Exploring Perceptions of Collaboration Between Two Federal Nutrition Programs Serving Low-Income Families: Formative Evaluation Using Mixed Methods

Ву

Anna VanderLeest

A paper submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Master of Public Health in the Department of Nutrition

Chapel Hill

November 30, 2017

Approved by:

04 December, 2017

MPH Paper Advisor (signature & date)

INTRODUCTION:

The Expanded Food and Nutrition Education Program's (EFNEP) mission is carried out by using a paraprofessional teaching model, "to assist limited resource audiences in acquiring the knowledge, skills, attitudes, and changed behavior necessary for nutritionally sound diets, and to contribute to their personal development and the improvement of the total family diet and nutritional well-being." State-level EFNEP and paraprofessionals partner with existing groups, ranging from community driven to federal low-income programs, to reach their target audience. The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), a separate low-income federal assistance program, promises "to safeguard the health of low-income women, infants, and children up to age 5 who are at nutrition risk by providing nutritious foods to supplement diets, information on healthy eating, and referrals to health care". Missional overlap in nutrition education suggests the potential for partnership between these two organizations.

The EFNEP-WIC partnership started with a 1980 memorandum from the USDA to all State Extension Directors. This statement revoked an earlier policy which refused partnership between these programs; it stated that coordination between the two programs, "could result in a more effective and efficient use of [Federal nutrition education] funds." In the mid 1990s, a 3-year Nutrition Education Initiative was implemented to promote breastfeeding through intentional interagency collaboration between these two programs: "strengthening referral networks and improving program efficiency". In the succeeding years, this partnership has not been maintained (S. Baker, personal communication, September 18, 2017), and today many states have fluctuating partnerships with WIC even though Extension and EFNEP partnerships are emphasized as key strategies to successful nutrition education. 6-8

All WIC participants are eligible for EFNEP², and thus a partnership between the two could expand the EFNEP program. In addition to simply increasing the number of participants, there are further benefits to the collaboration between these two federal programs. To improve behavioral change outcomes in nutrition education to low-income audiences, active^{12,13}, hands-on^{12,13}, client-centered^{14,15}, and peereducation models¹⁶ have been recommended to replace didactic education focused simply on increasing knowledge. EFNEP not only meets these criteria, but also has been shown to have additional benefits. Studies show in low-income women who participate in WIC, stress has negative impacts on birth outcomes and diet choice.¹⁷⁻¹⁹ EFNEP has a positive impact on the quality of life for its participants: decreasing stress and loneliness.²⁰ There are also implications of economic benefits to both.²¹

The purpose of this formative evaluation is to explore the EFNEP-WIC relationships present in the Northeastern EFNEP states by talking with EFNEP Coordinators. The goal of the study is to gain understanding from EFNEP Coordinators on the potential barriers and benefits to this collaboration, as well as solicit feedback on what recommendations could be made to enhance this relationship.

METHODS:

Qualitative (phone interviews) and quantitative (an online survey) methods were chosen for this formative evaluation. A survey created with SurveyMonkey²² assessed Northeastern EFNEP programs' current and future perceptions and relationships with WIC. The survey adapted questions (1-2) from Martin, et al. to address the level of coordination between the two programs.²³ Program leaders

classified this level ranging from no relationship to interagency cooperation, or collaboration. Each measure, as shown in Table 1, corresponds to what degree and extent resources are shared. Further survey questions (3-6) are based on perceptions of innovation adoption²⁴ – specifically the relative advantage, compatibility, and complexity of adapting a WIC-EFNEP partnership. Relative advantage measures the perception of the new versus existing relationship. If the advantage is "high", the new relationship is more likely to be adopted. In contrast, if compatibility or complexity attributes are "high", the WIC-EFNEP relationship is less likely to be adopted.

Logistically, coordinators received the link to the survey (solicited via e-mail) before the phone interview. If not completed before the interview, coordinators were prompted to complete it in a follow-up e-mail.

Preliminary e-mails with Coordinators and review of the literature informed the phone call script. Questions were designed and modified from formative research done by Martin, et al. which examined relationships between WIC and Head Start.²³ Each script had 9 questions, and each interview was designed to last 30 minutes (Table 2). During the interview, two researchers participated on the phone call, prompted for clarity, and took notes.

Using a modified conventional content analysis, the primary evaluator added specific details to the initial notes while listening to the tape recordings multiple times²⁵. Using these detailed drafts, the Coordinators responses were put into headings that aligned with the surveys: barriers (looking specifically at relative advantage, complexity, compatibility) and benefits. Under these sections, the data provided codes (based on repetition and frequency) and helped direct emerging trends. Relationships between the codes were identified through meetings with both evaluators, and six concepts emerged from the interviews. Continued discussion led to the derivation of six concepts to a central theme.

Table 1. Survey Questions

How would you classify your program's current relationship with WIC:

- a. Collaboration Exchange of information and resources among staff members from different types of agencies
- b. Cooperation Common effort and association for the purpose of a common benefit; beginning to develop trust, working together and seeing better ways of doing things
- c. Coordination Helping each other but not changing the basic ways of doing business; exchange of information and referrals
- d. No relationship little or no contact with WIC
- e. Other: write-in

How interested are you in pursuing future collaborations with WIC?

Not interested – strongly interested

Having a WIC-EFNEP partnership is compatible with the current coordination activities in my state (compatibility) Likert Scale 1-5 (Strongly disagree to strongly agree)

I believe that having a WIC-EFNEP partnership would require EFNEP to make substantial changes to our present activities (relative advantage)

Likert Scale 1-5 (Strongly disagree to strongly agree)

I believe that having a WIC-EFNEP partnership would require WIC to make substantial changes to their present activities (relative advantage)

Likert Scale 1-5 (Strongly disagree to strongly agree)

Overall, I believe that it will be complicated to implement a WIC-EFNEP partnership (complexity)

Likert Scale 1-5 (Strongly disagree to strongly agree)

Having a WIC-EFNEP partnership will increase the quality of EFNEP programs in my state (relative advantage) Likert Scale 1-5 (Strongly disagree to strongly agree)

Table 2. Interview Script

Please tell us what state you are working in and what university you are under.

Tell us some of the ways in which your staff has tried to collaborate, or is currently collaborating with WIC.

What things have you found to be successful in your collaboration efforts?

What benefits do you see with your current relationship, and what benefits would you see if this relationship grew?

What barriers have you discovered in your effort to collaborate services?

What feedback have you heard from your paraprofessionals in terms of barriers to collaborating with WIC?

What do you think would encourage this relationship further?

Of all the things we discussed today, which one is the most important to you?

Has anything been missed?

RESULTS:

SURVEY:

Eight out of 13 states in the Northeastern EFNEP region took the survey, a 62% response rate. In Table 3, it is clear there is a broad range of existing WIC-EFNEP partnerships in the Northeastern Region. The classification of current EFNEP-WIC relationship was evenly spread throughout all categories. The survey showed that the most common relationship (38%) was Coordination. Regardless of relationship, on the Likert Scale 1 being strongly disagree and 5 being strongly agree, the average Coordinator response 'agrees' that there is interest in future collaboration.

The highest agreement (3.9) for the innovation adaptation items was that EFNEP and WIC have compatibility. There was slight disagreement (2.9) that EFNEP would need to make changes to their programs, and more agreement (3.3) that WIC would need to. Note that both of these averaged around a 3 – a neutral response. There was higher agreement (3.8) that it would improve the quality of EFNEP. On average there was slight disagreement (2.9) that it would be difficult to start, again close to neutral.

Table 3. Survey Results	
	N (%)
Total responses:	8
Current Relationship:	
Collaboration	2 (25)
Cooperation	2 (25)
Coordination	3 (38)
No relationship	1 (13)
	Mean (Scale of 1-5)
Interested in future collaboration	4.1
Compatibility	3.9
(Based on existing structure)	
Relative Advantage (EFNEP would need to make changes)	2.9
Relative Advantage	3.3
(WIC would need to make changes)	
Complexity (Would be difficult to understand/implement)	2.9
Relative Advantage	3.8

(Increase in quality of EFNEP)	

INTERVIEWS:

Two primary researchers interviewed a total of 8 EFNEP Coordinators in the Northeastern EFNEP region via phone. Each interview lasted approximately 20 minutes. Data were analyzed and coded as described above.

Limited participant contact

EFNEP Coordinators cited the shift to online WIC nutrition education as a reason partnership has declined. They stated historically WIC clinics served as a location for recruitment, referrals, and education; today, the physical presence of participants has declined, making this engagement challenging. Another Coordinator pointed out that WIC allows proxies to pick up vouchers, which makes it difficult to interact with the target population. Several others added that while the shift to online classes further removed this opportunity for partnership, inherently it was challenging to partner with WIC because of programmatic barriers such as time and frequency.

Because of the shift to more electronic methods for reaching the WIC populations...We don't know how to access this population. When and where to access the population. That in itself has created a very big barrier. It's a good thing, but at the same time it has created difficulties in meeting this population.

Staff rapport building

Every Coordinator mentioned relationships as bringing barriers or successes to the local, state, or national level. The level perceived most successful varied among Coordinators. On the local level, Coordinators commented on personal relationships. The turnover of staff at the local level (EFNEP paraprofessionals and/or WIC staff) was seen as hard to navigate; further, paraprofessionals relayed to their supervisors a common sentiment of frustration when trying to build rapport on shifting connections. On the other hand, the persistence of several paraprofessionals led to current, well-established programs.

Some of our relationships, in every WIC district office, look a little bit different from year to year. In one of our offices, we just had WIC staff turnover... when that happens, our EFNEP educators [are] now working with a brand new person, trying to reform a new relationship.

Level of influence

Over half the Coordinators stated they have regular engagement with WIC at the state level: phone calls, meetings, or existing relationships with directors. Some viewed this as a way to continually educate and promote EFNEP; others questioned if their involvement produced real change. One Coordinator stated that the "bureaucratic rigmarole" was difficult to navigate at the higher level, in comparison to the local level. Others suggested that starting conversation or cultivating relationships at the national level could prove beneficial for the program. Many saw this as a future goal; a couple referenced the 1980 MOU between the programs and mentioned this formal agreement may be a place to revisit.

Work has to be top down and bottom up. But just even knowing what happens at the national level to help the collaboration would be a good start.

Similar mission; different approach

Most Coordinators referenced EFNEP and WIC's target audience as the largest benefit to collaboration. Many remarked that beyond sharing a similar population, they have similar nutrition education goals as well. Coordinators stressed that though overlap exists between the programs, EFNEP's nutrition education is unique and does not replace WIC education; rather, EFNEP is complementary to WIC. Others emphasized the slight difference in objectives (WIC provides supplemental food assistance and education, whereas EFNEP provides in-depth, practical education) make it difficult to partner. Those with this reasoning suggested not seeking out partnership. Both sides acknowledged sentiments of logicality often confronted them: if they serve the same people, why are they not collaborating?

From the perspective of collaboration, one stated:

We're trying to reach the same target audience, and our broad goals are generally the same. You know, the nutrition education goals are perfectly aligned. We are working with young families, young mothers, young children, and ...we are interested in reducing health disparities, we're interested in responsive feeding, we're interested in promoting healthier lifestyles...

From the opposite perspective:

I think we serve different functions. Which although that might sound bad on the one hand because one might say 'oh, you're not partnering?' on the other hand it justifies why both programs exist. Because they have different aims, both programs are valid, both programs are important, and both programs are needed. But because of their different aims you know, it just doesn't make sense to partner a lot of times.

Opportunity to fill a need

The most self-described, 'successful', WIC partnerships were with established community groups and were equally beneficial to both programs. These programs had many participants and had implications for long-term partnership. Several Coordinators emphasized framing their interest in WIC as 'What could EFNEP do for them?' lessened resistance and created opportunity for these successful partnerships. Further, finding one specific area, a niche of sorts, and concentrating on that aspect was most successful for their programs. Programs ranged from the Farmer's Market Nutrition Program to breastfeeding support groups.

Having that interest group, and that kind of narrow focus of "we're working with these breastfeeding moms" so WIC is there to help solve their breastfeeding problems and we just tag along for the ride. The advice would be find this very specific niche and work there, instead of trying to be everything to everyone.

Negative program perceptions

Among Coordinators, varied perceptions of WIC attitudes negatively affected partnerships. These perceptions centered on cultural WIC norms and previous WIC interactions with EFNEP. These included a "defeatist" mentality at WIC, territorial competitiveness between the programs, resistance to the

paraprofessional model, and an overall lack of knowledge surrounding EFNEP. Hesitation to share these perceptions was clear during conversation. After sharing, the focus of discussion centered on these barriers and how they impeded EFNEP's desire or ability to work with WIC.

We work really hard on optimism. That this is possible for people, even with all the barriers in their lives... We try to maintain it as something that people would want to be engaged in. And why shouldn't they? Because our educators are great and our classes are fun. But to be really honest, I find that, in our state at least, the WIC culture seems to be coming from a defeatist standpoint.

DISCUSSION OF EMERGENT THEME:

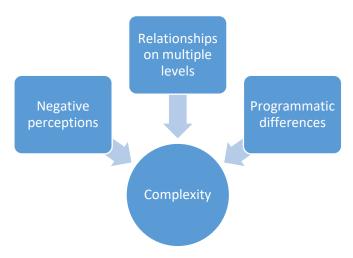


Figure 1. Categories contributing to 'Complexity' theme

Grouping these concepts into three categories resulted in the theme of complexity. Figure 1 shows how the categories contribute to this innovation adaptation measure. Complexity is defined, as "the degree to which an innovation is perceived as relatively difficult to understand and use." (316)²⁴ Thus, for this formative evaluation, it is defined as the relative difficulty to understanding and implementing collaboration between EFNEP and WIC. Note that complexity is not mutually exclusive to the other adaptation measures. In contrast, complexity can be manipulated, while relative advantage and compatibility are difficult to significantly change.

The first category, programmatic difference, encompasses the limited participant contact in part due to the shift at WIC to online programming, as well as the differing styles of education for EFNEP and WIC. In March 2016, over half the states in the Northeastern region of EFNEP were using online education options to meet secondary contact nutrition education for WIC²⁶. This online education reduces the obligation for participants to come into the physical WIC office, though most will still complete their education at the WIC clinic. Historically, EFNEP set up recruitment and referrals at WIC offices or counted EFNEP education classes at WIC as a secondary nutrition education contact. WIC provides supplemental vouchers and short education sessions; EFNEP provides in-depth, hands-on education.

Thus, the programmatic differences contribute to the complexity of collaboration, as partnerships will differ from the historical perspective.

There appeared a "logical" sentiment among Coordinators that these programs could partner, as evidenced by the average 'agree' for compatibility (3.9). However, this logical sentiment was overshadowed by the multiple examples of programmatic difference.

The second category, relationships on multiple levels, contributes to the theme of complexity as multiple levels of relationships altered partnership capabilities. While some states face legal barriers to collaboration (i.e. requiring MOUs) based on state legislation, others face staffing changes that makes building rapport difficult. Relationships regarded as viable and successful found a specific focus, or 'niche', within both programs. The variance in relationships showed that there are both benefits and barriers to creating a partnership, especially when trying to find consensus on multiple levels, leading to increasing difficulty understanding with whom and how this collaboration would pan out.

The third category, negative perceptions, was described above as a difference of attitude, opinion, and effort for the collaboration. Again, all these perceptions lead to the theme of complexity as they contribute to the difficulty in understanding how to work together while being fundamentally different (similar to the programmatic difference). Together, the programmatic (a "hard" difference) and the negative perceptions and relationships ("soft" differences) might explain why, when looking at relative advantage, the average Coordinator believed WIC needed to change (3.3) slightly more than EFNEP (2.9) to reach collaboration. All of these categories mentioned above contribute to the difficulty of understanding and implementing collaboration between these programs.

IMPLICATIONS:

Moving forward, these findings provide insight into how partnerships with WIC can move toward collaboration, regardless of relationship starting point. While some states face legal barriers to collaboration (i.e. requiring MOUs), the suggested implications are still appropriate.

- 1. *Invest in relationships*. In large part, good relationships brought good partnerships, whereas weak relationships led to poor partnerships. Therefore, while relationships can add to the complexity of this collaboration, positive relationships would lessen the difficulty and complexity, potentially increasing collaboration efforts. Many Coordinators stated that their successful relationships took time to build three mentioned it required greater than 5 years before the relationship turned into a working partnership. Many value-based partnerships, collaborations built around similar goals, emphasize that existing partnerships evolved as relationships strengthened: trust, honesty, and dialogue.²⁷⁻³⁰
- 2. Have a larger discussion. Relationships in value-based partnerships grow based on communication. ²⁷⁻²⁹ While this formative research provides a lot of background on EFNEP's perspective, the other side of the story is missing. Conversation among EFNEP Coordinators, conversation among WIC and EFNEP Coordinators, and conversation with paraprofessional staff need to occur. This dialogue can provide guidance and direction for EFNEP-WIC partnerships.

3. Work together to find your niche. Through persistent conversations and network building, finding a niche spot within both programs created the most collaborative relationships. Find an area where WIC has a gap that EFNEP could fill (some examples were breastfeeding support groups, Farmers' Market Nutrition Program, or home visitations). Approach WIC with an extended hand and frame the suggested, mutually beneficial partnership around what EFNEP can do for WIC. In several examinations of interagency collaboration, partnerships thrived when they were focused and specific.³⁰ The category of programmatic differences increased the degree of complexity; instead of trying to aim at the barriers to the historical relationship where EFNEP could provide nutrition education classes at WIC, a narrow focus will "prevent trying to be everything to everyone" and lessen the degree of complexity.

This formative evaluation has multiple limitations. Each state in the Northeastern region varies by geographic size, population density, cultural make-up, and regulations regarding WIC and EFNEP programs. Thus, it is difficult to project what a successful collaboration may look like, as it will vary by state. Some Coordinators may have felt uncomfortable sharing their views as each phone call had a 2:1 ratio of interviewers to Coordinator. Also, the current CT Coordinator was an interviewer which may have limited other Coordinators openness to share. The planned questions guided the discussion; however, some interviews explored topics not covered in others, which may have led to unequal distribution of weight when thematically analyzing the conversations. Most significantly, the WIC point of view should be examined to truly investigate this relationship.

The intention of this formative evaluation was to identify barriers and benefits to the collaboration between EFNEP and WIC. Through interviews with EFNEP Coordinators in the Northeastern states, a theme of 'complexity' emerged when analyzing the barriers and benefits. This theme provides context behind the current struggle to have flourishing collaboration between EFNEP and WIC. Understanding and reducing 'complexity' through relationships, conversation, and alignment of specific interests provides a starting point to continue this collaboration. Between these federal programs, collaboration would provide the opportunity to target a similar, low-income audience with the potential for both programs to work in tandem, providing their distinct services to impact nutrition outcomes of this population. Vouchers and general nutrition education from WIC combined with practical guidance for preparing these foods and applied nutrition knowledge from EFNEP would allow for more efficient and effective use of federal funds, as put forth in the 1980 MOU.

REFERENCES:

- 1. US Department of Agriculture. Expanded food and nutrition education program (EFNEP). https://nifa.usda.gov/program/expanded-food-and-nutrition-education-program-efnep. Accessed 09/14, 2017.
- 2. US Department of Agriculture. The expanded food and nutrition education program policies. 2015.
- 3. US Department of Agriculture. Women, infants, and children (WIC). https://www.fns.usda.gov/wic/about-wic-wics-mission. Updated 2015. Accessed 09/14, 2017.
- 4. US Department of Agriculture. WIC/EFNEP agreement. 1980.
- 5. Weimer JP. Breastfeeding promotion research: The ES/WIC nutrition education initiative and economic considerations. *Agriculture Information Bulletin*. 1998;744.
- 6. Paynter SR. Collaborative public management as hunger prevention strategy. *Journal of Extension*. 2013;51(1).
- 7. Couchman G, Williams G, Cadwalader D. Three keys to a successful limited-resource families program. *Journal of Extension*. 1994;32(2).
- 8. Robertson J, Fulton A, Buck MS. Extension service and healthy families. *Journal of Extension*. 1998;36(6).
- 9. Greenblatt Y, Gomez S, Gayle A, Rico K, McDonald DA, Hingle M. Optimizing nutrition education in WIC: Findings from focus groups with arizona clients and staff. *Journal of Nutrition Education and Behavior*. 2016;48(4):289-294.
- 10. Benavente LM, Jayaratne KSU, Jones L. Challenges, alternatives, and educational strategies in reaching limited income audiences. *Journal of Extension*. 2009;47(6).
- 11. Deehy K, Hoger F, Kallio J, et al. Participant-centered education: Building a new WIC nutrition education model. *Journal of Nutrition Education and Behavior*. 2010;42(3):39-46.
- 12. Isbell M, Seth JG, Atwood R, Ray TC. A client-centered nutrition education model: Lessons learned from texas WIC. *Journal of Nutrition Education and Behavior*. 2014;46(1):54-61.
- 13. Sigman-Grant M, Rye A, Loesch-Griffin D, Mitchell D. How to strengthen and enhance WIC nutrition education. *Journal of Nutrition Education and Behavior*. 2008;40(5):317-321.
- 14. Chang M, Nitzke S, Guildford E, Adair C, Hazard DL. Motivators and barriers to healthful eating and physical activity among low-income overweight and obese mothers. *Journal of the American Dietetic Association*. 2008;108(6):1023-1028.

- 15. Chang M, Brown R, Nitzke S, Smith B, Eghtedary K. Stress, sleep, depression and dietary intakes among low-income overweight and obese pregnant women. *Journal of Maternal and Child Health*. 2015;19:1047-1059.
- 16. Thomas M, Vieten C, Adler N, et al. Potential for a stress reduction intervention to promote healthy gestational weight gain: Focus groups with low-income pregnant women. *Women's Health Issues*. 2014;24(3):e305-e311.
- 17. Auld G, Baker S, Bauer L, Koszewski W, Procter SB, Steger MF. EFNEP's impact on the quality of life of its participants and educators. *Journal of Nutrition Education and Behavior*. 2013;45(6):482-489.
- 18. Rose D, Nestle M. Welfare reform and nutrition education: Alternative strategies to address the challenges of the future. *Journal of Nutrition Education*. 1996;29:61-66.
- 19. SurveyMonkey. https://www.surveymonkey.com/dashboard/. Accessed 10/5, 2017.
- 20. Martin KS, Wolff M, Lonczak M, Chambers M, Cooke C, Whitney G. Formative research to examine collaboration between special supplemental nutrition program for woman, infants, and children and head start programs. *Journal of Maternal and Child Health*. 2013;18:326-332.
- 21. Pankratz M, Hallfors D, Cho H. Measuring perceptions of innovation adoption: The diffusion of a federal drug prevention policy. *Health Education Research*. 2002;17(3):315-326.
- 22. Berg BL. Chapter 11: An introduction to content analysis. In: Lasser J, Adams E, eds. *Qualitative research methods for the social sciences*. 6th ed. Boston: Pearson Education, Inc.; 2007:303-339.
- 23. Bensley R. Selecting an online nutrition education program: A comparison of existing states. 2016.
- 24. Nelson G, Prilleltensky I, MacGillivary H. Building value-based partnerships: Toward solidarity with oppressed groups. *American Journal of Community Psychology*. 2001;29(5):649-677.
- 25. Azgajeski MJ, McKeveny MJ. Establishing a value-based community partnership. *Homes Healthcare Nurse*. 2014;32(2):128-129.
- 26. Abdel-Salam S, Kilmer A, Monico L, Visher CA. Building bridges in new jersey: Strengthening interagency collaboration for offenders receiving drug treatment. *International Journal of Offender Therapy and Comparative Criminology*. 2017;61(2):210-228.
- 27. Cross JE, Dlckmann E, Newman-Goncahr R, Fagan JM. Using mixed-method design and network analysis to measure development of interagency collaboration. *American Journal of Evaluation*. 2009;30(3):310-329.