



Center for Nutrition,
Diet and Health

Food Handler Certification Program Model



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ABSTRACT

The research project was designed to develop and demonstrate a preparatory education program for low-literacy food handlers taking national certification examinations through the integration of research, education and extension activities. There were six hundred and twenty four (624) volunteer participants over a 5-year program period that were randomly selected from seven hundred and eighty four (784) community service facilities within the District of Columbia. Program survey assessments were collected during the first two years of the project from participating organizations. At the end of year 3, enrollment was continued through referrals by previous attendees and pre-assessed organizations. The DC Code examination was added to the program instruments after January 2004 due to the District of Columbia Municipal Regulation (DCMR) 25 for all approved food handler education programs to include a comprehensive measure of knowledge of the District's requirements that was in addition to the national certification regulations. Results of the program showed that group mean test scores indicated knowledge was gained between the pre-test and end of the course post-test examinations (+13.9%), national examination (81.1% pass rate), and the DC code examination (83.3% pass rate). There were 46 participants who dropped out of the program and were asked to return for a later course through mailings or telephone calls. Class size in the District of Columbia did not play a role in the outcome of the results in this project.

Background

Almanza and Nesbith (2004) reported, "Food handlers often lack food safety training. Adequate training is important because foodborne illness results in a cost of \$7.7 to \$23 billion per year to consumers, the food industry, and the national economy." The value of food safety education by training methods is essential to the sustainability of food safety practices in between license renewals (every 3 years in the District of Columbia). A study in Oklahoma (Lynch et al., 2003.) investigated the understanding of basic food safety principles among restaurant managers and found that, "the sources of training, certification, and experience significantly affected their level of food safety knowledge."

Purpose

To develop a foodhandler certification training model for low literacy and hard-to-reach foodhandlers in the District of Columbia.

Goals and Objectives

1. Assess and document current education activities operating in the Washington metropolitan area to certify food service workers.
2. Examine the effectiveness of four (4) state-of-the-art methods (classroom instruction, CD-ROM, distance learning, self-study in groups) in preparing food handlers for the national certification examination.



CLASS SIZE AND GROUP MEAN TEST SCORES

Group Mean Examinations	Sample Size By Class Attendance (N)	Group Mean Examination Percentages
Pretest Examination	N=123	61.4
Pretest Examination	N=422	64.5
Posttest Examination	N=101	81.0
Posttest Examination	N=377	78.8
National Examination	N=134	77.4
National Examination	N=444	82.2
DC Code Examination	N=82	84.0
DC Code Examination	N=336	83.2

3. Develop and pilot test a course that will enable low-literate food handlers to prepare for the national certification examination.
4. Develop and demonstrate a research-based model approach to delivering education and training for food sanitation certification in the District of Columbia.
5. Disseminate information on results and implications concerning best practices and model programming for low-literate, hard-to-reach food handlers to personnel in the CSREES system nationwide.

Methods and Procedures

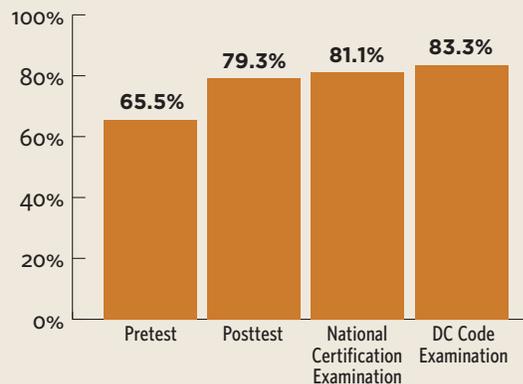
1. Every fourth agency of 784 community service facilities randomly selected within the District of Columbia received a flyer, brochure, and letter describing the project for the first three years of the program.

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PARTICIPANTS MEAN PERCENTAGES OF TEST SCORES



- Each agency was asked to post the flyer, fill out the agency registration form (demographic data instrument) and agency profile form (survey needs assessment instrument). The agency provided the project with a listing of names of the supervisory food handlers who were eligible to participate by faxing, mailing or hand delivering the completed documents for the first 3 years of the project.
- The needs assessment included questions detailing the type of services provided by the agency, the clientele and the food safety education needs.
- After the first 3 years of the program, participants were enrolled only by referral from previous agencies assessed and program attendees.
- The majority of participating agencies faxed their registration forms into the office and when a fax machine was not available, forms were mailed in to the office. Some participants were able to give enrollment information by phone to a CNDH volunteer or staff member if this was preferred.
- A confirmation letter was faxed to each participant for directions and class date and time notification after registration materials were received. On-site registrants did not receive a confirmation letter because they were already at the class upon registration. However, if there was a request for a confirmation notice or documentation of enrollment, then an official letter was provided. Intra-district agencies such as the DC State Education Office, DC Department of Health and other CNDH continuous participating agencies notified their agency staff of enrollment confirmation and did not receive a letter from CNDH.
- Each agency was given an option to register for a 20-clock hour training schedule based on availability. The 20-clock hour course consisted of the Department of Health's 15-clock hour class for all levels of food service employees and an additional 5 hours of program research instrumentation and resources.
- Research instrumentation of a pre-test, post-test, and DC code examination (4th day only) instrument was given on the 1st and 4th day of each of the 5 day training classes offered, and on the 1st and 2nd date of a 3 day training class option. A course outline and optional text book at cost was given to participants on the first date of training. The last date of any training schedule was exclusive to the national certification examination by Experior Assessments (December 2005 re-named Thomson Prometric) or ServSafe of the National Restaurant Association.
- Non-passers of the national certification examination were asked to return for any upcoming trainings until they achieved a passing national certification examination test score. (All participants were given the option to take one-on-one review sessions; but the non-passers were a

priority and encouraged the most by CNDH program staff through telephone calls and mailings).

Findings of the Study

There were 624 participants in the program; however, 46 program participants dropped out of the training over the 5 year program period. Participation with each of the evaluation tools varied on the pre-test (N=546), post-test (N=478), national certification examination (N=578) and the DC Code examination (N=418). The mean group test scores showed an increase from the pre-test to the end of the program examinations. There was a very small increase from the 3 testing instruments administered at the end of the training and there was no significant difference between them (post-test, national certification examination and DC Code examinations). As a result, of the training curriculum, knowledge was gained on food sanitation practices. The DC Code examination was added to the program after January of 2004 due to the District of Columbia Municipal Regulation (DCMR) 25 for all approved food handler education programs to include a comprehensive measure of knowledge of the District's requirements in addition to the national certification regulations. Class size did not make a significant difference in the outcome of the program on any of the group mean test scores. Knowledge gained was a result of individual achievement based on the group means.

Conclusion

The group mean examination percentages showed that classroom instruction is a successful method for training low literacy hard-to-reach food handlers in the District of Columbia. All program participants received a food safety training manual at no cost and access to a self-paced CD-ROM outside of training hours. An optional textbook was also provided at cost. In addition, random classes received training support through food safety cooking demonstrations by CNDH staff, a food safety jeopardy game/trivia exercise facilitated by CNDH staff, handwashing, or safe refrigeration practices that were demonstrated by volunteer program participants. The addition of these various types of program resources proved to be an essential tool for providing first time or low literacy participants with more than one method of receiving classroom instruction.

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