



Program Summary

Objective

To describe the development and implementation of an asynchronous virtual training course aiming to improve infant feeding practices of Child Care providers and report program outcomes.

Study Design and Setting

This study was a single group pretest-posttest quasi-experimental design. A three-module course was developed and virtually implemented through a partnership between the Maryland State Department of Education and the University of Maryland Extension.

Measurable Outcome/Analysis

Self-confidence and knowledge related to infant feeding practice were major program outcomes. Recommended changes were also assessed qualitatively. Descriptive statistics and a marginal homogeneity test were used for analysis. Providers completed pre-survey (n=51) and/or post-survey (n=57), respectively. Participants (n=32) who completed both were included for analysis.

Results

Approximately 37% of participants were teachers and 24% were center directors or owners. And the other 39% includes cooks, specialists, field monitors, etc. After the course, participants' self-confidence significantly improved in describing appropriate breast milk storage (p= 0.001), infant transitioning from a bottle to a cup (p= < 0.001), and infants transition to eating solid foods (p= < 0.001). Also, participants significantly improved their knowledge of infant feeding (p < 0.001) in understanding safe breastmilk storage, regulation of reimbursable meals, etc. The participants also emphasized the importance of educating staff to correctly feed infants, proving refresher training, and posting signage about key infant feeding practices in the classroom.

Conclusion

An asynchronous virtual training course implemented through the Extension was feasible and effective for improving self-efficacy and knowledge related to infant feeding practice.

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Problem statement

The Child and Adult Care Food Program (CACFP) provides meals and snacks to children at eligible, participating locations. Previous nutrition interventions for providers presented improved knowledge of CACFP nutrition standards, behavioral intentions, and confidence about feeding practice. However, few studies focusing on infant feeding for providers have been reported. Also, online learning during COVID-19 has been proposed as a feasible way to address professional development opportunities.

Procedures & evaluation methods

Developed & implemented three modules

Module 1: Overview of feeding infants in the CACFP

- Introduction to feeding infants in the CACFP
- Identifying, and responding to hunger and fullness signs
- Creating a breastfeeding-friendly environment

Module 2: Food safety related to breast milk and infant formula

- Storing and handling breast milk at a childcare site
- Selecting, storing, and handling infant formula

Module 3: Progression of intake for growing infants

- Bottle feeding and introducing a cup
 - Developmental readiness for solid foods
 - Infant feeding skills and modifying food textures
- Adapted USDA's PowerPoints, adding voiceovers and animations, and interactive elements to engage learners and appeal to different learning styles.
- Implemented through Office 365 and hosted on the Canvas platform.
- Administered pre, post-surveys via Canvas

Results

	Pre	Post	p-value
Self-confidence to support infant feeding practices (max.65)	52.5 ± 6.0	63.1 ± 3.1	<0.001*
Knowledge related to infant feeding (max. 13)	11.1 ± 1.1	11.8 ± 1.1	<0.001*

- After the participants completed three infant feeding modules, their self-confidence summative score was statistically significantly improved (p < 0.001).
- Very confident in describing how to store breastmilk (p= 0.001),
 - when a child should switch from a bottle to a cup (p= < 0.001)
 - when a baby is developmentally ready to start eating solid foods (p= < 0.001)
- Participants demonstrated significant improvements in their infant feeding practice knowledge (p < 0.001) after the training.
- Maximum breastmilk storage time (21% to 60%)
 - Baby holding position for bottle feeding (41% to 59%)
- Qualitative responses emphasized the importance of
- Educating staff to feed in response to hunger cues, rather than at set times
 - Providing refresher training, and posting signage about breast milk and formula feeding and storage guidelines in classrooms
 - Constant communication with families

Conclusions & Implications

- An asynchronous virtual training course was feasible and effective for improving the infant feeding practice of CACFP providers.
- It has strong potential for program sustainability considering asynchronous program format and collaborative partnership between a state department of education and an extension system.

References

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