

EVALUATING FOOD SAFETY HABITS AMONG COLLEGE STUDENTS

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ABSTRACT

Every year in the United States, several million people get sick, thousands die, and significant economic losses are incurred from foodborne diseases. Epidemiological data indicate that a substantial proportion of foodborne illnesses are attributable to improper food-preparation-practices in consumers' homes. Studies show that young adults have limited food safety knowledge and therefore engage in risky food consumption and handling practices. The objective of this study was to assess the food safety knowledge, beliefs and food-handling practices of college students, before and after food safety education intervention. A survey instrument was developed to measure awareness, beliefs and self-reported practices. Intervention modules were developed to provide information on minimizing the risk of pathogens in the food supply. Students (n=48) completed the survey pre- and post-intervention. Questions were grouped by the dependent variables tested: food safety knowledge, belief and self-reported behavior. Data were analyzed using Analysis of Variance (ANOVA) to evaluate differences in parametric variables at $P \leq 0.05$. Cross-tabulation and chi-square (χ^2) tests were carried out to determine the relationship between the variables tested and the demographic data (gender, race, family income, education). Intervention module post-test scores improved significantly for all students. The percentage of students with correct responses on food safety knowledge increased from 36 to 88 percent; on belief from 56 to 98 percent; and on behavior from 20 to 80 percent. Data suggest that students' knowledge and awareness of food safety issues increased significantly after intervention. However, further studies are needed to measure observed student behavior regarding food safety.

INTRODUCTION

Foodborne illness is a major health threat in the United States, resulting in an estimated 76 million illnesses, 325,000 hospitalizations, and 5,000 deaths in the United States (Mead et al., 1999). Concern about consumer food safety has prompted considerable research to evaluate food-handling practices. Studies have shown that undergraduate students engage in unsafe practices, including risky food handling and food consumption (Li-Cohen et al., 2002; Morrone et al., 2003; Unklesbay et al., 1998). Consumer education to promote safer handling of food can be the best way of managing the risk of foodborne illness at the consumer end of the food chain. According to the Centers for Disease Control and Prevention (CDC) (1997), "Colleges and universities are important settings for delivering health promotion education and services to many young adults." Our study aim to measure percentages of college students engaging in risky behaviors, such as poor hygiene, and cross-contamination, separated by various demographic categories pre and post food safety education intervention.

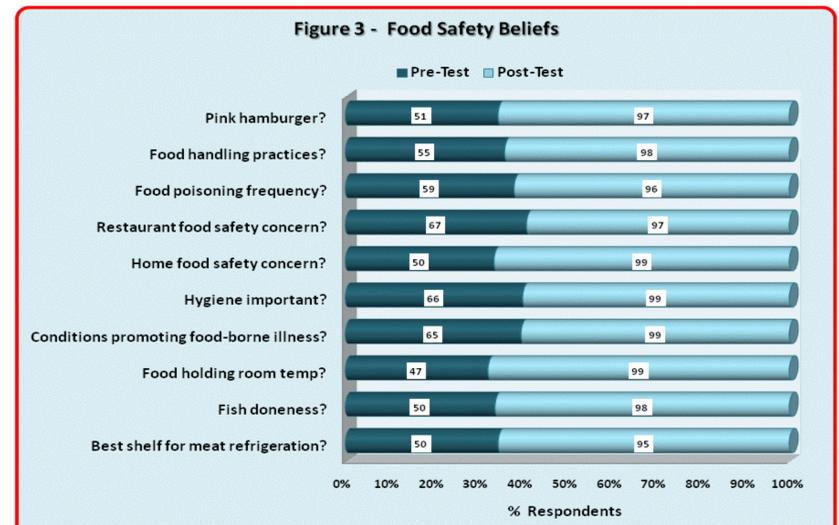
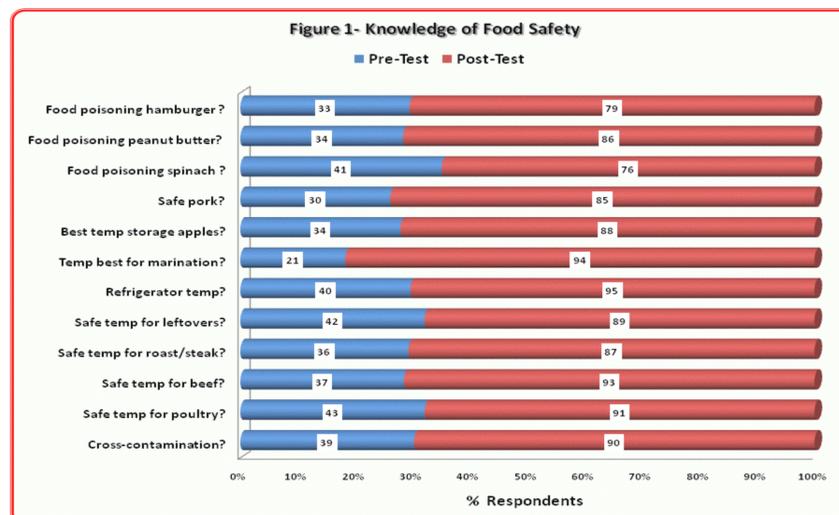
OBJECTIVES

The purpose of this research is to measure awareness and food safety practices, and will determine if a thirty minute food safety lecture accompanied by a food safety handout will change college students' scores on a food safety questionnaire.

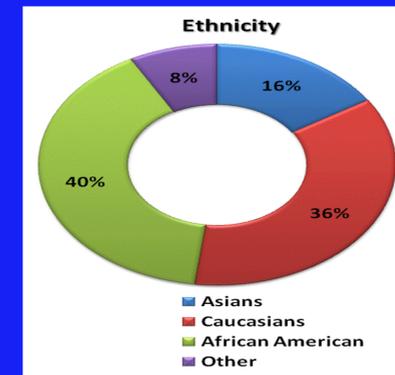
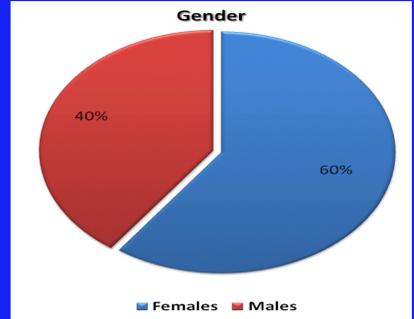
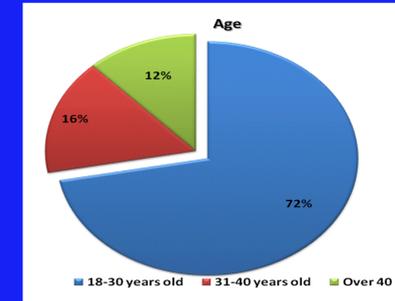
METHODOLOGY

A survey instrument was developed to measure food handling practices pre and post food safety education intervention among students enrolled at 3 colleges in the Baton Rouge area. Food safety questionnaires were developed to provide college students with the tools they need to help minimize their risk from harmful pathogens in the food supply and decrease the incidence of foodborne illness. Forty eight college students were randomly selected to participate in this study. Students were requested to complete a questionnaire (pre-test) regarding food safety. The test covered topics such as sanitation, personal hygiene, food selection, and storage and preparation techniques. Questions were grouped by the dependent variables tested: food safety knowledge, belief and self-reported behavior. When all pretests were received a handout and a lecture covering the test materials was given and reviewed with the subjects. After lecture completion, handouts were collected and the test was then re-administered (post-test). Data were analyzed using Analysis of Variance (ANOVA) to evaluate differences in parametric variables at $P \leq 0.05$. Cross-tabulation and chi-square (χ^2) tests were carried out to determine the relationship between the variables tested and the demographic data (gender, race, family income, education).

RESULTS



DEMOGRAPHICS



SUMMARY & CONCLUSIONS

- Data indicates that students knowledge and awareness regarding food safety improved significantly (Figures 1), after food safety education intervention.
- The percentage of students with correct responses on food safety knowledge increased from 36 to 88 percent; on belief from 56 to 98 percent; and on behavior from 20 to 80 percent (Figures 1, 2 and 3)
- Students belief and behavior (Figures 2 and 3) changed significantly post intervention suggesting that they were positively impacted by food safety education.
- However, more studies are needed to determine whether recommendations offered during intervention is sustainable. Students observed behavior needs to be measured.
- Morrone and Rathbun 2003, suggested that health professionals should focus creative efforts on developing safe food consumption behaviors in college students to safeguard the health of the population and enable them to fulfill the role of protecting the health of their future families.

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