*Research Article*

# Facebook: The Use of Social Media to Engage Parents in a Preschool Obesity Prevention Curriculum

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## ABSTRACT

**Objective:** This study investigated the use of Facebook to deliver health-related education materials to augment a preschool classroom-based obesity prevention curriculum.

**Design:** Cross-sectional, mixed methods (descriptive and interviews).

**Setting:** *Head Start* classrooms administered by 2 large agencies (1 rural and 1 urban).

**Participants:** Convenience sample of parents in 13 classrooms (cohort 1, 3 classrooms; cohort 2, 10 classrooms).

**Intervention:** Delivery of nutrition education curriculum content using social media (Facebook).

**Variables Measured:** Qualitative interviews assessed barriers and facilitators to Facebook use. Parent views, likes, and comments were measured to reflect parent engagement with Facebook.

**Analysis:** Content analyses (qualitative data) and descriptive statistics (quantitative data).

**Results:** Family access (views) and interaction (comments and likes) with the posts varied based on type and content of posts. Rural families were more active. Barriers to parental Facebook engagement included a desire to see more posts from classroom teachers, lack of time, and misunderstanding about privacy protections. Facilitators of parental Facebook engagement included perceived utility of the content and social support.

**Conclusions and Implications:** Facebook was found to be a feasible platform to provide nutrition education and facilitated varying levels of parental engagement. Lessons learned and implications for prevention and intervention programming are offered.


**Key Words:** social media, nutrition promotion, preschool, obesity prevention (*J Nutr Educ Behav*. 2018;50:4-10.)

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## INTRODUCTION

Early nutrition predicts long-term cognitive, social, and physical health outcomes.[1-3] However, many children aged <5 years are not meeting daily recommendations for minimum nutrition, especially those in low-income families.[4] Parents and other adults are the gatekeepers for the food that is purchased and prepared for young children. In addition, children are influenced by the consumption of the adults around them. These factors make parents a key target audience for interventions aiming to improve nutrition for young children.

Parents of at-risk youth face many barriers to enrolling and attending in-person intervention programs.[5,6] Recruitment rates for families of low socioeconomic status are <31%[7] and attrition rates are high even when low-income parents are successfully enrolled and provided with transportation and child care.[8] In a survey of mothers enrolled in *Head Start* (HS), the greatest reported barriers to involvement in a parent education program were schedules that conflicted with HS activities and having another child.[9] Time constraints,[10,11] child care needs,[11] fewer people in the household,[12] transportation issues,[10] and work conflicts[10] are known barriers to enrolling and remaining engaged in parent education.

This has led to an array of innovative delivery options for parenting information.[13] Options of information delivery and support for behavioral change likely to be successful are based on key adult learning principles. Adult learners have a history of life experience, are self-directed and internally motivated, and learn best when they have a need to know or a

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problem to solve.[14] Research based on social learning theory made it clear that when faced with chronic adversity, people are more likely to commit themselves to shorter-term, more immediate goals.[15] Consistent with this theory, intervention programs should be provided in small doses, available on-demand to accommodate the life exigencies of low-income families, allow active interchange (rather than a passive experience), and be provided by a reliable expert or respected source.

Technology provides a solution and has the potential to allow nutrition educators to connect with at-risk populations.[16] The Internet has long been the most used resource for health information.[17] Studies reported successful use of the Internet for nutrition education.[18,19] Rates of technology use in low-income populations are high, including wireless Internet,[20] cell phones,[21] and various social media,[22] and are similar to those of individuals with greater socioeconomic status.[23] In fact, 47% of US adults and 72% of young adults (aged 18–29 years) use Facebook for social networking.[22]

Nutrition education and promotion efforts have increasingly examined the utility of technology, particularly social media. Research on the *Supplemental Nutrition Assistance Program* found that videos posted to social media among contacts with participants increased engagement.[24] Results of the *Expanded Food and Nutrition Education Program* found that participants were interested in receiving nutrition information via social media,[25] were engaged with videos,[26] and indicated preferences for networking opportunities.[27] Another strategy involved Pinterest boards designed to deliver nutrition resources and recipes.[28] Nutrition experts agreed with the perceived opportunities to use technology for meal planning, cooking demonstrations, and sending nutrition messages to families.[29] Although Internet-based and technology-based (eg, texting) obesity prevention and intervention programs exist, exploration of the use of Facebook within these programs has been limited.

This multiphase mixed-methods study[30] examined the feasibility of Facebook as a component of a center-based, combined obesity prevention and nutrition curriculum, *We Inspire Smart Eating* (*WISE*).[31] In a preliminary study, a needs assessment survey was used to evaluate the potential of technology to provide a platform for an active parent component. The survey was targeted for parents at HS centers regarding their technology access and use.[16] Results from the needs assessment found that the majority of caregivers frequently used some form of technology to access the Internet (57% used Facebook) and were interested in receiving educational information via technology (88%).

## METHODS

### Sample

The convenience sample in this study reflected data collected across 2 cohorts from classrooms administered by two HS agencies in a southeastern state. One HS was located in a rural setting (population, 28,533); the other was urban (population, 193,524). The urban HS had a stable enrollment (n = 928) of 70% African American, 5% white, and 5% other/mixed/unknown families (20% Hispanic). The rural HS had a stable enrollment (n = 742) of 18% African American, 70% white, and 13% other/mixed/unknown families (17% Hispanic). In cohort 1 (school year 2012–2013), 3 classrooms participated (1 urban and 2 rural), and in cohort 2 (school year 2013–2014), 10 classrooms did so (6 urban and 4 rural). Maximum enrollment in each class was 20 children. The study was approved by the institutional review board at the University of Arkansas for Medical Sciences.

### Curriculum Description

The objective of *WISE* was to maximize children's interaction with the target foods (8 fruits and vegetables, each featured for 1 month), get children excited about the experience, and give children successful experiences with the target food. Eight monthlong units provided a lesson plan schedule, small group activities, how to integrate into other educational activities (eg, math, reading), parent engagement materials, and recipes. The *WISE* curriculum includes a puppet mascot, Windy Wise the owl.[31] Consistent with literature on the influence of characters on children's food choices,[32,33] Windy encourages healthy habits in the classroom. Windy delivers letters from farmers who grow the target foods, visits children when *WISE* lessons occur, and appears when *WISE* foods are served at mealtime. The Facebook component was intended to engage parents and translate the *WISE* message to the home.

### Facebook Component of Curriculum

The *WISE* research team created a Facebook account for Windy Wise and a closed Facebook group for each class. A closed Facebook group is accessible only by those who are invited to participate. Teachers received training on the curriculum and the use of Facebook. Parents received an invitation to join the closed Facebook group for their child's HS classroom. Research staff attended enrollment events to assist families in joining groups and obtained consent to post pictures of the children. Research staff posted Facebook content as the mascot, Windy Wise. Teachers were encouraged to post pictures including, but not limited to, *WISE* activities.

The content of the posting plan[34] was based on focus groups conducted with parents in a development phase. As seen in Table 1, this resulted in 8 content areas and 6 formats. Example posts are provided in Table 2. The researchers used HootSuite software to schedule posts of varying content and times across the day and week. The posts were written and reviewed by research staff with expertise in nutrition, social work, and educational psychology.

### Data Collection and Analyses

*Quantitative*. Because Facebook groups were closed, the Facebook analytics function was not available. Therefore, the research team manually logged the day and time, content type (eg, parenting, recipe), post type (eg, link), number of views, comments, and likes for all posts as a reflection of parent engagement. Descriptive statistics were calculated by content and format. Descriptive statistics of parents were computed based on the number of post views (ie, indicating that they saw the post even if they did not like it or comment on it).