SAM score was 92.50%. Similarly, in the study by Sinyai et al[49] the mean score of 103 different handouts, brochures and data sheets related to occupational health and safety was 74.7%. Corcoran et al[64] conducted an evaluation of 37 different leaflets on sexual health. The mean score of two raters for all materials was 71%; 59% of the leaflets were found to be “superior” and 41% were rated as “adequate”. Those studies that reported materials rated as “adequate” included a publication by Rhee et al,[62] which described the assessment of 23 different resources on rheumatic diseases. Among three raters, the mean score reported in that study was 56.5%. In a study by Smith et al[63] of 125 different patient education materials on colorectal cancer surgery, most (76.8%) were rated as “adequate” by two raters, 9.6% as “superior” and 13.6% as “not suitable”. Ryan et al[60] conducted a study of 97 printed patient education materials for use by low-education families on topics related to stroke, cancer and maternal-child health. Using two raters, 57.7% were rated as “adequate”, 30.9% were “superior” and 11.3% were “not suitable”. Tian et al[65] evaluated online patient education materials on colorectal cancer screening from 12 different sources using three raters. Most were rated as “adequate”, one was “superior” and three were “not suitable”. Lastly, only one of the studies had an overall rating of “not suitable”. Gill et al[53] assessed a random sample of seven drug court handbooks from three regions of the US. One rater (with extensive

experience as noted by the authors) read and reviewed each. The mean overall SAM score of all the handbooks was 21.4% (range was 4.5 to 36.4%) indicating they were "not suitable".

Considering those studies that included two evaluations of educational materials (the original and revised set) using the SAM instrument, two studies noted that the original versions were rated as "adequate" and one study noted the original version was "not suitable". Once revised, all three studies reported that the materials were then rated as "superior". Williams et al[52] reported the evaluation of ophthalmic patient education materials. The mean SAM scores on the original versions rated by two reviewers was 59.97%. Kloza et al[61] rated five pamphlets on cell free DNA testing for aneuploidy (aka: non-invasive prenatal testing for Down syndrome). The findings of the original versions revealed that one pamphlet was rated "superior" (74%) and all others were rated as adequate (range was 41% to 55%). McMullan et al[50] evaluated a hearing aid use guide. The reviewers were two experienced audiologists. The average SAM score of the original version was 28.95%.

In summary, the comparison of this thesis study with other published studies that included the SAM instrument reveals that the mean SAM score on the RYD booklet was greater compared to other studies, and that a relatively large number of reviewers was used here. In addition, it is interesting to note that the SAM instrument has been used to evaluate a wide variety of different types of materials including brief written materials (e.g. pamphlet) to lengthy handbooks. Lastly, both printed and digital resources have been studied using SAM.

Summary and Implications of the Formative Evaluation

The following is a discussion of the study findings in relation to each of the research questions posed, and the implications for further development of the RYD booklet.

The first research question (i.e., "To what extent do content expertsagree/disagree that the booklet on healthful beverage choices achieves the stated instructional objectives?") relates to the content expert survey. Based on the responses to the related close-ended survey questions that related specifically to the booklet, the results indicated that the objectives of the booklet had generally been addressed, although one was relatively weaker compared to the two others. Eighty-percent (20/25) answered affirmatively (i.e., "Yes") to the statement, "Readers will be able to correctly assign select drinks to the "Go", "Slow", and "Whoa" categories." Eighty-eight percent (22/25) answered affirmatively to, "Readers will have awareness of their child's typical drink choices compared to recommendations." A relatively lower proportion (68%, 17/25) answered affirmatively to the statement, "Readers will be able to correctly list three health risks associated with "Whoa" drinks." These results indicate that the booklet may be strengthened with additional content on the health risks associated with sugar-sweetened beverages.

The second research question (i.e. "To what extent do content experts rate the booklet on healthful beverage choices to be suitable for parents/guardians of young, school-aged children?") also relates to the content expert survey, specifically the questions from the Suitability Assessment of Materials (SAM). The content experts rated

the booklet with an overall "Superior" rating as noted by the mean score of 92.5%. In addition, mean percent scores for each of the individual factors also indicated a "Superior" rating. These findings suggest that the RYD booklet was suitable for the target audience. Suggestions were offered to improve the lay-out and graphics, content on page five of the booklet, and Spanish translation.

The third and final research question (i.e. "To what extent do the parents/guardians of young, school-aged children perceive the booklet on healthful beverage choices to be relevant and appealing to their needs and preferences?") relates to the interviews with the parents and guardians. The interview consisted of a combination of general questions (e.g., "In your own words, what would you say is the main idea of the booklet?") and some specific questions (e.g. "How can we make the cover more appealing?").

Overall, participants' perception of the content and purpose of the booklet as a whole, including the traffic light approach was positive and consistent with the intent. Participants also noted there was some new information within the booklet. Several suggestions were made to improve the booklet. These suggestions included changing the visual on the cover to make it more appealing, including culturally-relevant beverages, and adding more information on health consequences. A relatively greater number of suggestions were related to page 5 of the booklet. The use of the Rethink Your Drink Icon on this page was confusing to many, as well as the reference to drink names. Several also noted that some of the suggestions included in the booklet may be difficult for families to implement. The reasons ranged from financial constraints to their preference for sugary drinks. This suggest that additional attention on ways to enhance self-efficacy

would be of benefit.

In addition to the open-ended interview questions, there were several close-ended questions regarding characteristics of the booklet as a whole. A high proportion (>75%) reported that the booklet was interesting, informative, accurate, useful, easy to understand and complete.

In summary, the methods employed in Phase I and Phase II of this formative research study were successful in obtaining the opinions of experienced nutrition educators and parents/guardians of young school-age children necessary to address the three research questions. The results have implications for improving the RYD booklet.

Strengths and Limitations of the Research Study

There are several limitations in regards to this study. These limitations relate to the sampling design, and the data collection methods. First, the samples for both Phase I and Phase II were small and non-random. Content experts included registered dietitians who were or had previously been employed with Supplemental Nutrition Program for Women Infants and Children (WIC), the University of Nevada School of Medicine, or the University of Nevada Cooperative Extension. They were chosen based on their nutrition education experience with low-income households. In Phase II, participants were volunteers recruited from two health clinics in northern Nevada. While it isn't unusual to have a non-random sample for studies such as this, it is important to note that, the sampling method may have resulted in bias. Furthermore, both samples were relatively small compared to other descriptive studies. Lastly, only two content experts reviewed the Spanish-version of the booklet and ten parents/guardians were Spanish-speaking.

With regard to data collection some content experts in Phase I did not answer all questions. Therefore, not all ratings were included in the full sample. Part II of the survey was specifically created for this thesis study and had no prior testing for reliability and validity. For Phase II, the interview guide was pretested by the research team but not with the target audience. Another limitation was the inability to use a recording device during the interviews. This may have led to some missed data because the notes were recorded by hand instead of being audio recorded and transcribed. Additionally, the use of qualitative methods limits the generalizability of this study. The findings cannot be generalized to any population outside of those clients from the two participating health clinics.

As described previously in this chapter, three related research studies repeated the assessment of educational materials after making changes indicated by the first assessment. All three of the studies we discussed showed improvements to the materials, changing the scores from “adequate” and “not suitable” to “superior”. It may have been of benefit here to repeat the survey of content experts and interviews with parents/guardians to see how/if revisions to the RYD booklet were perceived. In addition, the formative evaluation could also be strengthened by including a measure of the parent/guardian knowledge after reading the booklet.

This study also had several strengths. First, this study used two complementary approaches in the formative evaluation of the RYD booklet, and resulted in both quantitative and qualitative data from content experts as well as members of the target audience. A portion of the quantitative data was derived from the SAM instrument which provides a standardized approach to assessing materials and has been widely used since it

was first published by Doak, Doak and Root in 1996.[45] As described previously in this chapter, the SAM instrument has been used to assess a variety of printed and online educational materials. The qualitative data provided by both the content experts and the parents/guardians provides a wealth of detail that may be used to guide further development of the RYD booklet. The participating content experts consisted of professionals with extensive knowledge and prior or current experience with the target population. A diverse sample of parents/guardians participated in the interviews. The ability to obtain direct feedback from the "end user" or target audience is a vital part of the process in formative research.[55] The inclusion of the target audience allows for the identification of gaps, areas that lack clarity, utilization of materials as well as overall appropriateness and relevance to the intended user.[57] Although the relative sample sizes of Phase I and Phase II were small compared to other descriptive studies, the sample sizes were larger than most other recent formative evaluation studies.

Conclusion

To conclude, formative evaluation and research have the potential to enhance the effectiveness of educational materials, and ideally the health and well-being of the public. Currently, there is a limited number of published studies that describe the results of such efforts in nutrition. The combination of qualitative and quantitative methods used in this thesis was successful in detecting a variety of ways to improve the booklet for the *Rethink Your Drink Nevada* program. Ideally, the resulting improvements may increase the knowledge, motivation and skills of parents/guardians and lead to improvements in their selection of beverages for their young children.

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Appendix A Approval Letter Phase I

University of Nevada, Reno

Research Integrity
218 Ross Hall / 331,
Reno, Nevada 89557
775.327.2368 / 775.327.2369fax
www.unr.edu/research-integrity

DATE:	March 19, 2019
TO:	Jamie Benedict, PhD, RD
FROM:	University of Nevada, Reno Institutional Review Board (IRB)
PROJECT TITLE:	[508842-26] "Rethink Your Drink": Development of a Social Marketing Campaign to Reduce Intake of Sugar-Sweetened Beverages among School-Age Children
REFERENCE #:	Social Behavioral; Children
SUBMISSION TYPE:	Amendment/Modification
ACTION:	APPROVED
APPROVAL DATE:	March 19, 2019
EXPIRATION DATE:	November 13, 2019
REVIEW TYPE:	Expedited Review
REVIEW CATEGORY:	Expedited review *#6 and #7*

The UNR IRB has reviewed and approved in the above-referenced protocol in accordance with the requirements of the Code of Federal Regulations on the Protection of Human Subjects (45 CFR 46 and 21 CFR 50 and 56). This approval is based on assessment that the research met all applicable regulatory criteria. The research must be conducted in accordance with this approved submission. This submission has received Expedited Review based on applicable federal regulations.

Instructions for preparing a modification, continuing review, or status report are located at http://www.unr.edu/research-integrity/human-research/irbnet. Call our office if you have any questions or problems with use of IRBNet software.

Approved Documents

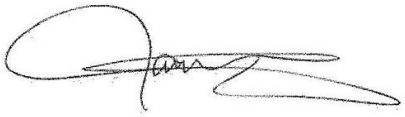
- Amendment/Modification - Amendent Request 3_18_2019.docx (UPDATED: 03/18/2019)
- Cover Sheet - Cover page 3-18-2019.docx (UPDATED: 03/18/2019)
- Letter - Appendix K_Stakeholder Confirmation Email.docx (UPDATED: 03/9/2019)
- Letter - Appendix I_Stakeholder Invitation Email #2.docx (UPDATED: 03/9/2019)
- Letter - Appendix H_Stakeholder Invitation Email #1.docx (UPDATED: 03/9/2019)
- Letter - Appendix G_Content Expert Reminder Email.docx (UPDATED: 03/9/2019)
- Letter - Appendix F- Content Expert Survey Packet letter.docx (UPDATED: 03/9/2019)
- Letter - Appendix B_Content Expert Invitation Email #2.docx (UPDATED: 03/9/2019)
- Letter - Appendix A_Content Expert Invitation Email #1.docx (UPDATED: 03/9/2019)
- Other - Appendix L_Handout for Stakeholders.docx (UPDATED: 03/9/2019)
- Other - Appendix M_Stakeholder Information Sheet.docx (UPDATED: 03/9/2019)
- Other - Appendix J_Stakeholder Scheduling Script.docx (UPDATED: 03/9/2019)
- Other - Appendix D_Booklet.pdf (UPDATED: 03/9/2019)
- Other - Appendix C_Content Expert Script.docx (UPDATED: 03/9/2019)

- Protocol - Protocol 3-18-2019.docx (UPDATED: 03/18/2019)
- Questionnaire/Survey - Appendix N_Stakeholder Interview Guide.docx (UPDATED: 03/9/2019)
- Questionnaire/Survey - Appendix E_Content Expert Review Survey.docx (UPDATED: 03/9/2019)

If you have any questions, please contact Nancy Moody at 775.327.2367 or at nmoody@unr.edu.

NOTE for VA Researchers: You are not approved to begin this research until you receive an approval letter from the VASNHCS Associate Chief of Staff for Research stating that your research has been approved by the Research and Development Committee.

Sincerely,



Richard Bjur, PhD
Co-Chair, UNR IRB
University of Nevada Reno

Janet Usinger, PhD
Co-Chair, UNR IRB
University of Nevada Reno

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within University of Nevada, Reno IRB's record.

University of Nevada, Reno

Research Integrity
218 Ross Hall / 331,
Reno, Nevada 89557
775.327.2368 / 775.327.2369fax
www.unr.edu/research-integrity

DATE:	May 6, 2019
TO:	Jamie Benedict, PhD, RD
FROM:	University of Nevada, Reno Institutional Review Board (IRB)
PROJECT TITLE:	[508842-27] "Rethink Your Drink": Development of a Social Marketing Campaign to Reduce Intake of Sugar-Sweetened Beverages among School-Age Children
REFERENCE #:	Social Behavioral; Children
SUBMISSION TYPE:	Amendment/Modification
ACTION:	APPROVED
APPROVAL DATE:	May 6, 2019
EXPIRATION DATE:	November 13, 2019
REVIEW TYPE:	Expedited Review
REVIEW CATEGORY:	Expedited review # 6 and 7

The UNR IRB has reviewed and approved in the above-referenced protocol in accordance with the requirements of the Code of Federal Regulations on the Protection of Human Subjects (45 CFR 46 and 21 CFR 50 and 56). This approval is based on assessment that the research met all applicable regulatory criteria. The research must be conducted in accordance with this approved submission. This submission has received Expedited Review based on applicable federal regulations.

Please prepare a Continuing Review / Progress Report Request at least 4 weeks prior to the approval expiration date using IRBNet https://www.irbnet.org. IRBNet will send you a courtesy reminder to that effect. Unless updated, the IRB is only authorized to approve a study activity for 12 months or less. There is no grace period. The study will be closed on the above stated expiration date unless the IRB receives and approves your annual update.

Instructions for preparing a modification, continuing review, or status report are located at http://www.unr.edu/research-integrity/human-research/irbnet. Call our office if you have any questions or problems with use of IRBNet software.

Approved Documents

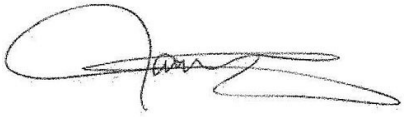
- Amendment/Modification - Amendent Request 3_31-2019.docx (UPDATED: 03/31/2019)only change to conduct interviews with parents/guardians of young, school-age children. The participants will include both English and Spanish-speakers.
- Cover Sheet - Cover page 3-31-2019.docx (UPDATED: 03/31/2019)
- Other - Appendix F_ Receipt of Participant Gift Form.docx (UPDATED: 03/31/2019)
- Other - Appendix D_Interview Note Sheet.docx (UPDATED: 03/31/2019)
- Other - Appendix C_Information Sheet.docx (UPDATED: 03/31/2019)
- Other - Appendix A_ Recruitment Flyer.pdf (UPDATED: 03/31/2019)
- Protocol - Protocol 3-31-19.docx (UPDATED: 03/31/2019)
- Questionnaire/Survey - Appendix E_Participant Information Form.docx (UPDATED: 03/31/2019)

- Questionnaire/Survey - Appendix B_Interview Script.pdf (UPDATED: 03/31/2019)

If you have any questions, please contact Nancy Moody at 775.327.2367 or at nmoody@unr.edu.

NOTE for VA Researchers: You are not approved to begin this research until you receive an approval letter from the VASNHCS Associate Chief of Staff for Research stating that your research has been approved by the Research and Development Committee.

Sincerely,



Richard Bjur, PhD
Co-Chair, UNR IRB
University of Nevada Reno

Janet Usinger, PhD
Co-Chair, UNR IRB
University of Nevada Reno

This letter has been electronically signed in accordance with all applicable regulations, and a copy is retained within University of Nevada, Reno IRB's record.

Appendix_C_Content Expert Review Survey

ID#_____

Expert Review of

Rethink Your Drink Booklet

Survey Sponsored by:

Department of Nutrition

University of Nevada Reno,

Reno, NV 89557

Instructions for completing your review

The goal of the *Rethink Your Drink Nevada* campaign is to promote healthful beverages and to decrease the intake of sugary drinks among school-aged children. As a part of this campaign, an educational booklet has been created for distribution to parents/guardians of young school-age children. The primary purpose of the booklet is to encourage parents/guardians to limit sugary drinks.

The aim of this survey is to obtain your assessment of the booklet.

This survey includes two parts.

Part I

- This survey will guide you to rate the booklet on factors that affect readability and comprehension using 21 factors. These factors relate to content; literacy demand; graphics; layout and typography;learning stimulation and motivation; and cultural appropriateness.

Part II

- This portion of the survey will guide you to rate the content of the booklet relative to the intended outcomes.

As you complete your review, please keep in mind this educational booklet was written for parents/guardians of young school-aged children (6-12 years old) who are currently enrolled in SNAP, or who reside in a low-income community.

Thank you for helping us to ensure that these booklets are effective.

Instructions for Part I

1. Please indicate which version of the booklet you are reviewing by checking the appropriate box (or boxes) below.

   ☐ English

   ☐ Spanish

2. Please read pages 5 to 15 of the survey to get familiar with the evaluation criteria.

3. Next read the booklet on healthful beverage choices.

4. Then evaluate the booklet by completing pages 5-15 of this survey.
   - For each characteristic check the box that best describes your rating (*Superior, adequate or Not Suitable)*
   - Please write comments in the space provided for ***Not Suitable*** rating to help us address the short-comings.

Content

1. **Purpose:** It is important that readers readily understand the purpose of the materials. If they do not clearly perceive the purpose, they may miss main points.

Check One:

□ Superior:	Purpose is explicitly stated in the title, cover illustration or introduction.
□ Adequate:	Purpose is not explicit. It is implied, or multiple purposes are stated.
□ Not Suitable:	No purpose is stated in the title, illustration or introduction.

Comment:

---

2. **Content Topics:** Adult Learners usually want to solve their immediate health problem, rather than learn medical facts. The content of most interest and use to readers is behavior information that helps solve problems.

Check One:

□ Superior:	Thrust of the material is application of knowledge aimed at desirable reader behavior rather than non-behavior facts.
□ Adequate:	At least 40% of content topics focus on desirable behaviors or actions.
□ Not Suitable:	Nearly all topics focus on non-behavior facts.

Comment:

3. **Scope:** Limited to purpose or objective(s) and what the reader can reasonably learn in the time allowed.

Check One:

□ Superior: Scope limited to essential information directly related to purpose.

□ Adequate: Scope expanded beyond purpose; no more than 40% is nonessential information.

□ Not Suitable: Scope far out of proportion to the purpose.

Comment:

4. **Summary and Review:** A review offers readers a chance to see the key points in other words, examples or visuals and increases comprehension.

Check One:

□ Superior: A summary is included and retells the key messages in different words and examples.

□ Adequate: Some key ideas are reviewed.

□ Not Suitable: No summary or review is included.

Comment:

Literacy Demand

5. **Writing Style:** Conversational style and active voice are easy to understand. Passive voice, embedded information and long or multiple phrases slow reading and reduce comprehension. [Example: *Take your medicine every day* is easier to understand than *Patients are advised to take their medicine every day.*]

Check One:

□ Superior: Mostly conversational style, active voice and simple sentences used.

□ Adequate: About half of the text uses conversational style, active voice and half of sentences are complex.

□ Not Suitable: Passive voice throughout and over half of sentences have long or multiple phrases.

Comment:

---

6. **Vocabulary:** Common, explicit words are easy to understand. General terms, categories and value judgments are more difficult to understand. [Example: Use *pain that does not go away in 5 minutes* instead of *excessive* pain]

Check One:

□ Superior: Common words used all the time. Technical, concept, category, value judgments words (CCVJ) are explained and appropriate imagery words are used.

□ Adequate: Common words used frequently, technical CCVJ words are explained sometimes and some jargon is used.

□ Not Suitable: Uncommon words used frequently, no explanation given or technical CCVJ words and extensive jargon is used.

Comment:

7. **Sentence Construction:** The context is given before new information. We learn new facts/ behaviors more quickly when told the context first. [Example: *To relieve pain* {context}, *put heat on the sore spot* {new information}.]

Check One:

□ Superior: Consistently provides context before presenting new information.

□ Adequate: Provides context first about half of the time.

□ Not Suitable: Context is provided last or no context is provided.

Comment:

8. **Advanced Organizers (Road Signs):** Headers or topic captions tell very briefly what is coming next. These "road signs" make the text look less intimidating and prepare the reader's thought process to expect announced topics.

Check One:

□ Superior: Nearly all topics are preceded by a header or topic caption.

□ Adequate: About half of topics are preceded by a header or topic caption.

□ Not Suitable: Few or no headers or topic captions used.

Comment:

Graphics: Illustrations, Lists, Tables and Charts

9. Cover Graphic: People *do* judge a book by its cover. The cover image often is the deciding factor in a reader's attitude, and interest in, the materials.

Suitability factors for the cover graphic include:

1) Friendly
2) Attracts attention
3) Clearly portrays the purpose of the materials

Check One:

□ Superior: The cover graphic includes all of the above factors.

□ Adequate: The cover graphic has one or two of the above factors.

□ Not Suitable: The cover graphic has none of the above factors.

Comment:

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10. Type of Illustrations: Simple line drawings can promote realism without distracting details. Visuals are accepted and remembered better when they portray what is familiar and recognizable.

Suitability factors include:

1) Simple adult appropriate line drawings/sketches are used
2) Illustrations are likely to be familiar to readers

Check One:

□ Superior: Includes both above factors.

□ Adequate: One of the factors above is missing.

□ Not Suitable: None of the above factors are present.

Comment:

11. Relevance of Illustrations: Nonessential details such as backgrounds, elaborate borders, and unneeded color can distract the viewer. The viewer's eyes may be "captured" by these details. The illustrations should tell the key points visually.

Check One:

□ Superior: Illustrations present key message visually so the reader can grasp the key ideas from illustrations alone.

□ Adequate: **1)** Illustrations include some distractions
2) Insufficient use of illustrations

□ Not Suitable: No illustrations or an overload of illustrations.

Comment:

---

12. Graphics: Lists, tables, charts, forms: Many readers do not understand the purpose of lists and charts. Explanations or directions are essential.

Check One:

□ Superior: Provides step-by-step directions with an example that will build self-efficacy.

□ Adequate: "How-to" directions are too brief for reader to understand and use the graphic without additional counseling.

□ Not Suitable: Graphics are presented without explanation.

Comment:

13. **Captions are used to "announce or explain graphics":** Captions can quickly tell the reader what the graphic is about and where to focuswithin the graphic. A graphic without a caption is usually an inferior instruction and missed learning opportunity.

Check One:

□ Superior: Explanatory captions with all or nearly all illustrations and graphics.

□ Adequate: Brief captions are used for some graphics.

□ Not Suitable: Captions are not used.

Comment:

Layout and Typography

14. **Layout:** layout has a substantial influence on the suitability of materials.

Suitability factors include:

1) Illustrations are adjunct to related text
2) Layout and sequence of information are consistent, making it easyto predict flow of information
3) Visual cueing devices (boxes, arrows, shading) are used todirect attention to key content
4) Pages do not appear cluttered
5) Use of color supports and is not distracting to the message. Readers need not learn color codes to understand and use the message
6) Line length is 30 to 50 characters and spaces
7) There is high contrast between type and paper
8) Paper has a non-gloss or low-gloss surface

Check One:

□ Superior: At least 5 of 8 factors listed are present:

□ Adequate: At least 3 of the factors listed are present.

□ Not Suitable: Two or fewer of the factors listed are present.

Comment:

15. **Typography:** Type size and fonts can make text easy or difficult for readers at all skill levels. For example, type in ALL CAPS slows reading comprehension. When too many (6+) type fonts and sizes are used on a page, the appearance becomes confusing and the focus uncertain.

Suitability Factors include:

1) Text type is in uppercase and lowercase
2) Type size is at least 12 point (this is 12-point font)
3) Typographic cues (bold type, color, size of type) emphasize key points
4) No ALL CAPS for long headers and running text

Check One:

□ Superior: At least three of the four factors above are present:

□ Adequate: Two of the four factors above are present.

□ Not Suitable: One or none of the factors above are present.

Comment:

---

16. **Subheadings and "chunking":** Few people can remember more than 7 independent items. For those with low literacy skill the limit may be 3 or 5 items. Longer lists need to be partitioned into smaller chunks.

Check One:

□ Superior: Lists are grouped under descriptive subheadings and no more than 5items are presented without a subheading.

□ Adequate: No more than 7 items are presented without a subheading.

□ Not Suitable: More than 7 items are presented without a subheading.

Comment:

Learning Stimulation and Motivation

17. **Interaction included in text and/or graphics:** When a reader does something to reply to a question or problem, chemical changes take place in the brain that enhance retention in long-term memory. Readers should be asked to solve problems, make choices and demonstrate.

Check One:

□ Superior: Problems or questions are presented for response.

□ Adequate: Question-and-answer format is used to discuss problems and solutions (passive voice).

□ Not Suitable: No interactive learning or stimulation is provided.

Comment:

18. **Desired behavior patterns are modeled or shown in specific terms:** People often learn more readily when specific familiar instances are used rather than abstract or general concepts.

Check One:

□ Superior: Instruction models specific behavior and skills. Example: information emphasizes changing eating patterns and cooking.

□ Adequate: Information is a mix of technical and common language the reader may not easily interpret in terms of daily living. Example: *High sugar, low nutrient value foods* instead of *No fuel foods.*

□ Not Suitable: Information is presented in non-specific or category terms such as food groups.

Comment:

19. **Motivation:** People are motivated to learn when they believe tasks and behaviors are doable.

Check One:

□ Superior:	Complex topics are subdivided so that readers may experience small successes in understanding or problem solving, leading to self-efficacy.
□ Adequate:	Some topics are subdivided to improve readers' confidence.
□ Not Suitable:	No partitioning is provided.

Comment:

Cultural Appropriateness

20. **Cultural Match– Logic, Language, Experience (LLE):** A valid measure of the cultural appropriateness of materials is how well its logic, language and experience (inherent in the instruction) match the LLE *of the intended audience* (not the reviewer). [Example: instruction is a poor cultural match if it tells readers to eat vegetables that are rarely eaten by people in that culture]

Check One:

□ Superior:	Central concepts of the material appear to be culturally similar to the LLE of the target culture.
□ Adequate:	Significant match in LLE for half of central concepts.
□ Not Suitable:	Clearly a cultural mismatch in LLE

Comment:

21. Cultural Images and Examples: To be accepted, an instruction must present cultural images and examples in realistic positive ways.

Check One:

□ Superior:	Images and examples present culture in positiveways.
□ Adequate:	Neutral presentation of cultural images and foods.
□ Not Suitable:	Negative images such as exaggerated or caricatured cultural characteristics, actions or examples.

Comment:

This concludes Part I, please continue to Part II

Instructions for Part II

The booklet content was developed to achieve specific outcomes among readers. Your assessment regarding the degree to which this has been accomplished is needed.

- Please consider the entire content of the booklet as you complete this part of the survey.
- For each outcome listed below, please check the box that best matches your opinion.

Next, write comments in the space provided for a "*No"* response to help us address the indicated short-comings.

1**. Readers will be able to correctly assign select drinks to the "Go", "Slow", and "Whoa" categories.** Comment:	□ No □ Somewhat □ Yes
2. **Readers will be able to correctly list three health risks associated with "Whoa" drinks.** Comment:	□ No □ Somewhat □ Yes
3. **Readers will have awareness of their child's typical drink choices compared to recommendations.** Comment:	□ No □ Somewhat □ Yes

Please, write any additional comments about Part I and Part II Below.

This concludes the Survey!

Your valuable expertise is greatly appreciated.

Please remember to return the survey in the postage paid envelope provided.

Thank You!!

This study is sponsored by the Department of Nutrition, of the University of Nevada, Reno. In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, sex, religious creed, disability, age, political beliefs, or reprisal or retaliation for prior civil rights activity in any program or activity conducted or funded by USDA. Persons with disabilities who require alternative means of communication for program information (e.g. Braille, large print, audiotape, American Sign Language, etc.), should contact the Agency (State or local) where they applied for benefits. Individuals who are deaf, hard of hearing or have speech disabilities may contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English. To file a program complaint of discrimination, complete the USDA Program Discrimination Complaint Form, (AD-3027) found online at: http://www.ascr.usda.gov/complaint_filing_cust.html, and at any USDA office, or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632- 9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture Office of the Assistant Secretary for Civil Rights 1400 Independence Avenue, SW Washington, D.C. 20250-9410;(2) fax: (202) 690-7442; or (3)
email: program.intake@usda.gov. This institution is an equal opportunity provider.

This material was funded by USDA's Supplemental Nutrition

Assistance Program - SNAP.

Phone call script - Following email invitation

Thank you for your call. My name is Kelly Eiler-Young, I am a Nutrition Graduate Student working with Dr. Benedict and the *Rethink Your Drink Nevada* effort. Thank you for expressing your interest in serving as a content expert in this study. As described in the letter, we are asking content experts to read our booklet and complete a survey about the content and format.

Do you have any questions?

Are you interested in participating?

Could I please get a mailing address to send the survey packet to you?

Record name and address for contact information for survey packets on the survey packet mailing list form.

Excellent! Thank you again for agreeing to serve as a content expert. The survey packet will be sent to you immediately and we look forward to your response.

Email script – Following email invitation

Date_____

Dear_____,

My name is Kelly Eiler-Young, I am a Nutrition Graduate Student working with Dr. Benedict and the *Rethink Your Drink Nevada* effort. Thank you for expressing your interest in serving as a content expert in this study. As described in the letter, we are asking content experts to read our booklet and complete a survey about the content and format. If you are interested, please provide me with a mailing address to send the survey packet. I will get that sent out to you immediately.

Sincerely,

Jamie Benedict, Ph. D., R. D. N.
Associate Professor

Kelly Eiler-Young
Graduate Student, Nutrition

Appendix_E_Content Expert Survey Packet

Date_____

Dear_____,

Thank you for agreeing to take part in our research study by serving as a context expert.

This research study relates to one component of a larger investigation that is aimed at reducing the intake of sugary drinks among school-aged children. The goal of this component is to create a short booklet for parents and guardians on healthful beverage choices using the traffic light approach.

The purpose of this study is to assess several different characteristics of the booklet as well as to determine its appropriateness for our target audience. This will be accomplished by asking experts such as yourself, to read the booklet and to then answer questions regarding the content and format. The estimated time for completing these tasks is about 20-30 minutes.

We recognize that your time is limited and very valuable. Unfortunately, we cannot pay you to participate in our study. However, we would like to show our appreciation for your time by providing you with a Rethink Your Drink Nevada soda model, a visual representation of the sugar content in soda (valued at $70.00).

You are being asked to participate because of your professional experience in nutrition education. Your participation, however, is completely voluntary. There is no penalty for not participating. Anticipated risks associated with completing this survey are minimal. Your responses to the questions in the survey will be kept confidential. Your name will never be included in any resulting publications or reports. Please do not write your name on your survey. You may skip any questions you do not feel comfortable answering and you may withdraw at any time. If you choose not to participate, we do ask that you return the survey and booklet in the enclosed stamped envelope.

Completed surveys will be secured in a locked file cabinet for a maximum of five years, after the study has closed. During this time, only study staff, members of the University of Nevada, Reno Social Behavioral Board, and representatives from our funding agency will have access. Once the surveys are no longer needed, they will be shredded, and any computer files destroyed.

If you have any further questions regarding the study, please contact; Jamie Benedict at 775-784-6445 or Kelly Eiler-Young at 775-684-6450. You may ask about your rights as a research subject or you may report (anonymously if you so choose) any comments, concerns or complaints to the University of Nevada, Reno Social Behavioral Institutional Review Board by calling 775-327-2368 or by addressing a letter to the Chair of the Board, c/o UNR Office of Human Research Protection, 218 Ross Hall/331, University of Nevada, Reno, Reno, NV 89557.

Sincerely,

Jamie Benedict, Ph.D., R.D.
Associate Professor

Kelly Eiler-Young
Graduate Student, Nutrition

Appendix_F_Booklet

Page 1

What does *your* child drink on a typical day? (Let's find out!)

STEP 1: Place a check in the boxes next to the drinks your child has on a typical day.

- ☐ Soda (not diet)
- ☐ 100% Fruit juice
- ☐ Water
- ☐ Whole or 2% milk
- ☐ Energy drinks
- ☐ Flavored low-fat milk (such as chocolate milk)
- ☐ Fat-free or low-fat milk
- ☐ Sweetened tea or coffee
- ☐ Unsweetened flavored water
- ☐ Sports drinks
- ☐ Fruit-flavored drinks (such as fruit punch)

STEP 2: Add up the number of red, yellow, and green boxes checked. Write these numbers below.

RED ☐ =_____ YELLOW ☐ =_____ GREEN ☐ =_____

STEP 3: Compare your results to the explanation below.

RED: ***These are WHOA Drinks.*** Too many can be harmful to kids' health. Consider these "once in a while drinks."

YELLOW: ***These are SLOW Drinks.*** These are healthful, but kids can drink too much. Consider these "sometimes drinks."

GREEN: ***These are GO Drinks.*** These can help kids stay healthy. Consider these "almost anytime drinks."

Keep reading to learn more!

SAY "NO" TO THESE WHOA DRINKS!

- Soda
- Sweetened tea or coffee
- Sports drinks
- Energy drinks
- Fruit-flavored drinks
  - Fruit nectar
  - Fruit punch
  - Lemonade

These drinks all have sugar added to them.

FOR EXAMPLE:

Fruit Punch
(6 oz.)

has this much added sugar

5 Sugar Cubes

1 sugar cube = 1 packet of sugar = 1 teaspoon of sugar

Too many sugary drinks can lead to:

- Unhealthy weight gain
- Cavities
- Diabetes
- Heart Disease


SLOW DRINKS ... USE CAUTION!
SLOW DRINKS, like low-fat chocolate milk and 100% fruit juice, contain important nutrients but kids can have too much.
Limit 100% fruit juice to:
4-6 oz. per day (for kids 1 to 6 years-old)
8-12 oz. per day (for kids 7 to 18 years-old)
SAY "YES" TO GO DRINKS!
Water, fat-free milk, and low-fat milk are GO drinks. These help kids stay healthy.
See the next page for ideas to flavor milk and water with no added sugar.
Small changes make a BIG difference. Start today.
TAKE THE PLEDGE! RETHINK YOUR DRINK
To help my kids make healthy drink choices, I will...
Serve water or low-fat milk at meals and snacks.
Buy WHOA drinks less often (such as soda, sports drinks, and fruit-flavored drinks).
Be a good role model. I will drink more GO drinks.


Go from WHOA to SLOW to GO with these yummy ideas!
TEAR OUT THIS PAGE AND POST ON THE FRIDGE AS A REMINDER
WHOA
SLOW
GO
Orange soda
100% Orange juice
Orange Slices
Sports drink
Periwinkle Orange
Fruit nectar
100% Pineapple juice
Mystery Mint
Lemonade
Sweet and Sour
Strawberry juice box
Low-fat strawberry milk
Low-fat plain yogurt with strawberries
Lemon-lime soda
Citrus Refresher
Hot chocolate
Low-fat chocolate milk
Yummy Banana Blend
Apple-flavored soda
100% Apple juice
Apple Spice
Iced tea- sweetened
Fruity herbal tea with lemon slice
Fruit Punch
100% Fruit juice
Citrus Cherry Delight
RETHINK YOUR DRINK
Find these recipes at RethinkYourDrink.com/recipes
This material was funded by USDA's Supplemental Nutrition Assistance Program (SNAP). Please call 1-800-992-0900 for more information. This institution is an equal opportunity provider and employer.

To Make Healthy Drink Choices
Remember...

THESE ARE SUGARY DRINKS. SERVE THESE TO KIDS ONLY ONCE IN A WHILE.

Soda
Sports drinks
Energy drinks
Whole or 2% milk
Sweetened tea or coffee
Fruit-flavored drinks
- Fruit nectar
- Fruit punch
- Lemonade

THESE CAN BE GOOD CHOICES BUT ONLY IF KIDS DRINK THEM SOMETIMES.

100% fruit juice
Low-fat flavored milk (such as chocolate milk)

THESE DRINKS ARE GREAT CHOICES ALMOST ANYTIME.

Water
Fat-free or low-fat milk
Unsweetened flavored water

TEAR OUT THIS PAGE AND POST ON THE FRIDGE AS A REMINDER

You're Invited...

To Participate in a research study

We are looking for volunteers to read a booklet about drinks and to answer questions about what they read.

Volunteers must be:

1. Age 18 or older
2. A parent or guardian of at least one child between 6 and 12 years-old.
3. Able to read and speak English.
4. Willing to stay for an additional 20 minutes after your appointment.

If you answered "Yes" to all of the conditions above and are interested in participating in the study, please check in with us after your appointment.

We are conducting the study in the waiting room.

As a *"Thank You"* all study participants will take home a $10.00 Walmart Gift card

Está invitado...

Participar en un estudio de investigación

Estamos buscando voluntarios para leer un folleto sobre bebidas y responder a preguntas sobre lo que leyeron.

Los voluntarios deben ser:

1. Edad 18 años o más.
2. Un padre o guardián de al menos, un niño entre 6 y 12 años de edad.
3. Capaz de leer y hablar español.
4. Estar dispuesto a quedar se por 20 minutos adicionales después de su cita.

Si respondió "sí" a todas las condiciones anteriores y está interesado en participar en el estudio, por favor contáctenos después de su cita.

Estamos realizando el estudio en la sala de espera.

Como una "Gracias", todos los participantes del estudios se llevarán a casa una tarjeta de regalo de Walmart de $10.00

Rethink Your Drink Information Sheet

We are conducting a study about a booklet on healthy drinks for kids. The results of this study will be used to improve the booklet that will be included in Nevada's ongoing *Rethink Your Drink* program.

You have been asked to join because, you are the parent or guardian of one or more children between the ages of 6 and 12 years-old.

If you volunteer for this study, you will be asked to read the booklet and to answer some questions about the booklet. Your answers will help us make the booklet more helpful for others.

For this study, two nutrition researchers will be present. The first researcher will ask you questions about the booklet to obtain your opinions. The second will take notes about what is said. We value your opinions and don't want to miss anything. For the final part of the study, you will be asked to complete a short form about you and your household. All together this will take about 20 minutes.

This study is considered to be minimal risk of harm. This means that the risk level is like what you might experience during daily activities. Because the waiting area is open to all patients, there is a possibility that someone else may overhear your answers to the questions. Please remember that you may refuse to answer any questions and may withdraw from the study at any time.

Benefits of doing research are not definite but, we hope to learn ways to improve the booklet, so that it will be a useful resource on healthy drink choices for kids. There are no direct benefits to you as a study volunteer.

Though you will not be paid for your time, we do value your help. To thank you, you will receive a $10 Walmart Gift card after you have completed the study. You will be asked to sign a form as a notice of receipt of this gift card. This form is for accounting purposes only.

The researchers of the University of Nevada Reno will treat your identity and information collected about you with professional standards of confidentiality and protect it to the extent allowed by law. Your name will not be included in any reports or publications that may result from this study. We will assign each study participant a different identification number. Your number will be written on the first page of your survey. The U.S. Department of Agriculture, the Division of Welfare and Supportive Services, the US Department of Health and Human Services, the University of Nevada, Reno Research Integrity Office and the Institutional Review Board may look at our study records.

You may ask questions of the researchers at any time by using the contact information below:

Jamie Benedict, PhD, RDN,: email jamieb@cabnr.unr.edu, phone 775-784-6445

Kelly Eiler-Young, Nutrition Researcher: email keileryoung@nevada.unr.edu, phone 775-784-6450

Your participation in this study is completely voluntary. You may stop at any time. If you decide not to participate or not to answer any specific questions, there will be no negative effects for you.

You may ask about your rights as a research participant. If you have questions, concerns, or complaints about this research, you may report them (anonymously if you choose) by calling the University of Nevada, Reno Research Integrity Office at 775-327-2368.

Rethink Your Drink hoja de información

Estamos realizando un estudio sobre un folleto sobre bebidas saludables para niños. Los resultados de este estudio se utilizarán para mejorar el folleto que se incluirá en la continuación del programa de Nevada Rethink Your Drink.

Se le pidió que se uniera porque usted es el padre o guardián de uno o más niños entre las edades de 6 y 12 años.

Si es voluntario para este estudio, se le pedirá que lea el folleto y que responda a algunas preguntas sobre el mismo. Sus respuestas nos ayudarán a hacer que el folleto sea más útil para los demás.

Para este estudio, dos investigadores de nutrición estarán presentes. El primer investigador le hará preguntas sobre el folleto para obtener sus opiniones. El segundo tomará notas sobre lo que se dice. Valoramos sus opiniones y no queremos perdernos nada. Para la parte final del estudio, se le pedirá que complete un breve formulario sobre usted y su familia. Todo esto llevará unos 20 minutos.

Este estudio se considera riesgo mínimo de daño. Esto significa que el nivel de riesgo es como lo que podría experimentar durante las actividades diarias. Debido a que el área de espera está abierta para todos los pacientes, existe la posibilidad de que alguien más escuche sus respuestas a las preguntas. Por favor, recuerde que puede negarse a responder cualquier pregunta y puede retirarse del estudio en cualquier momento.

Los beneficios de la investigación no son definitivos pero esperamos aprender maneras de mejorar el folleto, de modo que sea un recurso útil para las opciones de bebidas saludables para los niños. No hay beneficios directos para usted como voluntario del estudio.

Aunque no se le pagará por su tiempo, sí valoramos su ayuda. Para agradecerle, recibirá una tarjeta de regalo de Walmart de $ 10 después de haber completado el estudio. Se le pedirá que firme un formulario como notificación de recepción de esta tarjeta de regalo. Este formulario es sólo para fines contables.

Los investigadores de la Universidad de Nevada Reno tratarán su identidad e información recopilada sobre usted con estándares profesionales de confidencialidad y la protegerán en la medida que lo permita la ley. Su nombre no se incluirá en ningún informe o publicación que pueda resultar de este estudio. Asignaremos a cada participante del estudio un número de identificación diferente. Su número se escribirá en la primera página de su encuesta. El Departamento de Agricultura de los Estados Unidos, la División de Bienestar y Servicios de Apoyo, el Departamento de Salud y Servicios Humanos de los Estados Unidos, la Universidad de Nevada, la Oficina de Integridad de Investigación de Reno y la Junta de Revisión Institucional pueden consultar los registros de nuestro estudio.

Puede hacer preguntas a los investigadores en cualquier momento utilizando la información de contacto a continuación:

Jamie Benedict, PhD, RDN, correo electrónico jamieb@cabnr.unr.edu, teléfono 775-784-6445

Kelly Eiler-Young, investigadora de nutrición: correo electrónico keileryoung@nevada.unr.edu, teléfono 775-784-6450

Su participación en este estudio es completamente voluntaria. Puedes parar en cualquier momento. Si decide no participar o no responder alguna pregunta específica, no habrá efectos negativos para usted.

Puede preguntar sobre sus derechos como participante en una investigación. Si tiene preguntas, inquietudes o quejas sobre esta investigación, puede informarlas (anónimamente si lo desea) llamando a la Oficina de Integridad de Investigación de Reno de la Universidad de Nevada al 775-327-2368.

ID#_____

Rethink Your Drink Parent Guardian Interview Script

Contents

Introduction/Screening Process

1. Hello, I'm **{Interviewer's name}** and I am a Nutrition Researcher from the University of Nevada, Reno we are conducting a study to learn more about a booklet we have developed. Did you have a chance to read the flyer?

Interviewer: Show Recruitment Flyer (**Appendix_**)

1.a. "Yes" response: Can I tell you more about the study and see if you would be interested in being a volunteer?

"Yes" response: This study is to learn more about a booklet that discusses healthful beverages for children between the ages of 6 and 12. If you choose to volunteer and are eligible, you will be asked to read the booklet and to answer some questions about what you have read. Your answers will help us make the booklet better for others. You will also be asked to complete two forms: one that is about you and your household, and one that is a receipt of our thank you gift card. It should take no more than 20 minutes to complete these tasks.

"No" response: Thank you for your time and consideration. If you change your mind, we will be here until **{enter time}**

1.b. "No" response: Ok I will come back in a few minutes?

Interviewer: Give adequate time to review flyer After a few minutes return and start with 1.a.

2. Would you be interested in taking part of our research study?

2.a. "Yes" response: Great, let's confirm that you are eligible. I'll have you take a few minutes to look over our eligibility criteria.

Interviewer: Show and point to the "Participant Eligibility Criteria Handout" shown on **page 4** and give a few minutes to look over.

2.b. "No" response: Thank you for your time and consideration. If you change your mind we will be here until **{enter time}**

Are the following true for you?

1. Age 18 or older

2. Parent or Guardian to at least one child between the ages of 6 and 12

3. Able to read, and speak English

4. Willing to stay for an additional 20 minutes after appointment

Did you answer “yes” to all of the conditions above?

3. Did you answer "yes" to all of the conditions?

3.a. Eligible (answered all yes): You are eligible to take part of this research study. Next, I am going to ask you to please read this Information Sheet that explains the study in detail. After you have time to read it, I'll answer any questions you may have.

Interviewer: Hand Information Sheet (**Appendix_)** and give parent/caregiver all the time that is needed them to read the entire sheet.

3.b. Not Eligible (not all answers were "yes"): Unfortunately, you are not eligible totake part of this study. Thank you for your time. Hope you have a wonderful day.

4. Do you have any questions about the study? Or the study procedures?

4.a. "Yes" response with question: answer question(s).

4.b. "No" response: Let's continue.

5. Would you still like to continue with this study?

5.a. "Yes" response: Let's begin.

5.b. "No" response: Thank you for your time and consideration. If you change your mind, we will be here until **{enter time}**

Beginning Instructions: Page 1 of interview

Again, this interview will take about 20 minutes to complete. There will be three parts to this interview process. First, I will have you read the booklet. Then I will ask you some questions pertaining to the booklet with the assistance of **{insert name of assistant}** to ensure I don't miss any of your answers. Finally, there will be some forms you will fill out on your own.

Any questions so far?

"Yes" response with question: answer question(s).

"No" response: Let's continue.

Thank you, let's begin. Here is the booklet we would like you to review please take your time.

Interviewer: Hand Booklet (**Appendix_)** and give parent/guardian all the time that is needed them to read the entire booklet.

We really appreciate you taking the time to participate in this study. Now I am going to be asking you a few questions about the booklet you just read. Please have a seat. I am going to sit across from you and **{insert name of assistant}** will be sitting here.

There are no right or wrong answers to the questions I am going to ask, as they are really about what you think. Please don't be offended when I ask you for more information about your answer. I just want to make sure I understand what you meant.

Do you have any questions before we get started?

First: To begin, I want you to focus on the booklet as a whole.

6. In your own words, what would you say is the main idea of the booklet?
7. In your own words, what is the booklet encouraging the reader to do?
8. Can you give an example of something you read in the booklet that was new to you?
9. Do you have questions about drinks for children that were not answered in the booklet?
10. In your opinion was there anything in the booklet that was hard to believe?

    10a. Can you tell me more about that?

11. Do you think there are any suggestions in the booklet that would be difficult for families?

    11a. Can you tell me more about that?

Transition: Now I would like to go through the booklet and ask a few questions as we move through it.

Interviewer: Hand Booklet (**Appendix) and give parent/guardian adequate time to review sections of the booklet.

Page 1 of booklet

12. When you first saw the cover page what came to mind?

    12a. Can you tell me more about that?

    12b. Prompt: How can we make the cover more appealing, more eye catching, more interesting?

Page 2 of booklet

13. Does your child routinely drink something during the day that is not on the list?

    13a. If so, can you tell me more about that?

14. Were the instructions on this page clear?

Interviewer: Indicate to the instructions on page two of the booklet

    14a. Can you tell me more about that?

    14b. How can we make them easier to understand?

Page 3 of booklet

15. Can you point to something on this page that you found interesting or that you did not know before?

Page 4 of booklet

16. In your own words can you describe the difference between "Whoa", "Slow" and "Go" drinks?
17. To what extent, do you think that parents such as yourself would find these suggestions easy to do?

    17a. Can you tell me more about that?

Page 5 of booklet

Interviewer: follow along with the Whoa Slow Go suggestions for orange soda on page five

The goal of this page is to suggest ways to shift kids drink choices from "Whoa" to "Go". For example: instead of offering your child orange soda, which is a "Whoa" option suggest either 100% orange juice, which is a "Slow" option, or an even better choice is orange slices which is a "Go" option.

18. What suggestions do you have that would make it easier to convey this message?

Interviewer: Indicate the Rethink Your Drink Recipe icon.

This symbol is meant to show readers that the drink recipes can be found online at the Rethink Your Drink website.

19. Would you find this helpful, or do you think other families would find this helpful?

    19a. Can you tell me more about that?

    19b. What suggestions do you have to help families access our recipes?

Page 6 of booklet

This page is meant to serve as a summary of the booklet, and a reminder of key points.

20. In your own words, what would you say is the key point of the booklet?

    20a. Prompt: Stoplight approach

    "In your opinion, is putting drinks into the categories that correspond to a stoplight, an effective way to remember what drinks are healthy choices for your kids?"

Interviewer: Indicate the perforated lines used to remove Page six

This page is also meant to be torn out and posted on the fridge.

21. Would your family use it in this way?

    21a. If no, is there another way you would use this?

    21b. Can you tell me more about that?

Transition: Thank you, have just a couple more questions.

Interviewer: Show the booklet description list **(Appendix___)**

This is a list of some descriptions of the booklet.

As we go through the list, please select one choice from each line that most closely reflects your opinion of the booklet.

A. Did you find the booklet?

Very interesting Somewhat interesting Not at all interesting

B. Did you find the booklet?

Very Informative Somewhat Informative Not informative

C. Did you find the booklet?

Accurate Somewhat accurate Inaccurate

D. Did you find the booklet?

Very Useful Somewhat Useful Not Useful

E. Did you find the booklet?

Easy to understand Understandable Hard to understand

F. Did you find the booklet?

Complete Somewhat Complete Incomplete

Great just let me check with my associate.

Interviewer: Review with **{insert associates name}** those answers from the negative column and go over them with the parent or guardian.

22. You indicated_____as your opinion about the booklet…….

22a. Can you tell me more about that?

Closing:

"Those are all of the questions that I have for you. Now, I would like to ask **{insert assistants name}** if there was anything that was missed during the interview."

Interviewer: Confer with assistant to see if there were any missed questions or answers.

If assistant missed anything

Ask the participant for clarification or go over it again.

If nothing was missed

Proceed to final forms

"My interview is over, but I do have two short forms for you to fill out. The first asks about you and the ages of your children."

Interviewer: Give the Parent Guardian Demographics sheet **(Appendix____)** and a pen

"Thank you for your participation in this study. I have a small gift as a token of our appreciation of your time. We have a $10-dollar Walmart gift card for you."

Interviewer: Give Receipt of Participation form **(Appendix_____)** then indicate where to print name and where to sign the name.

"For accounting purposes, would you please sign this form that confirms you received the card? This form is not part of the information we keep for our study records. This form is delivered to a University accountant. Please Print your name here, and sign here."

Interviewer: Collect both Parent Guardian Demographics sheet **(Appendix___)** and Receipt of Participation form **(Appendix___)**. Give Participant Walmart Gift Card **(Appendix____)**

"Thank you again for your participation!"

ID#_____

Guía de la entrevista del padre / guardián

Contenido

Introducción / Proceso de selección

1. Hola, soy {nombre del entrevistador} y soy investigador de nutrición de la Universidad de Nevada. Reno, estamos realizando un estudio para obtener más información sobre un folleto que hemos desarrollado. ¿Tuvó la oportunidad de leer el folleto?

Entrevistador: Muestre folleto de reclutamiento (Apéndice ¬¬_)

1.a. “Respuesta de "Sí": ¿Puedo contarse más sobre el estudio y ver si estaría interesado en ser voluntario?

Respuesta de “Sí”: este estudio es para obtener más información acerca de un folleto que trata sobre bebidas saludables para niños entre las edades de 6 a 12 años. Si elige ser voluntario y es elegible, se le pedirá que lea el folleto y responda algunas preguntas sobre lo que has leído. Sus respuestas nos ayudarán a mejorar el folleto para otros. También se le pedirá que complete dos formularios: uno que trata de usted y su familia, y otro que es un recibo de nuestra tarjeta de regalo de agradecimiento. No debe tomar más de 20 minutos para completar estas tareas.

Respuesta de "No": gracias por su tiempo y consideración. Si cambias de opinión, estaremos aquí hasta que {apunta la hora}

1.b. 1.b. Respuesta de "No": Ok, volveré en unos minutos?

Interviewer: Give adequate time to review flyer After a few minutes return and start with 1.a.

2. ¿ Estaría interesado en participar en nuestro estudio de investigación?

2.a. Respuesta de "Sí": Genial, confirmemos que eres elegible. Le daré unos minutos para revisar nuestros criterios de elegibilidad.

Entrevistador: muestre y señale el “Folleto de criterios de elegibilidad del participante” que se muestra en la **página 4** y dé unos minutos para que los revise.

2.b. Respuesta de "No": gracias por su tiempo y consideración. Si cambias de opinión, estaremos aquí hasta {apunta la hora}

¿Son verdaderas las siguientes para usted?

1. Edad 18 años o más

2. Padre o guardián de al menos un niño entre las edades de 6 y 12 años

3. Capaz de leer y hablar Español.

4. Dispuesto a permanecer 20 minutos adicionales después de la cita.

¿Respondió "sí" a todas las condiciones anteriores?

3. ¿Respondió "sí" a todas las condiciones?

3.a. Elegible (respondió a todos sí): Usted es elegible para participar en este estudio de investigación. A continuación, le pediré que lea esta Hoja de información que explica el estudio en detalle. Después de que tenga tiempo para leerlo, responderé cualquier pregunta que pueda tener.

Entrevistador: dale la hoja de información **(Apéndice)** y bríndele al padre/guardian todo el tiempo que sea necesario para que lean la hoja completa.

3.b. No Elegible (no todas las respuestas fueron "sí"): Desafortunadamente, usted no es elegible para participar en este estudio. Gracias por tu tiempo. Espero que tenga un día maravilloso.

4. ¿Tiene alguna pregunta sobre el estudio? ¿O los procedimientos del estudio?

4.a. "Sí" respuesta con la pregunta: responda a la pregunta.

4.b. Respuesta de "no": Vamos a continuar.

5. ¿Aún desea continuar con este estudio?

5.a. Respuesta de "Sí": Comencemos.

5.b. Respuesta de "No": gracias por su tiempo y consideración. Si cambias de opinión, estaremos aquí hasta {apunta la hora}

Instrucciones de inicio: Página 1 de la entrevista

Una vez más, esta entrevista tomará unos 20 minutos para completar. Habrá tres partes en este proceso de entrevista. Primero, te haré leer el folleto. Luego, le haré algunas preguntas relacionadas con el folleto con la ayuda de {insertar nombre del asistente} para asegurar que no me pierda ninguna de sus respuestas. Finalmente, habrá algunos formularios que llenará por su cuenta.

¿Alguna pregunta hasta ahora?

"Sí" respuesta con la pregunta: responda la (s) pregunta (s).

Respuesta de "no": Vamos a continuar.

Gracias, comencemos. Aquí está el folleto que nos gustaría que revisaras, por favor tómese su tiempo.

Entrevistador: dale el folleto **(Apéndice_)** y brinde a los padres / guardianes todo el tiempo que sea necesario para que lean el folleto completo.

Realmente apreciamos que se haya tomado el tiempo para participar en este estudio. Ahora le voy a hacer algunas preguntas sobre el folleto que acaba de leer. Por favor tome asiento. Me voy a sentar frente a usted y **{insertar nombre del asistente }** se sentará aquí.

No hay respuestas correctas o incorrectas a las preguntas que voy a hacer, ya que realmente se trata de lo que piensas. Por favor, no se ofenda cuando le pido más información sobre su respuesta. Solo quiero asegurarme de que entiendo lo que quisiste decir.

¿Tiene alguna pregunta antes de empezar?

Primero: para comenzar, quiero que se centren en el folleto en totalidad.

6. En sus propias palabras, ¿cuál diría que es la idea principal del folleto?
7. En sus propias palabras, ¿el folleto, que anima al lector a hacer?
8. ¿Puede dar un ejemplo de algo que leyó en el folleto que era nuevo para usted?
9. ¿Tiene preguntas sobre bebidas para niños que no fueron respondidas en el folleto?
10. En su opinión, ¿había algo en el folleto que era difícil de creer?

    10a. ¿Me puede decir más sobre eso?

11. ¿Cree que hay alguna sugerencia en el folleto que sería difícil para las familias?

    11a. ¿Me puede decir más sobre eso?

Transición: Ahora me gustaría revisar el folleto y hacer algunas preguntas a medida que avanzamos.

Entrevistador: Dalle el folleto **(Apéndice)** y dé a los padres / guardianas tiempo adecuado para revisar las secciones del folleto

Página 1 del folleto

12. Cuando viste por primera vez la portada, ¿qué te vino a la mente?

12a. ¿Me puede decir más sobre eso?

12b. Pregunta: ¿Cómo podemos hacer que la portada sea más atractiva, más llamativa, más interesante?

Página 2 del folleto

13. ¿Su hijo toma habitualmente algo durante el día que no está en la lista?

13a. Si es así, ¿puedes decirme más sobre eso?

14. ¿Fueron claras las instrucciones de esta página?

Entrevistador: indique las instrucciones en la página dos del folleto

14a. ¿Me puede decir más sobre eso?

14b. ¿Cómo podemos hacer que sean más fáciles de entender?

Página 3 del folleto

15. ¿Puede señalar algo en esta página que le haya parecido interesante o que no supieras antes?

Página 4 del folleto

16. En sus propias palabras, ¿puede describir la diferencia entre las bebidas “Whoa”, “Slow” y “Go”?

17. ¿Hasta qué punto crees que a los padres como usted les resultarán fáciles estas sugerencias?

17a. ¿Me puede decir más sobre eso?

Página 5 del folleto

Entrevistador: siga las sugerencias de Whoa Slow Go para refrescos de naranja en la página cinco

El objetivo de esta página es sugerir formas de cambiar las opciones de bebida de los niños de "Whoa" a "Go". Por ejemplo: en lugar de ofrecerle a su hijo soda de naranja, que es una opción "Whoa", sugiera un jugo 100% de naranja, que es una opción "Lenta", o una opción aún mejor son las rodajas de naranja, que es una opción "Ir".

18. ¿Qué sugerencias tiene para facilitar la transmisión de este mensaje?

Entrevistador: indique el icono Rethink Your Drink.

Este símbolo está destinado a mostrar a los lectores que las recetas de bebidas se pueden encontrar en línea en el sitio web Rethink your drink.

19. ¿Le resultaría útil o cree que a otras familias les resultaría útil?

19a. ¿Me puedes decir más sobre eso?

19b. ¿Qué sugerencias tienes para ayudar a las familias a acceder a nuestras recetas?

Página 6 del folleto

Esta página debe servir como un resumen del folleto y un recordatorio de los puntos clave.

20. En sus propias palabras, ¿cuál diría que es el punto clave del folleto?

20a. Preguntar: enfoque de luz de parade enfouque

"En su opinión, ¿colocar las bebidas en las categorías que corresponden a un semáforo, es una forma efectiva de recordar qué bebidas son opciones saludables para sus hijos?"

Entrevistador: indique las líneas perforadas utilizadas para quitar la página seis

Esta página también debe ser arrancada y poner en la nevera.

21. ¿Lo usaría tu familia de esta manera?

21a. Si no, ¿hay alguna otra forma de usar esto?

21b. ¿Me puede decir más sobre eso?

Transición: Gracias, sólo tengo un par de preguntas más.

Entrevistador: muestre la lista de descripción del folleto **(Apéndice___)**

Esta es una lista de algunas descripciones del folleto.

A medida que avanzamos en la lista, seleccione una opción de cada línea que mejor refleje su opinión sobre el folleto.

A. ¿Encontraste el folleto?

Muy interesante Algo interesante No interesante para nada

B. ¿Encontraste el folleto?

Muy informativo Algo informativo No informative

C. ¿Encontraste el folleto?

Preciso Algo preciso Inexacto

D. ¿Encontraste el folleto?

Muy útil Algo útil No útil

E. ¿Encontraste el folleto?

Fácil de entender Comprensible Difícil de entender

¿Encontraste el folleto?

Completa Algo Completo Incompleto

Bueno, déjame consultar con mi socio.

> Entrevistador: revise con **{inserte el nombre de los asociados}** las respuestas de la columna negativa y repáselas con el padre o guardián.

10. Usted indicó_____como su opinión sobre el folleto…….

22a. ¿Me puede decir más sobre esto?

Closing:

"Esas son todas las preguntas que tengo para usted. Ahora, me gustaría preguntar **{insert assistants name}** si hay algo que hemos perdido durante la entrevista"

> Interviewer: Consulte con el ayudante para ver si había alguna pregunta perdida o respuestas.

Si el asistente perdió algo

Pídale una aclaración al participante o repáselo nuevamente.

Si no se perdió nada

Pásele al padre /guardian los formularios finales

“Mi entrevista ha terminado, pero tengo dos formularios cortos para que los llene. La primera pregunta es sobre usted y las edades de sus hijos."

Entrevistador: entregue la hoja de datos demográficos de padres / guárdanos **(apéndice____)** y una pluma

"Gracias por tu participación en este estudio. Tengo un pequeño regalo como muestra de nuestro aprecio por su tiempo. Tenemos una tarjeta de regalo de Walmart de $ 10 dólares para usted. "

Entrevistador: entregue el formulario de Recibo de Participación **(Apéndice_____)** y luego indique dónde imprimir el nombre y dónde firmarlo.

“Para fines contables, ¿por favor puedes firma este formulario que confirma que recibió la tarjeta? Este formulario no es parte de la información que guardamos para los registros de nuestro estudio. Este formulario se entrega a un contador universitario. Por favor escriba su nombre aquí y firme aquí.

Entrevistador: Recoja la hoja de datos demográficos de padres / guárdanos **(Apéndice____)** y el formulario de Recibo de participación **(Apéndice_).** Entregar la Tarjeta de regalo de Walmart al participante **(Apéndice____)**

"¡Gracias otra vez por su participación!"

Participant Information Form

Instructions: Please answer each of the questions below. The information will be used to describe, in general, those that participated in our study.

1. What is your gender?
   - ◯ Female
   - ◯ Male

2. What is your race? (check all that apply to you)
   - ◯ American Indian/Alaskan Native
   - ◯ Asian
   - ◯ Black
   - ◯ Caucasian
   - ◯ Hawaiian/other Pacific Islander

3. What is your ethnicity? (check one)
   - ◯ I am Hispanic/Latino
   - ◯ I am not Hispanic/Latino

4. What year were you born?
   Please write the Year → _____

5. Do you currently receive SNAP benefits or participate in SNAP (formerly known as Food Stamps)?
   - ◯ Yes
   - ◯ No

6. How many children between the ages of 6 and 12 live in your household?
   Please write the number of children here → _____

Thank you for your participation!

Hoja informativa del padre guardian

Instrucciones: Por favor responda cada una de las preguntas a continuación. La información se utilizará para describir, en general, a los que participaron en nuestro estudio.

1. Cuál es su género?
   - ◯ Mujer
   - ◯ Hombre

2. ¿Cuál es su raza? (Marque todo lo que aplique a usted)
   - ◯ Indio Americano /Nativo de Alaska
   - ◯ Asiático
   - ◯ Negro
   - ◯ Caucásico
   - ◯ Hawaiano /otro Isleño del Pacífico

3. ¿Cuál es su etnia? (marque uno)
   - ◯ Soy Hispano /Latino
   - ◯ No soy hispano / latino

4. ¿En qué año naciste?
   Por favor escriba el año →_____

5. ¿Recibe actualmente beneficios de SNAP o participa en SNAP (anteriormente conocido como cupones de alimentos)?
   - ◯ Si
   - ◯ No

6. ¿Cuántos niños entre las edades de 6 y 12 años viven en su hogar?
   Por favor escriba el número de niños aquí →_____

¡Gracias por su participación!

Appendix_K_Reciept of Participant Gift Form

Rethink your drink

Receipt of Participant Gift

Instructions: To show receipt of your Walmart Gift card, please print and sign your name below. This information will be provided to the UNR Controllers Office for accounting purposes only.

Name (please print): _____

Signature:_____Date: _____

Gift Card # _____

Rethink your drink

Recibo del regalo del participante

Instrucciones: Para mostrar el recibo de su tarjeta de regalo de Walmart, por favor imprima y firme su nombre a continuación. Esta información se proporcionará a la Oficina de Controladores de UNR solo para fines contables.

Nombre (por favor imprimir):_____

Firma:_____Fecha:_____

de Tarjeta de regalo:_____

Appendix_L_Content Expert Review Survey

Interview Note Sheet

This interview is being conducted in the following language

◯ English
◯ Spanish

Introduction/Screening Process

1.
2.
3. No notes required for this portion of the interview.
4.
5.

First: Focus on the booklet as a whole.

6. In your own words, what would you say is the main idea of the booklet? _____

_____

_____

7. In your own words, what is the booklet encouraging the reader to do? _____

_____

_____

8. Can you give an example of something you read in the booklet that was new to you?

_____

_____

9. Do you have questions about drinks for children that were not answered in the booklet?

_____

_____

10. In your opinion was there anything in the booklet that was hard to believe? _____

_____

_____

10a. Can you tell me more about that? _____

_____

_____

11. Do you think there are any suggestions in the booklet that would be difficult for families?

_____

_____

_____

11a. Can you tell me more about that? _____

_____

_____

Transition: Now go through the booklet.

Page one of booklet

12. When you first saw the cover page what came to mind? _____

_____

_____

12a. Can you tell me more about that? _____

_____

_____

12b. How can we make the cover more appealing, eye catching or interesting? _____

_____

_____

Page two of booklet

13. Does your child routinely drink something during the day that is not on the list? _____

13a. Can you tell me more about that? _____

14. Were the instructions on this page clear? _____

14a. Can you tell me more about that? _____

14b. How can we make them easier to understand? _____

Page three of booklet

15. Can you point to something on this page that you found interesting or that you did not know before? _____

Page four of booklet

16. In your own words can you describe the difference between "Whoa", "Slow" and "Go" drinks?

17. To what extent, do think that parents, such as yourself would find these suggestions easy to do? _____

    _____

    _____

    17a. Can you tell me more about that? _____

    _____

Page five of booklet

The goal of this page is to suggest ways to shift kids drink choices from "Whoa" to "Go". For example: instead of offering your child orange soda, which is a "Whoa" option suggest either, 100% orange juice, which is a "Slow" option, or an even better choice is orange slices which is a "Go" option.

18. What suggestions do you have that would make this message easier to convey?

    _____

    _____

This symbol is meant to show readers that the drink recipes can be found online at the Rethink your drink website.

19. Would you find this helpful, or do you think other families would find this helpful? ____

    _____

    _____

    19a. Can you tell me more about that? _____

    _____

    _____

    19b. What suggestions do you have to help families access our recipes? _____

    _____

    _____

Page six of booklet

This page is meant to serve as a summary of the booklet, and a reminder of key points.

20. In your own words what would you say is the key point of the booklet? _____

_____

_____

20a. Prompt: Stoplight Approach "In your opinion, is putting drinks into the categories that correspond to a stoplight, an effective way to remember what drinks are healthy choices for your kids?"

_____

_____

_____

This page is meant to be torn out and posted on the fridge.

21. Would your family use it in this way? _____

_____

_____

21a. If no, is there another way you would use this? _____

_____

_____

21b. Can you tell me more about that? _____

_____

_____

Transition to Booklet Description List: Mark the indicted description from the booklet for each set. Notify Interviewer of only those from the negative column for follow up questions.

A. Did you find the booklet?

Very interesting	Somewhat interesting	Not at all interesting

B. Did you find the booklet?

Very Informative	Somewhat Informative	Not informative

C. Did you find the booklet?

Accurate	Somewhat accurate	Inaccurate

D. Did you find the booklet?

Very Useful	Somewhat Useful	Not Useful

E. Did you find the booklet?

Easy to understand	Understandable	Hard to understand

F. Did you find the booklet?

Complete	Somewhat Complete	Incomplete

22. You indicated the following [list all from negative column] _____

_____

_____

22a. Can you tell me more about that? _____

_____

_____

ID#_____

Hoja de notas de la entrevista

Esta entrevista se realiza en el siguiente idioma.

◯ Inglés
◯ Español

Introducción / Proceso de selección

1.
2.
3. No notes required for this portion of the interview.
4.
5.

En primer lugar: centrarse en el folleto en totalidad.

6. En sus propias palabras, ¿cuál diría que es la idea principal del folleto?_____

_____

_____

7. En sus propias palabras, ¿en este folleto que anima al lector a hacer?_____

_____

_____

8. ¿Puede dar un ejemplo de algo que leyó en el folleto que era nuevo para usted?

_____

_____

9. ¿Tiene preguntas sobre bebidas para niños que no fueron respondidas en el folleto?

_____

_____

10. En su opinión, ¿había algo en el folleto que era difícil de creer?_____

10a. ¿Me puede decir más sobre eso?

11. ¿Cree que hay alguna sugerencia en el folleto que sería difícil para las familias?

11a. ¿Me puede decir más sobre eso?

Transición: Ahora atravese el folleto.

Página uno del folleto

12. Cuando viste por primera vez la portada, ¿qué te vino a la mente?

12a. ¿Me puede decir más sobre eso?

12b. ¿Cómo podemos hacer que la portada sea más atractiva, llamativa o interesante?

Página dos del folleto

13. ¿Su hijo toma habitualmente algo durante el día que no está en la lista?_____

_____

_____

13a. ¿Me puede decir más sobre eso?_____

_____

_____

14. ¿Fueron claras las instrucciones de esta página?

_____

_____

_____

14a. ¿Me puede decir más sobre eso?_____

_____

14b. ¿Cómo podemos hacer que sean más fáciles de entender?

_____

_____

Página tres del folleto

15. ¿Puede señalar algo en esta página que le haya parecido interesante o que no supiera antes?_____

_____

_____

Página cuatro del folleto.

16. En sus propias palabras, ¿puede describir la diferencia entre las bebidas “Whoa”,“Slow” y “Go”?

_____

_____

_____

17. ¿Hasta qué punto crees que a los padres como ti mismo les resultarán fáciles estas sugerencias?

_____

_____

_____

17a. ¿Me puede decir más sobre eso? _____

_____

Página cinco del folleto

El objetivo de esta página es sugerir formas de cambiar las opciones de bebida de los niños de "Whoa" a "Go". Por ejemplo: en lugar de ofrecerle a su hijo soda de naranja, que es una opción "Whoa", sugiera una de las siguientes opciones: jugo 100% de naranja, que es una opción "Lenta", o incluso una mejor opción son las rodajas de naranja, que es una opción "GO".

18. ¿Qué sugerencias tiene para hacer que este mensaje sea más fácil de transmitir?

_____

_____

Este símbolo está destinado a mostrar a los lectores que las recetas de bebidas se pueden encontrar en línea en el sitio web Rethink your drink.

19. ¿Le resultaría útil o cree que a otras familias les resultaría útil?_____

_____

_____

19a. ¿Me puede decir más sobre eso?_____

_____

_____

19b. ¿Qué sugerencias tienes para ayudar a las familias a acceder a nuestras recetas?

_____

_____

_____

Página seis del folleto

Esta página debe servir como un resumen del folleto y un recordatorio de los puntos clave.

20. En sus propias palabras, ¿cuál diría que es el punto clave del folleto?_____

_____

_____

20a. Prompt: Enfoque de la luz de freno "En su opinión, ¿poniendo las bebidas en las categorías que corresponden a una luz de parada, es una manera efectiva de recordar qué bebidas son opciones saludables para sus hijos?"

_____

_____

_____

Esta página debe ser arrancada y colocar en la nevera.

21. ¿Lo usaría tu familia de esta manera? _____

_____

_____

21a. Si no, ¿hay alguna otra forma de usar esto? _____

_____

_____

21b. ¿Me puede decir más sobre eso?_____

_____

_____

Transición a la lista de descripción de folletos: marque la descripción indicada del folleto para cada conjunto. Notifique al entrevistador solo aquellos de la columna negativa para las preguntas de seguimiento.

A. ¿Encontraste el folleto?

Muy interesante Algo interesante No interesante para nada

B. ¿Encontraste el folleto?

Muy informativo Algo informativo No informativo

C. ¿Encontraste el folleto?

Preciso Algo preciso Inexacto

D. ¿Encontraste el folleto?

Muy útil Algo útil No útil

E. ¿Encontraste el folleto?

Fácil de entender Comprensible Difícil de entender

F. ¿Encontraste el folleto?

Completa Algo Completo Incompleto

22. Usted indicó lo siguiente [listar todo de la columna negativa]

_____

_____

_____

22a. ¿Me puede decir más sobre eso?_____

_____

_____