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The Influence of Social Media on Child Feeding Practices and Beliefs among Hispanic Mothers: A Mixed Methods Study

Dina H. Griauzde, MD MSc^{1,2}, Edith C. Kieffer, MPH, PhD³, Sarah E. Domoff, PhD⁴, Kristen Hess, MSW³, Susannah Feinstein, MSW, MPH³, Amy Frank, MSW, MPH⁵, Denise Pike⁵, Megan H. Pesch, MD MSc⁶

¹Ann Arbor VA Health System, Ann Arbor, Michigan, USA

²Department of Internal Medicine, University of Michigan, Ann Arbor, Michigan, USA

³School of Social Work, University of Michigan, Ann Arbor, Michigan, USA

⁴Department of Psychology, Central Michigan University, Mount Pleasant, Michigan, USA

Community Health and Social Services (CHASS) Center, Detroit, Michigan, USA

⁶Department of Pediatrics, University of Michigan, Ann Arbor, Michigan, USA

INTRODUCTION

Among US children obesity is common, and the prevalence is greater among Hispanic children (21.9%) compared to non-Hispanic black (19.5%) and non-Hispanic white (14.7%) children. The reasons for this disparity are not well-described, but may be due, in part, to differences in maternal feeding practices and beliefs between Hispanic and non-Hispanic mothers.² Hispanic mothers, for example, may be more likely to initiate early introduction of solid foods and may perceive infant "chubbiness" to be a sign of good health.³ Further, socioeconomic and cultural environments may drive food choices and patterns of food consumption, particularly among low-income Hispanic populations.⁴

Given the prevalence of childhood obesity and the associated long-term health consequences,⁵ strategies to prevent obesity are urgently needed, particularly among highrisk populations. Such strategies may be most effective if they target infants and toddlers, as various factors during this time period (e.g., accelerated infant weight gain, introduction of solid foods before 4 months of age) are associated with obesity later in life ^{6,7} and may be modified through intervention.⁸ One cost-effective and highly scalable strategy may be the use of social media and text messages to disseminate public health information⁹ and augment traditional health promotion programs through strategies such as social marketing campaigns to promote population-level behavior change. ^{10,11,12} Such strategies offer an opportunity to address health disparities among vulnerable populations, ^{13,14,15} and they may be particularly effective among Hispanics given high rates of social media use (e.g., FacebookTM and TwitterTM) among this population. ¹⁶ Further, prior work has demonstrated

that social media and text messaging interventions to disseminate health-related information can be effective, ¹⁷ and are often preferred, ^{18,19,20} among Hispanic individuals.

This descriptive study has three objectives. The first is to describe the use of social media, other internet websites, and text messaging among Hispanic mothers in an urban setting. The second is to characterize the factors (e.g., family, social media) that may influence child feeding practices and beliefs among mothers in this community, and the third is to explore how social media and/or text messaging interventions may be used – either alone or in combination with an in-person program – to prevent obesity among Hispanic infants and toddlers. This project was conducted using the approaches and principles of community-based participatory research²¹ as a partnership between staff from the Community Health and Social Services (CHASS) Center, a Federally Qualified Health Center in Southwest Detroit, and the University of Michigan. The information obtained during this study could help inform the development of new interventions to promote health and prevent obesity in infants and young children in Hispanic families.

2. METHODS

2.1 Study Design

This is a mixed methods descriptive study with a sequential explanatory design in which quantitative and qualitative data were collected in two consecutive phases.²² In this way, our qualitative data provide an in-depth understanding of participants' perspectives and help to explain quantitative survey findings. The study was reviewed by the University of Michigan Institutional Review Board and assigned "not regulated" status, as the purpose of this study was to obtain information to improve clinical care through the subsequent development of new interventions (i.e., quality improvement).

We surveyed Hispanic mothers of children 6 months to 36 months of age regarding (1) their child feeding practices and beliefs; (2) their use of social media, other internet websites, and text messaging; and (3) the factors that may influence these practices and beliefs (e.g., family, social media). The majority of survey items were drafted by the study team and iteratively revised based on feedback from Hispanic, female employees of CHASS Center. We assessed food insecurity using a validated, 2-item instrument. The survey included a total of 43 questions and took participants an average of 20 minutes to complete. To accommodate individuals with low literacy or impaired vision, all survey respondents were given the opportunity to complete the survey with assistance from a study team member.

We invited survey-completers to participate in semi-structured telephone interviews to further explore mothers' child feeding practices and beliefs, their general use of social media and/or text messaging, and their perspectives on whether these modalities may be acceptable tools to communicate health-related information and to promote healthy eating among infants and young children. Interviews were approximately 45 minutes in duration. Surveys and interviews were administered in mothers' preferred language (i.e., Spanish or English). The English version of the interview guide is shown in the Appendix.

2.2. Participants and Recruitment

Surveys were administered at CHASS Center to 66 mothers with children between the ages of 6 months and 36 months who were patients of CHASS Center or clients of a Special Supplemental Nutrition Program for Women, Infant, Children (WIC) located in the CHASS Center building. Mothers were instructed to answer survey and interview questions as they pertained to their child between the ages of 6 months and 36 months of age. Mothers with more than one child in this age range were asked to consider their youngest child. CHASS Center serves a predominantly Hispanic community in Southwest Detroit. Seventy-nine percent of CHASS Center users are Hispanic, 11% are African American, 4% are White and the remainder are a mix of Native American, Arabic, Pacific Islander, Asian and Other. Because 68% of users prefer care in to be delivered in a language other than English, CHASS Center provides services in English, Spanish and Arabic. Among its comprehensive array of services for community members of all ages, CHASS Center provides prenatal, postpartum and pediatric care services. A WIC program is located on-site. Prior work conducted among a similar cohort of mothers from CHASS Center demonstrates that approximately 95% were born outside of the U.S.; 25% of mothers lived in the U.S. for over 10 years while 13% lived in the U.S. for less than two years.²⁴

2.3 Data Collection

Using survey instruments, we collected data on the domains shown in Table 1, including sociodemographic characteristics, social media use, cellphone use, and child feeding practices and beliefs among Hispanic mother (N=66). These results informed the development of specific questions that were asked during subsequent semi-structured interviews. Trained research assistants and clinic staff members were available to verbally conduct the survey in either English or Spanish given known variations in literacy within this population. At the end of the survey, all mothers were asked to participate in a voluntary semi-structured interview regarding social media and child health promotion. Interested mothers provided their name and phone number and they were subsequently contacted by a study team member to arrange for a telephone-based interview. We planned to conduct a minimum of 20 interviews with additional interviews to be conducted only if we did not achieve data saturation (i.e., the point at which no new information emerges from the data). ^{25,26} We planned to purposively sample mothers according to social media utilization patterns (e.g., high use versus low use). However, because the survey data indicated that rates of social media use were high among the entire sample, we were unable to use this sampling strategy and instead interviewed mothers who expressed interest in interview participation. Interview topics included the following: (1) child feeding practices and beliefs; (2) people and factors that influence these practices and beliefs; (3) mothers' social media use; and (4) mothers' beliefs about the acceptability of social media and/or text messaging to deliver child health promotion information.

2.4 Quantitative Data Analysis

Survey data were entered in RedCap.²⁷ We used descriptive statistics to summarize these data using Stata version 14.

2.5 Qualitative Data Analysis

Telephone interviews were audio recorded and subsequently transcribed verbatim. Interviews conducted in Spanish were translated to English by a study team member fluent in Spanish. Translations were then reviewed by a second study team member fluent in Spanish to ensure accuracy. All transcribed and translated interviews were imported into qualitative analysis software, Dedoose. Codes and definitions were generated during consensus conferences using directed content analysis. Specifically, initial codes were created to reflect the main topics in the interview guide, and additional codes were subsequently generated to reflect the patterns and themes that emerged from the data. Once the coding scheme was established, two research team members independently coded each transcript. These investigators then met to review their coding and resolve differences. A lead study investigator was also available to help resolve differences.

We counted the occurrence of each code to understand their relative frequencies within our data. These frequencies informed the descriptive language used in the Results section. Specifically, we use "few" to describe responses/experiences shared by 1–5 interviewees, "some" to describe responses/experiences shared by 6–9 interviewees, "many" to describe responses/experiences shared by 10–13 interviewees, and "most" to describe responses/experiences shared by at least 14 interviewees.

2.6 Integrated Analysis

Integration of the quantitative and qualitative data³¹ occurred after the study period. We merged quantitative data with our qualitative interview findings to better understand mothers' child feeding practices and beliefs and to identify specific practices that may inform future intervention content. Similarly, we merged quantitative data regarding mothers' social media, internet, and text message use with qualitative perceptions about the acceptability of these methods to deliver child health information.

3. RESULTS

3.1 Quantitative Survey Results

Sixty-six mothers with children between the ages of 6 and 36 months completed the quantitative survey and 19 of these mothers participated in semi-structured interviews. The average number of children among survey respondents was 2.6. The average number of children among interviewees was 2.5. The majority of survey respondents (78%) and interviewees (93%) received primary care at CHASS Center. Table 1 shows characteristics of all survey participants and characteristics of the interviewee subgroup. Most survey respondents (76 percent) and interviewees (85 percent) were between the ages of 20 to 39 years.

Almost half of survey respondents and interviewees had less than high school education and almost two-thirds of both groups reported that their family's food has run out sometimes or often, and approximately one-fifth of survey respondents and interviewees reported they often worry that the family's food would run out.

Feeding practices, beliefs, and influences—Among survey respondents and interviewees, approximately one-third of participants did little or no breastfeeding with their youngest child, approximately one-third breastfed for more than 6 months; the majority did not introduce solids until their child was older than 6 months of age; and a minority never introduced juiced.

In both groups, WIC and family members were the most common sources on information that influenced maternal feeding decisions. Twenty-two percent of survey respondents indicated that social media and other internet websites influenced their child feeding decisions. Thirty-six percent of interviewees indicated that social media and other internet websites influenced their child feeding decisions.

Cell phone ownership and use—Among survey respondents, almost all owned a phone with text messaging capabilities and used social media. About two-thirds send or receive a text at least once a day. More than two-thirds use Facebook MessengerTM and between half and two-thirds use What's AppTM for texting. More than three-quarters have a data plan and about a third frequently go over their maximum data usage. Among interviewees, all individuals owned a phone with text messaging capabilities and used social media. Approximately 75% send or receive a text at least once a day and use Facebook MessengerTM and What's AppTM for texting. Nearly 90% have a data plan and about a third frequently go over their maximum data usage.

Home internet and social media use—Approximately two-thirds of survey respondents and interviewees reported home internet access, approximately 75% used social media at least once daily and FacebookTM was, by far, the most commonly used social media platform. Approximately half of survey respondents and approximately 75% of interviewees used social media or the internet to find information that influenced a personal health decision or health behavior during the prior year.

3.2 Qualitative Results

Of the 66 survey respondents, 19 mothers volunteered to participate in semi-structured interviews. We conducted 20 interviews. However, the audio-recorder malfunctioned during one interview, resulting in inaudible data that could not be transcribed. During the iterative coding process, we observed that data saturation^{25,26} was reached after 14 interviews. Thus, we analyzed data for 19 interviews, and we did not attempt to recruit an additional interviewee, as we did not anticipate any new data to emerge. During qualitative interviews, key themes emerged regarding mothers' feeding practices, use of social media, preferred modalities for child health and feeding programs, including beliefs about the acceptability of social media and/or text messaging to deliver a child health promotion program.

Feeding practice, beliefs, and influences

Many mothers did not express worry about the type or quantity of food consumed by their child. Of the few that did express worry, all worried that their child was eating too little. For example, one mother commented that "during the day she doesn't really have an appetite, and she's a really active little girl...There will be days where I'll try to get her to eat lunch

and she'll only eat one bite of it, and she won't be hungry until dinner time." Similarly, many mothers did not worry about their child's weight status, and only one mother worried that her child was too big for her age: "...the doctor told me that [my daughter]...had a little more weight on her than other children...She's a little chubby but she doesn't seem too heavy to me because she is in a chubby phase and soon she'll grow, and then get a little chubbier, and then grow taller, and so on."

Many interviewees indicated that they rewarded their children with food. Food rewards were often given to promote a desired behavior. For example, one mother used soda pop to incentivize toilet training: "[I tell me daughter]...if you want pop, you have to pee-pee and poo-poo in the potty upstairs...and so if she pees or poops in the potty, she's allowed a glass of pop." Another mother commented that "...sometimes [my son] is playing or getting into some mischief, or a tantrum, and...I [ask] him if he wants a cookie or something."

Among mothers who did not use food as a reward or motivation, one specifically commented that she avoided this practice due to negative consequences of using food as a reward with her first child: "With my first son, I was always [saying], 'If you eat this I'll give you that', and he was overweight for a long time. I think that [using food as a reward] is a bad influence."

Mothers identified sources of information that influenced their child feeding practices. Many mothers included WIC as an information source, with family members also common. Among the mothers that were influenced by WIC, all described WIC's emphasis on consumption of fruits, vegetables, and water and many noted that WIC discouraged consumption of juice and sugar-sweetened beverages. Mothers trusted WIC in part because the organization provides food items. One mother commented. "...I think [WIC] gives me what they give me because it is healthy and good for kids..."

Maternal use of social media and perspectives on social media-based interventions to promote health among children—All of the interview participants were social media users and most used FacebookTM. Many mothers used social media and some used the internet to find information related to child health, and several mothers used child-specific mobile phone-based applications such as BabyCenterTM or ParentingTM to acquire information during and after pregnancy. Mothers often used Google to find answers to child-specific questions (e.g., natural remedies for wounds; reasons why young babies cry) while they use social media sites such as FacebookTM, PinterestTM, and YouTubeTM to find child-friendly recipes. For example, one mother described an article she read on FacebookTM: "They showed pictures of different dishes that I wouldn't [have] thought of putting together...they showed that you could take bread and make a little roll up, or toddler sushi roll. And I thought that was interesting, instead of giving them the same old sandwich, it's something different. Or you could use a tortilla and put the lunchmeat in there and roll it up if you don't want to use the bread." Four mothers specifically commented that they avoided use of social media and internet websites for child health information because they did not believe the information to be trustworthy. One mother commented, "I really try not to use FacebookTM and GoogleTM too much for health information, because I don't have a medical background and I don't want to misinterpret something. So I'd rather reach out to

the Healthy Start program or my doctor's office—a more reliable source for health information."

Most mothers expressed interest in social media as a tool to communicate information regarding child health and feeding in the context of a clinic-delivered child health promotion program. Similarly, most mothers (n=16) expressed interest in text messaging as a tool to communicate child health and feeding information.

3.3 Integrated Results

Quantitative findings demonstrated that the WIC program and family members were key sources of influence on mothers' feeding practices and beliefs. Despite high rates of social media use, few survey respondents identified social media as a source that influenced feeding decisions. Qualitative findings served to explain this apparent disconnect by revealing mothers' perceptions about the sources of child health information. Specifically, mothers trusted WIC providers and felt that social media-based information may not be reliable. However, mothers felt that social media could be an acceptable modality for delivering child health information if the content was managed by a trusted source.

4. DISCUSSION

In this mixed methods descriptive study, we describe child feeding practices and beliefs among Hispanic mothers in Detroit, characterize mothers' use of social media, other internet websites, and text messaging, and explore the degree to which these technologies influence how mothers make feeding and health decisions for their children. In accordance with recommendations from the American Academy of Pediatrics (AAP) and WIC, one third of mothers breastfed for over 6 months and the majority did not introduce solid foods until their child was older than 6 months of age. ^{32,33} WIC and family members were the most common sources on information that influenced maternal feeding decisions. Few mothers were concerned about their children's weight status. However, many of the mothers whom we interviewed reported use of food-based rewards for certain behaviors (e.g., using the toilet). This common practice³⁴ is discouraged by professional organizations including the AAP due to its association with excessive caloric intake and eating in the absence of hunger. ^{35–37}

To our knowledge, no prior studies have examined the influence of social media on mother-child feeding practices and beliefs among low-income Hispanic mothers. Rior work has examined social media-based marketing of infant formula and explored the influence of social media use and breastfeeding practices among African American mothers and participants of a pro-breastfeeding online group. Others have described the use social media platforms (e.g. Facebook) to recruit and engage intervention participants. One recent study by Laws et al. used cross-sectional data to examine differences in the use of personal and child health internet resources among mothers and fathers of children and months of age. The majority (80%) of participants in this study were born in Australia. Approximately half of the mothers used the internet to find information about child feeding and were more likely to do so compared to fathers (46.3% versus 17.5%). In contrast with the work of Laws et al, we explored the use of social media and internet resources to find

child health and feeding information among Hispanic mothers in Southwest Detroit. We explored these practices among mothers with children between the ages of 6 months and 36 months. Furthermore, we conducted qualitative interviews to further characterize mothers' beliefs and behaviors around child feeding and to understand mothers' perspectives on the use of mobile health-based interventions to promote child health.

Consistent with prior data, ⁴⁵ we demonstrate high rates of social media use among the Hispanic mothers whom we surveyed. The majority of mothers owned cellphones with text messaging capabilities and utilize social media sites. Most used FacebookTM with much lower percentages using Instagram, Google+, and Snapchat. At least half of mothers used social media and/or other internet websites to find information that influenced their own behavioral health (e.g., diet, physical activity). Despite high usage rates, mothers did not commonly use social media or other internet sources to inform their child feeding practices or beliefs. These findings substantiate prior work demonstrating that Hispanic mothers with young children may not consider social media platforms to be reliable sources of child health information. 46,47 Despite some skepticism about existing content on social media platforms, the majority of our interviewees expressed interest in receiving child health and feeding information through trustworthy social media platforms and/or text messages. Such social media-based strategies have previously been used to promote other health behaviors (e.g., safe sexual practices) among Hispanic populations¹⁵ and to promote healthy dietary habits among general populations⁴⁸ and pregnant women.⁴⁹ A recent study of a multicomponent intervention to promote health behaviors among pregnant and postpartum Hispanic women and their babies utilized a private FacebookTM group to facilitate delivery of health information and communication between participants.⁵⁰ Another study demonstrated that a childhood obesity prevention program, consisting of a private Facebook group, videos, and professional moderation, was feasible and acceptable among low-income mothers⁵¹ and led to modest changes in child feeding practices.⁵² Additionally, WIC mobile phone-based applications are increasingly used to disseminate nutrition resources among low-income families.⁵³ Hispanic mothers in our study identified WIC as a trusted source of information that influences their child feeding decisions. Thus, such approaches warrant testing among Hispanic women enrolled in WIC.

We demonstrated high rates of text messaging use and most mothers expressed interest in text messaging as a tool to communicate child health and feeding information. Text messaging interventions have demonstrated feasibility, acceptability, and positive influences on health behaviors among pregnant and postpartum mothers, ⁵⁴ WIC has successfully used text messaging to promote breastfeeding. ⁵⁵ Notably, many mothers use mobile phone-based messaging applications such as WhatsAppTM or Facebook MessengerTM, which allow for individual as well as group-based messaging. A moderated WhatsApp group for women during pregnancy, for example, was found to be feasible and acceptable among women in Kenya. ⁵⁶ Additional work is needed to examine the role of such interventions among Hispanic women, particularly those with socioeconomic barriers and low educational attainment, as these factors may influence data plan access and health literacy, respectively. Among our sample, 34% of women reported reaching maximum monthly data usage limits and 44% were not high school graduates.

Limitations

Our findings should be interpreted in the context of important limitations. First, the results described in this manuscript were derived from a survey and qualitative interviews among low-income Hispanic women who were patients of CHASS Center, a Federally Qualified Health Center in Detroit, Michigan or who were clients of a Special Supplemental Nutrition Program for Women, Infant, Children (WIC) located in the CHASS Center building. Thus, our findings may not be generalizable to the broader population of Hispanic mothers in other settings. Similarly, WIC was reported to be a primary source of influence on mothers' child feeding practices, yet we did not specifically explore sources of influence among WIC enrollees versus non-enrollees. Notably, most mothers (78%) received medical care at CHASS Center, and were thus exposed to a broad range of sources that may have influenced their child feeding practices (e.g., physicians, nurses, health educators, WIC). From among these sources, they identified WIC as most influential. We are unable, however, to discern the degree to which WIC's co-location within the health center influenced mothers' views or whether WIC might be more or less influential if located elsewhere. This could be explored in future work and may inform WIC programming. Second, we did not purposively sample mothers of overweight or obese children and most of our interview participants did not express concern regarding their children's weight. Thus, while our sample represented a cross-section of mothers in a community clinic, they may underrepresent the views of mothers of overweight or obese children. Study of whether social media influences feeding practices and beliefs among mothers with children with overweight and obesity may be warranted. Third, we did not collect data on the duration of time mothers lived in the U.S. Acculturation may influence child feeding practices and beliefs among Hispanic mothers and could be explored in future work. However, in a prior, larger study of Latina women in this community dietary intake did not vary by duration of U.S. residence.⁵⁷ Fourth, while most interviewees expressed interest in social media- and text messaging-based interventions, all were existing users of these modalities. Accordingly, it is unknown whether such interventions or alternative, scalable health promotion strategies (e.g., email, automated telephone calls) may be acceptable among non-social media or text messaging users. Subsequent work may specifically explore perspectives among non-social media and/or non-text messaging users.

Conclusion

Novel strategies are needed to prevent overweight and obesity among Hispanic children. Mobile health technologies and social media platforms are increasingly recognized as promising and scalable strategies to promote healthy behaviors among Hispanic populations. In our sample of Hispanic mothers in Detroit, MI, rates of social media use were high. Although few mothers reported current use of social media platforms to find information regarding child health and feeding, the majority of mothers expressed interest in social media-based interventions to promote healthy behaviors and eating habits among their young children. The results of this study could be used to develop and test social media-based interventions tailored to the needs of Hispanic mothers of infants and young children. Specific intervention components and strategies may need to be adapted to community-specific issues and needs, ideally based on formative community-based participatory research. For example, mothers in our cohort identified WIC as a trusted source of child

health information and reported high utilization rates or FacebookTM and WhatsAppTM. Thus, one tailored intervention strategy may use a WIC staff member to moderate a private FacebookTM group or communicate with intervention participants via WhatsAppTM. Because mothers expressed concerns about food insecurity, program content may include low-cost recipes and information regarding local grocery store sales and weekly specials.

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Table 1.

Characteristics of mothers who completed surveys (N=66) and subgroup of those who completed interviews (N=19).

Participant Sociodemographic Characteristics		
	Survey Respondents (N=66) n(%)	Interviewees (N=19) n(%)
Age range (years)		
13–19	4 (6.1)	0 (0)
20–29	28 (42.4)	6 (30.0)
30–39	22 (33.3)	11 (55.0)
40+	12 (18.2)	3 (15.0)
Caucasian race	17 (37.0)	5 (31)
Hispanic ethnicity	60 (93.8) ²	19 (100)
Educational Level		
< High school	27 (44.3)	8 (42.0)
High school graduate or GED	21 (34.4)	6 (32.0)
> High school	13 (21.3)	5 (26.0)
	Food Insecurity	
Worry that food will run out		
Never	13 (30.2)	6 (38.0)
Sometimes	20 (46.5)	7 (44.0)
Often	10 (23.3)	3 (19.0)
Run out of food		
Never	15 (34.9)	5 (36.0)
Sometimes	25 (58.1)	9 (64.0)
Often	3 (7.0)	0 (0)
	Feeding practices	
Breastfeeding duration		1
Not at all	8 (12.1)	2 (10.5)
< 1 month	12 (18.2)	3 (15.8)
1 to 6 months	24 (36.4)	7 (36.8)
> 6 months	22 (33.3)	7 (36.8)
Introduction of juice		
< 1 month	1 (1.6)	1 (5.3)
1–6 months	19 (30.2)	3 (15.8)
> 6 months	31 (49.2)	12 (63.2)
Never	12 (19.1)	3 (15.8)

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Frequently reach max data usage

Participant Sociodemographic Characteristics Survey Respondents (N=66) Interviewees $(N=19)^1$ n(%) n(%) Introduction of solids < 4 months 1 (1.6) 4-6 months 19 (30.2) 4 (21.1) 15 (79.0) > 6 months 43 (68.3) **Feeding Influences** Sources influencing feeding decisions Friends 8 (12.1) 1(5.0)Family 36 (54.6) 9 (47.0) Non-family caregiver 3 (4.6) 0(0)Health professional 9 (13.6) 5 (26.0) WIC 41 (62.1) 14 (74.0) Social Media 2 (3.0) 1 (5.0) Internet website 3 (16.0) 4 (6.1) Food cost 1 (1.5) 0(0)Decision(s) about child health influenced by Social Media 10 (16.4) 6 (31.6) Internet websites 13 (22.4) 7 (36.8) Decision(s) about child feeding influenced by Social Media 14 (22.9) 7 (36.8) Internet websites 13 (21.3) 7 (36.8) Information found on social media or internet influenced health decision within past 28 (47.5) 13 (68.0) Information found on social media or internet influenced diet or exercise within past 35 (55.6) 14 (74.0) Cell Phone Ownership/Use 19 (100) Own phone with texting abilities 63 (95.5) Send/receive 1 text/day 40 (69.0) 15 (75.0) Use of texting apps WhatsApp 36 (54.6) 13 (68.0) Facebook Messenger 42 (63.4) 13 (68.0) Other 7 (10.6) 0(0)Have data plan 51 (78.5) 16 (89.0)

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Home Internet Use

19 (34.0)

5 (31.0)

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Participant Sociodemographic Characteristics $\begin{array}{c} Interviewees~(N=19)^1 \\ n(\%) \end{array}$ Survey Respondents (N=66) n(%) Have access to home internet 42 (63.6) 13 (68.0) Social Media Use, Preferences, and Frequency Use social media 63 (95.5) 19 (100) Social media preferences 54 (81.8) 16 (84.2) Facebook Twitter 5 (7.6) 2 (10.5) Instagram 22 (33.3) 6 (31.6) Google+ 22 (33.3) 7 (36.8) 18 (27.3) 3 (15.8) Snapchat Use social media once per day 46 (75.4) 14 (78.0)

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