

10-1-2004

Extension and Research Professionals Join Forces to Address a Critical Nutrition Issue

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Recommended Citation

Nitzke, S., Kritsch, K., Lohse, B., & Horacek, T. (2004). Extension and Research Professionals Join Forces to Address a Critical Nutrition Issue. *The Journal of Extension*, 42(5), Article 20.

<https://tigerprints.clemson.edu/joe/vol42/iss5/20>

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October 2004 // Volume 42 // Number 5 // Ideas at Work // 5IAW1

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Extension and Research Professionals Join Forces to Address a Critical Nutrition Issue

Abstract

The land-grant mission of combining research and outreach efforts to address problems and needs of society was exemplified in the design and development of a randomized treatment-control pre-post, multi-state intervention to increase fruit and vegetable intakes of low income, young adults. Collaborative arrangements were established in 10 states to accomplish the project's multiple goals. These unique partnerships established an innovative model, paving the way for future multi-state research and Extension collaborations.

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Introduction

Incorporating theory into practice is strengthened through collaborations between Extension and research personnel (Ukaga et al., 2002; Saunders & Gallagher, 2003). Our research team developed a unique partnership among researchers and practitioners from Cooperative Extension and another institution with outreach functions, jointly referred to as "Extension" in this article. This collaboration not only helps young adults improve their nutritional health but also serves as a model for future research/Extension teams.

Project Goals

Our 10-state project was designed to improve fruit and vegetable consumption in economically disadvantaged young adults, using an intervention based on the Transtheoretical Stages of Change model (Prochaska & Velicer, 1997). The primary objectives were to:

1. Increase fruit and/or vegetable intakes by young adults based on goals outlined in *Healthy People 2010* (2000),
2. Determine the effectiveness of a stage-tailored intervention, and
3. Extend these findings to community-based practitioners.

Collaborative Partnership

Research and Extension professionals combined their expertise to design, pilot test, and implement recruitment, assessment, and intervention procedures. Unique collaborations were established between land-grant researchers and Extension partners in nine states and between a researcher and a community studies expert from a private 4-year institution in the tenth state to accomplish four major research functions--design educational materials, develop instruments, recruit/retain subjects, and make educational phone calls (Acknowledgment and Table 1). Extension specialists were state Principal Investigators for this project in Kansas, Nebraska, and Wisconsin. Non-Extension research faculty served as Principal Investigators in the other seven states. Major research functions were accomplished by professionals not directly employed by Extension in six states and, in all but one state (Wisconsin), graduate students played key roles.

Table 1.

In Addition to the Principal Investigator for Each State, Extension Specialists, Other Extension Partners, Outreach Professionals, and Students Played Major Roles in Coordinating and Implementing Key Functions.

Function	Extension Specialist	Extension Personnel*	Outreach Professionals**	Students
Educational material design	ME, OR, RI	ME, OR, WI	NE, NY, WI	KS, ME, MI, OR, RI
Instrument development	ME, MI	ME, OR, WI	NE, NY, RI, WI	IA, KS, RI
Subject recruitment and retention		AL, IA, ME, NE, OR, WI	AL, KS, NY, RI, WI,	AL, IA, MI, NE, NY, OR
Educational phone calls		IA, ME, NE, OR, WI	AL, KS, NY, RI, WI	IA, KS, MI, NE, NY, OR

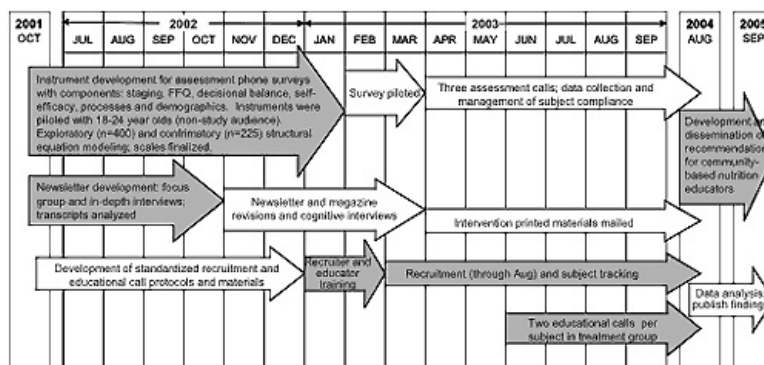
* Extension agents/educators, paraprofessionals and other Extension employees
 ** Professionals not directly employed by Extension

Extension practitioners were involved in all aspects of the research, especially recruitment and data collection. For example, theory-based items for instrument scales were drafted jointly by researchers and Extension partners. Researchers revised and finalized the scales using structural equation modeling (Bentler, 1998) and other statistical results from data that were gathered from the target audience by Extension partners.

This team of researchers is part of an 11-state team that studies dietary behavior patterns of young adults (see acknowledgment). Principal Investigators from each state met face-to-face annually and by phone monthly to plan and synchronize activities (Figure 1). Committees of research and Extension partners worked closely to develop tools and protocols for all key functions of the study.

The study utilized a randomized treatment-control, pre-post design and targeted hard-to-reach, low-income (< \$16,000/year) young adults aged 18 to 24 years. Extension and outreach partners recruited 2042 participants via direct contact and standardized advertisements. Subjects entered the study over a 6-month time period that began in March, 2003. Three rounds of assessment calls (pre-treatment, mid-treatment, and follow-up) were placed from a central location (WI) (Figure 1).

Figure 1.
Study Time Grid



This chart illustrates the timeframe for instrument development, training, data collection, and follow-up. Extension and outreach specialists from all participating states played major roles in activities represented by shaded arrows during the developmental and experimental periods.

Subjects were randomized into control or intervention groups in the initial phone assessment, with reassessments at months 4 and 12. Participants received \$20 after their first assessment interview and after the final interview. All control subjects received one mailed pamphlet (5-A-Day Publication #GOB101-99). The intervention group received six mailings comprised of a magazine and an individualized, stage-tailored report; four stage-tailored newsletters; and a second report. The reports were computer-generated from one central location (Rhode Island) and included theory-based (Stages of Change) feedback about decisional balance (benefits and barriers of eating fruits and vegetables), self-efficacy, and stage-specific behavior change processes. Subjects also received two educational phone calls conducted by local Extension partners, following specific protocols based on principles of motivational negotiation (Rollnick, Heather, & Bell, 1992).

Key Collaborative Activities

The partnering of research faculty and Extension to develop intervention materials and methods resulted in prototypes that were scientifically valid and theoretically sound while conforming to the needs of community-based educators and target audience members. Intervention materials included a series of four newsletters for fruits and four newsletters for vegetables for each of the five Stages of Change and thousands of text files for the computer-generated individualized reports.

Partners collaborated in conducting qualitative pre-testing of materials, Cloze readability tests (Doak, Doak, & Root, 1996), and psychometric testing of instrument scales. Individual interviews and focus groups were conducted with 250 young adults, with equal numbers of males and females in each stage of change. Approximately 650 young adults participated in psychometric testing.

Educational telephone calls from Extension practitioners or students in each state reinforced the messages in each subject's stage-based report. During these calls, educators answered questions, offered encouragement, facilitated goal-setting, and verified contact information.

Conclusion

Research and Extension partners crafted a unique system of interdependent roles to develop and

test a theory-based nutrition intervention. The findings will inform future nutrition education for this target population.

Joint input of researchers and Extension practitioners was essential in every stage of the project, assuring scientific fidelity while paying critical attention to the needs of educators and subjects in community settings. Administrative support and the willingness of team members to engage in a flexible style of planning and goal-oriented problem solving were key elements for success. This team's collaborative arrangements provide a heterogeneous model for future integrated, multi-state research and Extension efforts. The partnership model can inform activities in many areas of education and research with Extension/outreach components.

Acknowledgement

This project was conducted with support from the U.S. Department of Agriculture's Initiative for Future Agriculture and Food Systems (IFAFS 2001-52102-11226) and Agricultural Experiment Stations in AL, IA, KS, ME, MI, NE, OR, RI, and WI.

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The NC219/IFAFS research team wishes to thank the dozens of students, Extension professionals, and other outreach professionals whose cooperation made this research possible and whose dedication to meeting the nutrition education needs of young adults made this research fulfilling.

References

Bentler, P.M. (1998) EQS for Windows 5.7b. Information available at:

<http://www.usc.edu/isd/doc/statistics/help/pcsoftware/eqs.pdf>

Doak, C. C., Doak, L. G., & Root, J. H. (1996). *Teaching patients with low literacy skills*. Second ed. J.B. Lippincott Company, Philadelphia.

Prochaska, J. O., & Velicer, W. F. (1997). The transtheoretical model of health behavior change. *American Journal of Health Promotion*, 12,38-48.

Rollnick, S., Heather, N., & Bell, A. (1992). Negotiating behavior change in medical settings: The development of brief motivational interviewing. *Journal of Mental Health*,1,25-37.

Saunders, K., & Gallagher, T. (2003). Decision-making styles: An exploration of preferences of on- and off-campus faculty. *Journal of Extension* [On-line], 41(3). Available at:

<http://www.joe.org/joe/2003june/a1.shtml>

Ukaga, O. M., Reichenbach, M. R., Blinn, C. R., Zak, D. M., Hutchison, W. D., & Hegland, N. J. (2002). Building successful campus and field faculty teams. *Journal of Extension* [On-line], 40(2). Available at:

<http://www.joe.org/joe/2002april/a3.html>

U.S. Department of Health and Human Services. (2000) *Healthy People 2010*. Second ed. Understanding and Improving Health and Objectives for Improving Health. 2nd volume. Available at: <http://www.healthypeople.gov/Document/tableofcontents.htm#Volume2>

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