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Engaging Outreach Workers in the Development of a Farmworker Health Research Agenda

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Abstract

Farmworker health outreach workers have not traditionally been involved in the prioritization and design of research studies. This report from the field shares the results of a survey administered to outreach workers providing health services to farmworkers in North Carolina. Priority areas of research and best practices for engaged research are presented from the perspective of the outreach worker community. The purposeful involvement of outreach workers can make farmworker health research more meaningful and solution-oriented.

Keywords

community health workers; outreach workers; farmworker health; engaged research

Introduction

As defined by the American Public Health Association, a *community health worker* is a “frontline public health worker who is a *trusted* member of and/or has an *unusually close understanding* of the community served. This trusting relationship enables the worker to serve as a *liaison/link/intermediary* between health/social services and the community” (American Public Health Association, 2017, italics added for emphasis). As community members, the workers share “...ethnicity, language, socio-economic status, and life experiences” with the people they serve, including those who are vulnerable (U.S. Department of Health and Human Services, 2007). Under the umbrella term of *community health worker* falls a number of other titles, including *lay health advisor*, *peer health*

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educator, community health coach, and patient navigator, which all identify individuals who serve as a bridge between their community and outside entities (to include health care providers and researchers). In the area of farmworker health, community health workers are often referred to as *health outreach workers* or *promotoras de salud*. In an effort to formalize the roles, skills, and qualities of community health workers, the Community Health Worker Core Consensus (C3) has recommended 10 core roles, including participation in evaluation and research, as well as the more conventional roles of providing culturally competent health education and care coordination (C3 Project, 2016).

While the identification of priority issues and research questions and the development of research design and methods are recommended sub-roles for community health workers participating in research, recent studies suggest that community health workers do not typically engage in high-level prioritization and study design. Instead, they often participate in various aspects of implementation of the intervention, for example recruitment, delivery, tool development, data collection, and reporting (Farquhar et al., 2008; Hohl et al., 2016).

While outreach workers have extensive interactions with farmworkers around health-related issues, outreach workers do not have a mechanism to communicate those concerns to a research community who might be able to systematically study contributing factors and possible solutions. With few exceptions (e.g., Crowe, Kiefer, & Salazar, 2008), those in the academic community are frequently basing research questions on gaps in the literature without community prioritization of needs. The goal of this research is to bridge the gap between outreach workers and researchers.

Methods

Focus group

A focus group was conducted with eight North Carolina (NC) farmworker health outreach workers in April 2016 in conjunction with an annual farmworker services meeting. During the two-hour discussion, participants identified priority areas for research and best practices for involving outreach workers and farmworkers in research projects. The focus group was audio-recorded, transcribed, and analyzed for common themes using ATLAS.ti software (Saldaña, 2009). Results informed the development of items and response alternatives for a follow-up survey to be administered to outreach workers throughout NC.

Surveys

A 12-item survey was then developed in English and translated into Spanish and included demographic information (6 items) and the following items: *If you could prioritize topics for farmworker researchers to study, what would they be? What data collection methods do you think are best for farmworkers participating in research about health? What is the best incentive for researchers to provide farmworkers for participating in research? What is the best incentive for researchers to provide outreach workers for participating in research? What do researchers need to know about involving farmworkers in research? What do researchers need to know about involving outreach workers in research?* The two items related to what researchers should know about engaging farmworkers and outreach workers

in research were the only constructed-response items. Among the selected-response items, multiple responses were sought to some questions while single responses (e.g., choose the best option) were requested for others, and for each selected-response item, an “other” option was provided with the request to specify. The survey was first administered in a pen-and-paper version at the annual East Coast Migrant Stream Forum in fall 2016, with a follow-up survey administered online in spring 2017 for those who did not attend the forum.

Results

Participants

Forty-one individuals responded to the first survey administered to attendees at the East Coast Migrant Stream Forum. Despite instructions to respond only if one were an outreach worker, four sets of responses were removed from the dataset as they did not come from outreach workers. The study team also removed responses from outreach workers from states other than NC (n=14), which resulted in responses from a total of 23 participants. An additional four respondents completed the online survey. The results that follow are from 27 outreach workers in the state of NC. See Table 1 for participant personal characteristics. The study was reviewed by the authors’ university institutional review boards and found to be exempt (IRB no. 7846 at North Carolina State University and IRB no. 16-0860 at University of North Carolina at Chapel Hill).

Priority Areas for Research

The survey item related to priority areas asked respondents to select five topical areas. During analysis, responses for each topical area were tallied. Figure 1 illustrates the topical areas with the highest frequency of responses. In a follow-up item, those respondents who selected “best practices in providing outreach to farmworkers” as a priority topical area were asked to list up to three additional priority topics related to providing outreach. The most frequent responses were Zika virus (care, management, long-term effects) (n=4), agricultural chemical exposure (n=3), and behavioral and mental health (n=3).

Best Practices for Involving Outreach Workers and Farmworkers in Research

Respondents were asked to select the three most appropriate methods of data collection in research studies with farmworkers, and again, the tally method was used for analysis. The most frequent responses were a one-on-one interview (n=20), small group discussion (n=20), and survey questions asked aloud (n=12).

Respondents selected the single most appropriate incentive for both farmworker and outreach worker participants in research studies. For farmworker incentives, the most frequent responses were cash (n=11) and gift cards (n=10). For outreach worker incentives, respondents selected gift cards (n=11) and cash (n=7) most often, although these responses were closely followed by education/training (n=6) in frequency.

In two constructed-response items, respondents identified 1) what researchers should know about engaging farmworkers in research and 2) what researchers should know about engaging outreach workers in research. The most prevalent codes for responses to each item,

with exemplary quotations, are presented in Table 2. Considerable overlap existed in the two most prevalent codes for respondents' perceptions of what researchers need to know about working with farmworkers and with outreach workers. Respondents described farmworkers' time (n=11) and outreach workers' time (n=6) as being limited, valuable, and important for researchers to consider in research studies. The outreach workers also emphasized the link that outreach workers serve between farmworker and researcher communities (n=5) and the trust that farmworkers have for outreach workers (n=4).

Discussion

In prioritizing areas for farmworker health researchers to study, outreach workers identified topics that could be categorized as either the delivery of health services to the farmworker population or health outcomes related to farm work. Our findings related to the delivery of health services resonate with prior research with farmworkers, social service providers, and health care providers reporting that specialty care services, language barriers, cultural barriers, and transportation needs are factors that affect the health of farmworkers (Doyle et al., 2006). Occupational health experts in the agriculture, forestry, and fishing sector also identified the need for more research focused on healthcare infrastructure, including access and cost, and preparation and availability of culturally competent providers (Arcury, Grzywacz, Sidebottom, & Wiggins, 2013). However, most research that has been conducted on the delivery of health services to farmworkers has focused on characterizing problems with access rather than identifying solutions (e.g., Farmworker Justice & the National Center for Farmworker Health, 2015). With regard to the health outcomes related to farm work that our participants prioritized, extensive research already exists on chronic disease, nicotine exposure, and pesticide measurement (e.g., Salvatore et al., 2008). However, the predominance of the research on chronic disease has been conducted with farmers rather than farmworkers (e.g., Agricultural Health Study (Alavanja et al., 1996)), and acute nicotine effects have been emphasized over chronic (Arcury & Quandt, 2006). Nonetheless, outreach workers who participated in our study prioritized the topical areas, suggesting that there is a gap in the translation and dissemination of research findings to farmworker health outreach workers. This disconnect between existing research and outreach worker understanding could serve as a focus for outreach worker training.

As previously reported, farmworker health outreach workers in NC are predominantly Latino and female, with some college or a high school diploma as the highest level of education completed (LePrevost, Blanchard, & Cope, 2014). While respondents did identify cash and gift cards as the best incentives for outreach workers' participation in research, a portion (22%) responded that education or training would be preferred. Based on the demographic profile of the participants in this study, it is recommended that researchers who intend to provide education and training to outreach workers as an incentive for research participation consider the language in and educational level at which information is communicated. Outreach workers were most interested in education or training focused on outreach related to Zika virus (care, management, long-term effects), agricultural chemical exposure, and behavioral and mental health. It is important to note that the pen-and-paper version of the survey was administered in Miami, Florida, in 2016 at the height of concern about Zika virus in the United States.

A wide variety of data collection methods have been used previously in research with farmworkers (e.g., biomarkers, surveys, observation). In this study, respondents indicated that the less invasive methods of a one-on-one interview or small group discussion were much preferred to collecting blood, urine, or other bodily fluids. In describing what researchers need to know about engaging farmworkers in research, a couple of respondents described that one-on-one methods were preferable as these allow farmworkers to “speak up if they don’t understand the questions presented.” Conversely, another respondent relayed that research that is “invasive” can compromise outreach workers’ existing relationships.

Interestingly, some respondents identified farmworkers’ trust of outreach workers as something that researchers need to know when engaging farmworkers in research; this finding suggests that these respondents see themselves as central to the conduct of farmworker health research. One participant had a vision for how outreach workers might be engaged in farmworker health research projects: “[Researchers need to] make outreach staff feel valuable in the research process [and] respect the knowledge that we have of these communities.”

Overwhelmingly, the most prevalent theme to emerge from asking outreach workers what researchers need to know about engaging farmworkers and outreach workers in research was limited time within both groups. The implication of this finding for researchers is to design streamlined studies that require limited coordination on the part of the outreach workers and limited time investment by farmworkers engaging in research activities. While outreach workers have the potential to play an integral role in farmworker health research, researchers must explicitly consider how to reduce time-related burdens for outreach workers and farmworkers alike.

Conclusions

This study highlighted the importance of professional development to outreach workers themselves—from their identification of training/education an incentive for their participation in research to prioritizing best practices in outreach as an area for researchers to study. In this study, outreach workers were not familiar with current research findings related to occupational health outcomes of farmworkers; therefore, translation and dissemination of research results to outreach workers should be an imperative for researchers. Further, researchers should engage outreach workers at every stage in the research process, beginning with research question formulation and study design. As the “bridge to help connect and facilitate research,” outreach workers have the potential to transform farmworker health research to make it more meaningful and solution-oriented.

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Highlights

- Farmworker health outreach workers seek research on health services delivery
- A gap exists in translating research results for farmworker health outreach workers
- Farmworker health outreach workers are a bridge between researchers and farmworkers

Health Services Topics

- Need for specialty care services for farmworkers (17)
- Language barriers for farmworkers in the healthcare setting (9)
- Cultural barriers for farmworkers in the healthcare setting (9)
- Transportation needs of farmworkers in accessing healthcare (9)
- Best practices in providing outreach to farmworkers (9)

Health Topics

- Impact of farm work on chronic disease (13)
- Health effects of nicotine exposure on farmworkers working in tobacco (11)
- Measurements of pesticides in farmworkers' bodies (9)

Figure 1.
Prioritized topics for farmworker researchers to study

Table 1

Survey Participant Personal Characteristics

Personal Characteristics	Mean	Frequency (%)
<i>Demographics</i>		
Gender		
Male		11 (41%)
Female		16 (59%)
Ethnicity		
Non-Latino White		8 (30%)
Latino		19 (70%)
<i>Highest Level of Education Completed</i>		
High school diploma		4 (15%)
Some college		11 (41%)
Bachelor's degree		10 (37%)
Graduate/professional degree		2 (7%)
<i>Outreach Experience (in years)</i>	6.5	

Table 2

Prevalent Codes and Exemplary Quotations from Survey Respondents' Perceptions of What Researchers Need to Know about Engaging Farmworkers and Outreach Workers in Research

Code (Frequency)	Exemplary Quotations
What Researchers Should Know about Engaging <i>Farmworkers</i> in Research	
Farmworkers' time is limited (n=11)	<ul style="list-style-type: none"> • "Research should not require farmworkers to sacrifice work time or sleep time to participate." • "[S]ometimes workers are very limited on time so, depending on the research, researchers should consider how much time the research is going to take." • "[F]armworkers' time is very valuable so any researcher needs to be aware of that and work around their time."
Farmworkers trust outreach workers (n=4)	<ul style="list-style-type: none"> • "[O]utreach workers are the bridge between the farmworker and investigator." • "[Researchers] need to have outreach workers or Migrant Education Program workers assist because of established relationships [with farmworkers]."
It is difficult to maintain contact with farmworkers (n=3)	<ul style="list-style-type: none"> • "The migratory nature of farmworkers may impede any long term follow up." • "It is really hard to meet with farmworkers. Most of the time farmworkers will tell you that they will be there but won't show up. It is better to just show up to where farmworkers are."
Farmworkers are people fundamentally (n=3)	<ul style="list-style-type: none"> • "Don't take out the "human" factor!" • "Que son personas muy sencibles y sencillos." "[Farmworkers] are very sensitive and simple people."
What Researchers Should Know about Engaging <i>Outreach Workers</i> in Research	
Outreach workers' time is limited (n=6)	<ul style="list-style-type: none"> • "I think they need to know that we stay pretty busy, so if there is not a lot of paper work or emails that would be helpful." • "Most of the time when Farmworkers are active and when they get home they want to rest, make phone calls to families, eat, shower, and go to bed. And we [outreach workers] try to have a short (quick) visit. Time Management is a must."
Outreach workers serve as a link to farmworkers (n=5)	<ul style="list-style-type: none"> • "[Q]ue somos el enlace entre investigadores y trabajadores." "That we [outreach workers] are the liaison between investigators and workers." • "[U]sing outreach workers to approach and interview the farmworkers might be very helpful as farmworkers are already familiar with the outreach workers and might feel more comfortable."
Researchers should provide clear communication to outreach workers (n=3)	<ul style="list-style-type: none"> • "[E]xplaining or giving good/helpful information of what is expected from the outreach workers and what information is important to collect, ask, etc. [is necessary]." • "[Researchers should p]rovide good structure and training if need be."