

# Pathways: Evaluation of an Emerging Digital Nutrition Campaign

A research partnership between Chapman University's School of Communication and Dairy Council of California

## BACKGROUND

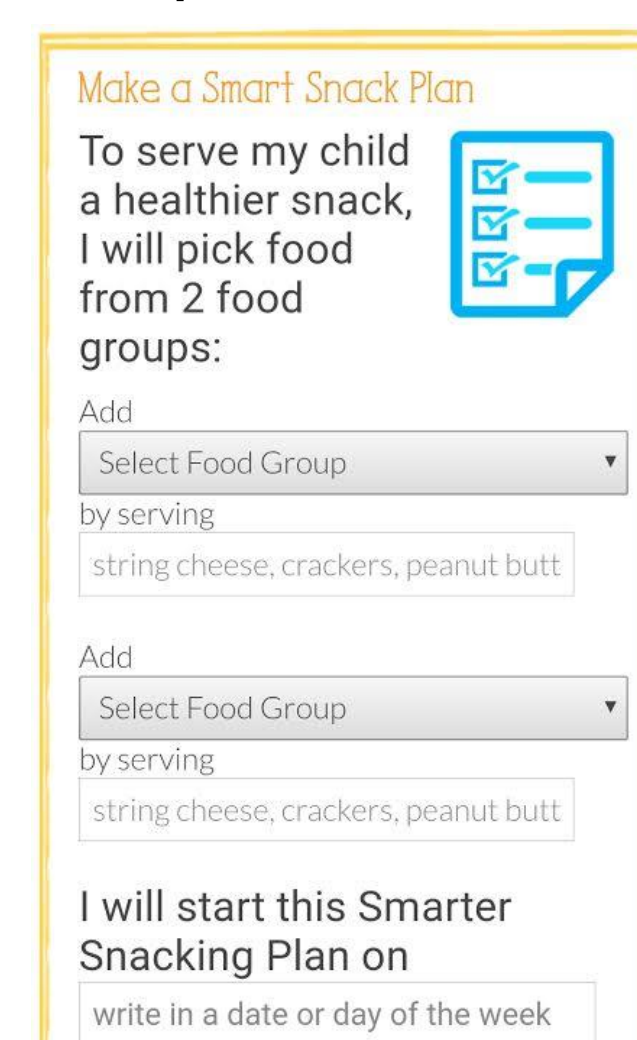
- Many American children consume high calorie/low nutrition breakfasts and snacks.
- School-aged children in California are at risk for numerous health complications given the prevalence of poor nutrition habits.
- Dairy Council of California launched *Pathways*, an online digital nutrition campaign, to promote healthier breakfast and snacking habits among site users and their families in winter, 2016.



- These digital educational materials are designed to for parents and for use within families and as part of school-based nutrition education programs.
- Pathways lessons (modules) focus on improving parent users' knowledge, attitudes, and behaviors relative to planning and creating breakfasts and snacks for their families.
- Two short, interactive modules focused on breakfasts and snacks follow this formula:
  1. A quiz to help parents assess their current level of nutritional literacy in creating breakfast and snack plans
  2. A quick attention-getting series of benefits related to healthy breakfast and snack consumption
  3. A research-based formula for a healthy, balanced breakfast or snack
  4. Links to recipe
  5. Interactive breakfast and snack planners, with the option to print

[Recipes + More Tips for Healthy Snacks](#)

[Protein Packed Snack Ideas](#)



### Objective

Under the supervision of Dr. Jennifer Waldeck and with oversight by Dairy Council of California Program Manager Trina Robertson, graduate students in the M.S. in Health and Strategic Communication program and undergraduates in the Corporate and Strategic Communication program in the School of Communication at Chapman University conducted a two-phase evaluation research study to assess the effectiveness of the Pathways initiative.

## METHODS

### Design

- Multi-method (survey, focus group, user behavior testing, and application of established theoretical frameworks as analytic lenses) qualitative and quantitative design..
- The formative evaluation was conducted at 3- and 6-months during the beta testing phase of *Pathways*.

### Participants and Procedures

- Parents participated in focus groups and user testing ( $n = 12$ ) and completed surveys reporting their attitudes and behavioral intentions relative to the content of the *Pathways* program ( $n = 141$ ). Organic site visitors ( $n = 1359$ ) were asked to provide demographic information and reasons for visiting the site.
- Focus groups and user testing were conducted in April, 2016, and surveys in July, 2016 after participants were exposed to the site.

### Measures

- **Site User Demographics:** Seven item instrument collected site user demographics and reasons for visiting the site.
- **Attitudes:** Seven question focus group protocol and 28 item Likert-type scale designed for this study assessing attitudes toward site content, layout, and design
- **Behaviors:** Fourteen step user testing protocol to assess site usability and functionality, with trained rater observation
- **Behavioral intention:** Seven item scale designed for this study to evaluate users' behavioral intentions relative to breakfast and snack habits following their interaction with *Pathways* material.

## METHODS

### Data Analysis

- Quantitative analysis of survey data and user testing observations.
- Constant comparative analysis of qualitative focus group responses guided by grounded theory.
- Application of key theoretical frameworks to existing site content and design for the purpose of making additional recommendations.

## RESULTS

Overall, research participants (both natural visitors to [healthyeating.org](http://healthyeating.org) and participants recruited) were:

- primarily white
- responsible for meal preparation in their family home
- motivated to learn about issues related to diet and health improvement.

Nearly 100% of respondents have children under the age of 12.

Over 80% of participants reported that they felt their family eating habits were "healthy" or "healthy overall, with some room for improvement." Thus, the sample (including organic visitors to the site) on which these findings and recommendations are based is relatively literate about issues related to healthy eating, and motivated to learn more and improve family dietary habits.

### Social and Mobile Is Where It's At!

In reporting their attitudes about the site, 78% of respondents indicated that the content provided on the Pathways sites **would be more useful if provided in an interactive mobile app**, rather than on a static website. **About 70% of participants are fairly heavy users of social media**, with Facebook, Instagram, and Pinterest being the most frequently used social media among these parents. Overall, respondents suggested that Dairy Council of California migrate the Pathways content to a mobile app **to increase the likelihood of one-time and repeat access of the content**. Further, they **recommended that the app be presented in a "social" format that would allow them to share content from the app easily on social media platforms**.

### Readability

Respondents overall found the Pathways sites easy to read and understand.

- Some concern emerged that the site contained too much static content, with 30% of survey respondents indicating that the amount of information was "overwhelming."
- Focus group and qualitative open-ended responses from parents indicated that the amount of content might not be the problem; rather, it might be that the content is presented in such a manner that requires too much reading and focus on static content.

### Design

Users found the sites "attractive" (74%), attention getting (64%), "interesting" (67%), and "fun to use" (62%). Respondents suggested using more visual elements, and creating more opportunities for them to click and reveal information, interactive shopping list builders, and online quizzes or assessments that provide some type of personalized interpretations as ways to enhance the design and interactivity of the sites.

### Behavioral Intention:

Parents reported strong motivation and behavioral intention relative to the recommendations made by the program. There appears to be a positive correlation among motivation, behavioral intention, and the likelihood that Dairy Council of California incorporate parent feedback into the content, design, and functionality of the site.

- 82% of participants reported motivation to build healthier breakfast and snack habits after interacting with the *Pathways*.
- 74% of participants reported that they intended to implement recommendations relative to breakfasts and snacks made in the *Pathways* material.
- 94% of participants reported that they would implement recommendations relative to breakfasts and snacks made in the *Pathways* material "if their suggestions about the site were incorporated into a redesign."

## DATA AND THEORETICALLY-DRIVEN CONCLUSIONS AND RECOMMENDATIONS

### Further Evidence-Based Recommendations

- Next phase of research should involve diary studies or an experimental design for stronger evidence of behavioral change. Enough justification exists at this point for development of a mobile app.
- Parents do not have access to printers and do not wish to print information or meal plans. Instead, the sites should feature an option to save this material as pdf files to parents' devices, or create interactive items that the app captures and saves. Eliminate printables.
- Parent data provides justification for incorporating more multimedia elements into the sites; additionally, theoretical frameworks provide evidence that this more video, social elements, and click/reveal triggers could be valuable in getting users' attention and motivating them to use the site and return to it.
- Elaboration Likelihood Model suggests that incorporating relevant, attention-getting stories and narratives from parents and children (to whom users can relate) about their healthy eating journeys could be useful. Research supports the use of stories, personal experiences, and anecdotes in health promotion campaigns.
- Maximize use and potential of social media channels.
- Traditional data collection methods have proven challenging for conducting research with this intended population and on the topics associated with the Pathways sites.