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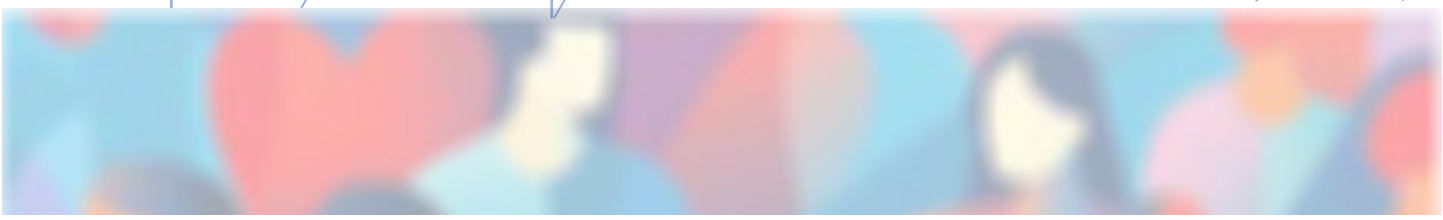

President's Message

On behalf of the 2022-23 NEAFCS Executive Board, the editors and the committee of the Journal of the National Extension Association of Family and Consumer Sciences (JNEAFCS), I am pleased to present to you the 2023 JNEAFCS. This peer-reviewed, research-based journal is one of our premier member resources and a benefit to our members. The JNEAFCS helps inform others in the profession of Family and Consumer Sciences about the scholarly work of Family and Consumer Sciences Extension professionals. The JNEAFCS highlights research, best practices, and implications for Extension Family and Consumer Sciences educators, agents, and state specialists. The JNEAFCS serves as a great tool to help you stay current with programming, research, and methodology that is specific to our learning and teaching environments.

As you read the 18th volume of the JNEAFCS, I know you will be inspired by the work of your colleagues throughout the U.S. Consider your own body of work, research, and impacts that could be shared with NEAFCS members in the future. Please consider making the submission of your program results among your professional goals for a future JNEAFCS article.

As an online resource, JNEAFCS can be shared as a link with a personal note to your administrators, local and state policymakers, advisory groups, and peers. By sharing the JNEAFCS, you can help connect efforts of Extension Family and Consumer Sciences professionals to the collective impact that Family and Consumer Sciences have across the nation.

Thank you to co-editors Ashley Dixon of University of Arizona Cooperative Extension and Rebecca Hardeman of University of Georgia Cooperative Extension for their dedication and hard work in creating an awesome Journal. I appreciate the members of the Journal committee, peer reviewers, and Vice President for Member Resources, Michelle Wright of Texas A&M AgriLife Extension Service. Because of their commitment to NEAFCS and the Journal, we have a quality, peer-reviewed professional publication that helps preserve our research and resources for the future.

Sincerely,

Julie Garden-Robinson, President 2022-2023
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From our Editors

As the current year comes to a close, we are thrilled to extend our gratitude to all the authors, subcommittee members, and peer reviewers who have contributed to the Journal of the National Extension Association of Family and Consumer Sciences in 2023. Your dedication to advancing knowledge in family and consumer sciences has undoubtedly enriched the scholarly landscape of our esteemed journal. The depth and diversity of the submissions have not only reflected the vitality of our field but have also inspired meaningful discussions and insights that resonate with our readerships far and wide.

As we turn our attention to the upcoming year, we encourage both seasoned and emerging scholars to consider submitting their work to our journal in 2024. The Journal of the National Extension Association of Family and Consumer Sciences thrives on the collective wisdom and expertise of our community, and your contributions play a pivotal role in shaping the future of our discipline. Whether it's research findings, innovative methodologies, or thought-provoking perspectives, we welcome a broad spectrum of submissions that showcase the breadth and depth of family and consumer sciences. Thank you for your continued support, and we look forward to another year of compelling research and scholarly excellence. Please enjoy the 2023 Journal of NEAFCS, and we look forward to seeing your submissions for the next journal by April 15, 2024.

Be safe and be well!

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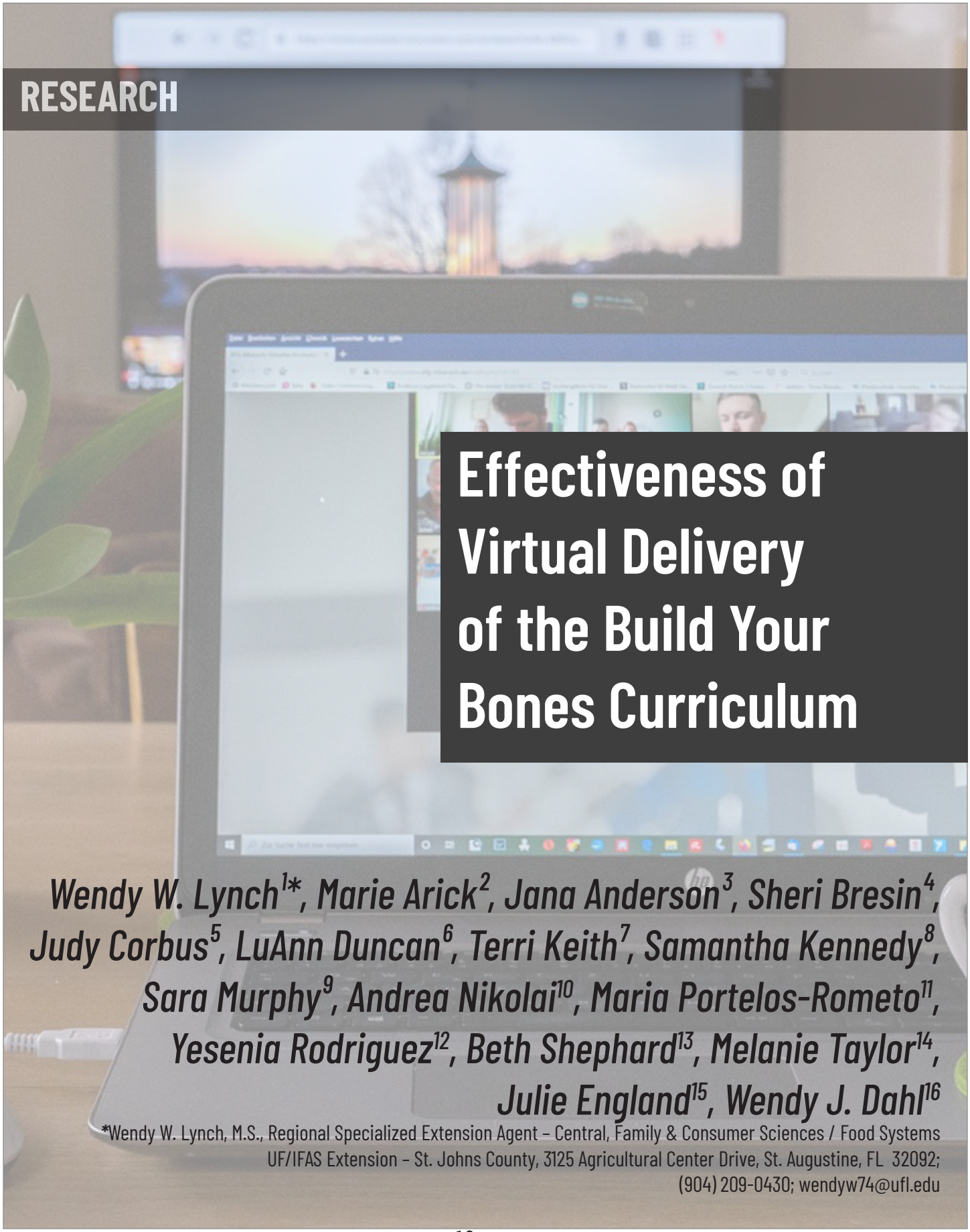

Effectiveness of Virtual Delivery of the Build Your Bones Curriculum

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Abstract

Bone health is essential for quality of life and lifelong independence. The Build Your Bones curriculum, designed for the prevention of osteoporosis and adapted to include fall prevention and balance improvement, was piloted as a seven-session virtual series. Post-session evaluations supported knowledge gain, whereas the post-series survey showed bone-friendly lifestyle outcomes related to dietary intake, physical activity, strength training, balance, and posture, as well as positive steps toward personal health, such as reducing fall hazards and requesting vitamin D and bone mineral density testing. Delivering Build Your Bones as a virtual program effectively supports bone health knowledge and behavior change.

Effectiveness of Virtual Delivery of the Build Your Bones Curriculum

Osteoporosis is viewed as a disease of aging. Bone mass peaks in young adulthood, followed by a gradual loss as we age, with an acceleration at menopause in women (Karlamangla et al., 2018) and late middle age in men (Laurent et al., 2019). This timeline of disease development provides a lengthy window for primary and secondary prevention efforts. Although genetics influence susceptibility to osteoporosis (Yang et al., 2020), lifestyle factors are critical for ensuring maximal bone accrual (Weaver et al., 2016) and slowing the progression of bone loss and resulting fractures (Lewiecki et al., 2020). The numerous lifestyle factors that impact bone health, including diet, exercise, body weight, smoking, and alcohol intake (de Villiers & Goldstein, 2022), are modifiable through community programming that promotes goal-setting and behavior change. The deleterious impacts of osteoporosis and related fractures on quality of life (Dziedzic et al., 2022; Wilson et al., 2012), together with the high costs of treating fractures, caring for these patients, and lost productivity (Lewiecki et al., 2019), support the need for targeted Extension programming to reduce the disease burden. Extension programming has been delivered face-to-face for over 100 years. However, the COVID-19 pandemic lockdown shook this foundation, resulting in a rapid shift to online programming (Dorn et al., 2021). Although challenging, the pandemic precautions highlighted the ease, reach, and low cost of online programming and its efficacy for disease prevention and management. For example, Family and Consumer Sciences (FCS) Extension successfully implemented a virtual National Diabetes Prevention Program during the pandemic (Wilson et al., 2022). Likewise, healthcare and education provide additional examples of successful virtual program delivery, such as a human immunodeficiency virus (HIV) pre-exposure prophylaxis program (Patel et al., 2022) and physical activity and nutrition education delivery (Whalen et al., 2021). However, the target audience for virtual education delivery requires consideration to determine its feasibility and effectiveness across age cohorts.

Healthy lifestyle choices are critical to bone health through the stages of life; however, urgency and interest in osteoporosis and prevention of fractures are typically greater in an older adult cohort. Although educational interventions have been shown to increase the knowledge of older adults regarding osteoporosis (Gai et al., 2020), the effectiveness of virtual program delivery requires evaluation. Given that many older adults have smartphones, do online banking (Wild et al., 2019), and are comfortable with online video conferencing platforms such as Zoom (Vincenzo et al., 2021), it was hypothesized that virtual delivery of a bone health program would be feasible and effective in eliciting positive behavior change.

Objective

This study aimed to assess the effectiveness of virtual delivery of the Build Your Bones curriculum on bone health knowledge, intentions, and behaviors of middle-aged and older adults.

Methods

Curriculum Development

The Build Your Bones curriculum was initially developed to target middle-aged women with a focus on the prevention of osteoporosis. However, local delivery of the program suggested that many attendees were older women and men who had already developed osteopenia or osteoporosis. The series was adapted over time to include more fall prevention and balance improvement to better serve this audience. The curriculum was delivered face-to-face statewide in Florida in 2019 and, following, updated with the most recent evidence-based content. In collaboration with dietetic faculty and graduate students in the Food Science and Human Nutrition Department, University of Florida, the program was evaluated using an adaptation of the Society for Nutrition Education and Behavior (SNEB) MyPlate e-Catalog review form. The revised curriculum has seven, one-hour lessons (Lesson 1: Osteoporosis Overview, Lesson 2: Screening and Medications, Lesson 3: Eating Tips for Your Bones, Lesson 4: Nutrition for Bones Health, Lesson 5: Bone Builders and Bandits, Lesson 6: Staying Strong, and Lesson 7: Physical Activity and Bone Health). Lessons include a lesson plan, key points, a PowerPoint presentation, take-home messages, interactive activities, and handouts.

Virtual Programming Evaluation

The Build Your Bones curriculum was delivered during the noon hour using the Zoom platform by a team of 14 FCS Extension agents, serving as presenters and co-moderators in April and May 2022. Post-session surveys examining session-specific perceived knowledge gain and intended behavior changes were sent via Qualtrics® to all attendees. Additionally, a 4-month post-series survey queried if participants had taken steps to improve or maintain bone health and if they perceived improvements in their health or wellness due to attending the virtual Build Your Bones program. The study was approved by the University of Florida Institutional Review Board 2 (IRB201900131). Following program delivery, members of the FCS team reflected on the successes and challenges of virtual program delivery.

Results

The Build Your Bones virtual series (7 sessions) attracted 280 synchronous-session participants with an average attendance of 40 for the single cohort, ranging from 49 (first session) to 34 (final session). Twelve out-of-state attendees (potentially duplicated participants) joined a session.

Osteoporosis Overview

Following Lesson 1, Osteoporosis Overview, survey respondents (n=32) agreed or strongly agreed that they increased knowledge of osteoporosis (81%), who is at risk (84%), the most common fracture sites (94%), and the risk factors (88%). Additionally, most respondents reported increased confidence in assessing their personal risk of osteoporosis (91%). When asked about intent to change behaviors related to personal risk factors, most respondents reported that they intended to increase calcium intake (63%) and exercise (72%).

Screening and Medications

Following Lesson 2, Screening and Medications, survey respondents (n=27) agreed or strongly agreed that they increased their knowledge of screening for osteoporosis (93%), medical conditions that affect bone health (96%), medications that contribute to bone loss (96%), and medications used to treat osteoporosis (96%). All respondents agreed or strongly agreed that they had increased confidence related to steps they can take to strengthen their bones. Respondents intended to discuss with their healthcare provider how their medications may affect their risk for osteoporosis (56%) and fracture (44%). Additionally, 30% of respondents intended to get a bone density test.

Food and Nutrition

Three sessions focused on food and nutrition topics related to bone health. In response to Lesson 3, Eating Tips for Your Bones, respondents (n=32) agreed or strongly agreed that they increased knowledge on the importance of "food first" for the prevention of osteoporosis (88%), calcium supplements (91%), medications that interfere with calcium absorption (81%), and risk factors for vitamin D deficiency (88%). They reported increased confidence related to steps they can take to ensure adequate calcium and vitamin D intake (91%). Respondents intended to choose 'bone friendly' foods more often (81%), check the labels of their vitamin and mineral supplements (66%), increase calcium (59%) and vitamin D intake (47%), and get their vitamin D blood level checked (34%). Following Lesson 4, Nutrition for Bone Health, respondents (n=24) indicated increased knowledge of the MyPlate eating pattern (96%), calcium requirements (100%), food sources of calcium (100%), vitamin D requirements (100%), and food sources of vitamin D (100%). Respondents intended to choose magnesium-rich (71%) and calcium-rich foods (88%) and sources of vitamin D more often (75%) and to decrease their intake of processed foods with phosphorus additives (67%). Following Lesson 5, Bone Builders and Bandits, respondents (n = 21) agreed or strongly agreed that they increased knowledge of how beverage choice affects bone health (100%), sodium intake impacts the risk of osteoporosis (86%), dietary fiber affects calcium absorption (95%), foods high in oxalates (95%), and protein and bone health (90%). Respondents intended to choose foods high in dietary fiber more often (57%), more nutrient-dense foods to support bone health (81%), and cola beverages less often (29%).

Balance and Physical Activity

Body movement was a theme addressed through most lessons. Lesson 4 concluded with a virtual demonstration of yoga poses; 71% of survey respondents intended to practice yoga poses, and most increased confidence in performing yoga poses for balance (96%). Similarly, in Lesson 5, simple stretches were performed; 76% of survey respondents intended to stretch more often, and 95% reported increased confidence in performing simple stretches. After attending Lesson 6, Staying Strong, respondents (n=18) agreed or strongly agreed that they increased their knowledge of posture and alignment (78%), risks of falling (94%), the importance of improving balance (100%), and ways to avoid falls (100%). Additionally, they agreed or strongly agreed with "increased confidence related to steps I can take to stay strong" (94%). Respondents intended to reduce fall hazards in their homes (67%), improve their posture (78%), practice balance exercises (100%), and install a safety feature in their homes (22%). Following Lesson 7, Physical Activity and Bone Health, respondents (n=22) agreed or strongly agreed that they increased their knowledge of weight-bearing exercise (95%), training and resistance training (95%), physical activity guidelines for different life stages (95%), and exercising safely with osteoporosis (95%). Many noted increased confidence in setting up a home fitness center (77%). Survey respondents intended to increase bone-building exercises (82%), try an exercise they enjoy and fits into their life (64%), hydrate more often when exercising (55%), exercise safely with osteoporosis (42%), and purchase hand-held weights (18%).

Post-series Evaluation

Respondents (n=22) to the post-program surveys represented 12 Florida counties. Participants were asked, "As a result of attending the Build Your Bones educational series, have you taken any steps to improve or maintain your bone health?" Of the respondents, 91% (n=20) responded positively with a "yes." In response to "Which steps have you taken to improve or maintain your bone health?" respondents indicated making many behavior changes (see Table 1). None of the participants noted that they had quit smoking or changed their behavior regarding adhering to their osteoporosis medication instructions, and these options may not have been applicable. When asked if they had any improvements in health or how they felt due to attending the Build Your Bones program, respondents noted: "More exercise," "Trying to reduce my weight little by little," "I feel a difference since taking vitamin D on a regular basis," and "better posture and balance." Concerning the quality of their overall experience during the Build Your Bones educational series, 65% reported excellent, 30% good, and 5% average. Respondents indicated they

were extremely (80%) or somewhat likely (20%) to recommend the Build Your Bones series to a friend, family member, or co-worker. Finally, participants were asked to provide any comments or suggestions for the Build Your Bones educational program. One respondent stated, "This is a great program. I learned a lot about what affects bone strength. I will now be more diligent about taking my calcium and D3." Another respondent commented, "We are having a bathroom redone and didn't even think of the grab bar. Thanks for the idea!" Additionally, one participant responded with the following comment:

> ***This class was an awakening for me. I have always had high [intakes] of vitamin D and calcium. However, I now have developed osteopenia and my vitamin D levels were extremely low. I am taking some of the tips from the program and using them hoping to improve or stay the same, not get worse! Thank you for the program.***

Suggestions for program improvement included adding details regarding food sources of calcium for a vegan diet and enhancing the yoga demonstration. Additionally, one participant noted that the section on label reading, specifically interpreting Daily Values, was confusing and, thus, requires additional explanation and clarity.

Discussion

Overall, the virtual delivery of the Build Your Bones curriculum resulted in knowledge gain, intention, and behavior change supportive of bone health. These findings agree with a recent systematic review concluding that education increased knowledge of osteoporosis in older adults (Gai et al., 2020). However, the present program may have been more comprehensive than those reviewed, as the content not only covered osteoporosis but added education on food and supplement choice, balance and fall prevention, and physical activity. The virtual delivery of this health and wellness program proved to be feasible, as has been previously demonstrated by healthcare delivery (Li et al., 2021) and mental health support programs (Taylor et al., 2020).

Excellence in health and wellness programming requires continued reflection and improvement, including timely curriculum revision. Team reflection, along with the participant evaluation process, identified several points for consideration. It was suggested to have a yoga professional demonstrate balance poses for potentially high-risk participants. Given the logistical and cost implications of securing a yoga professional for future program delivery, team members instead agreed to develop succinct balance and stretching videos for use in future virtual program delivery. There was consensus among team members that incorporating more interactive activities during the sessions would add value to the program. Increased interaction, although challenging in a virtual format, may help to reduce attendance attrition. However, the attrition may also have been due to the number of sessions or relative interest in session topics. Additionally, team members suggested that developing lesson-specific fact sheets might strengthen the program and be particularly useful for future in-person delivery of the program. A final consideration was related to participant goal setting. Although there was agreement on the importance of goal setting and follow-up to increase the effectiveness of the program, there was not a team consensus as to whether time for participants' goal sharing should be implemented for future virtual program delivery, primarily given time constraints. Real-time polling may be a more time-efficient, interactive activity to satisfy the perceived need for participation and goal setting, and may possibly contribute to program evaluation.

The virtual Build Your Bones program evaluation included a post-session and post-program participant reflection on perceived knowledge gain, intention, and behavior change rather than a pretest-posttest knowledge-based design. The current expectation for Florida state-wide Extension programming is that county faculty write their knowledge gain (short-term intended outcomes) objectives as the number of participants or percentage of participants who increase their knowledge by at least a specified percentage, based on pre and post-test scores. Thus, the current program evaluation may need to be revised to meet the expectations of the Florida Extension administration. However, evidence suggests that a retrospective pre-test may be more appropriate for perceived knowledge and abilities than a pretest-posttest design impacted by response shift bias (Drennan & Hyde, 2008).

Furthermore, there may be unintended effects of anxiety due to testing and test failure, which has been shown to impact memory (Cavuoto et al., 2021), a potential problem for an education program. Such anxiety may be lessened if test data are collected anonymously without sharing the results with participants. Still, additional steps would be needed to match individual responses to the pre and post-tests.

In conclusion, the Build Your Bones virtual program, delivered by a cohesive team of FCS agents, provided thorough and effective coverage of bone health topics. Participants who responded to the evaluation surveys felt they received the information they needed to empower lifestyle change. Future work is required to evaluate the in-person delivery of the Build Your Bones program, with and without the addition of hands-on learning experiences such as cooking and taste-testing of bone-friendly foods, as well as group-based balance and stretching activities.

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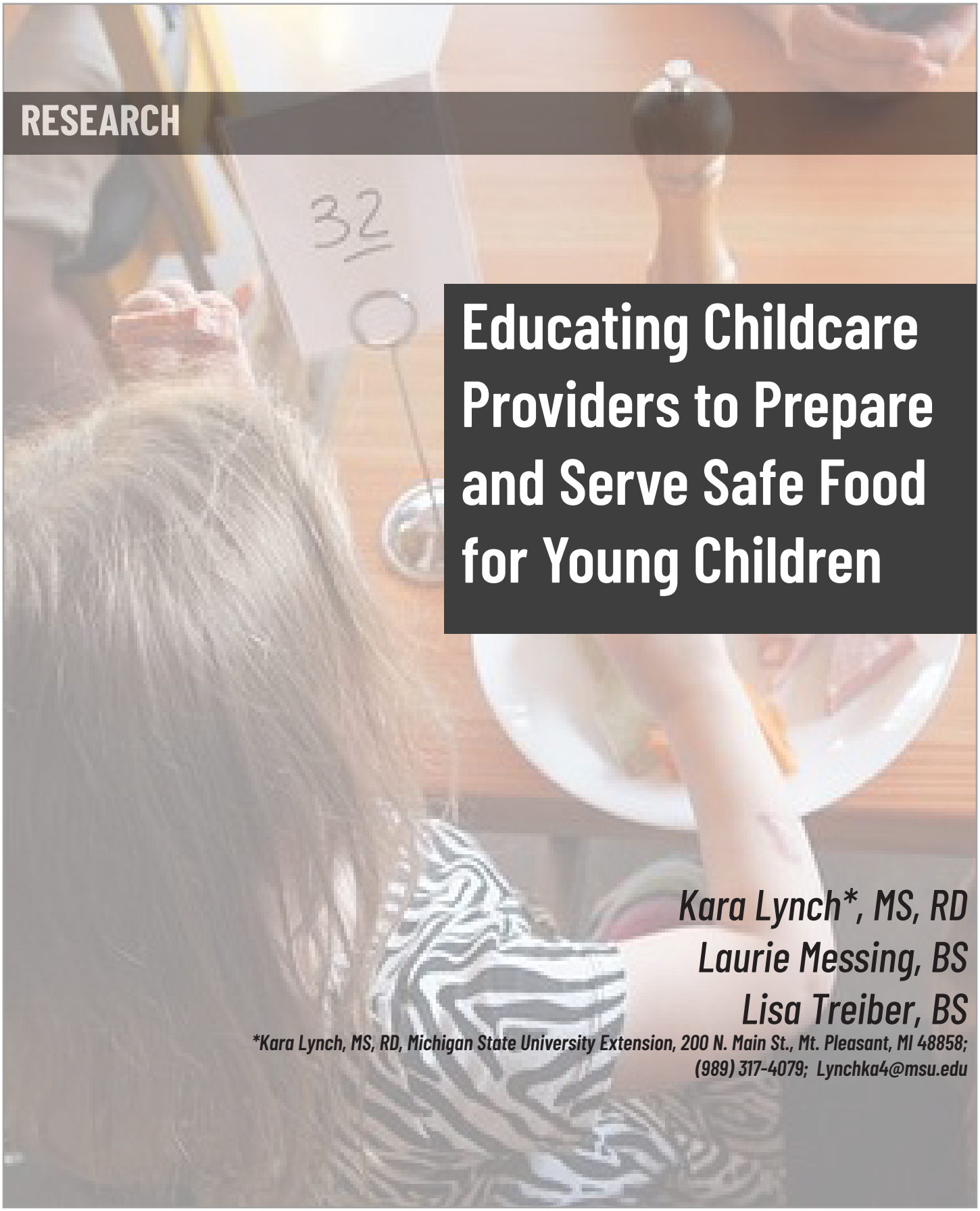
Table 1

Behavior-change items selected by Build Your Bones program participant survey respondents at 4 months post-program.

Behavior change	Number of responses
I choose more nutrient-dense foods to support bone health	5
I choose less processed foods more often	4
I choose foods high in calcium more often	5
I choose foods high in vitamin D more often	3
I reduced my cola beverage consumption	3
I started taking a calcium and/or vitamin D supplement	2
I read labels on vitamin/mineral supplements	2
I increased my physical activity level	5
I adopted new strength-training exercises	4
I adopted new balance or posture activities	4
I stretch more often	3
I hydrate more often when exercising	1
I exercise more safely due to my osteoporosis	1
I reduced fall hazards in my home	2
I had my vitamin D blood level checked	2
I had a bone density screening	3
I discussed with my health care provider about my osteoporosis/fracture risk and/or related medications	1
I reduced my alcohol intake	1



RESEARCH

Educating Childcare Providers to Prepare and Serve Safe Food for Young Children

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Abstract

Michigan State University Extension's Safe Food=Healthy Kids curriculum is a comprehensive three-hour food safety education program for childcare providers intended to reduce foodborne illness in young children. In Michigan there are no requirements for food safety training for childcare providers, yet this workforce prepares food for an at-risk and vulnerable population. Post-class program evaluations (n=1,906) and follow-up surveys (n=149) show evidence that education to childcare providers increases their food safety knowledge and behaviors (i.e., thermometer use, cleaning/sanitizing, time and temperature control); thus, providing safer food for children. The program is available to implement virtually or in-person and as a train-the-trainer.

Educating Childcare Providers to Prepare and Serve Safe Food for Young Children

Foodborne illness reaches all segments of the population, but children are disproportionately affected (Reynolds, 2016). Not only do children under the age of five account for 30% of all foodborne illness related deaths (WHO, 2015), but children in childcare facilities have reported acute infectious diarrhea two to three times than of children cared for in their own homes (Collins et al., 2018). Lack of food safety training for childcare providers and lack of adherence to effective diapering and hand hygiene practices as well as improper use of food preparation equipment may result in poor quality control for factors that affect food safety (Enke et al., 2006). Childcare providers furnish the bulk of children's nutrient intake, yet, according to the National Database of Child Care Licensing Regulations (2017), only 20 states require providers to have Health and Safety Training. The need for food safety education for childcare providers is critical to prevent foodborne illness in children.

The Centers for Disease Control and Prevention (CDC) estimates 48 million Americans become ill with foodborne illness every year, and up to 3000 of these cases will result in death (CDC, 2018). Based on data from the Michigan Department of Education, there are approximately 10,000 childcare provider homes and centers throughout Michigan, providing more than 42 million breakfasts, lunches, and snacks annually (CACFP, 2020). In Michigan, there are no requirements for food safety training for childcare providers, making community-based options for education necessary. By educating childcare providers they can improve their knowledge and skills and have the potential to be a trusted source for food safety practices through their interactions with families and caregivers, thus decreasing the overall foodborne illness risk for children.

Purpose

Safe Food = Healthy Kids (SFHK) is a food safety education program created to educate childcare providers on food safety best practices thus minimizing the incidence of foodborne illness in young children and their accompanying health disparities. The purpose of this paper is to share the development, delivery, and evaluation of this novel food safety education program focused on childcare providers. Michigan State University (MSU) Extension Educators identified that existing food safety curriculums did not meet the need to educate childcare providers who are caring for a high-risk population. The positive impact on providers' food safety practices as captured in the program evaluations, and the opportunity for this program to be implemented in other states is highlighted.

Method

Program Development

SFHK was created and implemented in 2017, with funding for program development and pilot testing from the Michigan

Health Endowment Fund grant. Grant funds supported the work of four Educators to develop the curriculum, marketing materials, resources, and participant incentives. The pilot programming began in six Michigan counties, consisting of both rural and urban audiences. Pilot SFHK class locations included community settings, childcare centers, and Extension offices. Classes were offered in the evening to accommodate childcare provider's demanding daytime schedules. The delivery method was designed for in-person programming. Grant funds were used to procure incentives including branded insulated grocery bags, refrigerator/freezer and food thermometers, laminated index resource cards and a printed packet of food safety resources.

The need for curriculum revisions was identified following the initial 12-month pilot phase. Participant feedback led to further modifications of the curriculum presentation and supplemental pieces to enhance the program including more in-depth information on pathogens and thermometer use. Also added was a lesson on High Speed Handwashing, a resource from Oregon State Extension (2020); an expanded sanitizing lesson; and the development of a Safe Sanitizing and Disinfecting fact sheet.

SFHK program outcomes are self-reported and collected through a post-class evaluation measuring both participant's behavior change and food safety knowledge gained. The evaluation process received IRB approval from the university research office. Participation in the survey for program evaluation purposes was completely voluntary. The survey was designed to gather information illustrating what participants learned regarding current safe food handling practices and what they plan to implement after the program. The survey has six questions in which participants self-report what amount of new information they learned from the program in the areas of both food safety knowledge and behavior change. The survey uses a Likert Scale allowing participants to report what amount of new knowledge was learned following program completion (no new knowledge, some new knowledge, a moderate amount, and a great deal). Questions measured plans to implement food safety behaviors to improve food safety practices. Participants indicated which food safety practices they "planned to do" because of the course and those that "plan to do more often". If participants reported learning either "some," "a moderate amount," or "a great deal," they were combined into one group to create a percentage of participants who improved their knowledge. Likewise, those who "planned to do" or "do more often" were combined into one group for a percentage of participants that will engage in food safety behaviors more often because of the course. The survey also has an open-ended question allowing participants to provide further anecdotal feedback and comments. The same evaluation questions were collected for in-person and virtual programs, using paper and electronic options depending on the class delivery format. Online surveys were collected using a QR code or direct link to a Qualtrics survey; surveys collected on paper were manually entered into Qualtrics. Spreadsheets were exported from Qualtrics for data analysis in Excel and Statistical Package for Social Sciences (SPSS).

Additionally, a follow-up evaluation was also conducted with participants who had completed the class in the previous three to nine months. The protocol for this follow-up survey involved electronic distribution of the survey link to a sample of past participants using Qualtrics. Participant consent was received as part of the Qualtrics survey. Before being directed to the survey questions, participants had the opportunity to opt out, or if they agreed, move forward with survey completion. Upon completion, participants were directed to a separate Qualtrics survey to collect their name and email address for a $10 gift card incentive distribution. This process kept identifiable information separate from survey responses used in the present study.

Program Delivery

SFHK is a three-hour educational program with a PowerPoint presentation and a facilitator's guide with prompts for activities to engage audience and follow-up resources and handouts. The program objectives for class participants are to:

- Learn the sources of foodborne illness and why children are considered high risk
- Understand the basic principles of safe food handling
- Identify incorrect food handling practices
- Determine proper sanitizing procedures
- Recognize reputable food safety resources

The format was adapted in 2020 to include either a single session or two, one and a half hour sessions. The coronavirus pandemic halted in-person classes resulting in the transformation of the program to an online version with an interactive format, utilizing polls and discussion questions. Accommodations for program participants are made upon request including closed captioning and resources for visual learners. Educational resources are sent in a follow-up email after program completion. Participants can sign up for a supplemental, optional, weekly texting program which sends food safety text messages with links and/or videos to subscribers.

Marketing

Multiple marketing avenues were used for SFHK program promotion. Within MSU Extension, weekly informational emails with upcoming programs and events were sent to 83 county offices. Materials were created to share with local and statewide community partners and included: postcards for childcare providers and MSU Extension staff, class flyers, and social media graphics. All marketing print materials and online graphics were designed with MSU Extension branding and logo used to maintain the program's identity (Figure 1). The MSU Extension Safe Food = Healthy Kids program maintains a web page which features resources, articles, and upcoming classes. Great Start to Quality (GSQ) is a statewide rating and quality improvement organization used to promote statewide professional development opportunities, track attendance, and record training hours for childcare providers. Because the GSQ online platform is a mandatory tool, it effectively led to the majority of participant recruitment.

SFHK was highlighted at the 2021 National Extension Association of Family and Consumer Sciences (NEAFCS) Annual Conference during a concurrent, ignite, and poster session for marketing and recruitment. Further exposure was gained as SFHK received multiple NEAFCS awards: national award winner in 2020 for the Food Safety Award; five-time regional award winner; and six-time state award winner.

Results

Since the program's inception in 2017, 1,999 childcare providers participated in 80 SFHK training sessions. During the pilot period, demographic data revealed the average age of participants was 41 years; 98% were women; 75% were White, 19% Black and 5% Hispanic; and 34% were a high school graduate, 29% had some college, and 34% had a college degree or vocational training.

Following the pilot phase, work has been done to expand participant diversity. Self-reported data shows the diversity of participants in 2020-21 included 52% Caucasian, 25% Black/African American, 4% Asian and 1% American Indian, as compared to 2017-19 with a mostly Caucasian audience of 96%. This increase was due to the transition to online programming which created opportunities to reach a larger and more diverse audience throughout the state. Participants spanned from over 84% of Michigan counties and resulted in an increase in ethnic diversity by 33%. The frequency of programming and participation also increased with virtual delivery. For example, 11 sessions were delivered in 2019 with 124 participants, compared to 20 sessions in 2020 reaching 958 participants (673% increase).

Post-class evaluation data from the past five years of both in-person and virtual programming indicates improved food safety knowledge and practices of childcare providers who participated in SFHK. From 2017 to 2021, 1,906 participants completed the post-class evaluation survey. Data show increases in the following participant behaviors (Table 1):

- 71% plan to check food temperature with a calibrated food thermometer
- 46% plan to cook foods to proper temperature
- 61% plan to limit the time food spends in the temperature danger zone
- 68% plan to cool foods quickly

Respondents also gained new knowledge in the following areas: Personal Hygiene, 55%; Controlling Time & Temperature, 84%; Cross Contamination, 72%; Cleaning & Sanitizing, 67%; and Foodborne Pathogens, 83% (Table 2).

The total number of children served meals and/or snacks by class participants since 2017 was more than 45,700. This demonstrates the substantial reach childcare providers have when preparing and serving food to the children they care for. Educating childcare providers with best practices for food safety can greatly influence their food preparation and service behaviors when feeding children.

Participant feedback for SFHK has been overwhelmingly positive as providers shared, they learned a variety of information to benefit them in both their childcare career as well as personal lives. In the area of time and temperature control, participants noted how to use thermometers, proper cooling methods of food, how to check food temperatures, the minimum internal cooking temperature and understanding the temperature danger zone. In the area of cleaning and sanitizing, providers stated they learned the difference between cleaning and sanitizing information about the strength of different brands of bleach and proper mixing of sanitizer solutions. One provider indicated that "SFHK should be mandatory for everyone, like cardiopulmonary resuscitation training."

A follow-up survey was completed to capture additional data from 149 participants who participated in the program in the three to nine months prior. Participants indicated they have started or increased the following food safety practices: checking food temperature with a calibrated food thermometer, 47%; cooking foods to proper temperature, 29%; limiting time food spends in the temperature danger zone, 52%; and cooling foods quickly, 60% (Table 3).

The follow-up evaluation results also illustrated that since the conclusion of the program, 22% of participants shared handwashing educational information with staff; 58% implemented High Speed Handwashing with children. Additional responses highlighted food safety practices providers have implemented, including wearing gloves to handle prepared food, using a new digital thermometer, labeling and dating each container, cooking to proper temperature, defrosting foods the right way, using correct sanitizer and cooling foods properly before refrigerating. These all reflect the food safety practices that the SFHK educational program intended to instill.

Summary

The need for food safety education in childcare providers is great, yet a lack of standards exists (National Database of Child Care Licensing Regulations, 2017). By strengthening knowledge and behaviors through education, childcare providers can improve their food handling practices and reduce the risk of foodborne illness in one of the most at-risk groups (Enke et al., 2006). The commitment by providers to ensure attention is given to implementing food safe behaviors is critical, as is consideration to encourage families to comply to these standards as well (Alamansour et al., 2011). SFHK participants have provided overwhelming positive response to the SFHK program, evidenced by post class evaluations and follow-up data. (Tables 1, 2, 3) Demonstrated impact in the areas of thermometer use, cleaning and sanitizing, and time and temperature control, showcase how education leads to improvements in knowledge and practices.

Looking at the SFHK program success in Michigan, there is value to offering this program nationally, considering the need for food safety education of all providers to minimize health implications that foodborne illness can have on children. Future opportunities include documenting similar results in other states that adopt use of the curriculum. There is potential for the development of more advanced program evaluation designs that can test program implementation to be used for continued quality improvement and/or updating the curriculum and establishing more generalizable outcomes. The SFHK curriculum received copyright in 2020 and is a standardized set of educational materials. The curriculum is available at no cost to Extension Educators in other states using the Desire to Learn platform to become trained as an instructor. Food Safety Extension Educators can access the curriculum by visiting MSU Extension's SFHK webpage (Figure 1).

Virtual delivery of the SFHK program resulted in new reach to more diverse participants compared to in-person SFHK classes only, which was a similar finding when food safety educators provided the Cottage Food Law program as an online program (Waitrovich et al., 2018). Virtual delivery shows great promise in reaching more diverse participants and presents opportunities for research on the program's effectiveness in delivery and with subpopulations or special audiences.

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Appendix

Table 1

Food Safety Practices Reported in Post Class Evaluation Results

Food safety practice	Did before	Plan to do	Probably won't do
Check food temperature with a calibrated food thermometer	26.87% (500)	70.55% (1,313)	2.58% (48)
Cook foods to proper temperature	51.85% (953)	47.17% (867)	0.98% (18)
Wash hands for 20 seconds	82.00% (1,512)	17.79% (328)	0.22% (4)
Limit the time food spends in the temperature danger zone	41.28% (762)	57.96% (1,070)	0.76% (14)
Cool foods quickly (to 70ºF in 2 hours and to 40ºF in 4 hours)	29.55% (547)	68.34% (1,265)	2.11% (39)
Separate raw and ready-to-eat foods during preparation, storage and serving	68.66% (1,266)	30.53% (563)	0.81% (15)
Use appropriate strength sanitizer on utensils, equipment & food contact surfaces	59.60% (1,102)	39.37% (728)	1.03% (19)

Note. N=1,906 respondents to the post class evaluation survey. Percentages show agreement with the statements. Numbers in parentheses indicate the number of survey responses.

Table 2

Knowledge Gained by Childcare Providers as a Result of Program Attendance

Food safety knowledge	Percent gaining new information
Personal Hygiene	55% (1,032)
Controlling Time & Temperature	84% (1,543)
Cross Contamination	72% (1,330)
Cleaning & Sanitizing	67% (1,234)
Foodborne Pathogens	83% (1,527)

Note. N=1,906 respondents to the post class evaluation survey. Percentages show agreement with the statements. Numbers in parentheses indicate the number of survey responses.

Table 3

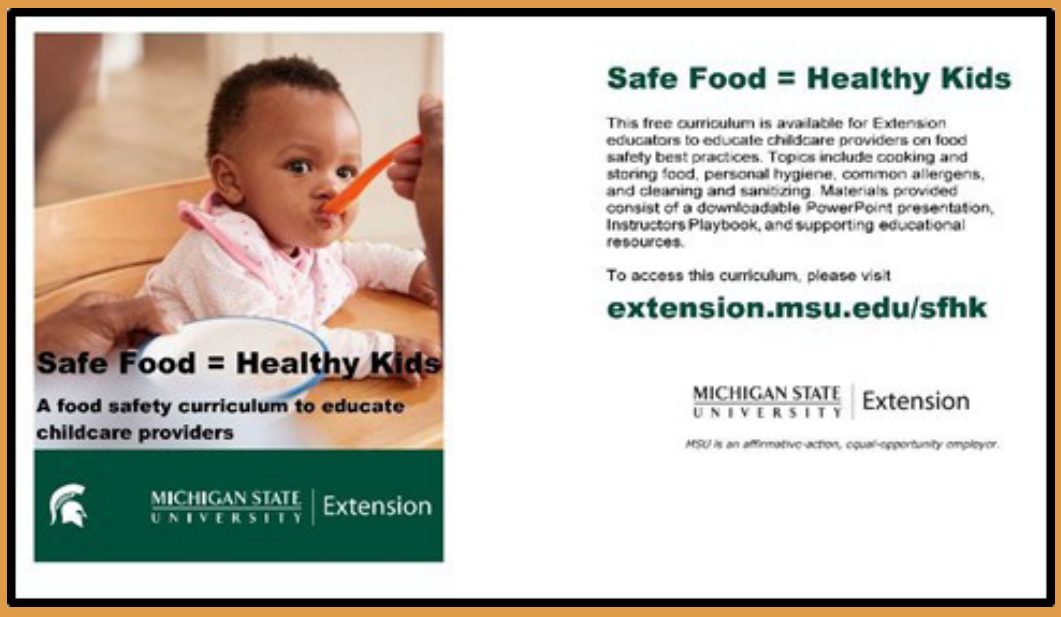
Identified Food Safety Practices Implemented Three to Nine Months Following Program Attendance

Food safety practice	Did before	Have started or increased doing	Have not done
Check food temperature with a calibrated food thermometer	40.87% (47)	46.95% (54)	12.17% (14)
Cook foods to proper temperature	65.45% (72)	29.09% (32)	5.45% (6)
Wash hands for 20 seconds	77.70% (108)	22.31% (31)	0.00% (0)
Limit the time food spends in the temperature danger zone	46.83% (59)	51.59% (65)	1.59% (2)
Cool foods quickly (to 70ºF in 2 hours and to 40ºF in 4 hours)	31.53% (35)	60.37% (67)	8.11% (9)
Separate raw and ready-to-eat foods during preparation, storage and serving	70.09% (82)	28.20% (33)	1.71% (2)
Use appropriate strength sanitizer on utensils, equipment & food contact surfaces	71.21% (94)	26.52% (35)	2.27% (3)

Note. N=149 respondents to the follow-up survey. Percentages show agreement with the statements on food safety practices. Numbers in parentheses indicate the number of survey responses.

Figure 1

Safe Food=Healthy Kids Promotional Postcard for Train-the-Trainer D2L Course



RESEARCH

Financial Education (and fun) for Young Learners: Money Week

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Abstract

The elementary school years are the optimal time for students to develop financial literacy skills. This article describes development, implementation, and evaluation of a five-lesson, multi-pronged program combining financial education and literacy. Program objectives, format, and structure are presented. Following this, methods of teacher training, implementation, evaluation, and implications for replication are discussed. Implemented across 13 schools in 85 classrooms, the program reached 1,707 students. End-of-program evaluations reveal the program was highly valued by partner educators and impactful on students' financial and literacy skill development.

Financial Education (and fun) for Young Learners: Money Week

It is never too early to develop financial literacy skills (Smith et al., 2018). Skills and knowledge for dealing with money begin to be acquired in childhood (Johnson, 2022; Gudmundson et al, 2011). The elementary years are optimal for students to hone financial competence, setting the stage for informed, wise decision making (Pandey et al., 2020; Puspitarona et al., 2020). Financial instruction, when delivered in developmentally appropriate ways, can heighten students' understanding of foundational economic and financial concepts increasing their social and economic power (Puspitarona, 2020; Hill, 2010). According to the Consumer Financial Protection Bureau (2019), the rewards of early, quality financial instruction "pay dividends" across the lifespan.

Financial socialization describes the ongoing process by which children develop financial attitudes, values, skills, and behaviors (Danes, 1994). Financial socialization can happen almost anywhere from home experiences to school interactions to media influence. As a major part of a child's life, school sites are ideal for both direct and indirect financial socialization. Teacher instruction offers a pathway for direct financial socialization through instructor and learner guided education. Observation of peer and adult behaviors in the school offers a venue for indirect socialization (Consumer Financial Protection Bureau, 2016). Through a two-generational approach, direct and indirect socialization occurring in the elementary school setting can be cultivated through financial socialization in the home environment.

The elementary school curricula afford numerous opportunities for direct financial socialization that dovetails with standards-based instruction. Concepts such as planning, budgeting, saving, spending, and credit can form the core of financial education for elementary learners (Amagir et al., 2017). The elementary years are a time for the development of foundational skills - financial habits and norms develop, self-confidence grows, and analytical skills mature (Consumer Financial Protection Bureau, 2016).

Empirical research demonstrates the effectiveness of financial instruction for young learners (Battty et al., 2014). Those studies available, point to positive impacts of early financial literacy. Outcomes assessed for elementary school financial education include changes in financial knowledge, financial behaviors, and increases in attitudes or confidence (Amagir et al., 2017). For example, A National Endowment for Financial Education (NEFE) funded study from Kansas State, using two treatment groups, demonstrated that children who received financial education in Kindergarten followed by independent financial instruction in first and second grades, improved financial knowledge more than children in a control group. (NEFE, 2022). A recent meta-analysis of financial education programs for children and adolescents found financial education for elementary learners produced improvements in students' financial knowledge and attitudes (Amagir et al., 2017). While numerous Extension programs have used school settings for youth financial education, few have focused specifically on elementary school youth (Cheang & Kawamura, 2014).

Economic and financial education is not a traditional part of the elementary school curriculum. Beliefs such education is not needed, lack of teacher preparation, and government educational policies are all roadblocks to inclusion (Editya & Supriatna, 2020). This lack of financial instruction in forma-

tive years of students' development means children learn about financial knowledge and behaviors at home, through socialization, or through media sources (Consumer Financial Protection Bureau, 2016). The quality and accuracy of financial knowledge acquired through these information sources can be detrimental at worst and questionable at best.

Money Week builds on our extant understanding of children and money by providing financial education for first and second grade students. This article highlights the development of Money Week and its successful implementation in 13 public elementary schools in a southern state. Program objectives, format, and structure are presented. Following this, methods of teacher training, implementation, and evaluation are discussed. Program impacts and implications for future programming conclude the article.

Program Overview

Money Week utilizes in-class instruction, read-aloud activities, caregiver engagement, and school environmental changes to achieve program objectives (Figure 1). The program includes five lessons for first graders and five for second. An optional extender lesson completes the curriculum. Lessons align to National Jump$tart standards as well as state academic standards in mathematics and foundational literacy. Money Week was developed to guide first and second grade students to meet five money-related objectives: identify relative values of money; count currency of different denominations; explain the difference between wants and needs; identify ways money can be used; and use a spend, save, share bank for managing money.

A unique aspect of Money Week is the integration of financial education and literacy. Money-themed children's books are paired with each lesson (Table 1). Each book corresponds and reinforces the topic of that day's lesson. Local community leaders, business professionals, politicians, and/or banking professionals read the children's books to students each day. At the conclusion of Money Week, each student receives a money-themed book and bookmark.

Caregiver engagement is incorporated into Money Week through a newsletter in English and Spanish that is sent home to students' caregivers each day. The newsletters explain what students learned that day and contain a money tip caregivers can use. The newsletters conclude with suggested activities caregivers can do to extend learning.

In addition to lessons, read-aloud activities, and newsletters, Money Week includes changes to the school environment that help promote messages of smart money habits. A large banner reading "Hey 1st and 2nd Graders - It's Money Week" is placed in front of the school marketing the program to the broader school community. Daily money facts corresponding to the lessons are read each morning on the announcements. A photo booth allows students to have their pictures made with the mascot for Money Week – Mr. Money (Figure 2).

Money Week was conceptualized and developed by Extension consumer economics specialist faculty with consolation from first and second grade educators, an elementary school librarian, and an elementary school administrator. The school staff reviewed each lesson for clarity, relevance, and integration with state standards. School staff assisted in selecting and pairing children's books with each lesson.

Money Week was peer-reviewed and pilot tested with one school site in 2021. Based on feedback, slight modifications were made to lesson layout changing the layout from narrative text to bulleted lists. A handout listing ways teachers can prepare students for Money Week was also added to the curriculum.

Implementation

In 2022, Family and Consumer Sciences (FCS) Extension Agents from participating counties attended a day-long face-to-face training. The training, conducted by Extension consumer economics faculty and specialists, provided an overview of Money Week and guidelines for implementation. At the conclusion, FCS Agents received curriculum copies, children's books, supplies, and handouts necessary for program implementation. The goal was to provide partner teachers with all the supplies needed. FCS Agents in turn facilitated two-hour face-to-face training for teachers at the intervention schools in their respective counties.

Measures

An online survey was developed to measure teachers' attitudes about Money Week and their perceptions about how the program impacted their students. Teachers' attitudes about the program were measured using seven statements rated on a five-point Likert scale. Response options ranged from strongly agree to strongly disagree; a not sure option was included. Teachers were also asked to respond to seven statements about their perceptions of how Money Week impacted their students. Response options again ranged from strongly agree to strongly disagree; a not sure option was included. Additional survey questions included grade taught, numbers of students, and county location of school.

Results

Money Week was implemented in 13 elementary schools located in 12 counties. Across the 13 schools, 85 classrooms participated (43 first grade classrooms and 42 second grade classrooms). A total of 1,707 students were reached (851 first graders and 856 second graders). A total of 81 out of 85 teachers completed surveys resulting in a response rate of 95%. Responses were received from all 12 participating counties. Teachers had high rates of agreement for how Money Week lessons were integrated into state standards, that the lessons were easy to follow, and how the lessons integrated literacy into the program (Table 2). Most teachers were planning to implement the program next year and would recommend the program to other teachers. There was slightly less agreement about the impact of the program on student's caregivers with only 79% agreeing or strongly agreeing with this statement. Teachers also had high ratings for their perceptions of how the program impacted students' learning (Table 3). Almost all teachers agreed the program met the objectives for students including teaching students the difference between wants and needs and how to manage money. Educators reported a majority of students learned to better identify money values, count currency, and identify uses of money. Almost all teachers (96%) agreed the program provided students an opportunity to practice literacy skills with only slightly fewer (86%) agreeing the program increased literacy skills.

Discussion

Results clearly reveal Money Week was well received. Teachers felt the program was well integrated with state standards, easy to follow, and engaging. A majority would recommend the program and would implement it again if given the chance. Such feedback is valuable as Extension expands the program to other school sites. The positive reviews and praise will be utilized to help market the program to school administrators and other educators.

Additionally, teachers reported positive program impacts for their students. Educators reported students learned important information related to uses of money as well as having opportunities to practice and increase literacy skills. Once again, these results speak to the value of the program as a resource for first and second grade students. As with the educator responses, the impact of this program will be used to highlight the program's value to new audiences. Given the rigorous and tight curriculum that characterizes today's public schools, these outcomes are important to demonstrate the value of this program in helping students develop practical skills related to money, math, and literacy.

The positive impacts would not be possible without the power of partnerships on the local and state level. Developing a close, collaborative relationship with school teachers and administrators was key for effective program implementation. Additionally, such a close relationship allowed Extension educators to offer guidance and technical assistance as needs and questions emerged during teacher implementation.

Beyond the school site, however, strong community support helped to insure a steady supply of guest readers. During debrief sessions following the program, many Extension educators expressed surprise at how willing community leaders and financial industry professionals were to be part of the program. Additionally, involving financial professionals in the program through read-aloud activities helped generate excitement and support – including financial support - for the

program.

Finally, strong support from the State Treasurer ultimately made this program possible. Without their generous support, costs of program supplies would have been the responsibility of local school sites. Providing all materials needed for turn-key implementation was certainly a selling point for this program. The state treasurer's office has generously provided funding for expanding this program from 13 schools to 20.

Implications

The simplicity of this intervention holds potential for replication. For those Extension educators wishing to replicate, the following best practices are offered:

Involve educators. Educators and school administrators were critical to helping inform development of the program. Involving educators from the beginning gave them a sense of ownership in the program and helped to make certain the program addressed state standards and school needs.

Make sure it is turn-key, educators are busy. To ease the burden of adding a new program to their already busy day, the program was designed to be turn-key. Everything – lessons, handouts, educational materials, books – was provided to them, clearly organized by lesson. All teachers had to do was review the lesson and implement it.

Train and follow up. A one-time training was not enough. Instead, educators needed periodic check-ins with their local Extension educators. These check-ins, often held via Zoom, proved important to aid educators in troubleshooting problems during implementation.

Offer incentives. As an incentive for implementing the program, all educators were able to keep all the supplies given to them to implement the program. These items were a welcomed surprise and a small gesture of appreciation.

Report back. Program impact data were reported back to partner teachers and the school administrators through site-specific summary reports. Reporting back helped demonstrate the impact and effectiveness of the program thus reinforcing its value to the partner schools.

Conclusion

Engaging young learners with quality financial education is powerful, offering long-term benefits. With deep community connections and expertise in grass-roots programming, Extension educators are ideal support for teachers of this education. By coalescing the necessary educator and community support, Extension can facilitate financial education as a key part of instruction for young learners thus facilitating instruction that will pay dividends for life.

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Table 1

Money Week Books

Lesson Title	Children's Book
Lesson 1: Wants and Needs (1st Grade); Wants and Needs in Advertising (2nd Grade)	Those Shoes by Maribeth Boelts
Lesson 2: Forward and Back (1st and 2nd Grade)	Alexander Who Used to beRich Last Sunday by Judith Viorst
Lesson 3: Dimes, Dimes and More Dimes (1st Grade); Dimes and Nickels (2nd Grade)	You Can't Buy a Dinosaur with a Dime by Harriet Ziefert
Lesson 4: Dollar Days (1st and 2nd Grade)	The Penny Pot by Stuart J. Murphy
Lesson 5: Spend, Save, Share (1st and 2nd Grade)	Give, Save, Spend with the Three Little Pigs by Clint Greenleaf

Table 2

Teachers' Attitudes of Money Week

	Number of Strongly Agree and Agree Responses	Percentage
The *Money Week* lessons were well integrated with state standards.	79	98%
The *Money Week* lessons were easy to follow.	80	99%
Money Week generated excitement among students.	78	96%
Money Week was effective in engaging students' caregivers.	64	79%
There is a good chance I will implement *Money Week* next year if given the opportunity.	76	94%
I would recommend *Money Week* to other first and second grade teachers.	77	95%
Money Week effectively integrated literacy to support cross-curricular connections.	79	99%

Note. Some statements had less than 81 responding.

Table 3

Teachers' Perceptions of Student Learning

	Number of Strongly Agree and Agree Responses	Percentage
Students learned how to better identify the values of money.	77	95%
Students learned to count currency of different denominations.	75	93%
Students learned the difference between needs and wants.	81	99%
Students learned the different ways money can be used.	79	98%
Students learned how to use a spend, save, share bank to manage money.	80	99%
Students were able to practice literacy skills.	78	96%
Students increased their literacy skills.	70	86%

Note. Some statements had less than 81 responding.

Figure 1

Money Week Overview

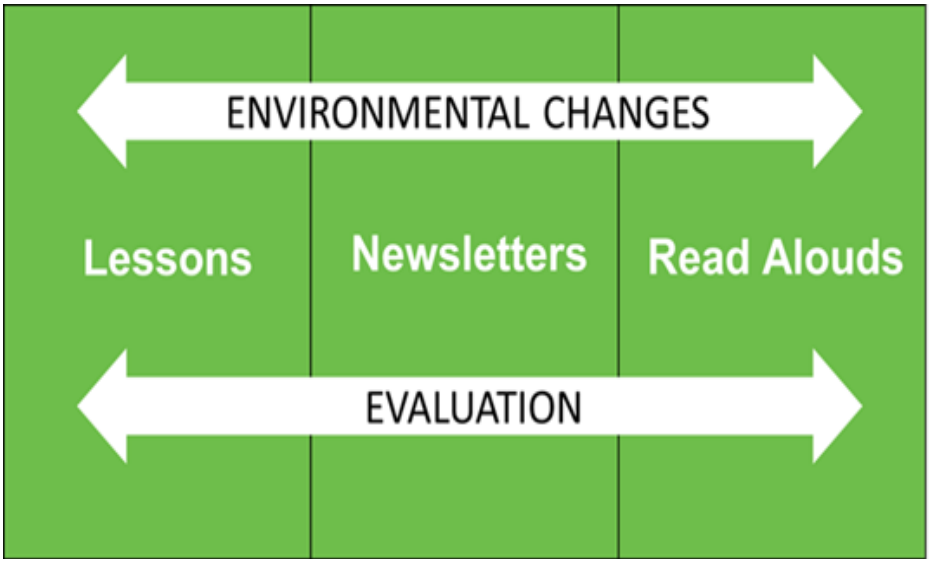
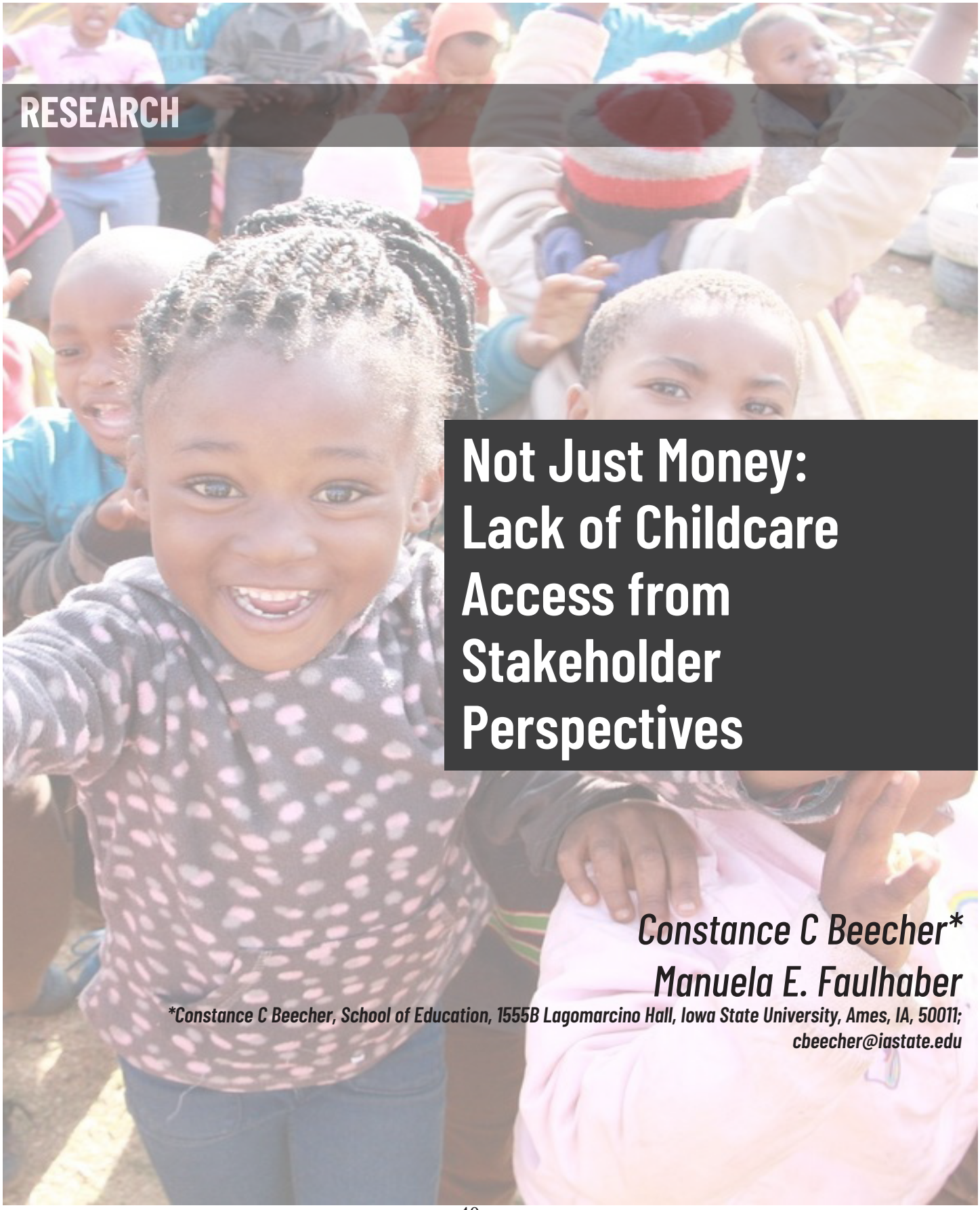


Figure 2

Money Week Mascot



RESEARCH

Not Just Money: Lack of Childcare Access from Stakeholder Perspectives

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Abstract

Childcare scarcity is a widespread phenomenon and challenge with many implications for childhood development. Researchers conducted a qualitative study to foreground local knowledge and discover policy-relevant implications to drive reform efforts for this critical early period. Stakeholders, including administration leaders, directors, teachers, staff, and parents, were asked to describe the most urgent and vital issues in the childcare shortage. Findings reveal an intertwined set of factors, with financial concerns being a large but not sole part of the picture. All participants mentioned children's behavioral health as a significant challenge. Stakeholders raised concerns about how many adults children may interact with throughout their time in childcare – putting them at risk for social-emotional issues. Expanding access to childcare alone will not solve the problem without other supports addressing these concerns. Implications for future research and partnerships to address challenges are discussed.

Not just money: Lack of childcare access from stakeholder perspectives

Children's experiences with their primary caregivers during the first few years of life create rich opportunities or lasting deficits because of the potency of interactions within these contexts (Huston & Bentley, 2010). The formative years and experiences shape the cognitive, language, and socio-emotional skills that influence young children's future learning and development, 60 percent of whom encounter non-parental care (Redford et al., 2017). The type of childcare children receive may vary significantly over a child's first five years, especially in rural areas, due to factors such as access, local resources, and cost (Morrissey et al., 2022).

Access to quality childcare is essential for healthy communities. Not only is early childhood care the foundation for later learning and development, but parents are better able to engage in the workforce when they have consistent, trustworthy childcare. Two-thirds of children under five have working parents (Malik et al., 2018). There is also a national trend of underfunded childcare, resulting in a lack of access to quality licensed childcare that could be described as a national crisis (Malik et al., 2018). Parents living in rural communities have even less access to childcare than in urban areas, and the quality of what is accessible is not well-known. The Rapid Survey Project at Stanford University (2022) reported over 75% of parents surveyed were looking for childcare and struggled to find affordable care. A recent Save the Children Action Network report (2022) found 55% of rural families said access to childcare has worsened since the COVID-19 pandemic.

Large-scale national research has helped to illuminate the associations between childcare quantity, type, and quality with child outcomes. Specific local data is needed to clarify how the lack of access to quality, consistent childcare impacts individuals participating in the system. The current study is a qualitative investigation of stakeholders' perceptions of the issues surrounding access to quality early childhood care in non-urban Midwest communities. The research question addressed is: How do stakeholders involved in childcare perceive the crisis, barriers, and solutions to the childcare shortage?

Methods

The current study is an exploratory qualitative investigation designed to identify and understand how the most proximal stakeholders (parents, childcare directors, teachers) see access and quality issues in their own settings. Focus groups, interviews, and open-ended surveys were used to obtain participants' thoughts and opinions. The study was reviewed and approved (#18-342-00) by the Institutional Review Board of the university.

Participants

The study took place in a Midwestern state. Participants were recruited using stratified purposeful sampling. First, administrative-level stakeholders (n=4) of the state's Childcare Resource and Referral (CCR&R) network agreed to participate in the study and identify childcare directors from different communities. Next, childcare center directors (n=4), teachers (n=26), and two parents agreed to participate in the study (total n=32).

Data collection procedures

Focus groups were scheduled at the groups' convenience. The research team and a local university Extension and Outreach staff member facilitated the groups. Participants signed consent, and facilitators gave directions to keep responses confidential. Focus group members had a paper copy of the questions and were invited to write answers and/or verbalize them. Facilitators recorded each one-hour session, and they could ask clarification or follow-up questions. All groups were asked what they perceived as a primary concern regarding the childcare shortage, how these concerns impacted children, and what barriers exist to addressing the problems they reported. Participants received a copy of the transcript of their session to ensure accuracy and quality. Additionally, they were asked if there was anything to add or take away and if the data accurately reflected their previously stated opinions.

Data analysis strategy

Analysis began with thematic coding based on themes found in literature about childcare access and quality, followed by rounds of inductive coding. Using an iterative approach (Hsieh & Shannon, 2005) with multiple rounds of decontextualizing, recontextualizing, and categorization of codes, researchers aim to increase the rigor and trustworthiness of the interpretation of the data. Coding was conducted using the qualitative data analysis software NVivo (QSR International, 2012). The researchers began coding in the first round by assigning predetermined codes to each transcript. In the last round, the compilation of the previous cycles focused on bringing together insights. As a final validity check, the researchers considered how the results corresponded to the available literature (Bengtsson, 2016).

Results

Table 1. lists the major themes and subthemes that emerged to answer the questions "how do stakeholders in early childhood see the quality and access to early childhood care?" and "what are the current barriers to solving this problem?". As expected, the primary concerns from stakeholders regarding the childcare situation in their area revolved around finances and access. The stakeholder identified the following issues as essential factors in the childcare crisis.

Finances

Parents were concerned with the affordability of childcare, but they also were concerned about the childcare having enough resources to care for their children and provide stimulating activities properly. One parent commented, "I think I would say that in rural [Midwest state], we can't afford to have one parent not working. And just, small towns are … literally, there's a library and a swimming pool. And that's the only options we have for anything … to take the kids out of daycare for a field trip, it's almost impossible." All groups mentioned the low pay and little-to-no benefits of childcare positions as significant reasons for the high turnover and shortage of childcare staff. Respondents acknowledged state subsidies and programs like state-funded universal preschool as avenues to provide quality, affordable childcare. Still, the regulations childcare centers had to follow to qualify for state subsidies or offer state-funded preschool made the financial balance untenable for some.

Policies, Regulations, and Training

All stakeholders commented on the challenges associated with policies and regulations that licensed childcare providers must follow and how these impacted training requirements. In fact, policies were often named as a barrier to solving the childcare crisis. At the same time, all acknowledged the need for more professional development and specific training so that childcare providers and early childhood teachers can be more effective, provide a quality learning environment and keep children safe. These points are particularly salient around infant care. One parent shared, "When I was, I think it was only like five months pregnant, and I called like five or six daycares. And I'm still on waiting lists. And my daughter's 19 months old". This parent took her child to an in-home daycare, and "I don't even know if my daycare is licensed. I assume so, but I've never asked. I mean, everyone recommends them."

Behavior Management Impacts

A surprising finding that was very clear in the data analysis was concern about children's behavior. Participants observed children demonstrating anxious, acting out behavior. Even parents noted they had observed children who had difficulty forming relationships and required a lot of attention. Staff agreed with this statement by a lead teacher "I don't know what to do some days when they won't respond or anything. I don't know how to handle that." Directors reported on the difficulties, "Teachers in daycare are working harder to get the kids to learn how to communicate instead of getting so mad and hitting people and throwing things. You lose teachers because these kids are violent towards their teachers, they're violent towards each other, and there's no way for the pay to compensate for that." Parental attitudes were also raised by directors and staff "It really stems back on changing the attitude of parents of seeing us as babysitters versus childcare providers who have gone to school for this, who have wanted to do this, who this is their passion."

Discussion

Initial findings indicate a complex web of interrelated factors. The nuanced way finances played into every challenge – policy, regulations, and training are multi-faceted. Senior staff who stay regardless of low pay may do so because of intrinsic rewards such as an emotional reward for caring for children and making a positive impact (McDonald et al., 2018). Regardless, even dedicated staff can be pushed out because of a lack of support, lack of respect from parents, or management issues in the childcare center leading to stress and low morale. Supports to address these issues are needed. For example, providing parents with education on safety requirements may prompt more parental support to their childcare providers. Another might be helping childcare centers and home-based businesses improve and streamline their management and business practices.

Although salaries were a major part of the financial discussions, the expense of training employees was a much-discussed topic. There are no educational requirements for teachers and providers of licensed childcare in this state, but there is required training. Centers typically (but not always) pay employees for this training. The essential training needed for this state is twelve hours, covering health and safety. While all stakeholders want well-trained and educated people working with young children, training costs are particularly challenging given the amount of turnover the profession experiences. Basic training is supported by state and federal funding. At the same time, the workforce turnover is so significant that funding to support new staff takes precedence over funding to support staff with more experience and provide more advanced training. Clearly, each stakeholder group in the current study felt that more training was necessary. Given the importance of the early childhood developmental window, having a well-trained staff is critical. Further, when staff did not have access to quality training, they were more likely to leave due to frustrations around working with children's behavior. This becomes part of an unproductive cycle. In fact, children's problematic behavior was a surprising finding that emerged from all stakeholders, given that they were not directly asked about child behavior. Many participants felt that if childcare staff were better able to manage children, they would be happier and less likely to quit. Likewise,

parents expressed concern about their children's exposure to negative behavior. The behavior management issue is likely exacerbated by moving children and staff from room to room to comply with state ratio minimums. Participants reported children might be assigned to a particular room and staff member but the children or staff may be moved to balance the numbers. The implications are that within the childcare center, children encounter multiple adults – many of whom may not have vital training in supporting social-emotional development. In the Bratsch-Hines study (2017), researchers found negative associations between the number of childcare arrangements and children's social-emotional outcomes.

When considered alongside concerns about children's mental health (McMillian et al., 2018) and the current global health crisis – the most vulnerable of our society are at risk for long-term adverse impacts with unforeseen consequences. Expanding access to childcare will not solve the problem without other supports. Expanding university-community involvement and partnerships may be a way to help under-resourced communities find workable solutions. More specifically, addressing the current findings, delivering effective and affordable universal behavioral health intervention training could benefit all stakeholders. This study was a small qualitative investigation, so the findings may not apply to other stakeholders. More work on data collection with more parents and different types of childcare staff could add more perspectives. Importantly, evaluation of strategies and approaches beyond increased pay are needed to provide new and evidence-based solutions for communities desperately in need of quality childcare.

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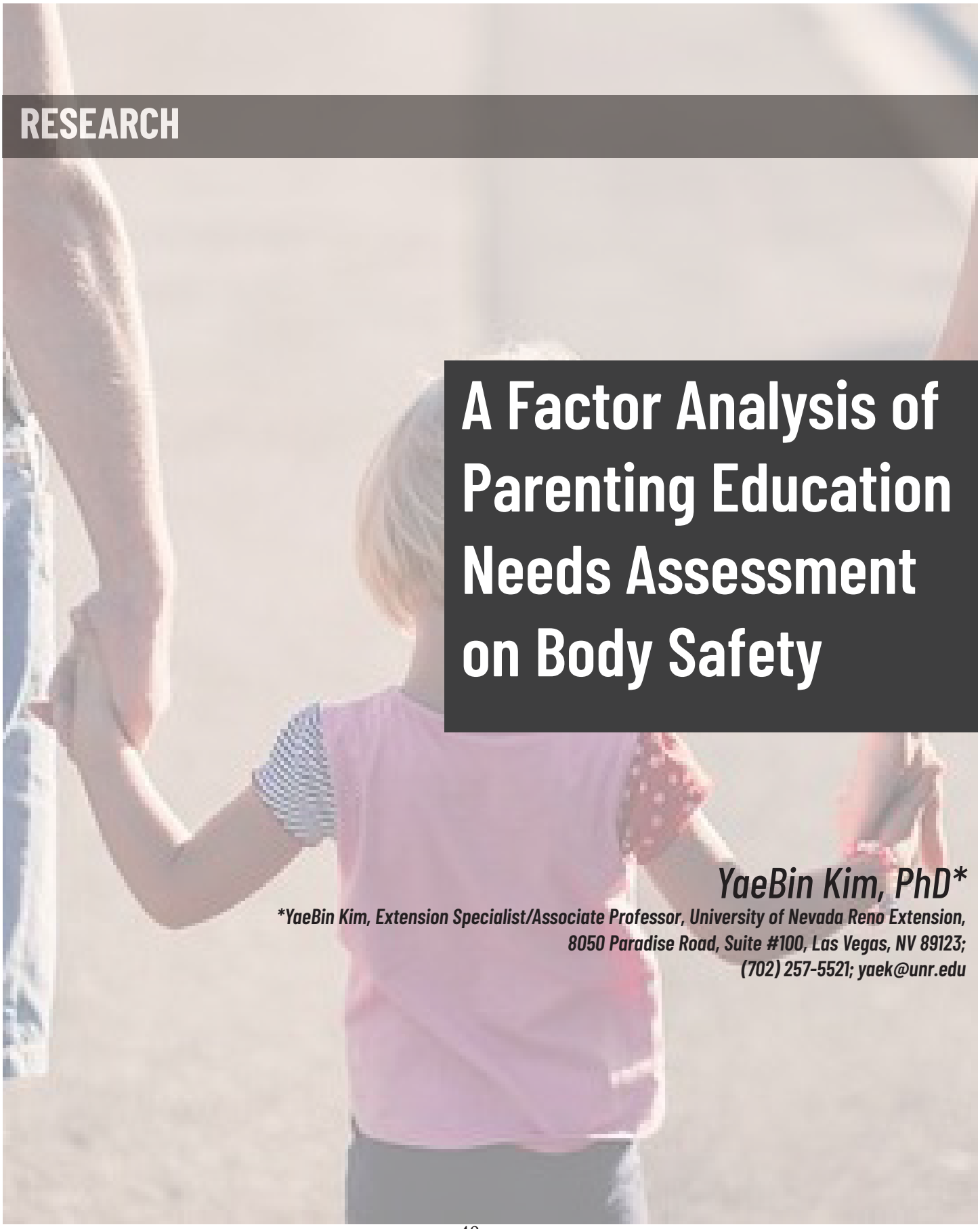
Table 1

Themes and Subthemes

Theme	Subtheme	Example quote
Finances	**a) Pay**	"it is a high demand job and [...] with that comes a rate of pay that should match that, and I don't feel that this is met by any means."
	Salary too low.	
	High demand job.	
	Pay schedule.	
		"The salary for the ladies that work there is not high enough, or good enough benefits. So they have a high turnover."
	Too little benefits.	
	High staff turnover.	
	Low quality staff.	
	b) Cost	
	Parents want high quality, low cost.	"The parents want that quality, they want teachers that understand special needs kids, and take all those trainings to learn how to work with these kids, but they don't want to pay more to get that better quality of daycare."
	Parents don't qualify for assistance, pay out of pocket.	
	Training is expensive.	
	In-home daycare is cheaper.	
	Too high staff-kids ratio/short staffed in summer.	"In rural [midwest] we can't afford to have one parent not working. [...] Best about the in-home daycare is that it's cheap and flexible."
	c) Access	"I have openings for kids, I don't have any staff to come in."
	Lack of staff.	
	High staff turnover.	
		"When I was, I think it was only like five months pregnant, and I called like five or six daycares. And I'm still on waiting lists. And my daughter's 19 months old."
	Kids-staff ratio too high.	
	Frequent staff changes.	
	Long waitlists for centers.	
Policies and Regulation, Professional Development	**a) Policies & Regulations**	"They [babies] have blankets at home. We can't cover them up with blankets, we have them in an environment sleeping that they don't sleep at home so therefore the babies do not sleep at daycare centers."
	Different standards across daycares.	
	Policies difficult to implement/explain.	
	b) Regulations	"I'm not sure that is legally licensing okay [for the in-home daycare]. But that's what we have in very rural areas."
	Ratio requirements.	
	Quality rating issues.	

	c) PD/Training Lack of qualified staff/not enough training for challenging child population. Degree requirements. Differences in education level (rural vs urban). More age specific training needed.	"Oh, I'm sorry but you'll probably have to move to an assistant because you're not qualified as a teacher because you don't have your certificate."
Challenging Behavior	**a) Children Behavior** Negative children's behavior (high anxiety, depression, temper tantrums, acting up, lack of emotional/social development/life skills). Difficulties with patience/relating to this new generation.	"We got a challenging population, but that also relates to staff turnover because when dealing with challenging students it can be an extreme burden just on the soul of whoever's working there."
	Lack of teachers for special needs kids. High turnover due to children's behaviors (temper tantrums, acting up).	"The problem is these kids are having so many behavioral problems that they don't know how to act around other kids."
	Children lack attention in daycare but lack education in home daycares.	"She [daughter] is 19 months and she knows every kids name there, she can tell you it. […]It's a smaller scale than a center. But she gets less... so it's a less education but more attention."
	b) Parents Behavior Parents prefer cheaper care (babysitter over daycare).	"I think that if we changed the attitude of parents it'll change the whole scope of things. It really stems back on changing the attitude of parents of seeing us as babysitters versus childcare providers who have gone to school for this, who have wanted to do this, who this is their passion."
	Difficulties with parents (attitude, doing things differently than at home). Parents do not see children's problematic behavior	



RESEARCH

A Factor Analysis of Parenting Education Needs Assessment on Body Safety

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Abstract

One of the Western extension programs conducted a needs assessment to determine body safety parenting education needs and examine how well the survey items cluster together. A survey was collected from 482 parents/caregivers of young children in 2017. The recommendations of this study are: 1) Parenting education on body safety should focus on using topics of high interest to develop new parenting education programs or update an existing program; 2) Body safety should be delivered through the preferred delivery methods identified by parents/caregivers; 3) Different groups of participants showed different interest in different subscales.

A Factor Analysis of Parenting Education Needs Assessment on Body Safety

Young children are curious about everything, but specifically, many young children are interested in physical differences between boys and girls, where babies come from, and how babies are made. Although children ask a lot of those questions, many parents/caregivers feel uncomfortable or are overwhelmed about talking with their children about sexuality and reproduction. When parents hear sexuality development or sexuality education, they think of sexual activity and get very anxious (Goldman, 2011). However, most often young children are only interested in the body, pregnancy and babies, rather than the mechanics of sex.

According to Healthy Sexuality Development: A Guide for Early Childhood Educators and Families (Chrisman & Couchenour, 2002), "Children learn about sexuality and their developing bodies the same way they learn about everything else – through words, actions, interactions, and relationships." (pg. 3) Children can also learn about acceptable sexual behaviors and sexuality through different media such as movie, TV, or video games and internet (Collins, et al., 2017; von Rosen, A. J., et al., 2017). Therefore, it is a great idea for parents to start talking about age-appropriate sexuality development early on to help children understand better about the body, and help them feel positive about their own bodies. Studies have confirmed that sexuality education is a lifelong learning that starts at birth (Kurtuncu, Akhan, Tanir, & Yildiz, 2015) and parents should be a child's first source of information about sexuality development. When they do start talking with their children, it is important that they are getting the right information, including healthy childhood sexual development as well as appropriate knowledge and skills for children at each age (National Sexual Violence Resource Center, 2013). However, many adults including parents/caregivers and early childhood educators are afraid of addressing this topic because of their own level of discomfort and the related stigma, so this can hinder children's normal interest in their bodies (Counterman & Kirkwood, 2013; Sciaraffa & Randolph, 2011; Stone, Ingham, & Gibbins, 2012). Because many people feel uncomfortable saying or hearing sexuality development or education, experts started calling this "body safety," or "body safety education."

Talking with children about childhood sexuality development and helping them understand it can also play a key role in preventing child sexual abuse (Gilgun & Gordon, 1986; Kandi et al., 2022). According to the recent Kids Count report (2022), total of 3,121,309 child abuse neglect victims were investigated across the United States (1 out of 1,000 children) in 2020. Moreover 41% of child abuse and neglect victims were children under 5 years old. In addition, 9% of children are sexually abused by the age of 18, and 20% of these children are abused before the age of 8. One in three girls and one in five boys is a victim of child sexual abuse (https://laurenskids.org/awareness/about-faqs/facts-and-stats/). However, 30% of sexual abuse is never reported. Sexual abuse is a serious, but unfortunately common problem that affects both boys and girls (American Academy of Pediatrics, 2023). Research has consistently found children's exposure to sexual abuse was highly related to children's educational achievement in later adolescence and early adulthood (Bodena, Horwooda, & Fergusson, 2007; Oshima, Jonson-Reid, & Seay, 2014). Furthermore, studies have shown that children who have been sexually abused may experience negative outcomes across their lifespan, and may see ripple effects across generations (Whitaker et al., 2005).

According to the Child Abuse Prevention and Treatment Act (US Department of Health and Human Services, 2010), parenting education is one effective way to provide activities designed to prevent or respond to child abuse and neglect. Parents need to teach their children about the risk of sexual abuse so that the child can recognize it when it happens, protect themselves as much as possible, and identify and access available sources of support available in the community. In addition, it is important for young children to understand a person's identity, gender, behaviors, values, and feelings about intimacy. However, many parents do not want to discuss sexual abuse or sexuality development with their young children because 1) the topic itself is too difficult to bring up with young children; 2) they do not want to scare their children; 3) they do not view child sexual abuse as a danger to their children; 4) or they feel their children are way too young for the topic (Deblinger, Thakkar-Kolar, Berry, & Schroeder, 2010). When parents/caregivers have more knowledge, comfort, and skill, they can better understand and support healthy childhood sexual development and protect their child from this form of abuse (Kandi, et al., 2022; Medora & Wilson, 1992; Stone, Ingham, & Gibbins, 2012). In one study, researchers evaluated a sex education program for parents of young children and found that it changed preschool mothers' teaching skills, comfort levels, and frequency of parent-child communication on the topic (Davis, Koblinksy, & Sugawara, 1986). The recent AAP report (2023) emphasized that young children can understands concepts about bodies, gender, and relationships and sexuality education is most effective when it starts before children develop sexual activity. Body safety education programs can help parents/caregivers learn about their role as crucial adults, and consider their strengths to support children's healthy and successful development.

Objective or Purpose

Body safety in early childhood is an area without extensive research and virtually no, or at best, very limited parenting education programs are readily available. The current research focuses on understanding parents/caregivers' perceived needs for body safety information to create or provide a parenting education program for parents of young children. The specific objectives of this needs assessment study were:

1) To identify parents/caregivers' expressed needs for information about body safety parenting education.
2) To determine parents/caregivers' desired sources of information about body safety parenting education.
3) To conduct factor analysis to examine how well the survey items cluster together and different groups are compared on different subscales.

Methods

Participants

Of the parents/caregivers who completed the survey, almost 64 percent were mothers. Forty percent were between 30 and 40 years of age and no parents under 19 completed the survey. Almost 34 percent of respondents were Latino/Hispanic and 22 percent were Caucasian. Only 26 percent of parents/caregivers were employed full-time. Nearly 50% of families had not moved last year and don't expect to move anytime soon. Half of the parents/caregivers used a language other than English and 73 percent of those spoke Spanish. Only 14.5 percent of parents/caregivers sent their children to full-day child care. Among 456 parents/caregivers who said they use a cell phone (94.6 percent), 91.6 percent of them were using smart phones. Among 445 parents/caregivers who said they can access the internet, 79.1 percent reported that they have Internet connection at home. About 42 percent of the participants received at least one social service and among them 68 percent were recipients of Medicaid (see Table 1).

Survey Content and Data Collection

The self-administered body safety parenting needs assessment survey was developed by parenting education Extension Specialist in one of the Western states (Nevada) and was based on previous research and literature on body safety (and reviewed by other professionals). The questionnaire (available in English and Spanish) consisted of 22 questions, divided into four parts: 1) a list of 17 potential body safety

parenting education topics (parents/caregivers were asked to check how interested they were in each topic from 1 = not at all interested to 5 = very interested); 2) eight preferred delivery methods for body safety parenting information; 3) demographic information about participants.
A convenience sampling method was used to collect surveys. Total respondents were 482 parents or legal guardians of young children birth to age five. All questionnaires were used for the data analysis, except for some demographic questions that were not answered by all participants. Questionnaires were distributed to passers-by or program participants (only 25% of survey participants) at 26 sites. The survey was approved by the IRB at the University of Nevada, Reno.

Data Analysis

Descriptive statistics were used to describe the characteristics of survey participants, rank order body safety items by mean, and rank order delivery methods by percent. To explore the underlying factor structure of the body safety data, an EFA consisting of principal axis factoring (PAF) with oblimin rotation was conducted. In addition, a one-way ANOVA and an individual T-Test were conducted to compare body safety topics among different groups of participants.

Results and Findings

Preferred Body Safety Parenting Education Topics

Parents/caregivers of children ages 0 to 5 were asked to rate their interest in 17 body safety parenting education topics on a scale of 1 to 5, with 1 indicating no interest to 5 indicating a great deal of interest. In addition, they were asked to identify other body safety topics of interest (open-ended question). Using average scores for each item, the topics appear in rank order in Table 2. It is noteworthy that the average rating for every item was over 3.5 and the ratings of most items were over 4, indicating high interest in all 17 topics (see Table 2).

As can be seen in the table 2, parents reported the greatest interest in learning how to teach children to report unwanted touch. Items ranked 2 through 16 all received scores higher than 4, indicating considerable interest. Parents showed comparatively less interest in connecting with other parents to talk about childhood sexual development and child sexual abuse prevention. Only a few parents identified other topics of interest such as sexual orientation, transgender and LGBTQ issues, what to watch and not watch on TV or Internet, how to know when their children have a problem, how to teach children to tell parents or grown-ups when something happens, and parents as the people who teach their children about this topic.

Preferred Delivery Methods for Parenting Information

Parents also indicated several preferences for receiving body safety information. As can be seen in Figure 1, the largest percentage wanted to get information through brochures/booklets, while radio was the least popular delivery method. It is noteworthy that 45 percent preferred to receive parenting education electronically and 40 percent wanted to attend workshops or meetings (see Figure 1).

Factor Analysis of Body Safety Parenting Education Topics

The inter-item Pearson correlations were conducted and the items displayed inter-item correlations between r = .31 to r = .87. All the items displayed significant inter-item correlation coefficients at $p < 0.01$ level. Multicollinearity is not a problem for this data, so there is no need to consider eliminating any questions at this stage (Determinant + 1.462E-7).
The suitability of the data for factor analysis was assessed prior to the analysis. The Kaiser–Meyer–Oklin was 0.94, which falls into the range of being superb, so factor analysis is appropriate for this data (Kaiser, 194). Furthermore, Barlett's test of sphericity (Barlett, 1954) reached statistical signifi-

cance, supporting the factorability of the correlation matrix. Furthermore, the EFA revealed the presence of three factors with eigenvalues exceeding Kaiser's (1974) criteria of one. These factors explained 75.7% of the variance (32.3, 22.8, and 20.5%, respectively). The sample was shown to be sufficiently large (N = 482) (Costello & Osborne, 2005) and inspection of the scree plot showed an elbow break after the third factor. Table 3 shows the factor structure of the 17 body safety items tested. The first factor, understanding human sexuality, consisted of eight items. The second factor, preventing and reporting sexual abuse, consisted of five items. The last four items constituted learning about body boundaries factor. These three factors showed satisfactory internal consistency (see table 2). Understanding human sexuality displayed the lowest average score (M = 4.22), and learning about body boundaries displayed the highest average score (M = 4.58). However, all three items showed high average scores, reflecting parents' high interest in all three subscales.

A Closer Look

All three subscales were compared among survey participants with different characteristics (parents' age, Ethnicity, moving, native English speaker, using internet to search for parenting information, local areas). Parents aged 20 to 29 seemed to be more interested in learning about body boundaries ($F = 4.55$, $p < .01$) and parents aged 40 to 49 seemed to be more interested in understanding human sexuality ($F = 3.66$, $p < .05$). Hispanic parents were interested in all three subscales compared to non-Hispanic parents ($t = 4.75$, $p < .001$; $t = 3.28$, $p < 01$; $t = 3.97$, $p < .001$). Native English speakers (regardless of their ethnicity) were interested in all three subscales ($t = 6.06$, $p < .001$; $t = 3.14$, $p < .01$; $t = 3.02$, $p < .001$). Our organization is currently delivering several parenting workshops throughout the area where the needs assessment was conducted, so a separate question about attending workshops was asked. Sixty-six percent of parents/caregivers showed interest in attending parenting workshops if available, although 40%of parents chose workshops as a preferred delivery method in the previous question. Among parents who showed interest in attending parenting workshops in the future, 50% of parents wanted to attend the workshop with 5-7 people, 46% wanted their children to be with them and learn together during the class, and 77% of parents preferred weekdays. A large majority (63%) of parents did not care about the instructor's ethnicity or language, while 29% wanted an instructor who spoke the same native language they did (mostly Spanish).

Summary and Discussion

Overall, parents/caregivers showed high interest in all 17 proposed body safety parenting topics and among three factors, participants showed the highest interest in learning about body boundaries subscale. A few differences were found when comparing responses from people with different family characteristics. This needs assessment study revealed that more parents/caregivers of young children in this study preferred to receive body safety parenting information through brochures/booklets, email, or workshops. Community programs need to make decisions about how best to deliver body safety parenting information, taking into consideration available resources and relative value. It is also necessary to understand demographic differences among parents with regard to which delivery methods they prefer to use for body safety information.

These findings will be used to develop or start a parenting education program and help other agencies understand the reasons for concerns about body safety. Child sexual abuse is prevalent in our society across different races, genders and socioeconomic statuses, so parents/caregivers want to acknowledge it and learn more about it. Parents/caregivers wanted to learn about this topic through various channels such as booklet, workshops and emails. It is important to understand program participants in the community before developing resources. When providing a workshop, the instructor must take into consideration participants' preferences regarding program delivery.

Limitations and Conclusion

While this study has a number of strengths, several limitations should be considered when interpreting study results. Though the survey sample consisted of 482 individuals across a major metropolitan area in one of the western states, the information provided by these respondents only represents their perspectives and may not entirely reflect or provide a complete picture of the body safety parenting education concerns and needs of community members across states. In addition, convenience sampling was used in administering the survey, so the characteristics of the sample might be different from that of the population. Therefore, these results cannot necessarily be generalized to the overall population. For example, over 50% of parents in this sample did not work and the children were not in more than part time care. Parents/caregivers of young children who work full time may want the information in another format, such as through their child care providers. The information gathered relied on self-reports from respondents, which may be subject to inconsistencies or inaccuracies, a limitation in all self-report methodology. Additionally, respondents were not required to answer any questions on the survey, therefore not all respondents responded to all questions. Finally, only seven percent of participants answered that they preferred to receive body safety parenting information through radio. This may be because the radio option was not specified (e.g., radio talk show, podcast, radio app, etc.), so future research needs to specify the radio option.

The findings from this study may provide a starting point for reaching out to parents/caregivers of young children, helping them teach their own children about body safety topics. This study is promising in a sense that many parents/caregivers regardless of their family characteristics were highly interested in most of the body safety topics, considering the fact that parents/caregivers usually do not express it publicly in the past.

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Figure 1

Preferred Delivery Methods for Parenting Information about Body Safety

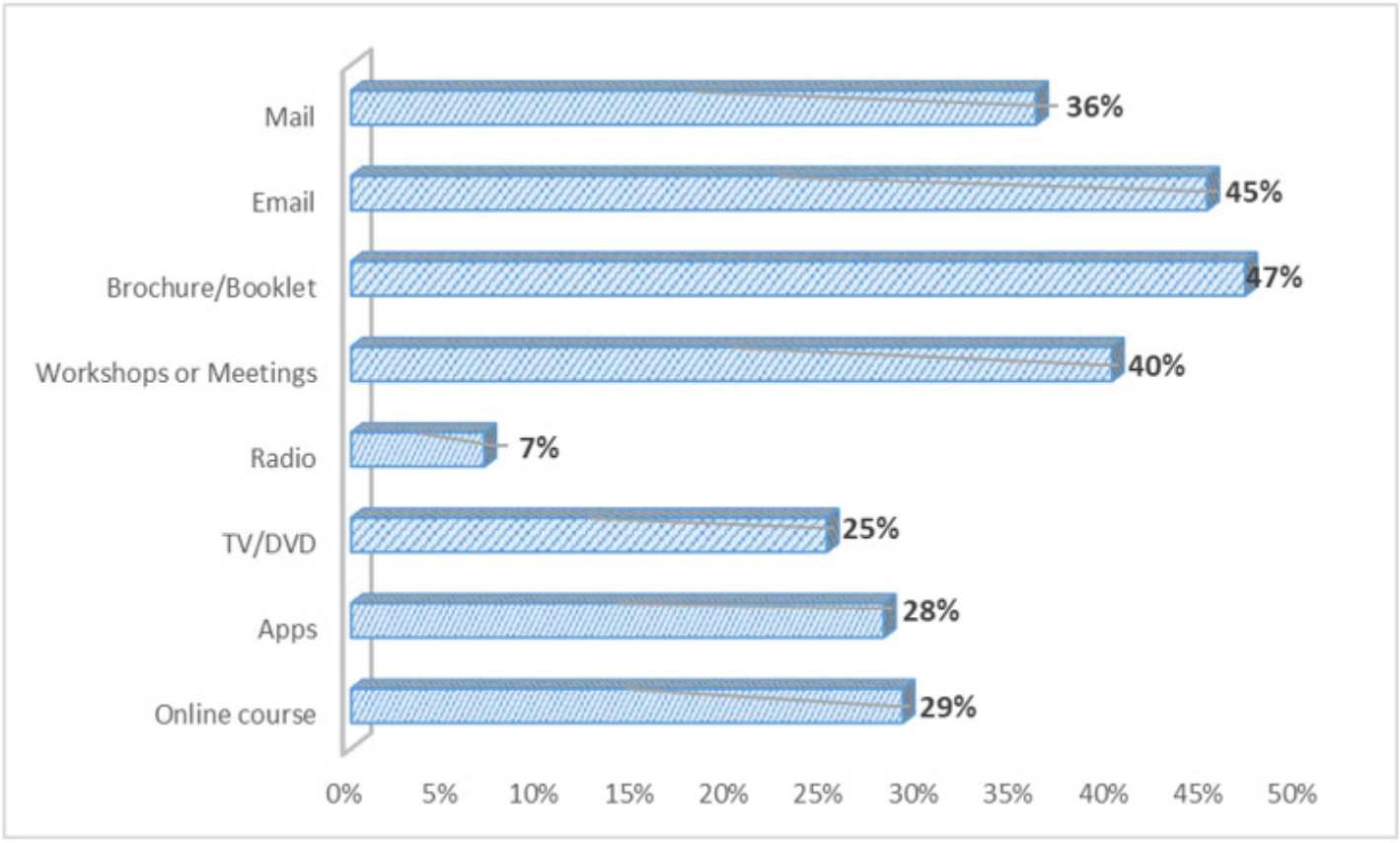


Table 1

Demographic Characteristics of Survey Participants (N=482)		
Characteristics	N	Percent
Relationship to Child		
Mother	307	63.7%
Father	30	6.2%
Other (grandparents, uncle and aunt)	30	6.2%
Both parents	7	1.5%
Did not respond	108	22.4%
Parents/ caregivers' age		
20 - 29	128	26.6%
30 – 39	226	46.9%
40 - 49	64	13.3%
50 or older	31	6.4%
Ethnicity		
African American	87	18.0%
Asian/ Pacific Islander	48	10.0%
Latino/ Hispanic	163	33.8%
White/ Caucasian	107	22.2%
Biracial	37	7.7%
Other	12	2.5%
Work status		
Full-time home maker	221	45.9%
Job from home	26	5.4%
Looking for a job	39	8.1%

Part-time (< 20 hrs.)	42	8.7%
Full-time	125	25.9%
Cell phone use	456	94.6%
Smartphone use	418 (out of 456)	91.6%
Internet access*	445	92.3%
Home	360 (out of 445)	79.1%
Friend's home	14	3.1%
At work	41	9.0%
At the library	38	8.4%
Child's internet use		
Yes, with supervision	309	64.1%
Yes, unsupervised	12	2.5%
No	124	25.7%
Online parenting information		
Yes	355	73.6%
No	93	19.3%
Marital status		
Single/ never married	79	16.4%
Divorced or separated	29	6.0%
Married or living with a partner	347	72.0%
Widowed	5	1.0%
Frequency of moving last year		
One time	143	29.7%
Several times	13	2.7%
No, but I expect to move in the next year	57	11.8%

No, and I don't expect to move	240	49.8%
Child care		
No	247	51.2%
Part-day	124	25.7%
Full-day	70	14.5%
Programs*		
Head Start	195	67.0%
School district Pre-K	31	10.7%
Other child care centers	26	9.0%
Family care programs	9	3.1%
After-school care	9	3.1%
Other family members or friends	86	29.7%
Boy or a girl		
Boy	138	28.6%
Girl	168	34.9%
Boy and a girl of different ages	107	22.2%
Did not respond	69	14.3%
Number of children		
One child	131	27.2%
Two children	182	37.8%
More than three Children	137	28.4%
Did not respond	32	6.6%
Social service recipients*	204	42.3%
Medicaid	138	67.6%
TANF	11	5.4%
SNAP	83	40.7%
Early Intervention	8	3.9%
Women, Infants and Children (WIC)	97	47.5%
Child Subsidy	8	3.9%
Other	5	2.5%

**Questions could have more than one answer.*

Table 2

Rankings of Body Safety Parenting Education Topics

Ranking	Topics of Possible Interest	Average
1	Learn how to teach my child to report unwanted touch	4.70
2	Learn about the signs of possible child sexual abuse	4.69
3	Learn how to protect my child from sexual abuse	4.68
4	Learn to explain the differences between wanted and unwanted touch; how to say "no" to unwanted touch	4.65
5	Learn how to report suspicions of child sexual abuse	4.59
6	Learn to teach my child about privacy and when behaviors are appropriate and not appropriate	4.54
7	Learn about healthy childhood sexual development stages	4.50
8	Find out how to have open conversations with my child about body boundaries and safety	4.45
9	Learn how to answer my child's questions about human sexuality (e.g., where do babies come from)	4.43
10	Find out what community resources are available for families who have concerns and questions about child sexual abuse	4.41
11	Learn how to respond to my child's curiosity about others' bodies, including their own	4.36
12	Learn when to start talking about human sexuality with my child	4.35
13	Find out about children's books that can help my child understand about gender identity, their bodies, where babies come from and other human sexuality age appropriate topics	4.26
14	Learn how to teach my child correct names for human body parts, including private body parts	4.23
15	Get tips on helping my child understand the difference between a boy's and girl's body	4.17
16	Learn fun ways to share educational toys and books related to human sexuality with my child	4.12
17	Connect with other parents to talk about childhood sexual development and child sexual abuse prevention	3.81

Table 3

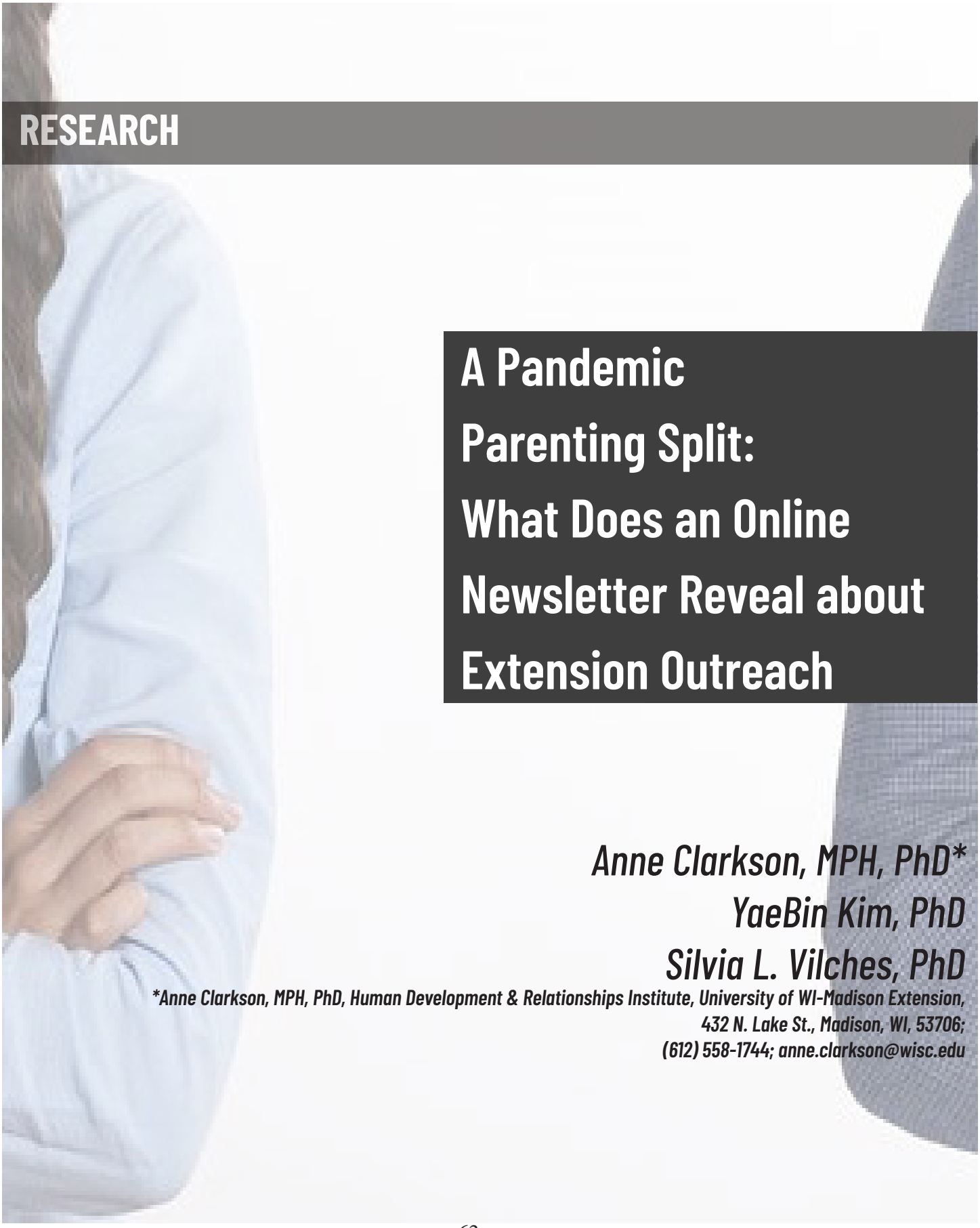
Factor Analysis Body Safety Needs Constructs.

	Factor Loading		
Item	**1**	**2**	**3**
Factor 1: Understanding Human Sexuality (α = .68)			
11. Get tips on helping my child understand the difference between a boy's and girl's body.	.80		
10. Learn how to teach my child correct names for human body parts, including private body parts	.79		
8. Learn fun ways to share educational toys and books related to human sexuality with my child.	.77		
6. Connect with other parents to talk about childhood sexual development child sexual abuse prevention.	.73		
7. Learn when to start talking about human sexuality with my child.	.72		
14. Find out about children's books that can help my child understand about gender identify, their bodies, where babies come from and other human sexuality age appropriate topics.	.71		
12. Learn how to respond to my child's curiosity about others' bodies, including their own.	.68		
9. Learn how to answer my child's questions about human sexuality (e.g., where do babies come from).	.66		

Factor 2: Preventing and Reporting Sexual Abuse (α = .82)		
1. Learn how to protect my child from sexual abuse.	.87	
2. Learn about the signs of possible child sexual abuse.	.85	
3. Learn how to report suspicions of child sexual abuse.	.84	
4. Find out what community resources are available for families who have concerns and questions about child sexual abuse.	.70	
5. Learn about healthy childhood sexual developmental stages.	.58	
Factor 3: Learning about Body Boundaries (α = .85)		
16. Learn to explain the differences between wanted and unwanted touch: how to say "no" to unwanted touch.		.80
17. Learn how to teach my child to report unwanted touch.		.77
15. Learn to teach my child about privacy and when behaviors are appropriate and not appropriate.		.71
13. Find out how to have open conversations with my child about body boundaries and safety.		.59

Note. Double-loaded items are denoted in bold font.

RESEARCH



A Pandemic Parenting Split: What Does an Online Newsletter Reveal about Extension Outreach

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Abstract

The COVID-19 pandemic had significant impacts on caregivers, parents, families, and children. Disruptions to daily life through illness, stay-at-home orders, missed school or childcare, limited in-person contacts, and constant uncertainties aggravated existing stressors. Furthermore, lack of parenting respite and lower in-person social support were thought to increase risk for parental burnout and isolation. Using pre- and mid-pandemic survey responses, this study examined whether survey respondent characteristics or usage of an online parenting newsletter differed pre- and mid-pandemic. Results show that financially secure parents may have experienced slightly more support, contrary to anecdotal reports. Different outreach might be needed for lower-income parents.

A Pandemic Parenting Split: What Does an Online Newsletter Reveal about Extension Outreach?

On March 13, 2020, the United States declared a national emergency over COVID-19 which started rapidly spreading (The White House, 2021). For many parents, the home became the office, the classroom, and even the gym. Evidence is accumulating around parents' struggles to teach and keep their children occupied, work from home, and perform all other daily necessities (Fauzi, 2020).

Children's early experiences help brain development; and healthy relationships with adults are critical to children's development and learning. For all families, greater household chaos due to the COVID-19 pandemic increased risk (Johnson et al., 2022). Experts reported that parents were at increased risk for psychosocial burdens during the pandemic (Cluver et al., 2020). Many families also experienced changes in income and employment (Jenco, 2020), and restrictions affected parents' access to social connection and instrumental support (Cameron et al., 2020). Furthermore, increased time with children and little social support led to increased risk for parental burnout and more parental isolation (Kerr et al., 2021; Kim et al., 2022). Protective factors such as mindfulness practices helped minimize the negative impact of household stress and the chaos of the pandemic (Johnson et al., 2022). Disruptions to daily life through illness, stay-at-home orders, missed school or childcare, and constant uncertainties especially aggravated existing stressors. Parents and caregivers who were already marginalized or at risk, such as single parents or grandparents, were at increased risk. Low-income and single-parent households were more likely to not receive medical care or be unable to access mental/emotional care (Radey et al., 2021; Xu et al., 2022). As other economic and physical supports were removed, family caregivers spent more hours caring for others with less information and support, which reduced caregiver well-being (Muldrew et al., 2022).

The stay-at-home orders also disrupted access to early care and education. Early care and education programs support children to prepare for school by monitoring and developing their skills and abilities. According to the National Institute for Early Education Research 2020 Preschool Learning Activities Survey (Barnett et al., 2020), as a consequence of the pandemic, preschool participation fell from 61 to 8 percent due to classroom closures or parents' decisions not to send their children. Many parents struggled to not only perform all other daily necessities of family life, but also to keep their young children occupied (McConnell et al., 2021).

Prior to the pandemic resources such as digital age-paced parenting newsletters showed significant benefits to families (Vilches et al., 2020). For instance, parents who received a nationally recognized, research-based parenting newsletter series for a year reported less stress, more confidence, and more patience with young children. Delivery of digital resources such as these newsletters continued without interruption during the pandemic. However, it is unknown if these positive parenting resources proved protective against the stresses of increased caregiving during the pandemic.

Objective

The primary purpose of the current research study is to examine whether usage of an online parenting newsletter differed during the pandemic compared to before the pandemic. Specifically, did families with young children differ from before in demographic information, and did their online survey responses reveal differences in parenting practices, perceived usefulness of our online parenting newsletters, and family issues and life changes before and during COVID-19.

Methods

On March 13, 2020, the United States declared a national emergency over the rapid spread of COVID-19. Therefore, we selected the three months preceding the official COVID-19 pandemic emergency declaration and one year later as our comparison groups.

A total of 95 survey respondents before COVID-19 (January – March, 2020) and 84 survey respondents one year later (January – March, 2021) completed our online survey. The survey was approved by the IRB at the University of Nevada, Reno. Both groups represent a little less than a quarter of the annual survey responses (total annual respondents in 2020 was 438 and in 2021 was 362). The 14 parents who completed the survey at both time points were removed from the sample for a separate within-subjects analysis. For a between-subjects analysis, a total of 81 survey respondents before COVID-19 and 70 survey respondents during COVID-19 were used. All data were derived from self-report questionnaires that included demographic information, changes in parenting practices after reading our newsletters, referral sources for our newsletters, the usefulness of our newsletter compared to other sources, and questions about family stability and life change (adapted from the FRIENDS National Center for Community-Based Child Abuse Prevention, https://friendsnrc.org/evaluation/protective-factors-survey/).

Results

Demographic Differences

Survey respondents before COVID-19 and during COVID-19 were not significantly different in most of the demographic features. Approximately 80% of respondents were female, the average age for respondents was mid-thirties, one-third of respondents were parents of infants, over 80% were White/Caucasian, and over 95% were college-educated. One marginally significant difference found between the two groups was that there was a 15% drop in children attend childcare or preschool during COVID-19 (See Table 1).

Family Stability and Life Changes between Survey Respondents Before and During COVID-19

A few of the family stability and life changes were significantly different before and during COVID-19 (See Table 2). In 2021, parents reported that they were more likely to have friends who will support their goals, were less likely to have childcare on short notice and were more likely to report life changes in the past year.

Influence of Reading Parenting Newsletters between Survey Respondents Before and During COVID-19

Although both groups seemed to improve their parenting knowledge after reading parenting newsletters, no significant differences were found in the influence of reading digital

newsletters between subscribers before and during COVID-19. It was also reported that survey respondents' perception regarding the usefulness of parenting sources was not significantly different. Both groups thought that online parenting newsletters were very useful, compared to other sources such as other parenting websites, parenting classes, books or magazines, social media, family, or friends.

Within-Subject Differences

There were 14 parents who completed the survey in both 2020 and 2021. Their demographic characteristics were similar to the respondents described earlier (See Table 4). A few differences in outcomes were found for this matched group before and during COVID-19. During COVID-19, more parents reported using parenting tips less in taking care of their child ($t = 2.35$, $p < .05$), increased use of JITP and other parenting websites ($t = 2.57$, $p < .05$: they used JITP more than other sites), reported the future looks better for their family ($t = 2.57$, $p < .05$), and thought that in their family, they took more time to listen to each other ($t = 3.02$, $p < .05$).

Discussion

The current study showed that this national digital parenting newsletter reached a similar group of parents before and during COVID-19. There were few significant differences found between these two timepoints suggesting that the newsletter remained useful to this group of secure parents. The current study confirmed that for this mostly White, middle-class group of parents, online parenting newsletters were very effective during COVID-19, same as before. Although these parents reported a few changes in the first year of the pandemic, such as less access to childcare, they continued to report that the online parenting newsletter was useful. Furthermore, they continued to report positive parenting practices after reading the newsletter. Delivering free and easily accessible parenting information during COVID-19 continued to be relevant and appreciated and our efforts still seem to be significant in supporting families.

Our findings do not reflect the reports of increased stress for lower-income families. The literature shows two populations emerged mid-point in the pandemic. One group of parents was strongly impacted by the COVID-19 pandemic and faced increased emotional and fiscal stress. Another more affluent group of parents reported feeling minimally affected by the pandemic and optimistic about the future. This evaluation only reflects the second, more affluent group of parents.

These findings indicate that Extension outreach is needed and useful to financially stable families but that more work needs to be done to access lower-income families. Future research on online resources for parents should focus on increasing access to all parent populations. Possible actions include increasing plain language, translating the resource into multiple languages, and decreasing the quantity of reading within the online resource. Furthermore, digital resource delivery could reach more parents within their social ecological systems such as at health care sites, neighborhood gathering places, schools, and libraries.

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Table 1

Demographic Differences between Subscribers Before and During COVID-19

	Before COVID-19 (N = 81)	During COVID-19 (N = 70)	P-value
Relationship to the child			.646[2]
Mother	84%	81%	
Father	11%	9%	
Other caregivers	5%	9%	
Child attending child care or preschool, %			.056[2]
Yes	79%	64.1%	
No	21%	35.9%	
Parent Age			.776[1]
Mean	37.03	36.63	
Median	36	35.50	
Range	26-70	25-67	
Child Age			.889[2]
0-1	26%	27.3%	
1-5	74%	72.7%	
Marital Status			.196[2]
Married	92%	79.7%	
Single, not in a committed relationship	2.7%	9.4%	
Not married, but in a committed relationship	4%	7.8%	
Other	1.3%	3.1%	
Race			.399[2]
White	87.7%	82.5%	
Others	12.3%	17.5%	
Highest Level of Education			.842[2]
Some college/vocational training	4%	4.7%	
College degree	96%	95.3%	

1. Tested using an independent t-test
2. Tested using a chi-square test.

Table 2

Family Stability and Life Changes before and during COVID-19

	Before COVID-19 (N =81)	During COVID-19 (N = 70)	P-value
How much do these statements look like your life? [1]			
• The future looks good for our family.	4.36 (.63)	4.44 (.61)	.47
In my family, we take time to listen to each other.	4.17 (.74)	4.16 (.70)	.89
• There are things we do as a family that are special just to us.	4.13 (.86)	4.20 (.80)	.62
• My child misbehaves just to upset me.	1.99 (.76)	1.80 (.74)	.14
• I feel like I'm always telling my kids no or stop.	2.61 (.90)	2.55 (.93)	.67
• I have frequent power struggles with my kids.	2.53 (.94)	2.28 (.92)	.11
• How I respond to my child depend on how I am feeling.	3.00 (.92)	2.92 (.87)	.60
• I have people who believe in me.	4.43 (.66)	4.59 (.56)	.11
• I have someone in my life who gives me advice, even when it's hard to hear.	3.93 (1.02)	4.05 (.86)	.11
• When I am trying to work on achieving a goal, I have friends who will support me.	4.07 (1.08)	4.14 (.81)	.07
• When I need someone to look after my kids on short notice, I can find someone I trust.	3.73 (1.20)	3.65 (1.30)	.08
In the past year, my life was changed (e.g., medical or dental care, places to stay, transportation, employment).	19.7%	32.8%	.08 chi-square
In the past month, I was unable to pay for rent or mortgage, utilities or bills, groceries/food, child care/daycare, medicine, medical expenses, or health insurance or co-pays or changes, basic households or personal hygiene items, transportation).	2.7%	6.3%	.30 chid-square
I have trouble affording what I need each month [2]	1.47 (.78)	1.39 (.68)	.54
I am able to afford the food I want to feed my family [2]	4.71 (.94)	4.75 (.89)	.78

1. Not at all like my life: 1 – Just like my life: 5
2. Never: 1 – Almost always: 5

Table 3

Influence of Online Newsletter Before and During COVID-19

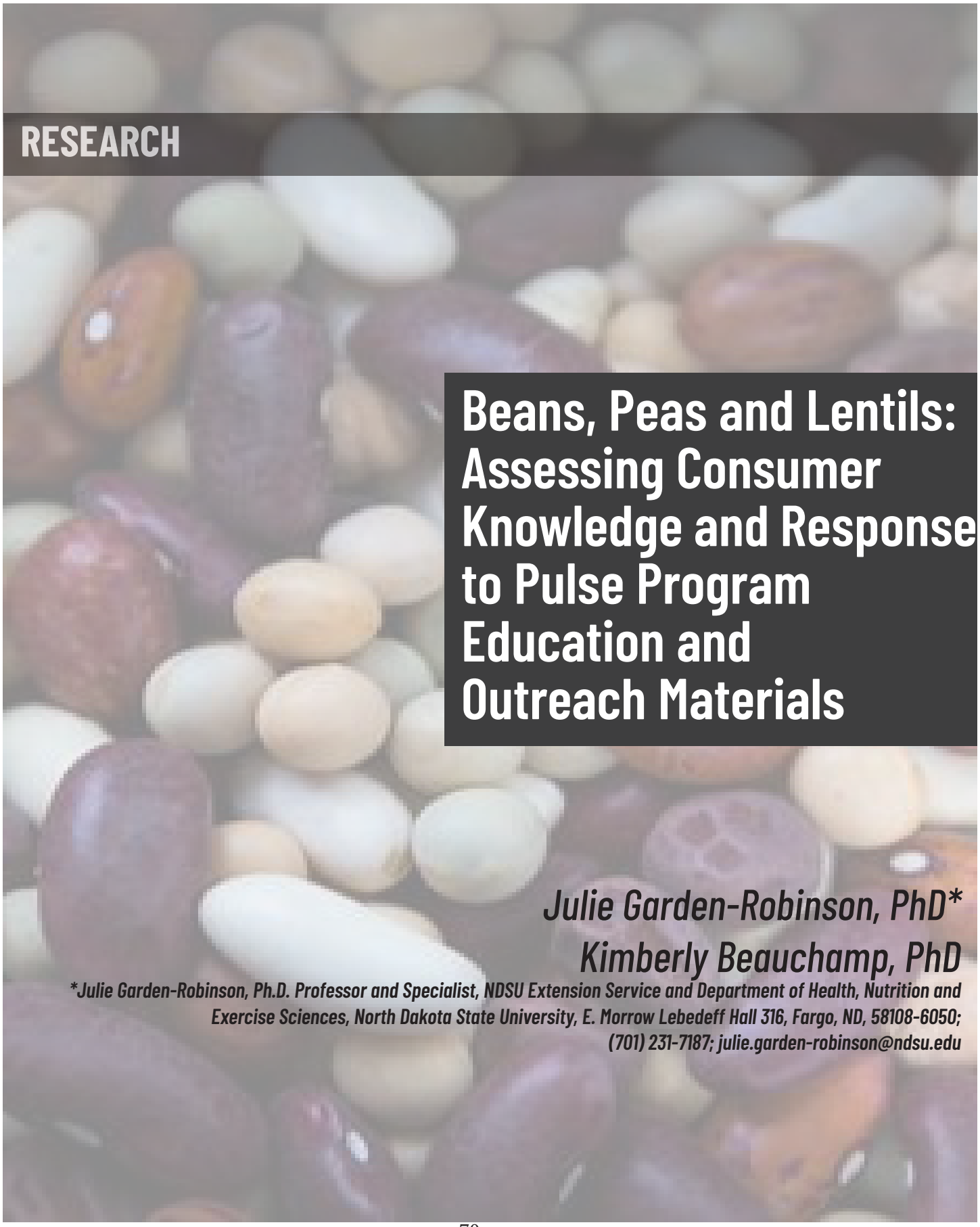
	Before COVID-19 (N = 81)	During COVID-19 (N = 70)	P-value
Reading the online newsletter caused me to			
• know more about what to expect my child to be able to do at each age.	3.41 (.76)	3.37 (.82)	.78
• use the parenting tips in taking care of my child.	3.21 (.72)	3.09 (.76)	.30
• provide more opportunities for my child to explore and learn.	3.10 (.72)	3.09 (.78)	.45
• feel more confident in my skills as a parent.	3.21 (.74)	3.23 (.84)	.44
• feel less stressed about parenting	3.14 (.71)	3.06 (.81)	.26
• notice my child's cues more (what my child needed and was trying to tell me)	3.15 (.68)	3.16 (.79)	.97
• have more patience when my child was fussy or did something that was annoying	3.13 (.71)	3.04 (.77)	.48
• use ideas about how to get my child to behave (Like having a few food rules, explaining them to my child, and sticking to them)	3.14 (.69)	3.06 (.78)	.50
• help my child learn and use new words, such as by naming things, reading books together, and talking about what we were doing	3.09 (.75)	3.09 (.79)	.98
• have ideas to support my child's healthy eating	3.04 (.61)	2.91 (.83)	.30

Strongly disagree: 1 – Strongly agree: 4

Table 4

Demographic Characteristics of Matched Survey Respondents

	Percent/Mean
Relationship to the child	
Mother	69%
Father	31%
Other caregivers	0
Child attending child care or preschool	
Yes	69%
No	31%
Parent Age	36.57
Child Age	
0-1	23%
1-5	77%
Marital Status	
Married	92%
Single, not in a committed relationship	8%
Not married, but in a committed relationship	0
Other	0
Race	
White	100%
Others	0
Highest Level of Education	
Some college/vocational training	8%
College degree	92%



RESEARCH

Beans, Peas and Lentils: Assessing Consumer Knowledge and Response to Pulse Program Education and Outreach Materials

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Abstract

Pulses, which include dry beans, lentils, and peas, are increasingly recognized by nutrition researchers for their role in promoting health. The purpose of this online study was to explore how variations in recipe presentation and preexisting pulse-product knowledge interact to affect behavioral intentions to modify pulse-product consumption. This study incorporated a between-subjects experimental design where an accessible sample (n=385) was drawn from the U.S. target population. Participants were predominantly female, white, non-Hispanic, and non-students. Our results suggested a specific condition that an education and outreach effort will more likely (rather than unlikely) predict a significant positive effect on people's intentions to increase weekly consumption of pulse products. The project has potential implications for professionals who teach nutrition and food preparation. Many nutrition education professionals use recipes to introduce less-familiar foods and to engage their participants in their content. This study supports providing adequate background information about recipe components, nutritional value, and their health implications before exposing people to recipe variations. Further, our findings indicate that audience assessment and segmentation may empower professionals to tailor education and outreach programs to address variations in the preexisting knowledge of a target audience.

Introduction

Pulses, provide an economical source of protein, dietary fiber including heart-healthy soluble fiber, and several vitamins, including the B vitamin folate, and minerals including iron, magnesium, potassium, phosphorus, and zinc (Hall, Hillen, & Garden-Robinson, 2016; Rebello, Greenway, & Finley, 2014). Adults need 21 to 38 grams of fiber per day. About 90% of women and 97% of men do not meet the recommendations for fiber intake (USDA, 2020), making beans and other pulses a solution to help fill the fiber gap in many diets. For example, cooked split peas provide 16 grams (g) of fiber per cup, lentils provide 15.6 g per cup, and black beans provide 15 g per cup. Incorporating these foods could fill the gap in fiber in many diets while providing protein and other valuable nutrients in the diets of adults and children.

Literature Review

Studies suggest that regular consumption of pulses may reduce the risk of heart disease, diabetes, and certain types of cancer (O'Neil, Nicklas, & Fulgoni, 2014, Singhal, Kaushik, & Mathur, 2014). Botanically, pulses are members of the *Leguminosae* family, which include dry beans (e.g., navy, kidney, pinto, black beans), dry peas (e.g., chickpeas or garbanzo beans, black-eyed peas, and split peas), lentils, lupins, and several other types. The role of pulses in promoting good health is associated with its nutritional composition. The Food and Agriculture Organization (FAO) promoted the "International Year of Pulses" 2016 to raise awareness of the role that pulse foods play in human nutrition throughout the world. Each year, the FAO continues to promote "World Pulses Day" on February 10 (FAO, 2023).

As with previous editions, the Dietary Guidelines for Americans (DGA) (U.S. Department of Agriculture [USDA], 2020) promotes frequent consumption of beans, lentils, and dry peas. MyPlate, as the graphic icon for the DGA, recognizes beans, lentils, and dry peas as unique foods. When tracking food choices, pulses can count either as a vegetable or a protein. For example, people tracking their food servings for a vegetarian diet would typically count pulse foods as a protein. In contrast, people who consume meat would count pulse foods as a vegetable, until recommendations are met. One-fourth cup of cooked beans would be a 1-ounce equivalent in the protein group. One cup of whole or mashed, cooked beans, lentils, or peas would count as one cup of vegetables. Adults need 5-to-7-ounce equivalents of protein and 2-to-4 cups of vegetables, depending on age and sex (USDA, n.d.).

Purpose

The purpose of this study was to explore how variations in recipe presentation and preexisting pulse-product knowledge interact to affect behavioral intentions to modify pulse-product consumption. We proposed an overall hypothesis that: Recipe variation will interact with preexisting pulse-product

knowledge to affect behavioral intentions to modify pulse product consumption (H1). An objective of this study was to identify If, when, and how a recipe variation would differentially impact behavioral intentions. To explore the conditional direct effect of the recipe variation on intentions, we the hypothesized that: A video-enhanced recipe variation (compared to a print-only recipe variation) will have a more positive impact on behavioral intentions, regardless of preexisting pulse-product knowledge (H1a).

Methods

This Pulse Program was partly supported by a USDA Specialty Crop grant awarded in 2020. The North Dakota State University (NDSU) Institutional Review Board (IRB) approved the online study before any data were collected. All data were collected between November 7, 2022 and January 8, 2023. This study incorporated a between-subjects experimental design where an accessible sample was drawn from the U.S. target population. Participants were recruited through a news column that ran online and in newspapers in the Midwest, social media platforms (Facebook, Twitter), and listservs to county Extension Offices and their county agents. Individuals were provided a link to the online study via the news column (online and print), social media, and email listservs. Recruiting incentives were offered to encourage study participation. Each prize packet included at least two items selected from a 2023 nutrition education calendar, a refrigerator magnet, full-color handouts about pulses, a cookbook, and/or a meat thermometer.

The Qualtrics software system licensed to NDSU randomly assigned participants to one of two experimental conditions. For the control condition, participants were randomly assigned to receive one of three print recipes: Cowboy Caviar (beans); Greek Lentil Salad (lentils); Split Pea Salsa (peas). All print recipes were similar in design to include a photo of the finished entrée, a list of ingredients, preparation instructions, cooking instructions, and a description of the entrée's nutritional value. Each print recipe was converted into a YouTube video demonstration of the recipe. For the treatment condition, participants were randomly assigned to receive one of three video-enhanced print recipes: Cowboy Caviar (beans); Greek Lentil Salad (lentils); and Split Pea Salsa (peas). All video recipe demonstrations were similar in design to include background music, closeup demonstrations (i.e., hand shots) of ingredient preparation, demonstrations of cooking procedures, text overlays to describe each step of the recipe preparation process, an image of the finished entrée, and a screenshot of the printed recipe. Thus, while the control and treatment conditions included the print recipe, the treatment condition was additionally enhanced to include the elements of a video demonstration.

Upon accessing the website, the participants were asked to read an online consent form. By checking two boxes, individuals indicated that they had read the form and consented to participate in the study. The first question asked consenting participants to indicate their age as either 'less than 18 years old,' or 'at least 18 years old.' Individuals more than 18 years of age continued with the first survey. Individuals less than 18 years of age were thanked for their response and redirected to the NDSU Extension website (https://www.ndsu.edu/agriculture/extension/extension-topics/food-and-nutrition/subscribe-food-nutrition-newsletters).

Upon completing the first survey, participants clicked on a link and were redirected to a second survey located on a separate website. Through the second survey, participants were able to provide contact information so that the study coordinator could provide the incentive items to participants via the U.S. Postal Service. Responses to the first survey were not linked to the second survey.

Groups and Measures

General Demographics

The first survey included three items to collect participants' general demographic information (i.e., sex, ethnicity, student status; see Table 1). Participants self-identified as being 'female' (coded as 0.5) or 'male' (coded as -0.5). Participants indicated their ethnicity as 'Hispanic' (coded as 0.5) or 'non-Hispanic' (coded as -0.5). Participants also indicated whether they were 'currently a student' (coded as 0.5) or 'not currently a student' (coded as -0.5).

Individual Difference Variable: Preexisting Knowledge

To measure preexisting knowledge of pulse products, all participants were asked 'What are pulses?' before being exposed to a recipe variation. Participants answered this question by selecting a response from four multiple-choice options: a) pulses are dry beans, dry peas, lentils, soybeans, and peanuts; b) pulses are dry beans, peas, and lentils; c) pulses are dry beans only; d) I do not know. Participants selecting option 'b' were placed in the 'correct answer group' (coded as 0.5). Participants selecting option 'a,' 'c,' or 'd' were placed in the 'incorrect answer group' (coded as -0.5).

Predictor Variable: Recipe Variation

As noted earlier, six recipe variations were developed and served as stimuli for our study: video-enhanced print recipe (i.e., Cowboy Caviar; Greek Lentil Salad; Split Pea Salsa); print recipe without video enhancement (i.e., Cowboy Caviar; Greek Lentil Salad; Split Pea Salsa). The group viewing a video-enhanced print recipe was coded as: 0.5 (treatment condition). The group viewing a print recipe without video enhancement was coded as: 0.5 (treatment condition) and -0.5 (control condition).

Dependent Variable: Behavioral Intentions

Three items were developed for this study to assess participants' self-reported intentions to modify weekly consumption of beans, lentils, and split peas. First, participants in the treatment and control conditions read a base statement (e.g., 'As a healthful choice, the total amount of beans (other than green beans) that I consume on a weekly basis should be' ...) and completed this statement using a 7-point scale ranging from 1 ('decreased a lot') to 7 ('increased a lot'). Second, participants read a base statement (e.g., 'As a healthful choice, the total amount of lentils that I consume on a weekly basis should be' ...) and completed this statement using a 7-point scale ranging from 1 ('decreased a lot') to 7 ('increased a lot'). Finally, participants read a base statement (e.g., 'As a healthful choice, the total amount of split peas that I consume on a weekly basis should be' ...) and completed this statement using a 7-point scale ranging from 1 ('decreased a lot') to 7 ('increased a lot').

The three behavioral intention items were subjected to a principal components analysis (PCA) to determine if they formed a reliable measure, as a scale. The Kaiser-Meyer-Olkin (KMO) value (0.71) exceeded Kaiser's (1970, 1974) recommended value of 0.60. From the correlation matrix, all three items had correlations of 0.3 or higher. The PCA revealed the presence of one component, with an eigenvalue of 2.31 that explained 77.1% of the total variance. A scree-plot inspection confirmed a clear break after the second component. The factor loadings of the single component ranged from 0.84 to 0.91. Given the PCA results, testing the reliability of the composite scale was justified. Indeed, an index including the three items revealed a reliable three-item scale for behavioral intentions (α = 0.85, Mean = 16.17, SD = 3.01, Variance = 9.08), with higher scores reflecting a more optimal response.

Results

Of the total sample (n = 385), 81,3% were female, 91.4% self-identified as white, 89.4% identified as non-Hispanic, 100% were at least 18 years of age, and 92.9% were non-students (see Table 1). Approximately 45.5% of the participants were exposed to a video-enhanced print recipe. About 54.5% of the participants were exposed to the print recipe without the video enhancement. Among individuals viewing a video recipe (treatment condition), roughly 37.7% correctly identified pulse products before recipe exposure. Among those reading a print recipe (aka control condition), approximately 32.8% correctly identified pulse products before recipe exposure. (Table 1)

We conducted a 2 (condition) x 2 (preexisting knowledge) univariate analysis to test our overall hypothesis (H1). The composition of the condition and preexisting knowledge groups can be found in Table 2. The data revealed a significant interacting effect between condition and preexisting knowledge on behavioral intentions to increase pulse product consumption [F (1,385) = 5.26, $p < 0.05$]. Thus, our data provided support for our overall hypothesis (H1) that stated: Recipe variation will interact with preexisting pulse-product knowledge to affect behavioral intentions to modify pulse product consumption (H1). (Table 2)

As shown in Figure 1, when preexisting pulse-product knowledge was accurate, behavioral intentions did not differ to a statistically significant degree between individuals reviewing a video-enhanced print recipe and individuals reviewing a print recipe without the video enhancement (*Mean* = -0.26, *SE* = 0.172, $p > .05$). When preexisting knowledge was inaccurate, behavioral intentions did not differ to a statically significant degree between individuals reviewing a video-enhanced print recipe and individuals reviewing a print recipe without the video enhancement (*Mean* = -0.24, *SE* = 0.127, $p > .05$). When participants viewed a video-enhanced recipe, behavioral intentions did not differ to a statistically significantly degree between individuals with accurate preexisting knowledge and individuals with inaccurate preexisting knowledge (*Mean* = -0.07, *SE* = 0.155, $p > .05$). However, when individuals viewed the print-only recipe, behavioral intentions were significantly lower among those with accurate preexisting knowledge compared to those with inaccurate preexisting knowledge (*Mean* = -0.42, *SE* = 0.146, $p < .05$). Thus, we found no support for our working hypothesis (H1a) that stated: A video-enhanced recipe variation (compared to a print-only recipe variation) will have a more positive impact on behavioral intentions, regardless of preexisting pulse-product knowledge (H1a). (Figure 1)

Discussion

The Pulse Program illuminated the importance of assessing consumer knowledge plus people's response to the education and outreach materials. When testing consumers' reactions and response to recipe variations, the data suggest the need to take consumers' individual differences into consideration. For this study, we included preexisting pulse-product knowledge as an individual difference variable in the statistical analysis.

This online experiment demonstrated that survey participants' preexisting knowledge of pulse products interacted with recipe variation to motivate increased consumption of pulse products. Although the data revealed a significant interaction between recipe variation and preexisting pulse-product knowledge on behavioral intentions (H1), we found one significant conditional direct effect of recipe variation. For people exposed to a print-only recipe variation, individuals with accurate preexisting knowledge (rather than inaccurate) reported significantly higher intentions to increase pulse-product consumption. However, we found no statistically significant difference in the conditional direct effect of a video-enhanced recipe variation on behavioral intentions, compared to the effect of a print recipe without video enhancement. Taken together, these results suggested a specific condition that an education and outreach effort will likely (rather than unlikely) predict a significant positive effect on people's intentions to increase weekly consumption of pulse products. The fact that individuals with accurate (rather than inaccurate) preexisting pulse-product knowledge were significantly more likely to increase pulse-product consumption after viewing a print-only recipe variation, suggests that education and outreach programs should take consumers' preexisting knowledge into consideration.

Study Limitations

We engaged only participants in this project who had internet access on a computer, phone, tablet, or other device. Most of our participants were non-Hispanic, white, females, and not currently enrolled as a student. Further, we found that attracting participants in online research studies can be challenging, even when incentive items are offered.

Implications For Professionals and Future Directions

The project has potential implications for professionals who teach nutrition and food preparation. Many nutrition education professionals use recipes to introduce less-familiar foods and to engage their participants in their content. This study supports providing adequate background information about recipe components, nutritional value, and their health implications before exposing people to recipe variations. Further, our findings indicate that audience assessment and segmentation may empower professionals to tailor education and outreach programs to address variations in the preexisting knowledge of a target audience.

Nutrition concepts are complex, and the DGA change as more research is conducted and published. Many people are not familiar with the specifics of nutrition; therefore, crafting user-friendly materials is important. Educational materials can effectively motivate consumers toward optimal behavioral intentions to increase pulse-product consumption, when preexisting knowledge of pulse products is taken into consideration. A combination of communication, outreach, and education studies need to identify effective strategies for increasing pulse-product consumption. While this study targeted a general U.S. population, additional studies are needed to also explore how population diversity (e.g., attentive to individual differences) may interact with recipe variations and preexisting knowledge to influence people's intentions to increase weekly consumption of pulse products. Educational pulse resources used in this project are available at https://www.ndsu.edu/agriculture/extension/extension-topics/food-and-nutrition/food-preparation/cooking-basics/beans-lentils.

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Table 1

Demographic Information of Survey Participants

Demographic data	Percentages	Number
Sex		
Female	81.3%	313
Male	18.7%	72
Ethnicity		
Hispanic	10.6%	41
Non-Hispanic	89.4%	344
Student Status		
Student	7.1%	27
Non-student	92.9%	358

Note: All participants were at least 18 years of age.

Table 2

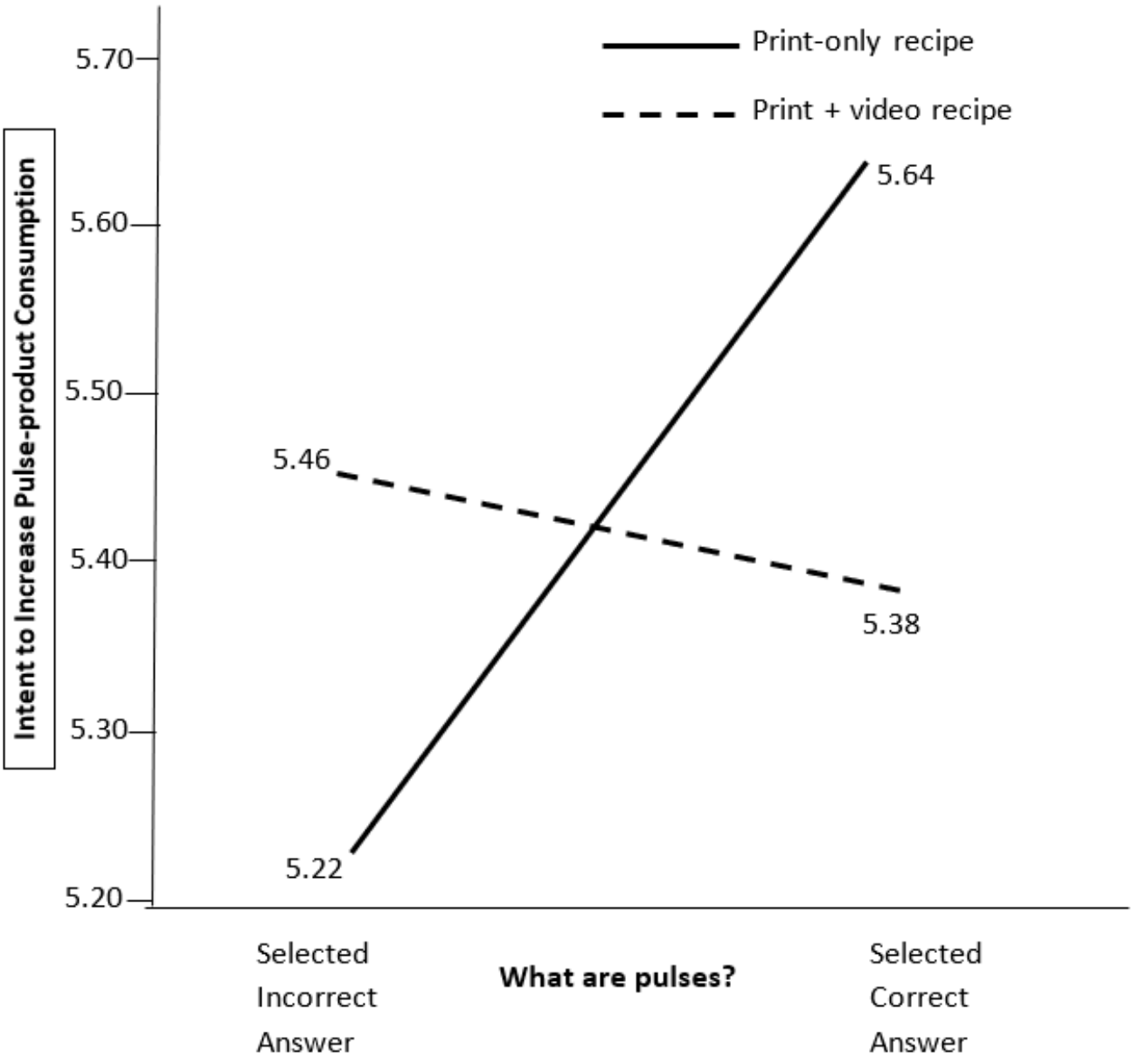
Knowledge of Pulse Products Prior to Recipe Exposure in Video/ and/or Print Format

Groups	Exposed to a video-enhanced print recipe	Exposed to a print recipe without video enhancement	Totals
Correctly identified pulse products	37.7% (n=66)	32.8% (n=69)	35% (n=135)
Incorrectly Identified pulse products	62.3% (n=109)	67.2% (n=141)	65% (n=250)
Totals	100% (n=175)	100% (n=210)	100% (n=385)

Note: Prior to recipe exposure, participants indicated their knowledge of pulse products. Using a scale of 1 to 7, participants indicated the extent that they should modify their weekly intake of pulse products. Higher scores reflected an intent to increase consumption of pulse products.

Figure 1

Estimated Marginal Means of Change in Consumption of Pulse Products



Note: Prior to recipe exposure, participants indicated their knowledge of pulse products. Using a scale of 1 to 7, participants indicated the extent that they should modify their weekly intake of pulse products. Higher scores reflect an intent to increase consumption of pulse products.

RESEARCH

Temperament Profiles May Positively Impact Mentor/Mentee Relationships in Cooperative Extension

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Abstract

This study examined the impact of temperament awareness education on mentor/mentee relationships in Cooperative Extension. Active, formal mentors were recruited from within Cooperative Extension systems across the United States. Qualitative findings were studied by collecting responses through an open-ended questionnaire. Responses were coded through thematic reduction. Three overarching themes were discovered from the mentor's responses: " temperament awareness,"; " intentionally changing behavior," and " awareness of the needs of themselves and others." One of several recommendations includes adding temperament profiles for both mentor and mentee in formal mentoring programs across Cooperative Extension.

Temperament Profiles May Positively Impact Mentor/ Mentee Relationships in Cooperative Extension

In 2019, the Bureau of Labor and Statistics reported the annual worker turnover rate for the United States at 45.1% overall, while the educational sector reported 29.8% (Bureau of Labor and Statistics, 2022). Boushey and Glynn (2012) note recruiting and training a new employee may cost more than one-fifth of the existing employee's salary to replace them when they leave. Additional costs may also be incurred as vacant positions potentially reduce morale, slow organization efficiency and create a lag in services or deliverables (Hinkin & Tracey, 2000).

Mentoring new employees by veteran employees has been shown to increase employees' feelings of belongingness and their intent to remain within the organization (Allen et al., 2004; Craig et al., 2013; Horner, 2017). According to Allen and Eby (2003), when organizations take time to mentor employees, staff earn higher salaries, advance more rapidly, and are more likely to remain employed at the organization. Furthermore, mentoring experiences may lead to increased job satisfaction, leading to reduced turnover (Allen et al., 1999; Allen et al., 2004; Craig et al., 2013).

What is mentoring? Several scholars have acknowledged the challenges of creating a single definition of mentoring and have focused on identifying mentoring relationships' core components or attributes. Eby et al. (2007) described mentoring attributes as a unique learning partnership between individuals, a defined process of support provided by the mentor, and a reciprocal and dynamic relationship.

It should be noted that not all mentoring programs are the same. There are both formal and informal mentoring opportunities. Regardless of the formality of mentoring, the quality of the mentoring relationship is essential to the success of the relationship between the mentor and mentee (Bidwell, 2016; Scott, 2010). In her pivotal work on mentoring in the workplace, Kram (1983) stated that mentoring relationships have the "potential to enhance the career development of both individuals" (p. 613), the mentors and the mentees. Huggett et al. (2020) asserted that "Understanding the influence of personality on the mentoring relationship remains a gap in the literature, especially in the contexts of health professions and higher education" (p. 91).

A review of literature by Hugget et al. (2020) and Turban and Lee (2007) indicated a lack of information on the 'influence of personality' and little research examining individual personality characteristics and their impact on mentoring relationships. Mueller (2020) stated that effective mentoring is based on trust. Trust potentially develops through quality relationships; thus, creating opportunities for mentor/mentee dyads to learn more about each other may be beneficial. What is not known is if awareness education on individual temperament traits, the foundational building blocks of personality (Chess & Thomas, 1999), positively impacts the quality of the relationship between Cooperative Extension mentors and mentees.

Purpose of the Study

Mentors who understand personality and behavioral reactions have higher emotional intelligence (Opengart & Biere-

ma, 2017). Emotional intelligence can be defined as knowing and managing emotions, motivating oneself, recognizing emotions in others, and managing relationships (Goleman, 1995). When mentors understand the foundational behavioral reactions due to temperament traits, they may improve their emotional intelligence and impact their perceived mentoring quality.

This study aimed to examine the impact of temperament awareness education on the mentor/mentee relationship in Cooperative Education. The study explores the assumption that when mentors complete temperament profiles (awareness education), they may increase awareness of how their temperament may negatively or positively impact the quality of the mentor/mentee relationship.

Methodology

This study is a qualitative examination of the survey results from a mixed-methods, multi-phase study. The qualitative phase consisted of an eight-item, open-ended Qualtrics questionnaire delivered electronically. Before answering the survey, participants completed the Adult Temperament Questionnaire.v2 (ATQ2) (Chess & Thomas, 2008) and received awareness education via a personal temperament profile interpretation summary. The ATQ2 identifies an individual's temperament along a continuum of the nine traits identified by Chess and Thomas' New York Longitudinal Study (1983) and a temperament awareness educational summary.

Convenience sampling was utilized by contacting formal mentors from Cooperative Extension Land-Grant Affiliates throughout the United States. Invitations to participate were sent through Cooperative Extension Professional organizations and professional contacts. Nineteen mentors completed IRB protocols and were sent the ATQ2 profile. Upon completing the ATQ2 profile and reviewing the individual interpretive summary, mentors continued engaging with their mentees for approximately 30 days. At the end of 30 days, mentors were sent the Qualtrics questionnaire to gather the perceptions of their mentoring effectiveness after receiving the temperament profile interpretive summary. Results of the Qualtrics questionnaire were analyzed with thematic coding.

Results

Qualitative data revealed three overarching themes, "temperament awareness," "intentional change during interactions," and "responsive to the needs of self and others." While mentors not only became more aware of temperament overall, they made or planned to make immediate behavioral changes. Additionally, they noted becoming more responsive to the needs of themselves and others. Mentors' ability to become more responsive to not only their needs but also the needs of others may assist in developing a deeper interpersonal relationship.

Temperament Awareness

Overall, "temperament awareness" allowed mentors to take the knowledge gained from the ATQ2 interpretive summary and try it out in real time. Mentors applied what they learned to the mentor/mentee partnership and adjusted their interactions to create a new 'fit' between themselves and their mentees. Mentors shared specific examples of how they understood temperament's role in emotional responses. "...use temperament traits to your advantage to keep yourself motivated," and "we had a discussion on the ability to be adaptable in situations while still honoring process and routine. We discussed boundaries and how to determine the physical reaction and how it relates to the needs for boundaries." Another mentor wrote that her mentee "shared she was very sensitive and reactive to a comment that a colleague had made about their working together." Finally, one mentor stated that, "persistence and focus are essential to completion of our work plans."

Intentional Change During Interactions

Mentors indicated an intentional change occurred in their interactions with the mentees during the 30 days following the ATQ2 and summary interpretations. Mentors began

modeling for mentees how to interact and socialize within their systems. Mentors shifted how they approached conversations, made environments more amenable to discussions with the mentees, and offered shared experiences as a way to engage.

A new awareness of temperament moved the mentors to make deliberate changes during the interactions. Participants began to consider temperament in their mentees' interactions intentionally. One mentor stated, "[I needed] to be sensitive to where we are meeting so there are limited distractions, and I can focus on the conversation." Another mentor shared, "Being very aware of high level of distractibility, I wanted to find a way to keep [the] mentor/mentee meetings on task. I found that by implementing a checklist of topics…set a timetable…taking notes…" A third mentor stated, "I need to be more open…need to stay focused."

Responsive to the Needs of Self and Others

More "awareness of the needs of themselves and others" offered the mentors a new skill or task to analyze the interactions with their mentees. Responses by the mentors indicated that becoming more self-aware allowed them to move deeper into the relationship with the mentee. One mentor stated, "it created a deeper awareness of the whole person," while another wrote, "…[this] impacts all of my relationships and interactions."

Mentors shared comments such as, "I did a lot of reflection… on how to draw more out of my mentee, how to build the relationship". One mentor wrote, "I am learning that it is best to focus on listening and responding objectively without emotion." Still another mentor utilized a temperament trait word to describe self-awareness by stating, "…trying to control my mood, so it does not play into my interaction." One mentor, shared a reflection process, "saying what I thought I heard her say, offering open-ended questions and specific guidance when requested, and then checking for understanding." Opengart and Bierema (2017) impart that mentors' ability to gauge their mentees' emotions and become aware of their own emotions may assist in developing a deeper interpersonal relationship.

Discussion

Mentoring adults has traditionally been built upon three distinct theoretical foundations: developmental, learning, and social theories (Dominguez & Hager, 2013). The theories became evident in the three overarching themes discussed above.

Developmental Theories

Developmental theories are fundamental to mentoring approaches (Dominguez & Hager, 2013). They speak to the processes or tasks occurring as humans grow and change throughout their lifespan (Horowitz, 2014). Developmental tasks typically build from the simple to more complex stages. These processes are generally orderly but may occur at different rates of time for everyone (Horowitz, 2014).
The overarching theme of "awareness of the needs of themselves and others" offered the mentors a new skill or task to analyze the interactions with their mentees. Learning new skills and growing personally and professionally reflects a developmental theory foundation change. As mentors grow, they have the potential to model that growth to their mentees.

Learning Theories

Learning involves the transfer of knowledge. Mentoring leaders Fain and Zachary (2020) state, "Effective mentoring requires a strong relationship between mentoring partners" (p. 7). The relationship between the mentor and mentee is a process-oriented partnership that involves critical reflection and application instead of product-oriented teaching and transfer of knowledge (Zachary, 2005). Levinson
The overarching theme of "temperament awareness" allowed mentors to take their newfound temperament awareness and development and apply it immediately with their mentees. Using their insight from the ATQ2 into their relationship with their mentee shows a learning theory process.

Social Theories

In mentoring programs, a vital piece of the program is engaging the mentee in the organization's social fabric (Kram, 1983). Social theories view mentors as role models that help integrate mentees into the organization's social fabric when used as frameworks for mentoring programs. Successful socialization in mentoring programs has been tied to higher satisfaction in the workplace, career advancement, and retention (Boushey & Glynn, 2012; Cohen et al., 2007). Mentors can help mentees join an organization's social networks by modeling behaviors, providing information, and introducing mentees while adjusting (Dominguez & Hager, 2013).

The overarching theme of "intentionally changing behavior" shows developmental and learning theory strategies but also connects to social theories. This study utilized the Social Network Theory to think about a person's connection and purpose within their system. As mentors created intentional change in their interactions, they were modeling for the mentees how to interact and socialize within their systems. Mentors shifted how they approached conversations, made environments more amenable to talks, and offered shared experiences. The mentor's behavior change potentially created more opportunities for the mentee to successfully understand how to replicate social exchanges in their systems.

Summary

These findings mirror the type of changes that Cameron et al. (2013) found in their work on temperament with parents and children. Their research was completed at Kaiser Permanente, a large Health Maintenance Organization in the United States. It showed that parents who completed a temperament profile (i.e., awareness assessment) were likelier to implement positive behavior changes during interactions with their children (Cameron et al., 2013). For this study on temperament and mentoring, mentors who completed temperament the ATQ2 profiles also began implementing behavior changes that impacted the mentor/mentee relationship, just like the parents did with their children in the Cameron et al. (2013) study. This study's themes supported that mentors became responsive to the needs of others and then intentionally changed their behavior to support their mentor's needs. This change may potentially increase the effectiveness of the mentor/mentee relationship.

Future Recommendations

Research shows that the retention of employees is a problem many organizations have (Bidwell, 2016; Mullen, 2012). Cooperative Extension is no exception (Extension Committee on Organization and Policy's Leadership Advisory Council, 2005). Healthcare, education, and manufacturing research support mentoring to impact employee retention. Curtin et al. (2016) state that mentoring may impact individuals personally and professionally.

Fain and Zachary (2020) also frame mentoring as a reciprocal learning relationship. The mentor and mentee are responsible for the partnership; findings from this study support intentionally adding temperament education to formal mentoring programs.

Adding temperament profiles allows mentors and mentees to enhance relationship interactions positively. One mentor stated, "I would like more information... and would like my mentee to have the profile as well." Offering both parties the opportunity to complete temperament profiles and have conversations around similarities and differences creates an opening for honest dialogue and potentially more positive relationships. Research shows that mentor/mentee relationship success can be tied to the quality of the interactions (Allen et al., 2004; Brondyk & Serby, 2013: Zachary, 2005).

Along with completing temperament profiles, these findings call for additional opportunities to share temperament education. While an increase in awareness of temperament in the interactions was shown in the responses, further education may offer mentors and mentees opportunities to practice and model temperament awareness in their relationships. Additional temperament education opportunities, spaced at intervals throughout the mentor/mentee relationship, may provide further learning and development of relationship skills.

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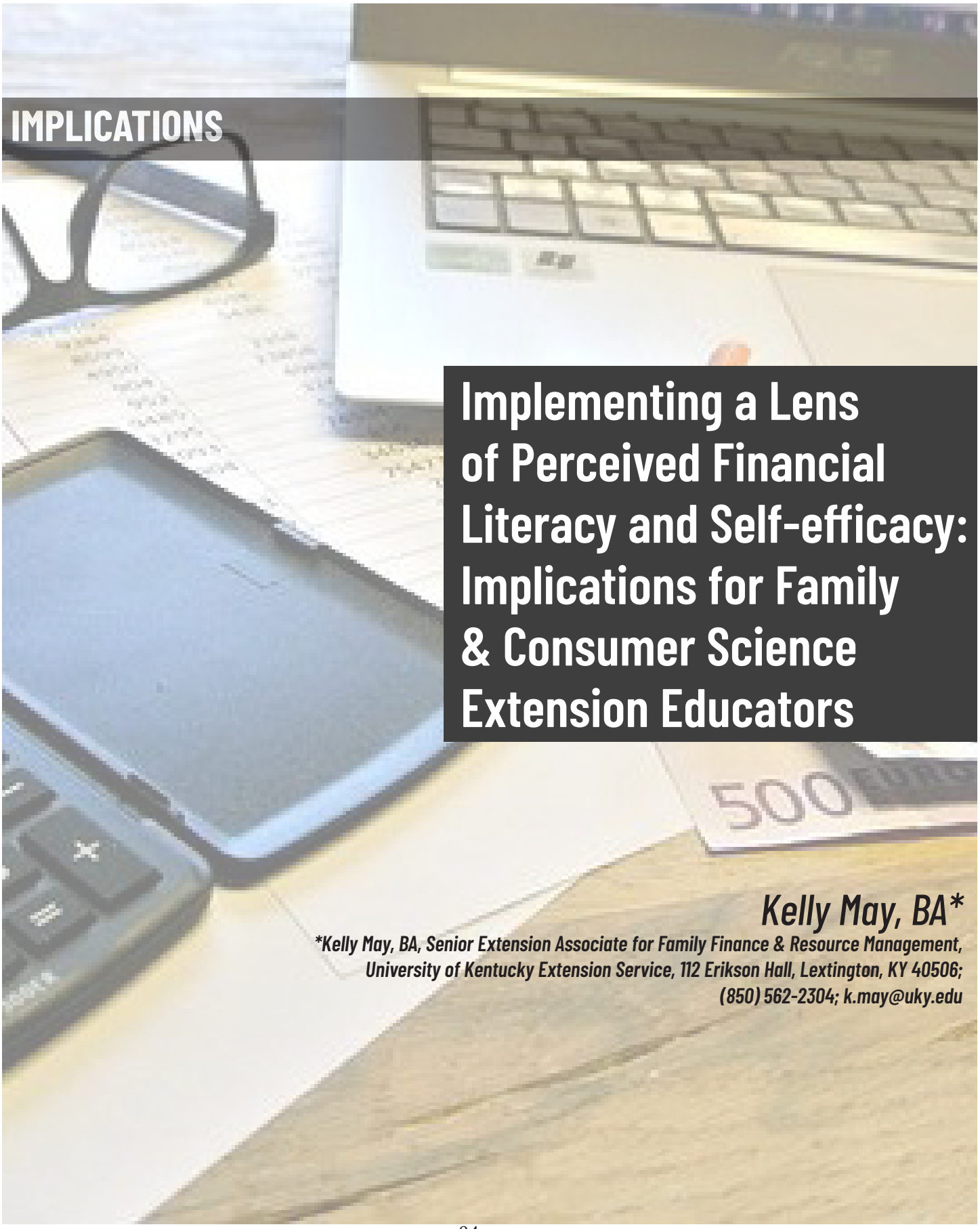

IMPLICATIONS

Implementing a Lens of Perceived Financial Literacy and Self-efficacy: Implications for Family & Consumer Science Extension Educators

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Abstract

Family and Consumer Science (FCS) Extension agents are uniquely poised to deliver needed financial literacy content for all ages in local communities. However, there is little research on the financial literacy perceptions and self-efficacy of FCS agents who may provide this content. This literature review summarizes current research on self-efficacy and perceived financial literacy and seeks to determine if there is value in pursuing similar studies regarding FCS educators.

Perceived financial literacy and self-efficacy: Implications for Family and Consumer Science Extension educators

Among researchers, there is agreement that financial literacy is a skill that the general population needs. Today's consumer must navigate a startling number of financial decisions and choices within a lifetime. Traditional financial products and services have continued to evolve with the advent of new technologies, giving way to more – and more complex – product and service choices for the consumer (Lind et al., 2020). Credit options abound in a wide range of rates and terms. Company-provided pensions are being discontinued in favor of defined benefit plans that are at the consumers' discretion. While flexibility can be a positive, the sheer number of choices can lead some consumers to shut down and avoid making choices at all. Consumers who lack the ability to compare and select the best offer may pay much more than necessary.

Financial literacy research is still young, gathering steam in the early- to mid-2000s. Some early financial literacy research lacked a theoretical foundation (Lusardi & Mitchell, 2014; Collins & Holden, 2014). Recently, studies have begun to look at financial literacy through the lens of Bandura's theory of self-efficacy. Other studies have delved into perceived and objective financial literacy and whether perceptions enhance financial literacy skills or possibly create overconfidence.

Objective

Much of available financial literacy research focuses on the learner's financial literacy efforts, regardless of age. Few studies focus on the educator. It appears little research has been done to find out about the self-efficacy and perceptions of educators, in particular the Family and Consumer Science (FCS) Extension educator. Therefore, the following research question could be posed: Would there be value in a study that looks into what FCS Extension agents think they know (versus what they actually know) and their self-efficacy, to see if it influences their likelihood of offering financial literacy programming? It could be hypothesized that a study exploring FCS agents' preparedness to teach financial education would illuminate how to better prepare them to provide this valuable programming in their communities.

Background Section 1: The Need for Financial Literacy

Researchers studying financial literacy and financial capability appear to agree that there is a general need for financial education (LeBaron et al., 2018; Lusardi & Mitchell, 2014; Hensley et al., 2017, etc.). On an individual consumer level, those benefiting from more financial literacy are more likely to amass wealth through retirement planning and other savings options (Lusardi & Mitchell, 2014). Those with less financial literacy are more likely to have larger debt loads and use more costly forms of borrowing (Lusardi & Mitchell, 2014). Harvey (2019) found that financial education mandates reduced likelihood and frequency of payday loan borrowing in particular, among the more costly alternative financial ser-

vices. Lusardi & Mitchell (2014) summarized related findings over a decade of amassed research that confirm an overall lack of financial literacy in U.S. respondents.

However, there is great disparity around when, how, and if financial literacy should be included in education in the United States, as evidenced by some states that have financial literacy education requirements and some that do not (Pickler et al., 2022). Even where there are requirements, there is great variance on how much financial literacy is taught – whether it is a standalone class or incorporated into other studies (Pickler et al., 2022).

There also appears to be some disagreement over whose role or responsibility it is to teach the subject matter. Is it the role of the education system to teach it? Mandating financial education in schools does not necessarily equate to providing related teacher training (Hensley et al., 2017; Lusardi & Mitchell, 2014; Compen et al., 2019). Thus, mandates may fall short of the goal.

Should it be taught by parents at home? Today's parents may not feel equipped to adequately teach their children financial principles (Jorgensen et al., 2019). In that study, parents and grandparents regretted that they did not provide financial lessons earlier in their child's life. A different qualitative study found that across generations family members wished they had received more opportunities to learn at home (LeBaron et al., 2018).

Should it be taught by government and non-profit groups? With Extension's research-based education focus and agents positioned in local communities, Family and Consumer Sciences Extension may be uniquely poised to help meet this need locally.

Background Section 2: Impact of Perceived Vs. Objective Financial Literacy

The objective financial literacy of respondents is typically measured by judging the number of "correct" responses given to a series of questions that demonstrate the subject matter, as in Lusardi & Mitchell (2014). Interestingly, other researchers have begun to explore perceived financial literacy, and those instruments also gather responses to scaled questions that measure subjective financial literacy, as in Henegar & Mauldin (2015). Subjective financial literacy refers to a person's confidence level with finances; it evaluates the person's perceived knowledge, or his or her self-assessed financial knowledge (Ouachani et al., 2020).

By comparing the two measures (objective and perceived), researchers can determine how much the subject knows versus how much that subject thinks he or she knows, or the "illusion" of knowing. This comparison has led to some interesting research questions such as whether perceptions about financial literacy actually enhance financial literacy skills or possibly create overconfidence.

Studies by Balasubramnian & Sargent (2020a and 2020b) and Henegar & Mauldin (2015) differed in their findings depending on the income of the household of those studied. Heneger & Mauldin (2015) explored the relationship between financial literacy and savings behavior in low- to moderate-income households. They found that perceived knowledge was a strong indicator of savings behavior in low- to moderate-income households.

However, Balasubramnian & Sargent (2020a and 2020b) found that as income level increases, perceptions were skewed, with the greater financial freedom allowing for poorer financial decisions to be made. The authors referred to the gap between objective and perceived financial literacy as "blind spots." Their research supports their hypothesis that those with "blind spots" will make weaker financial choices than those without, and found that those with "blind spots" appear to be more likely to have greater education and income (Balasubramnian & Sargent, 2020a and 2020b).

Perceived financial literacy may be at least as important as objective financial literacy, and possibly more so (Lind et al., 2020; Allgood & Walstad, 2016). There may be a distinction between perception of financial knowledge and perception of financial ability, such as predicting the stock market (Allgood & Walstad, 2016). In one study, subjective financial knowledge, which the authors equated to confidence, was a stronger predictor than objective knowledge, which they equated to competence (Lind et al., 2020). Both measures suggest consumers will engage in sound financial practices. Thus,

financial literacy educators should focus on boosting both measures and how it affects financial decisions, behaviors, and wellbeing (Lind et al., 2020, Allgood & Walstad, 2016).

Several of the studies found a difference in perceived versus objective knowledge by gender (Tenney et al., 2021; Balasubramnian & Sargent, 2020a; LaBorde et al., 2013). They report males tend to perceive themselves more financially literate, while females tend to hold lower perceptions.

Background Section 3: Impact of Self-Efficacy on Financial Literacy

While early studies of financial literacy were lacking in theoretical foundation, more recent studies have begun to look at financial literacy through the lens of the theory of self-efficacy, by Canadian American psychologist Albert Bandura. Self-efficacy revolves around an individual's belief in his or her ability to affect situations (Fish & Jumper, 2021; Shim et al., 2019; Rothwell & Wu, 2019). Shim et al. (2019) define **financial self-efficacy** as a person's self-beliefs about his or her ability to manage personal finances. Self-efficacy is more specific than just confidence or self-esteem; it involves both belief in personal capabilities and that a person can reach specific attainments (Odle, 2019).

Bandura's theory revolves around four sources of efficacy: mastery experiences, vicarious experiences, social persuasion, and physiological (Odle, 2019, Mu'izzuddin et al., 2017). Mastery experiences involve achievements or successes a person has reached. Mu'izzuddin et al. (2017) suggest that the motivational construct of self-efficacy theory – in particular, successfully managing finances, using credit cards less, and controlling debt – can predict the level of individual financial literacy.

Vicarious experiences, or modeling, are those where one feels success is more achievable after observing peers succeed. Social or verbal persuasion happens when the belief of others leads to one's own belief in success. Finally, physiological conditions can affect belief. Stress, in particular, can reduce self-efficacy for individuals in terms of financial literacy (Mu'izzuddin et al., 2017).

A few studies have looked at the impact of financial self-efficacy on the consumer. Shim et al. (2019) used self-efficacy to measure student loan repayment stress. They found that those with greater self-efficacy perceived less difficulty in paying off their loans. In conjunction, they also studied problem-solving orientations. While negative problem-solving orientations do impact perceived difficulty, financial self-efficacy impacted perceived loan repayment stress more significantly (Shim et al., 2019). Therefore, confidence in ability equated to less difficulty.

Hoffman & Plotkina's (2021) study focused specifically on Bandura's mastery source of self-efficacy. They asked individuals to recall and analyze a previous personal financial experience to find out its association with financial self-efficacy. They found a successful previous performance led to a more positive view on being able to accomplish a similar task in the future. This suggests that practitioners should focus on highlighting past personal successes and accomplishments to build consumer financial self-efficacy and trigger future success.

Of the studies that focus on self-efficacy and financial literacy in educational settings, most focus on students or workshop participants and how self-efficacy manifests itself within financial literacy. Program evaluation could be improved by measuring learning gain using the change in financial literacy self-efficacy (Prevett et al., 2020). However, it may warrant further attention when self-efficacy gains are larger than knowledge gains, as this could be considered overconfidence (Lusardi et al., 2017; Skimmyhorn et al., 2016).

Rothwell & Wu (2019) suggest that tailoring financial education content to life stage and gender could be effective strategies to ensure lessons are timely and relevant. The study compared self-efficacy to perceptions using data from a Canadian survey. They measured subjective financial knowledge, objective financial knowledge, and financial self-efficacy for individuals who completed financial education as well as those who did not. While finding statistically significant evidence, they noted that financial education did not explain the variation on objective knowledge (Rothwell & Wu, 2019).

Fish & Jumper (2021) studied the self-efficacy of Family and Consumer Science schoolteachers relating to the COVID-19

modality switch to off-campus instruction. These teachers often employed project-based or hands-on learning that was challenging to replicate remotely. Data showed teacher self-efficacy increased when the school district communicated to teachers that they were doing a good job and when teachers had prior experience with online student interactions (Fish & Jumper, 2021).

There is a general lack of studies that look at the financial literacy educator in particular, rather than the student, and whether self-efficacy makes him or her a more effective teacher. Further studies of instructor self-efficacy could yield insights into whether belief in self may lead to offering more and/or better financial literacy programming.

Implications for FCS Extension Agents

Family and Consumer Sciences (FCS) agents within Cooperative Extension have delivered educational content to the individuals and families in the communities they serve for more than 100 years (Washburn et al., 2021). As such, they are in a unique position to address community needs – including financial literacy. FCS agents routinely reach the same audiences that social service providers reach; they present easily accessible, understandable, and unbiased information; and they provide programs and curricula for caregivers as well as for adults and youth.

FCS professionals regularly collaborate and engage with communities. Their unique blend of education and training allows them to address complex needs, serve in leadership roles, and work to transform communities (Franck et al., 2017). Extension agents study local community needs and determine the curriculum pieces that will result in positive outcomes with specific audiences. In this way, clientele needs direct the programming offered and potential research (Collins & Holden, 2017).

Clearly research has shown that financial literacy is a need for the general public. Therefore, ensuring that FCS agents are well-prepared to provide financial literacy education will help them make a difference in this area in their local communities. However, no one has yet applied research in the areas of financial literacy perceptions and self-efficacy to FCS agents as financial literacy educators. Doing so would fill a gap in current research.

Summary

Multiple studies have declared the importance of financial literacy for consumers. A review of ten years' worth of amassed research reports that multiple surveys "confirm that most U.S. respondents are not financially literate" and note that "the costs of financial ignorance are substantial" (Lusardi & Mitchell, 2014, p.12&24). Collins & Holden (2014) cited a lack of theory-driven approaches generally in current evaluations of financial literacy programs. A few newer studies are just beginning to explore how self-efficacy theory may apply (Prevett et. al., 2020, Rothwell & Wu, 2019; Lusardi et al., 2017, etc.). The majority of studies currently available focus on objective financial literacy, or actual knowledge and skills, rather than subjective or perceived financial literacy (Ouachani et al., 2020).

While researchers are beginning to look into financial perceptions and self-efficacy of students or workshop participants, few have looked into the perceptions and self-efficacy of financial literacy educators. Further, there appears to be a gap in the literature addressing how this research could be applied to FCS agents as financial literacy educators. A study might investigate what FCS Extension agents think they know versus what they actually know (perceptions) and their self-efficacy in financial literacy. Studying them as educators may shed light on how prepared they feel to teach this topic and if these factors influence the likelihood of them offering financial literacy programming.

Implications might be broadened beyond Extension if the study could be replicated for other educators, such as schoolteachers or government or non-profit outreach educators. Another future implication might be to cross-apply a similar study to other areas of FCS Extension to find out how best to equip agents in any program area. Finally, equipping FCS agents to successfully teach financial literacy may have a positive impact on strengthening communities.

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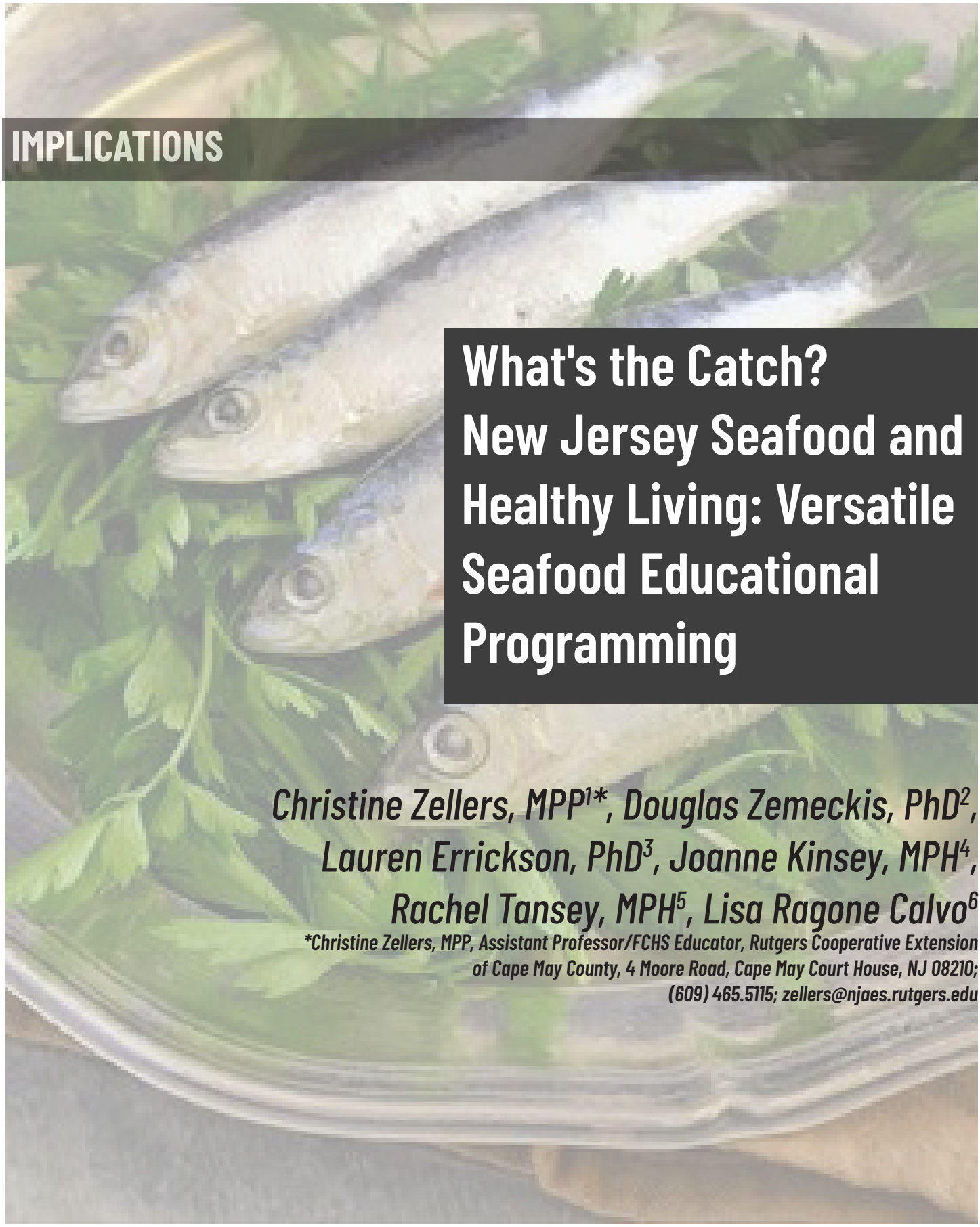

IMPLICATIONS

What's the Catch? New Jersey Seafood and Healthy Living: Versatile Seafood Educational Programming

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Abstract

In recognition of National Seafood Month and to support New Jersey's fishing and aquaculture industries during the COVID-19 pandemic, *What's the Catch? - New Jersey Seafood and Healthy Living* was developed and implemented as an Extension education program in October 2020 to deliver science-based information on sustainable seafood production and health benefits of seafood consumption. Diverse content connected seafood harvest and production methods with the health and nutritional aspects of seafood consumption to encourage increased purchasing and intake. Since its inception, this program has been offered annually in New Jersey and serves as a useful model for seafood programming nationally.

What's the Catch? New Jersey Seafood and Healthy Living: A Versatile Seafood Education Program

New Jersey is well known for the Jersey Shore, where marine ecosystems and resources support valuable fishing and aquaculture industries. In 2018, the commercial marine fisheries and seafood industries had a total economic value of $3.6 billion and supported over 49,000 jobs, while the marine recreational fishing industry had a $1.3 billion value and supported over 14,000 jobs (National Marine Fisheries Service, 2021). Seafood producers and resource managers in the state continue to implement responsible practices to ensure the long-term sustainability of New Jersey's marine resources while expanding consumer support (MAFMC, 2019; NJDA, 2022).

Regular seafood consumption has important implications for human health, including reduced risk for chronic disease. The 2020-2025 Dietary Guidelines for Americans (DGAs) recommend twice weekly consumption of varied seafood as part of a strategy to lower dietary saturated fat and sodium levels (USDA and USDHHS, 2020). For women who are pregnant, breastfeeding, or planning to become pregnant, consuming appropriate amounts of seafood lower in mercury yet rich in nutrients such as Omega-3 fatty acids contributes to infant health and wellbeing (FDA and EPA, 2019). While federal guidelines and information to help consumers make appropriate seafood choices are available, almost 90% of Americans do not eat the recommended amounts of seafood (USDA and USDHHS, 2020). Additional education is warranted to boost seafood consumption and foster associated health and socioeconomic benefits.

Extension education programs have improved consumer knowledge and intake of local seafood elsewhere in the U.S. (Abeels et al., 2015), but no previous programs existed for New Jersey. The objective of this this program was to encourage increased seafood consumption among New Jersey residents by providing science-based information on responsible seafood production and the health and benefits of consuming local seafood.

Objective and Purpose

What's the Catch? - New Jersey Seafood and Healthy Living was designed as a two-part webinar series first delivered virtually in October 2020, during National Seafood Month, by Extension educators with expertise in fisheries, aquaculture, seafood, and health and nutrition. Statewide program participants were recruited via social media, print media, email, and university websites. Popularity of the program resulted in versatile follow-up programs in 2021 and 2022. In 2021, the program was once again a virtual presentation; however, in 2022, the program was delivered virtually and in-person simultaneously. To encourage attendance at the 2022 presentation, incentives were given to in-person attendees. The incentives included seafood seasonings and recipes along with Extension fact sheets and National Oceanic and Atmospheric Administration (NOAA) fishery handouts.

Through diverse content presented at each session, Extension educators connected the topics of seafood production

with the health and nutritional aspects of seafood intake. In the first 90-minute session in 2020 and 2021, two marine Extension educators discussed types of seafood produced from New Jersey's marine fishing and shellfish aquaculture industries. They shared responsible stewardship practices employed by industry and management practices required by state and federal agencies to maintain the long-term sustainability of New Jersey's marine resources, ecosystems, and coastal communities. During the second 90-minute session, four health and nutrition Extension educators shared important information regarding the DGAs and federal mercury guidance along with tips for purchasing seafood, with an emphasis on seafood produced in New Jersey. To fully equip consumers with the skills to properly choose and prepare seafood, this session highlighted interpretation of seafood labels, practicing safe handling practices, preparing seafood recipes, and understanding seafood mercury content. When in-person programming allowed for a hybrid program in 2022, the program was presented as a one-night, 90-minute program that included abbreviated coverage of the same topic areas as the two-night program delivered in previous years.

The nutrition, preparation, and purchasing portion of the presentation has been replicated by the Family and Community Health Sciences (FCHS) Educators who partnered to create the program. The success and interest in the program demonstrate the need for nutrition education that supports increased seafood consumption through lessons that provide purchasing, preparation, and overall knowledge of the benefits of seafood.

Background

To both encourage increased consumption and support the local economy during the COVID-19 pandemic, the educational program of *What's the Catch? - New Jersey Seafood and Healthy Living* sought to provide educational materials that would guide participants to better understand seafood production and health benefits. To overcome potential barriers to eating seafood, Family and Community Health Science (FCHS), Agriculture and Natural Resources (ANR), and other Extension educators involved in this collaboration highlighted topic areas to support safe purchasing and preparation, as well as beneficial nutrients and mercury recommendations for vulnerable populations. While the webinars highlighted specific topic areas, such as seafood's ability to assist with maintaining a healthy weight and providing Omega 3s, supplemental materials like recipes and recipe videos were developed to provide continual educational opportunities and to support behavior change. https://njaes.rutgers.edu/fchs/recipes/recipe.php?NJ-Flounder-Mediterranean-Style.

Evaluation responses and participant questions helped to annually improve programming. For example, questions from previous participants were used to enhance topic areas for future presentations, whereas, to address cost barriers, material was added about purchasing local, seasonal seafood and techniques for freezing seafood that could be purchased when pricing is lower. Additionally, suggestions on how to make seafood on a budget by selecting more affordable options were exemplified to assist participants who may need creative ideas to eat seafood on a budget.

Results

To evaluate success, a post-program internet-based Qualtrics survey was distributed annually via email to all participants (2020, n=94; 2021, n=31; 2022, n=35). In 2020, the Rutgers Institutional Review Board approved the survey instrument and evaluation process. Survey data were analyzed using IBM SPSS v.27 statistical software. Descriptive statistics were used to summarize participant demographics, evaluate overall program satisfaction, and measure intended behavior change. All survey respondents provided a positive evaluation of the overall program quality, organization, and delivery, with the majority rating these program aspects as "Excellent" (based on a scale of 1-Poor to 5-Excellent) in all three years. Almost all respondents indicated they were at least somewhat (33.3%) if not highly (55.6%) likely to consume more New Jersey-sourced seafood in 2020, and those figures improved with each year's program with 81.2% highly likely and 9.09% somewhat likely to eat more New Jersey-sourced seafood in 2021. In 2022, 50% of respondents indicated that they were highly likely or somewhat likely to consume more New Jersey-sourced seafood. Evaluation results from all years demonstrated an increased likelihood of increased purchasing of New Jersey-sourced seafood based on anticipated behavior changes, whereas, in 2020, 59% of respondents

reported intentions to purchase more seafood, in 2021 that number increased to 64%, and 100% of respondents in 2022, stated they were highly likely to purchase more seafood after program participation. Survey respondents also reported increased knowledge relative to New Jersey's recreational and commercial marine fisheries and aquaculture industries, as well as regarding nutrition and health benefits of consuming seafood. Median self-reported scores for knowledge gained and an improved understanding of all seafood-related topics were higher among participants after *What's the Catch? – New Jersey Seafood & Healthy Living*. Qualitative data from survey participants in the three years included: "Knowing which fish are local and where they can be bought was helpful." "I would like even more information on cooking seafood and food safety related to NJ seafood, please repeat this program yearly."

Summary

While pandemic restrictions prevented in-person programming in 2020, a webinar format was advantageous to enable attendance of participants and presenters from across the state. As pandemic restrictions were lifted and educational formats progressed toward hybrid formats to accommodate virtual and in-person participants, so too did *What's the Catch? – New Jersey Seafood and Healthy Living* programming.

Based on the positive reception, abridged versions of the nutrition education portion of W*hat's the Catch? – New Jersey Seafood and Healthy Living* were offered in other venues. For example, in 2021, the nutrition portion of the program was broken into two sessions during Wellness Wednesday with FCHS, with 231 attending the first week and 228 attending the second week. Once again in 2022, the abridged program was well-received during Wellness Wednesdays with FCHS, with 83 viewers in the first session and 79 attendees at the second presentation (Shukaitis et al., 2022). FCHS also used *What's the Catch? – New Jersey Seafood and Healthy Living* nutrition program materials as individual educational opportunities at libraries across the state.

This interdisciplinary, multi-departmental programming highlighted New Jersey's seafood industry while successfully educating diverse participants on the health advantages of eating more seafood. The creation of the program during the pandemic warranted a virtual program that allowed professionals across the state to work collaboratively to create new programming. Barriers have included limitations on audience participation during National Seafood Month in October when New Jersians are entering colder months and less likely to eat seafood as coastal activities decrease. To combat this barrier in 2023, creators intend to deliver the program in warmer months when residents may be even more interested in the prospect of seafood consumption.

While *What's the Catch? – New Jersey Seafood and Healthy Living* focused on local seafood, the core content regarding both domestic seafood harvest and production along with the health and nutritional benefits of seafood are broadly relevant. FCHS educators throughout the U.S. can consider a similar model to engage geographically separated constituents. Educators can select regionally inspired seafood recipes to customize recommendations for their audiences. Non-coastal states with limited availability of fresh seafood can promote fresh or frozen domestic seafood choices for improved health and benefit to the U.S. seafood economy. This program model demonstrates implications for Extension professionals for multi-disciplinary work as well as the communities served by Cooperative Extension.

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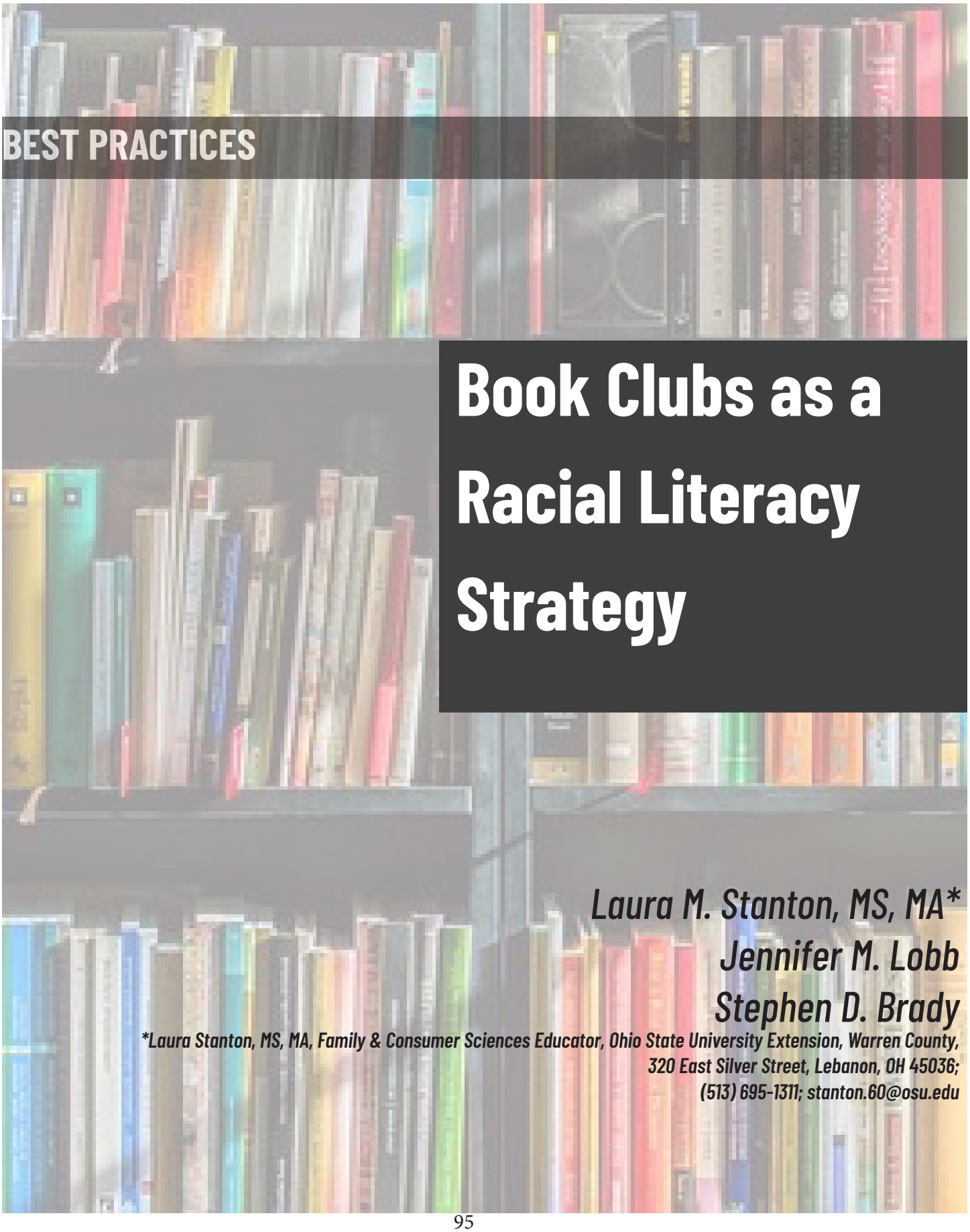
Figure 1



BEST PRACTICES

Book Clubs as a Racial Literacy Strategy

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Abstract

In 2021, two Extension educators partnered to offer a virtual book club in their county. The book club was focused on racial literacy and took place over 11 months. Feedback from participants indicates that the book club was an ideal setting to learn about and reflect on historical and contemporary racial events and topics. Survey results indicated a substantial gain in knowledge as a result of book club participation. The success of the book club lends itself to be replicated in other counties, other states, and on other diversity, equity, and inclusion topics.

Book Clubs as a Racial Literacy Strategy

Professional development is needed both within Extension and within education at large to support existing efforts to increase diversity, equity, and inclusion (DEI). University of California Extension professionals demonstrated that Extension professionals who develop intercultural competence are better prepared to meet the needs of multicultural populations (Moncloa et al., 2019). Fields & Nathaniel (2015) suggested that becoming more aware of social disparities can help Extension professionals work toward social justice in their communities. With this idea in mind, a group of Extension professionals at the Ohio State University offered a book club in 2021 to improve racial literacy among their peers (Lobb et al., 2022).

Book clubs are an effective method to strengthen a sense of community among readers in both professional and personal settings (Grenier et al., 2021; Kattapuram et al., 2019; Smith & Galbraith, 2011). Popularized by the Oprah Winfrey book club model, like-minded readers form groups around a common book (Fajardo, 2010). Different from academic book discussions, book clubs give readers a sense of control within their reading and learning, and this empowering model of engagement has many influential results (Petrich, 2015). The book club format encourages members to build relationships, learn together, and to engage in cultural change work (Grenier et al., 2021).

Purpose

The purpose of this paper is to share how two county-based Extension educators organized, facilitated, and evaluated a book club to enhance racial literacy in their community. The efforts in the county were modeled after a statewide book club offered as a professional development opportunity to Extension faculty and staff at the same time (Lobb et. al., 2022). The state- and the county-based book clubs were offered virtually and occurred simultaneously in 2021.

Method

Two county Extension educators, one in Family and Consumer Sciences and one in 4-H Youth Development, organized and facilitated a virtual book club for their community. Both Extension educators identify as White. The FCS educator is female and the 4-H educator is male. Both share a passion for DEI topics and believe in the importance of anti-racism efforts.

The purpose of the book club was to increase the racial literacy of participants, which includes building the knowledge, skills, awareness, and vocabulary needed to talk thoughtfully about race and racism, and to identify racism as a system in society (Sealey-Ruiz, 2021). Participants read Why Are All the Black Kids Sitting Together in the Cafeteria? and Other Conversations About Race by Dr. Beverly Daniel Tatum (Tatum, 2017; see Stanton et al., 2022 for a book review) and used the Book Group Discussion Guide provided by the author (Tatum, 2020). The book club took place over the course of 2021, starting in February (Table 1) and meeting once a month for the remainder of the year. The General Guidelines for Productive Discussion outlined in Tatum's (2020) discussion guide were used, as well as guidelines from a respectful dialogue toolkit available through the Ohio State University's Office of Diversity and Inclusion (n.d.). Table 1

The book clubs were held virtually using the Zoom platform. All book club members started in the same room. After a brief icebreaker or check-in activity, participants were randomly assigned into two breakout rooms. One of the

Extension educators served as the facilitator in each breakout room. At the start of the book club, participants were reminded of Zoom best practices, such as staying muted unless talking, keeping video cameras on, and using the chat feature for questions and comments.

The book club was offered to residents of Warren County, a populous, suburban community. Extension partnered with the Martin Luther King Community Coalition of Lebanon, a local social justice community organization. The book club was marketed across multiple social media platforms and promoted across several email lists. Participants were required to register and could choose either a daytime (from 12–1pm) or an evening (7–8pm) book club meeting. When registration closed, 72 people had registered.

A public school in the county marketed the book club to their staff and many of the book club participants were teachers. When asked if the district wanted to have their own separate book club, the director of curriculum and instruction said the teachers preferred to mix with the community members. The combination of community members and educators was often mentioned as a strength of the book club experience.

During the registration process, people were invited to share their demographic information. Of the 68 who responded, the group was primarily female (91%) and White (88%). Three participants were Black (4%) and four identified as having two or more races (6%). No one reported being Hispanic or Latino. This demographic profile is representative of the county. Data from the U.S. Census Bureau (2020) show that the county population is 84% White alone (not Hispanic or Latino), 4% Black, 7% Asian, 2% two or more races, and 3% Latino. In terms of age, the largest age group ranged from 40–49 years old (34%) with the next largest age group consisting of those 60 years old and older (28%). The next two largest age groups were between 50 and 59 years old (18%) and between 30 and 39 years old (13%).

In addition to the two official book clubs (daytime and evening), "office hours" were held once a month during the first few months of the year at the request of several individuals who asked for additional time to talk and ask questions. To build community and connection, two open houses were scheduled, one in July and one in December. Both were in-person events, with the July open house taking place outside in a community park and the December open house taking place at a local coffee shop. During each open house, the FCS Extension educator shared educational materials and resources including multicultural children's books, multicultural crayons, and art supplies, as well as different skin tone band-aids. This was in response to many book club conversations when White participants shared that they were not familiar with what resources were available. The Extension educator was modeling the "windows and mirrors" framework (Style, 1988) and deliberately providing "windows" for the predominately White participants, so they could see new and different points of view and resources (Stanton, 2023).

As the year progressed, attendance slowly decreased. The highest attended month was February with 47 participants and November was the lowest attended month with 11 participants. On average, 25 people attended each month (daytime and evening book clubs combined). At the conclusion of the final book club meeting in December 2021, participants were sent an anonymous, online, eight-question evaluation by email. They were invited to provide feedback about their experience (Appendix). We received 24 completed evaluations.

Results

The evaluation data suggests that book club participants increased their knowledge of DEI issues. Before the book club, 38% of the respondents stated they had some knowledge of DEI information, 46% were fairly knowledgeable, and 17% were very knowledgeable. The knowledge rate shifted after the book club, when 38% of the respondents said they were fairly knowledgeable and 63% said they were very knowledgeable. Figure 1

After the book club, the majority of respondents stated they would use the knowledge they gained. Five individuals (21%) stated they would probably use the information and 75% said they would definitely use the information. Another highlight from the post-survey was a one-sentence statement: "My high respect for the extension system was increased by this program."

A permanent and indirect result of the book club was the creation of a DEI resource webpage that was, and continues to be, housed on the Warren County Extension website (go.

osu.edu/Warren-dei-resources). Participants were encouraged to share helpful resources throughout the year. The webpage was updated throughout 2021 and is still active. It includes recommended websites, books, and other educational resources.

Discussion

The county book club took place during a unique period in history. At the time, Donald Trump was President and according to the Pew Research Center (2021), "racial tensions were a constant undercurrent during Trump's presidency, often intensified by the public statements he made in response to high-profile incidents." Furthermore, Trump's election was associated with a statistically significant surge in reported hate crimes across the United States, even when controlling for alternative factors (Edwards & Rushin, 2018).
In May 2020, George Floyd was killed by police in Minneapolis, Minnesota. His death was one of several police brutality and death cases that year, and the event brought race into mainstream conversations. In addition to the heated social and political landscape, people were physically isolated from each other due to COVID-19.

It became clear that the monthly book club meetings provided a safe space for the mostly White participants to process and reflect on racism, their individual racial identity, and the role they could play in their personal and professional lives as community members in a rather conservative county. According to the Warren County Board of Elections (2020), 64.5% of the county residents voted for Donald Trump in the November 2020 general election.

After just three meetings, participants were informally asked what new information they had learned so far. One participant shared, "Encouragement is my answer. Knowing there is a group of people in our community, and specifically staff members of the school, who want to become aware of and know other people's stories is very encouraging. Specifically, the author's review of the last 20 years of racial inequity was eye-opening. Those were my young adult years, but the issues mentioned were mostly oblivious to me." Another participant responded:

> ***I am gathering much from the book, but honestly have so enjoyed listening to others' opinions and experiences. I am a quiet member of the Zoom meetings but feel as if I am learning much more about this town I have lived in for 29 years (since I began teaching here). I also am feeling more adequate in responding or standing up to others and not falling into that passive racism category.***

An unexpected and positive outcome of the book club has also been a stronger bond between the school district that marketed the book club, the teachers that participated, and the community. Both Extension educators were recently invited to teach about DEI topics at a professional development day for teachers and staff in the school district and continue to serve as community resources. The personal and professional relationships that have been formed demonstrate the value of the book club format highlighted by Grenier et al., (2021)– stronger relationships and a willingness to engage in cultural change work together.

As evidenced by the survey results and participant comments, information gained from the book club was valued and participants intend to use what they learned. The success of the book club lends itself to be replicated in other counties and other states, as well as on other diversity, equity, and inclusion topics.

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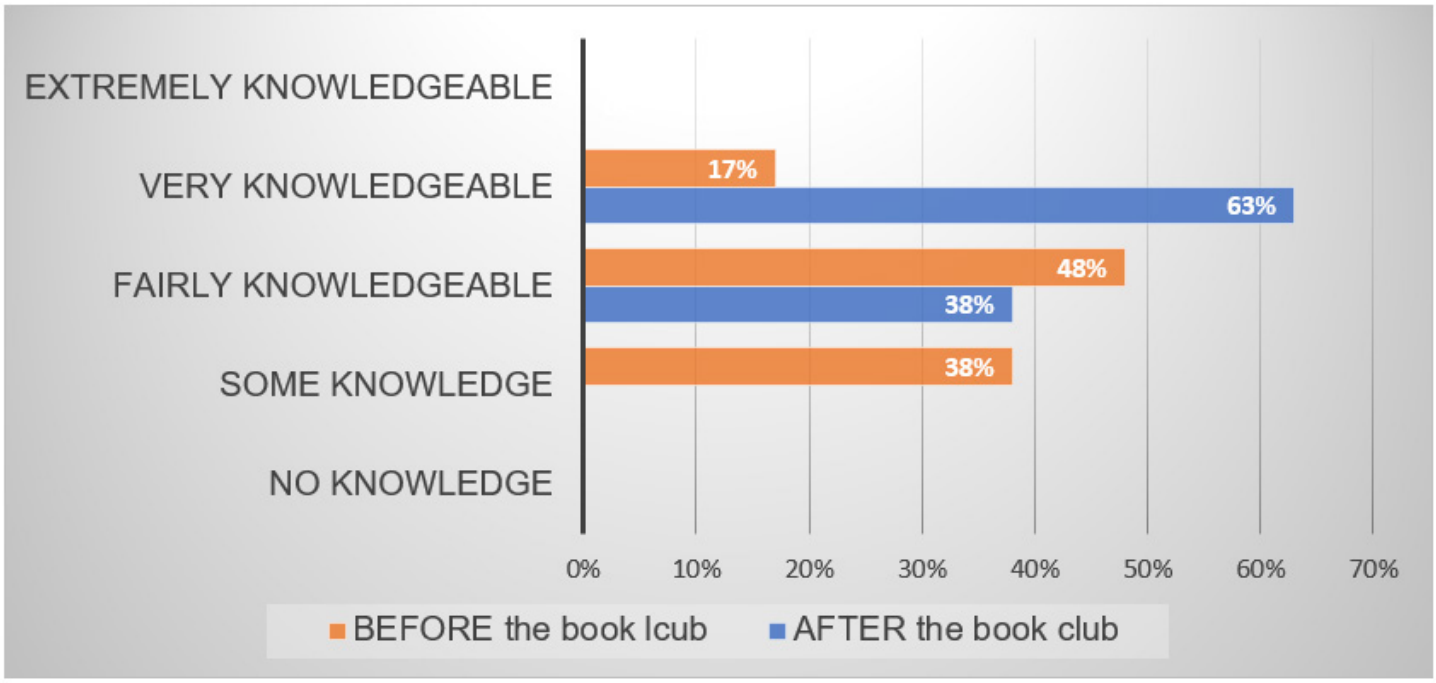
Table 1

***Why Are All the Black Kids Sitting Together in the Cafeteria?* and Other Conversations About Race (Tatum, 2017) Book Discussion Schedule**

Month	Reading Assignment
February	Prologue and Introduction
March	Chapter 1: Defining Racism and Chapter 2: The Complexity of Identity
April	Chapter 3: The Early Years
May	Chapter 4: Identity Development in Adolescence
June	Chapter 5: Racial Identity in Adulthood
July	Chapter 6: The Development of White Identity
August	Chapter 7: White Identity, Affirmative Action, and Color-Blind Racial Ideology
September	Chapter 8: Critical Issues in Latinx, Native, Asian and Pacific Islander, and Middle Easter/North African Identity Development
October	Chapter 9: Identity Development in Multiracial Families
November	Chapter 10: Embracing a Cross-Racial Dialogue
December	Epilogue: Signs of Hope, Sites of Progress

Figure 1

Self-Reported Knowledge Level of DEI Issues Before and After the Book



Note: Responses to the statement: *Please rate your knowledge level regarding diversity, equity, and inclusion...*

Appendix

Post Book Club Survey

1) Which book club did you join?
- Daytime
- Evening
- Both (a mixture of Daytime and Evening)

2) How many Book Club meetings did you attend?
- 1-5
- 6-11

3) Please rate your knowledge level regarding diversity, equity, and inclusion (DEI) information before and after the book club.
- No knowledge
- Some knowledge
- Fairly knowledgeable
- Very knowledgeable
- Extremely knowledgeable

4) Please indicate your intention to use the information presented during the DEI Book Club.
- I will definitely use the information.
- I will probably use the information.
- I have not decided if I will use the information.
- I probably will not use the information.
- I definitely will not use the information.

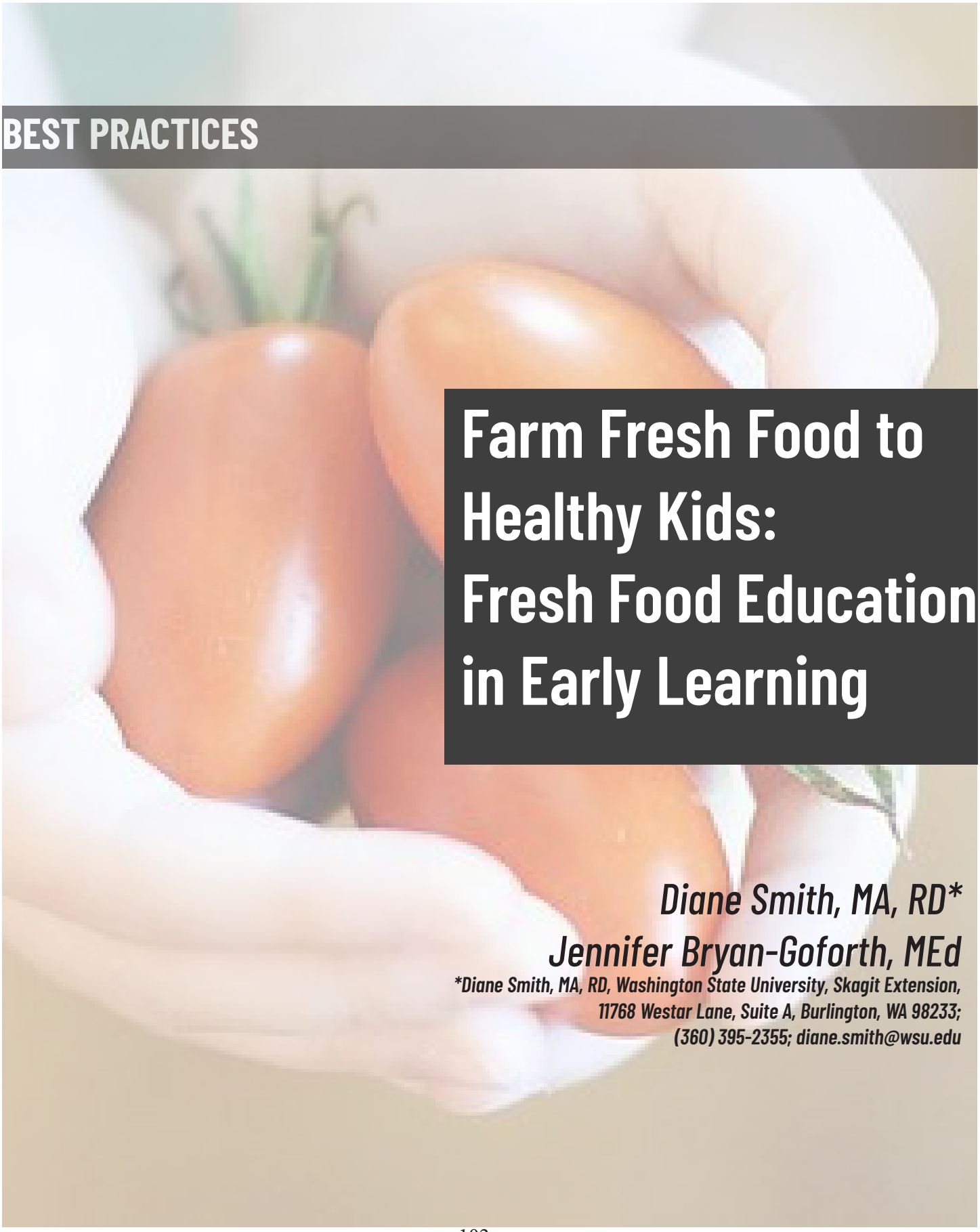
5) Please tell us something that you learned as a result of participating in the DEI Book Club.

6) What was the best part of the DEI Book Club?

7) What is one area of the Book Club that needs improvement?

8) Our Team is interested in offering additional educational opportunities around DEI topics and issues. What would be helpful to you on your DEI journey? Are there books or topics that you would like to learn more about? We would love to hear your ideas and suggestions.

BEST PRACTICES



Farm Fresh Food to Healthy Kids: Fresh Food Education in Early Learning

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Abstract

Family Farm to Healthy Kids (FF2HK) program was a collaboration between farmers, culinary students, early learning centers, and parents with the goal of increasing familiarity of local produce to promote increased vegetable and fruit acceptance and intake. A local farm cooperative provided seasonal produce, recipes were developed for culinary students to prepare samples for tasting, which were then delivered to early learning centers. Teachers incorporated harvest activities at circle time and harvest recipe sheets were delivered to parents to extend food education at home. An increase in familiarity of local produce was reported by culinary students, teachers, and parents. This paper describes program development, implementation, and lessons learned.

Farm Fresh Food to Healthy Kids: Fresh Food Education in Early Learning

Teaching children to consume and enjoy more fruits and vegetables is a promising way to help them eat healthy. Research has shown that repeated exposure has a direct and positive impact on food acceptance (Spill, et al., 2019). If a child is not familiar with eating a particular food, he/she is more likely to reject it. The current food environment does not encourage families to serve fruits and vegetables, and their high cost may prevent low-income families from buying them (Scalioni, et al., 2018).

Literature Review

Food preferences are influenced by taste (Liem & Russell, 2019; May & Dus, 2021). It is not uncommon for children to prefer sweets and dislike vegetables. Top reasons why kids hate vegetables are lack of exposure, bitter taste, and texture (Gibbs, 2022). Vegetables, in general, are slightly bitter since they contain calcium and beneficial constituents such as phenols and flavonoids (Tordoff & Sandell, 2009). Produce that is over or under cooked changes the food texture resulting in children adverse reaction to the food (Tournier & Forde, 2023).

Typically, in the American diet, ultra-processed foods represent more than half the calories and contribute nearly 90% of all added sugars (Steele, et al., 2016, Gupta, et al., 2021). This shift away from whole and lightly processed food to a diet dominated by highly processed food that are energy rich but nutrient poor has contributed to the development of chronic diseases and particularly obesity (Poti, Braga, & Qin, 2017; Crino, Sacks, Vandevijvere, Swinburn, & Neal, 2015). Washington State Public Health reported in 2016 that approximately 12% of children aged 2-4 years receiving WIC benefits met the criteria for obesity (Washington Dept. of Health, n.d.). The 2021 National Survey of Children's Health reported 32% of children aged 1 to 5 years did not eat fruit daily and 49% did not consume vegetables daily (Hamner, Dooymea, & Blanck, 2021).

Recognized by the Centers for Disease Control and Prevention (CDC) as an opportunity to increase healthy environments, an increasing number of early childcare and education providers are engaging in Farm to Early Care and Education (ECE) activities (National Farm to School Network, 2021). The term "Farm to ECE" encompasses efforts to serve local or regional produce, provide hands-on learning activities such as gardening, farm visits and culinary activities, and integrates food-related education into the curriculum. Program coordination, teacher and care provider training, and facilities for safe preparation of produce samples are components of a successful program (McCloskey, Kesterson, Mena, Dellaport, & Bellows, 2020; Nekitsing, Hetherington, & Blundell-Birtill, 2018).

Purpose and Objectives

Family Farm to Healthy Kids (FF2HK) was developed and implemented at thirteen early learning centers to (1) increase familiarity and improve food acceptance/preference for produce grown in the Skagit Valley region, (2) provide markets for local farmers, (3) and engage teachers and parents in learning about produce grown in the Skagit Valley
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Program Design and Implementation

Funding from USDA-FNS (CN-F2S-IMPL-20-WA-3) supported farm to ECE activities in 13 early learning centers in Skagit County, WA for the 2020-2022 school years. The program's protocol and survey questions were reviewed and approved for exemption status by Washington State University IRB. Collaborations between key stakeholders were established with each one having a specific task and role in the project. WSU Skagit Extension Ideas for Healthy Living Program designed and distributed harvest recipe sheets, offered teacher training, and curriculum guidance. Viva Farms, an incubator farm cooperative, provided bilingual training for farmers with limited resources on organic farming practices and supplied local, organic seasonal produce once a month during the school year. Northwest Career and Technical Academy (NWCTA) ProStart Culinary Program, a two-year, industry-backed culinary arts and restaurant management program for high school students, prepared and packaged samples to be delivered to the early learning centers. The teachers at Mount Vernon School District (MVSD) Early Childhood Education and Assistance Programs (ECEAP) and Skagit/Islands Head Start providing center-based early learning for children aged 3-5 years distributed the samples during snack/circle time and incorporated nutrition and fresh food education into the learning environment. Parents were engaged in the program through the harvest recipe sheets that were sent home each month or shared online.

Food education programming was modeled on Harvest for Healthy Kids (Izumi, Greenough, Hallman & Barberis, 2014). Seventeen harvest recipe sheets were created based on local, seasonal produce grown in Skagit County, WA and included a descriptive introduction on the featured produce, easy-to-prepare recipe, yield of edible portion, and preschool activity to extend learning to the home. Each recipe followed the safe recipe style-guide and listed safe food storage tips to extend shelf life and reduce waste (Kranias, & Thesmar, 2020). Kid-friendly learning activities, Kids in the Kitchen, aligned with early learning outcomes (Head Start, 2010), were included to engage preschoolers in learning through science, math, art and language activities, using the produce item featured. The harvest recipe sheets can be downloaded from https://extension.wsu.edu/skagit/healthy-harvest-for-kids/. Research points to the importance of early learning of food groups which can be foundational in increasing familiarity with different foods and healthy food choices (Toomey, Schweitzer, & Agenbroad, 2021); therefore, a component of the curriculum provided by WSU Skagit Extension included a series of in-classroom lessons based on Discover My Plate (USDA, 2023).

ProStart students referenced the harvest recipe sheets to prepare tasting samples from produce sourced from Viva Farms. Once a month, a seasonal crop was harvested and prepared following the recipe and delivered to ECE centers in compliance with local health department guidelines. Preschool teachers used circle time to introduce the produce to their students and shared information about the farmer who grew the food. They also discussed food gardening, and talked about the food flavor, taste, and texture.

Methods

Thirteen ECE centers serving 231 preschool-aged youth participated in FF2HK during the 2020-2022 school years. An initial planning meeting established the FF2HF foundation, and subsequent follow-up convenings provided guidance to each stakeholder group participating in the program. A master calendar of monthly harvests was created, delivery route for distribution to each ECE center was established, and supplies needed for sampling at the preschool were provided. Audience specific survey tools developed incorporated

Knowledge, Attitude and Practice (KAP) questions to gather feedback from four target audiences—ProStart students, Parents, Teachers, and Preschool Youth. Questions were designed to gather feedback on novelty of the produce, ease of recipe preparation, intention to purchase the featured produce item, and intention to prepare the recipe. The preschool youth survey was designed as a circle time activity with students raising their hands in response to questions: "Is this fruit/vegetable new to you?"; "Did you like it?"; "Would you try it again?". To encourage parents to provide feedback, a postcard with a QR code linked to an online survey was sent home and a drawing for a gift card was offered as an incentive. A year-end meeting with teachers reviewed the food and nutrition education instruction and activities, logistics of the delivery and service of the samples, and recommended changes.

Survey Results and Findings

The surveys were completed by 29 ProStart students on the last day of class, 6 parents by online survey, 7 teachers in a listening session, and 8 preschool classrooms (n= 120) during a circle time activity.

Farmers from Viva Farms through conversations, described the benefit of the training opportunity to learn about the Good Agricultural Practices (GAP) certification process required to sell to public entities. The modest earnings from the FF2HK program contributed to their overall earnings for the year.

NWCTA Feedback

An increase in familiarity with Skagit grown fruits and vegetables was reported by 38% of the ProStart students, and 17% reported purchasing at least one of the featured produce items to prepare at home. Other findings showed: 83% enjoyed the food sample made from the recipe; 60% reported increased familiarity with the produce grown in Skagit Valley; 62% were more familiar with farmers in Skagit Valley; and 17% reported increased consumption of fruits and vegetables.

The overall interest in the program was positive as conveyed by comments such as "do this more often", "definitely do this again next year" and "yes, keep this going, I enjoyed it a lot". Suggested improvements included (1) allow students to discuss and vote on the recipe to prepare for the seasonal, local produce; (2) add more food group variety to dishes, such as grains; and (3) increase the frequency from one to two samples each month. The favorite recipe among the students was Maple Syrup Roasted Carrots. Purple potatoes and delicata squash were novel produce items for the students.

Preschool Student Feedback

During a circle time activity, preschool teachers in eight classrooms asked students (n=120) to raise their hands in response to three questions about the produce samples tasted: : "Is this fruit/vegetable new to you?"; "Did you like it?"; "Would you try it again?". In responses by count of hands raised, at least 50% of harvest samples offered were new foods; about 40% liked the harvest sample especially delicata squash, kale, asparagus, radish, and purple potatoes; and 85% would try the produce items again.

Teacher Feedback

Teachers (n=7) described FF2HK as an added benefit to the teaching environment. Samples arrived just before circle time – a perfect opportunity to share and discuss the harvest. About 50% said they added Kids in the Kitchen activities in classroom learning, including five senses activities with different fruits and vegetables. All teachers stated that the program was beneficial, giving a "real-world" connection to farming and places in the community. One teacher stated, "This program gave us a chance to come together to share food that we might not normally have tried". Head Start teachers shared that they rely on the nutrition education curriculum and lesson ideas shared by WSU Skagit Extension, including a themed fruit or vegetable each month, in their classroom instruction.

Teachers suggested ways to improve the program: (1) Connect with farmers with a picture or story delivered with the produce, or possibly Zoom presentation from the farm; (2)

Create a map of the county and pin where the farmer works and the food is grown; (3) Include a field trip to the farm; (4) Place seeds or tubers of the produce in a small plastic bag for children to observe; (5) List the ingredients used in preparing recipe for those kids with food sensitivities.

Parent Feedback

Six parents completed an online survey, shared in postcards sent home with a QR code link to the survey. Parent response ranked Apple Crisp, Overnight Raspberry Oats, and Roasted Asparagus as favorite recipes. Additionally, 85.7% reported that the asparagus, delicata squash and purple potatoes were a new food for their child; 71.4% tried at least one recipe at home; 100% of parents reported purchasing asparagus, radish, and kale; 85.7% of parents reported the recipe was easy to follow; 57.1% tried at least one of the Kids in the Kitchen activities described on the harvest recipe sheet; and 71.4% reported that they changed how they stored produce after reading the "how to store" section.

Summary and Discussion

The F2HK program, offered at 13 ECE centers during the 2020-2022 school years, was a collaboration between farmers, culinary students, early learning centers, and parents with the goal of increasing familiarity of fresh, local produce to promote increased fruit and vegetable acceptance and intake. Once a month, local, seasonal produce was provided by farmers, delivered to culinary students who prepared samples for tasting by preschool students. Curriculum support, harvest recipe sheets, and in-class education were strategies to enhance the overall quality of the food education experience. Seventeen harvest recipe sheets were developed for culinary students to follow in preparing tasting samples, for teachers to incorporate monthly harvest activities at circle time and as part of snack/lunch meal conversations, and delivered to parents to extend the food education at home.

This multi-agency collaboration served a diverse audience including preschoolers and high school students of color and Hispanic farmers; therefore, culturally responsive educational materials were developed including culturally relevant recipes, made available in Spanish and English to reflect the diversity, equity and inclusion considered in this collaboration. The ProStart instructor found value in the collaboration as students gained knife skills, application of heat to food, impact of cooking method on taste and texture, and math skills in portion size and cost per serving analysis.

Barriers frequently identified when offering a farm to ECE program include lack of funding to purchase local items outside established procurement channels, seasonality of fruits and vegetables, and lack of cooking and service equipment to prepare local produce in the classroom for children to taste (Bloom, et al., 2022). In Skagit County, WA, the FF2HK collaboration worked together to overcome the barriers to offer a fresh food education program. Viva Farms seamlessly added the FF2HK to their delivery schedule. Seasonal availability of produce due to weather (e.g., a wet spring delayed the spinach harvest) provided an opportunity to explore weather patterns and local harvest, and partnership with the culinary school addressed the concern of cooking and equipment needed to prepare local produce in the classroom while providing a skill development for high school students.

A limitation of this program was the lower number of parent responses than anticipated, likely due to COVID-19 related restrictions in which parents could not enter the classroom and had minimal interaction with teaching staff. Due to COVID-19 restrictions, in person instruction by outside educators was not allowed which impacted the original plan to offer a 5-part nutrition education series in the classroom. WSU Skagit Extension developed a 5-lesson video series based on Discover My Plate (USDA, 2023) curriculum which was viewed by children, teachers, and parents.

Evaluation questions were created by WSU Skagit Extension, specific for each target group participating to assess familiarity, acceptance, and consumption of local, seasonal produce. Survey questions were tested for readability at the third-grade level; however, questions were not validated. Future research on parent confidence to offer/serve fruits and vegetables in the home following a farm to ECE program will be an important addition to knowledge on children feeding practices.

The survey responses indicate that the FF2HK collaboration met the program objective to increase familiarity of local produce. An increase in familiarity and consumption of locally grown, seasonal produce was reported by culinary students, teachers, and parents. The partners expressed interest in continuing the program beyond the funding cycle which may be possible since logistics and procedures have been established, roles and responsibilities well defined, and perceived value and shared benefit realized.

The increased familiarity with taste and texture of local produce addresses the need described in the 2021 National Survey of Children's Health to increase children's daily consumption of fruits and vegetables. Through robust partnerships, clear expectations among stakeholders, and recognized value of fresh food education for children and their families, FF2HK resulted in new markets for local farmers, hands-on, real-life learning experiences for ProStart students, and met the objective of increased familiarity with local, seasonal foods for preschool-aged youth, their teachers, and parents.

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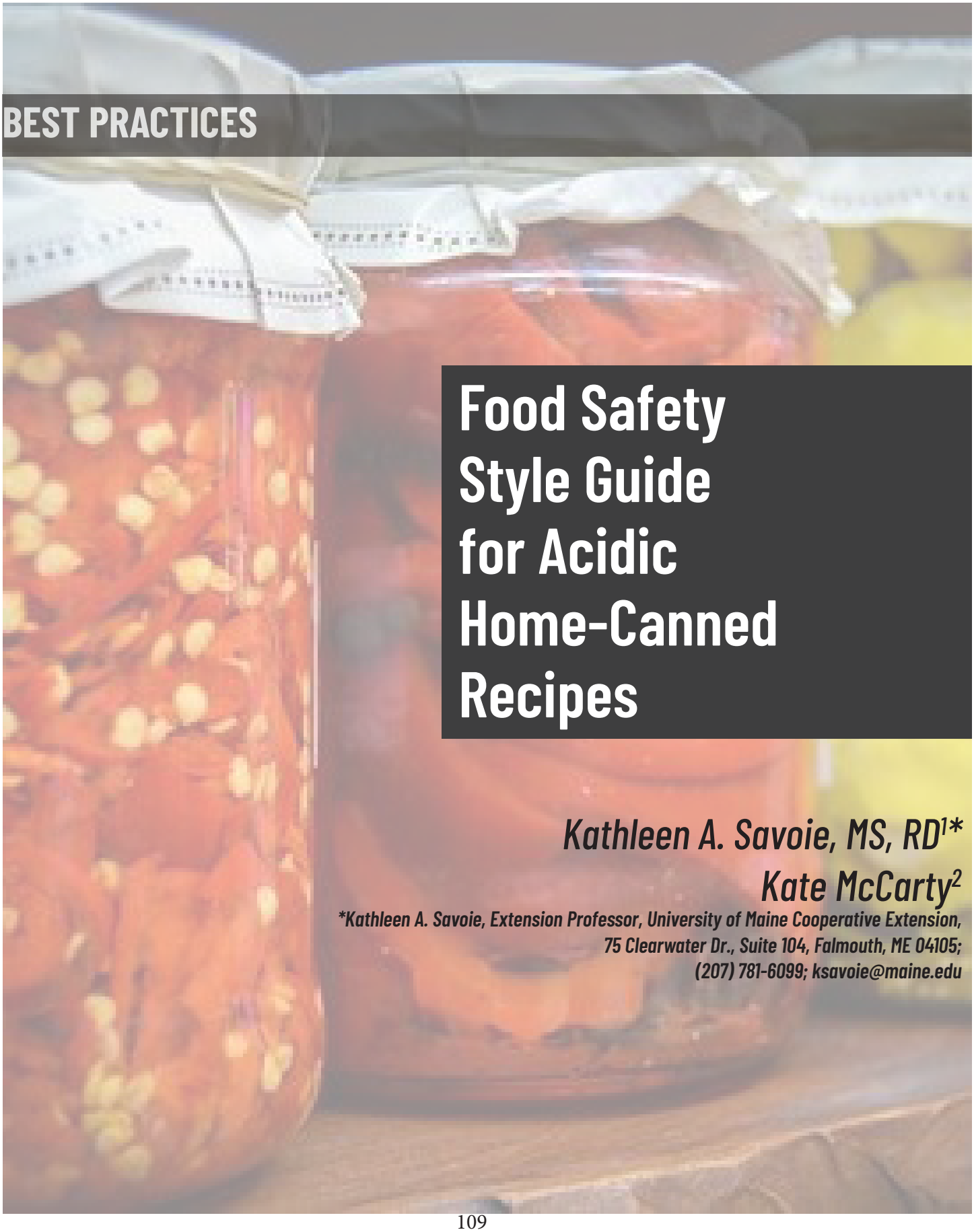

BEST PRACTICES

Food Safety Style Guide for Acidic Home-Canned Recipes

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Abstract

Increased consumer interest in home food preservation and the emergence of research documenting food blogs as a widely utilized yet risky recipe source has created food safety concerns. The Food Safety Style Guide for Acidic Home-Canned Recipes provides best practice guidelines to promote consistency and improved readability amongst recipes created for home canners. Four critical control categories for home food preservation are addressed: prevention of cross-contamination, proper acidification, adequate thermal processing, and producing a vacuum seal. Through targeted educational outreach this style guide intends to minimize the risks of foodborne illness that are associated with consumption of home-canned products.

Best Practices: Food Safety Style Guide for Acidic Home-Canned Recipes

Interest in home canning among the general public continues to grow as does the variety of foods being canned in home kitchens (Gabel et al., 2018; Johnson et al., 2018; Lorenz et al., 2016; Savoie et al., 2019). The process of safe home canning requires adherence to research-based practices for the minimization of food safety risks (Andress et al., 2014; U.S. Department of Agriculture, 2015). Research has demonstrated that recipes have a great impact on consumers' behaviors in the kitchen (Lezama-Solano et al., 2018; Maughan et al., 2016). Historically, home-canned vegetables have been the most common cause of botulism outbreaks in the United States. Two recent botulism outbreaks in 2015 and 2018 involving improperly home-canned foods demonstrate that this risk continues, as well as highlighting the need for continued education for those who want to preserve foods at home (Bergeron et al., 2019; McCarty et al., 2015). Foodborne botulism is a potentially fatal paralytic illness caused by the ingestion of a neurotoxin produced by the spore-forming bacterium Clostridium botulinum. Foodborne botulism outbreaks caused by home-canned foods have highlighted critical areas of concern in home canning that need to be addressed through targeted educational efforts to home canners to prevent botulism (Bergeron et al., 2019; McCarty et al., 2015; Savoie et al., 2019). Additionally, between 2009 and 2015, 12% of recorded outbreaks of foodborne diseases in the United States were attributed to foods prepared in the home, but surveys have demonstrated that consumers do not perceive their homes as a place they are likely to acquire a foodborne disease (Lando et al., 2016), highlighting the need for a food safety focus in home canning education, instruction and recipes. The growing preference for digital communication media necessitates that food safety educators make a concerted effort to reach the public through these channels and also seek to educate digital influencers who provide home canning recipes about their responsibility to disseminate information that is accurate and to utilize existing accurate resources (Savoie et al., 2019).

Purpose

The Food Safety Style Guide for Acidic Home-Canned Recipes is designed for use by any recipe writer who creates and publicizes recipes that have a pH of 4.6 or lower for distribution to the public. This Guide builds upon established best practices (Lezama-Solano et al., 2018; Granberg et al. 2017) and standardization guidelines (Andress et al., 2014; U.S. Department of Agriculture, 2015) to create clarity and consistency within the language used in home canning techniques.

Background

When consumers follow recipes with food safety instructions written into them, they are more likely to adhere to safe food handling practices in their home kitchens (Lezama-Solano et al., 2018, Maughan et al., 2016). Therefore, providing accurate information on preparing a product is crucial for consumers' understanding of the recipe and ultimately their safety. Both the general food safety and nutrition quality of

food blog recipes have raised concerns in recent reviews and beckoned a call for intervention by experts (dietitians and food safety authorities) to target educational materials for food blog writers (Morrison et al., 2019, Mayer et al., 2012; Schneider et al., 2013; Kuttschreuter et al., 2014). Blogs are popular way for the public to access information (Savoie et al., 2019; Schneider et al., 2013; Rutsaert et al., 2014; Morrison et al., 2019). Research has identified that the popular web-based resources commonly used by today's home canners lack adherence to and inclusion of USDA recommended home canning practices (Savoie et al., 2019). A recent study conducted to assess the adherence of salsa recipes on blogs to USDA home canning guidelines found that the majority of USDA home canning guidelines were not included in food blog recipes (Savoie et al., 2019). Specifically, an average of 70% of guidleines were missing across all four categories analyzed (prevention of cross-contamination, proper acidification, adequate thermal processing, and producing a vacuum seal), representing an overwhelming lack of adherence and cause for food safety concerns (Savoie et al., 2019).

Findings

The Food Safety Style Guide for Acidic Home-Canned Recipes (see Figure 1.) is designed for use by any recipe writer who creates and publicizes recipes that have a pH of 4.6 or lower for distribution to the public. This Style Guide builds upon previous research that was conducted to establish consumer preferences regarding recipe format and style and includes standardization guidelines to create consistency and clarity within the language used in home canning techniques (Lezama-Solano et al., 2018, Granberg et al. 2017). In addition to adherence to USDA Home Canning Guidelines (Andress et al., 2014; U.S. Department of Agriculture, 2015), this Guide addresses issues related to readability, another factor in recipe comprehension. Readability issues are improved through style guide format standardization for font, layout, numerical lists and bullet features (Lezama-Solano et al., 2018). Four critical control categories for home food preservation are addressed in this style guide: prevention of cross-contamination, proper acidification, adequate thermal processing, and producing a vacuum seal. Specific steps in the Instructions Style section are targeted messages to reduce cross contamination (i.e., wash produce, clean kitchen area). To ensure correct acidification, the Ingredients Style section provides standard descriptive language to direct the recipe user to the proper ingredient and reduce confusion (i.e., 5% acidity and bottled lemon juice). Furthermore, the F*ood Safety Style Guide for Acidic Home-Canned Foods* refers the recipe writer to their Food Processing Authority for recipe Product and Process Review to ensure that the recipe is suitable for processing in a boiling water bath, properly acidified and meets guidelines for compliance with thermal processing (i.e., thickness, viscosity, and liquid to solids ratio) and adequate processing time to attain a vacuum seal. The Style Guide identifies standard statements for filling jars to adhere to USDA research-based guidelines to reduce food safety risks by honing in on steps to address adequate thermal processing (i.e., temperatures controls, chop, processing) and producing a vacuum seal (i.e., processing times, filling jars, temperatures controls). This targeted educational outreach effort intends to minimize risk of foodborne illness associated with consumption of home-canned products. This F*ood Safety Style Guide for Acidic Home-Canned Recipes* provides guidelines to ensure consistency among recipes used by home canners to reduce the risks associated with home canning.

Summary/Discussion

Overall, research has demonstrated that food blog content does not include the majority of recommended home canning practices related to thermal processing, acidification, attaining vacuum seals, adjusting for altitude, and preventing contaminants (Savoie et al., 2019). Given this lack of content to communicate research-based information, food blog authors are potentially increasing the risks associated with home canning. Including correct food canning guidance in blogs, or providing links to research-based websites including USDA, NCHFP and Extension, may help to reduce the risk of foodborne illness from these foods.

This *Food Safety Recipe Style Guide for Acidic Home-Canned Recipes* is a tool to reinforce that research-based food preservation resources are essential in promoting safe home canning techniques (see Figure 2) . This tool, a recipe style guide that incorporates food safety instructions as well as USDA and NCHFP guidelines to minimize risk in the areas of

vacuum sealing, cross-contamination, thermal processing, and acidification, could assist in risk reduction. Given the documented current critical area of concern in consumer home canning practices and a heightened need for Extension-based efforts to educate the public, with emphasis on the digital influencers, the *Food Safety Style Guide for Home-Canned Foods* provides a research-based tool to of best practices for home-canned recipes to reduce the risk of foodborne illness.

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Figure 1

Food Safety Guide for Acidic Home-Canned Foods

Food Safety Style Guide for Acidic Home-Canned Foods

This style guide contains a set of standards for writing and designing content for acidic home-canned recipes. A Food Processing Authority should approve all recipes for safety.

General Layout & Design

- 14-point font for recipe title
- 12-point font for ingredient list and instruction text
- Use a sans serif font style
- Do not justify text format

Ingredients Style

- List ingredients in a bulleted list.
- List ingredients in the order in which they are used in the instructions.
- Include all the ingredients used in the recipe in the ingredients list.
- Units of measure:
    - List measurements in the imperial, standard units of measurement, not metric.
    - If using abbreviations: Use abbreviations T. (tablespoon) and tsp. (teaspoon).
    - Use numerals not words (ex. 1 garlic clove, not one garlic clove).
    - Do not use subscript (i.e. ½); for readability use 1/2.
    - Use a hyphen between whole numbers and fractions (i.e. 4-1/2 cups) and between a number and a word (i.e. 1/2-inch).
    - Avoid numeral runs by separating numbers with parentheses (e.g. 1 (15-ounce) can of kidney beans.
    - Use inch instead of the " abbreviation.
    - Use the easiest units of measure (ex. 1/4-cup instead of 4 tablespoons).

- Indicate if ingredients are optional using (optional) after the ingredient.
- Use lowercase text except for proper nouns.
- Specify the canning jar size and quantity needed.

As needed, ingredients must include:

- Brand name of pectin, as recipes are brand-specific.
- Use standard chop measurements defined by the actual size (ex. use 1/4-inch chop instead of small chop; use 1/2-inch chop instead of medium chop; use 3/4-inch chop instead of large chop) and set off by a comma (ex. 1 cup onion, 1/4-inch chop).
- Acidification: specify (5% acidity) after vinegar; specify bottled lemon (or lime) juice.
- Refer to salt as "canning and pickling salt".
- In salsa recipes, specify "Do not drain tomatoes".

Instructions Style

Use numbered steps that contain complete sentences and an active voice. Steps should be in manageable task units.

Include before any instructions specific to the recipe:

- To ensure you are using current canning recommendations, refer to USDA's *Complete Guide to Home Canning* or the *National Center for Home Food Preservation* for an overview of canning procedures.
- Products that have had Product and Process Review by a Food Processing Authority should be clearly stated.
- "Clean the kitchen area and wash hands with soap and water."
- "Wash and rinse canning jars; keep warm until ready to use. Wash two-piece screw bands and lids." Do not include information on simmering lids in warm water.
- If processing time is under 10 minutes include: "Sterilize jars by submerging for 10 minutes in boiling water."

As needed, recipe instructions include:

- Wash produce under running water.
- Clear cooking directions (boil and length of time).
- Instructions for making safe substitutions.

Standard instructions for filling jars:

- Immediately pour hot [product name] into hot jars, leaving [#]-inch headspace.
- Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a clean, damp paper towel; apply two-piece metal canning lids until fingertip tight.
- Place the jar in a preheated boiling water bath canner (140°F for raw pack, 180°F for hot pack) with a rack. Repeat until all jars are filled. Check that the water level in the canner is at least 1" over the jars.
- Once the water in the canner has come to a vigorous boil, process for [#] minutes, adjusting for altitude. Turn off the heat, remove the lid, and let the jars stand for 5 minutes.
- Remove jars from the canner and let cool, undisturbed, for 12 to 24 hours.
- Check that vacuum seals have formed. Label and date jars; remove screw bands; store in a clean, cool, dark, dry place and use within 1 year for best quality. Refrigerate after opening and use within 2 weeks.

Include yield as number and size of jars (ex. Yields 5 to 6 pint jars)

Include recipe attribution when necessary: "Adapted from *Title of Resource*"

Figure 2

Sample recipe using Food Safety Style Guide for Acidic Home-Canned Recipes

Sample recipe using Food Safety Style Guide for Acidic Home-Canned Recipes

Let's Preserve: Tomato Salsa with Paste Tomatoes

- 7 quarts, peeled, cored, 1/2-inch chopped paste tomatoes, do not drain tomatoes
- 4 cups seeded, 1/4-inch chopped long green chilies
- 5 cups 1/4-inch chopped onions
- 1/2 cup seeded, finely chopped jalapeno peppers
- 6 cloves garlic, finely chopped
- 2 cups bottled lemon or lime juice
- 2 tablespoons canning and pickling salt
- 1 tablespoon ground black pepper
- 2 tablespoons ground cumin (optional)
- 1 tablespoon dried oregano leaves (optional)
- 2 tablespoons fresh cilantro, minced (optional)

1. To ensure you are using current canning recommendations, refer to USDA's *Complete Guide to Home Canning* or the *National Center for Home Food Preservation*.

2. Clean the kitchen area and wash hands with soap and water.

3. Wash and rinse standard mason-style canning jars; keep warm until ready to use. Wash two-piece screw bands and lids.

4. Wash produce under running water. Combine all ingredients except cumin, oregano, and cilantro in a large pot and bring to a boil, stirring frequently, then reduce heat and simmer 10 minutes. Add spices and simmer for another 20 minutes, stirring occasionally.

5. Ladle hot salsa into pint jars, leaving 1/2-inch headspace. Remove air bubbles and adjust the headspace if needed. Wipe rims of jars with a clean, damp paper towel; apply two-piece metal canning lids until fingertip tight.

6. Place the jar in a preheated boiling water bath canner with a rack. Repeat until all jars are filled. Check that the water level in the canner is at least 1 inch over the jars.

7. Once the water in the canner has come to a vigorous boil, process for 15 minutes, adjusting for altitude. Turn off the heat, remove the lid, and let the jars stand for 5 minutes.

8. Remove jars from the canner onto a cooling rack and let cool, undisturbed, for 12 to 24 hours.

9. Check that vacuum seals have formed. Label and date jars; remove screw bands; store in a clean, cool, dark, dry place and use within 1 year for best quality. Refrigerate after opening and use within 2 weeks.

Yield: 16 to 18 pints

Adapted from *National Center for Home Food Preservation*