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Eating Habits and Feelings of Health in Ouachita Baptist University Faculty and Staff

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ABSTRACT

Background Eating habits and source of meals may contribute to overall well-being. However, little data is available on the comparison between eating habits and source of meals in comparison to feelings of health.

Objective This study evaluates how eating habits and the main source of meals compares to feelings of health in participants.

Methods This study was conducted electronically through distributing an online questionnaire to faculty and staff at Ouachita Baptist University.

Statistical analysis The results were analyzed by the online questionnaire software and the researchers by comparing percentages of participants' answers. An average was also calculated for the different source of meals participants ate.

Results The majority (68%) of participants consumed home-cooked meals more frequently than any other type of meal. Most participants also consumed breakfast, lunch, and dinner along with a few snacks daily. Based on these results, the majority of participants (78%) either felt good or excellent about their health.

Conclusion Frequency of eating and source of meals may contribute towards positive feelings of health in working adults. Further studies need to be conducted in order to validate this conclusion.

REVIEW OF LITERATURE

Eating habits in working adults is a commonly reviewed subject. In contrast, literature is scarce about adults' feelings of health based on eating habits. Factors that may contribute to one's feelings of health include frequency of snacks and meals, meal length, frequency of family meals, and meal preparation.

One main factor that affects health is snacking and meal frequency. Working adults often tend to live busy lifestyles, and there have been several studies that have tracked eating frequency in relation to weight and health.[1-4] Often, snacking is seen as a negative activity, but it is actually a vital aspect of having a balanced diet. In fact, previous literature has possibly linked eating frequency to positive results such as lower Body Mass Index (BMI) and successful weight loss maintenance.[1] Specific areas of snacking that have been associated with a positive relationship with health include snacking energy from fruit, juice, vegetables and nuts; snacking energy from sweets, desserts, and sweetened beverages have been linked to a negative relationship with health.[2] The negatively associated snacks are generally what give the activity of snacking a negative connotation. Differentiating between meals and snacks is also a common misconception, but regardless both meal and snack frequency have shown positive effects on diet quality in adults.[3]

Along with meal and snacking frequency, the time that Americans spend eating is another factor contributing to health. One study divided time spent eating into primary eating and secondary eating; primary eating refers to times when eating is the adult's main focus, and secondary eating refers to times when adults eat while performing some other activity such as working or watching television.[4] Since working adults live busy lives, this breakdown of eating time may help identify certain eating habits that contribute to overall health and well-being. In

recent years, the total time adults spend eating has increased, but primary eating time has decreased.[4] With the rise in overweight and obese Americans, this study suggests that the more time adults spend eating, the more likely they are to have an increased food intake.

The frequency of dining with others is associated with a better overall diet, which may contribute to increased feelings of health.[5] Adults who consumed home- cooked meals with family had 26% lower odds of obesity compared to adults with little or no home meal preparation.[6] Surprisingly, obesity did not differ with the frequency of consuming family meals.[6] Furthermore, a study on a university campus correlated family dining (as opposed to restaurant dining) with increased fruit and vegetable consumption and decreased calories, fat, salt, and sugar intake.[7] These three studies show that feelings of health may sometimes be attributed to the family environment of a healthy and nutritious lifestyle.

Feelings of health may frequently be attributed to the dining location, such as a fast-food restaurant or a healthy restaurant. According to a study on working adults in a university, 67% ate one or more meals from a fast food or pizza restaurant in a seven-day period.[8] This study analyzed that participants who were male, less educated, and overweight or obese had a higher association with fast-food consumption than female, educated, and healthy faculty members.[8] Most importantly, this study associated factors of impulsivity with increased frequency of fast-food consumption, showing that convenience is a major factor in choosing to eat at a fast-food restaurant.[8] Additionally, people who are trying to decrease sodium intake might dine out less frequently than people without this goal.[9] In summary, individuals with health goals are more likely to eat at home and cook meals.

When reporting on weight and health, adults perceived status and actual status do not agree; adults tend to perceive themselves as more physically fit than their actual condition.[10]

Although the percentage of overweight or obese people is steadily rising in America, over half of adults have reported that they are either in good health or satisfied with their health.[10] These findings may aid in further research about the discrepancy between adults' perceptions of health and reality, in addition to adults' feelings about health.

The purpose of this study is to acquire information regarding the faculty and staff's eating habits. Based on the information of their eating habits, connections between their food choices and their feelings of personal health will be made. This information will be used to make a conclusion about the relationship between food choices and attitudes regarding personal health.

METHODS

Design

The study was initially developed by choosing a topic and creating a questionnaire. The researchers reviewed available literature to determine a topic of interest for a university setting. The researchers chose to survey the employees of the university because they have more dining options than university students with a cafeteria dining plan or an apartment. Similarly, faculty members' eating habits may be influenced by family demographics, such as children in the household. Therefore, the questionnaire was developed to assess eating habits along with feelings toward personal health in working adults. Questions regarding demographics, meal and snack habits, and feelings of health were included in the questionnaire. Students from the Introduction to Nutrition class at Ouachita Baptist University (OBU) participated in pilot testing. Each student read the questionnaire and wrote comments for the researchers to review. The students were instructed to suggest improvements for clarity or additional answer choices. The researchers analyzed the comments and increased the options for breakfast food choices in the questionnaire.

Proposal

After composing the study, a proposal (see Appendix A) was composed and sent to OBU's Institutional Review Board (IRB). The proposal consisted of the project description, selection of subjects, purpose of study, procedures, assessment, policy statements, informed consent, and written questionnaire. Once the IRB approved the proposal, an email with the link to the survey was sent to all the faculty and staff of the university.

Subjects

All faculty and staff at OBU in Arkadelphia, Arkansas, were given the opportunity to participate in this study. The subject selection was not randomized, but it was based on the potential participants responding and completing the survey. The eligibility criteria to the study included employment by the university and age ranging from 20 to over 81 years old. Both males and females were eligible to complete the questionnaire. Study participation was voluntary; there was no compensation for completion of the questionnaire. An informed consent form was available to the participants prior to responding to questions. A total of 96 out of 332 faculty and staff completed this study.

Data Collection

The questionnaire was self-administered electronically on SurveyMonkey.com. An email explaining the study was sent to all faculty and staff of the university with a link to complete a questionnaire. The questionnaire took approximately five minutes or less to complete. The questionnaire included a written consent form asking for permission to use the data collected and ensuring that all information would remain anonymous. Participants either chose one or no answer for each question. Three demographic questions were included, followed by questions about age, meal and snack frequency, meal and snack intake, and feelings of health (Table 1). The questions were developed by reviewing similar literature and composing questions based

upon this study's goal to evaluate participants' eating habits and feelings of health. Once the questionnaire was emailed, it remained open for a week to gather responses. Upon completion, all data was collected and analyzed by the researchers.

Gender	**a.** Male **b.** Female
Age	a. 20-30 years b. 31-40 years c. 41-50 years d. 51-60 years e. 61-70 years f. 71-80 years
Do you have children under the age of 18 that live in your household?	a. Yes b. No
How many meals do you typically eat a day?	a. None b. 1-3 c. More than 3
Do you typically snack during the day?	a. Yes b. No
If yes, how many snacks do you typically have during the day?	a. 1 b. 2 c. 3 d. More than 3
What is your main source of meals for breakfast?	a. I do not eat breakfast b. Home- cooked meals c. Pre-made/packaged/frozen food d. Fast food/restaurants e. The cafeteria
What is your main source of meals for lunch?	a. Home-cooked meals b. Pre-made/frozen food c. Fast food/restaurants d. The cafeteria e. Chick-fil-A/Sandella's/ Dr. Jacks f. I do not eat lunch.
What is your main source of meals for dinner?	a. Home-cooked meals b. Pre-made/frozen food c. Fast food/restaurants d. I do not eat dinner.
Based on what you eat how do you feel about your overall health?	a. Excellent b. Good c. Fair d. Poor

Table 1. The written questionnaire for the OBU faculty and staff

Data Analysis

The data was analyzed with the online software of the survey website (Surveymonkey.com). The website included number of respondents, percentages, and graphs for each question and answer. The main method of data analysis was the comparison of percentages from the answer responses. An average of the main sources of meals was calculated by adding the number of responses for certain types of meals (t) and dividing by the sum of all meals (m); therefore, the formula was $sum\ of\ t\ \div sum\ of\ m = average$. Since certain sources of meals were similar for all time-periods, the average was only calculated for home-cooked meals, fast-food meals, pre-made meals, and not eating.

RESULTS

There were 96 OBU faculty and staff who completed the questionnaire. Thirty-three respondents (35%) were male, and 61 participants (65%) were female. Two participants opted out of answering this question. The age ranges of each participant were broken up into six different categories. Each category was a span of ten years, the first ranging from twenty to thirty years, the second ranging thirty-one to forty years, with the pattern continuing to 80 years. There were no participants over 81 years old. Table 2 outlines the percentages of the participants' ages. The most common age category included participants between fifty-one and sixty years old.

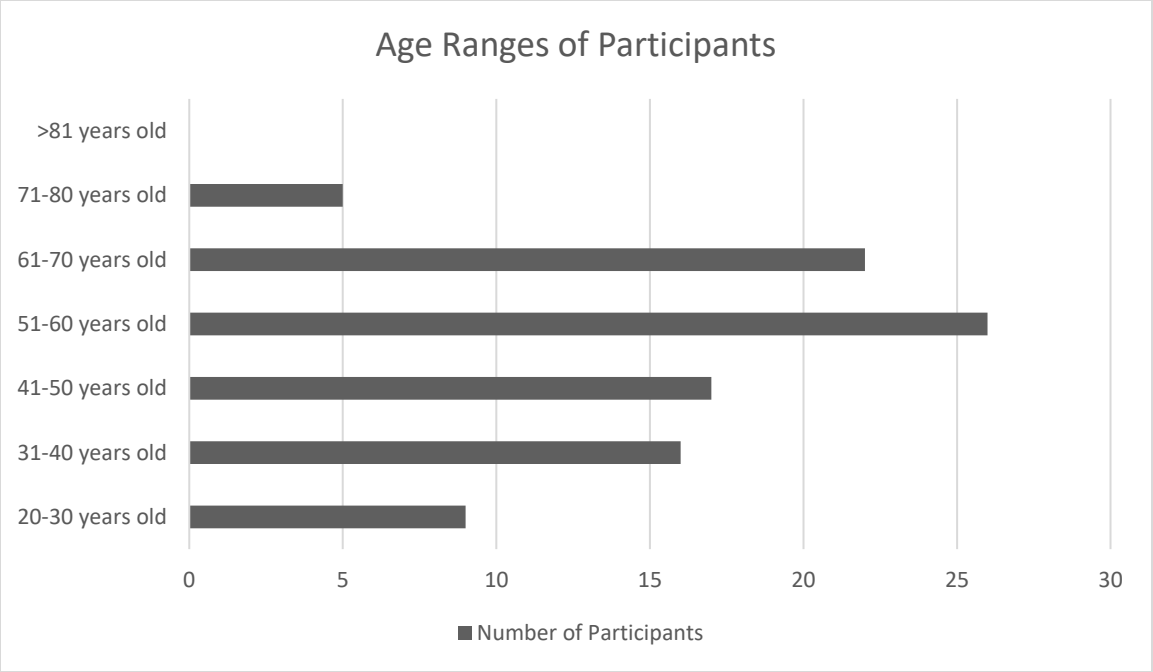

Table 2. Age ranges of OBU faculty and staff participants

The majority (71%) of the interviewed employees did not have children under the age of 18 residing in the household, while 29% of the participants had minors living with them. One participant opted out of answering this question.

Most participants (97%) consumed one to three meals per day, and three respondents ate more than 3 meals per day. No respondents answered with zero meals consumed per day. Seventy participants consumed snacks throughout the day, and twenty-six faculty members did not usually snack. Of the participants who snacked, 35 people (47%) ate one snack, 28 people (37%) ate two snacks, 10 people ate three snacks (13%), and 2 people (3%) ate more than three snacks per day.

Table 3 below describes the results regarding the different sources for meals (breakfast, lunch, and dinner) that participants reported typically eating. Home-cooked meals constituted the highest percentage across all categories, with 68% of all meals being prepared at home. Fast-

food meals were 4% of all meals. Pre-made or frozen food was 19% of all meals. Not eating a meal occurred 4% of the time.

Main sources of meals	Percentage (%) of participants	Number (n) of participants
Main source of breakfast		
Home-cooked meals	53%	51
Pre-made/packaged/frozen food	34%	33
Fast food/restaurants	2%	2
Cafeteria	1%	1
Do not eat	9%	9
Main source of lunch		
Home-cooked meals	57%	55
Pre-made/frozen food	20%	19
Fast food/restaurants	7%	7
The cafeteria	14%	13
Chick-fil A/Sandella's/Dr. Jack's	0%	0
Do not eat	2%	2
Main source of dinner		
Home-cooked meals	93%	89
Pre-made/frozen food	4%	4
Fast food/restaurants	3%	3
Do not eat	0%	0

Table 3. Main sources of meals

Lastly, the participants were asked how they felt about their overall health based on their eating habits. While over half (61%) recorded that they felt "good" about their overall health, 17% reported feeling "excellent", 16% reported feeling "fair", and 6% reported feeling poor. Zero participants skipped this question. Figure 1 summarizes the percentages of reported feelings of health.

Figure 1. Feelings of health based on food eating habits in faculty.

DISCUSSION

This study overviewed the eating habits and feelings of health in OBU faculty and staff. Using a self-reported electronic method, questions regarding demographics, snack and meal frequency, and feelings of health were collected and analyzed. Based on the results collected, the following comparisons were made.

In contrast to a previous study that reported 67% of interviewed adults ate at a fast-food restaurant in the past week,[8] only small percentages of OBU faculty and staff reported regularly eating meals at fast-food restaurants. The difference in fast-food consumption between the two studies may be attributed to two factors. First, OBU staff were asked about their main source of meals instead of meals in a specific period. This factor may have decreased the percentage of fast-food consumption in the OBU study. Second, the previous study compared the eating habits of men and women, and women demonstrated lower frequencies of consuming fast-food. Since

the OBU study had more female participants, the decreased rate of fast-food consumption may not be representative of a working population of both males and females. According to OBU participants, the meal with the highest percentage of habitual fast-food consumption was lunch, followed by dinner and breakfast. Potential reasons for increased fast food intake at lunch are the proximity of restaurants to the Ouachita campus and the irregular schedules of some professors which may lunch options vary.

In this study on Ouachita faculty and staff, 68% of all meals were home-cooked. According to a study by Tumin and Anderson,[6] adults had 26% lower odds of obesity when regularly consuming home-cooked meals in comparison to adults with little to no home-cooked meals. Additionally, a study by Jones and colleagues correlated family dining with a healthier intake of food compared to restaurant dining.[7] Although the OBU study did not analyze which meals were consumed with family, the term "home-cooked meals" suggests that the meals were not eaten in a restaurant, which may follow the healthy eating patterns suggested by Jones and colleagues. [7] Since the adults in the OBU study consumed fast-food 4% of the time, feelings of health may also be attributed to eating a high frequency of home-cooked meals and a low frequency of fast-food meals.

Similar to a study on meal and snack intake,[3] the more regularly participants ate, the better they felt about their overall health. The majority of participants in this study ate breakfast, lunch, and dinner daily, and over half of participants ate one or two snacks per day. Considering the meal intake, 61% of the participants in this study felt good about their overall health, with 17% also indicating feeling excellent about their health status. This statistic is also similar to a previous study, in which over half of adults perceive themselves as healthier than their actual

status.[10] According to the previous two studies and the data from OBU faculty, positive feelings of health were partially based on an adequate frequency of meals.

The study's strengths and limitations stemmed from its brief timeline and small setting and resources of the university. Although this study was performed at a small university, it yielded a good response rate from the participants. There was no risk and limited time involved with participation, which increased the sample size. The study was limited by the small sample size of educated adults, so results may not be representative of the general population. The questionnaire could be further improved by differentiating between snacks and meals. In question six, an option for "no snack" was not offered for participants who had previously chosen that they did not regularly snack. With more resources, this study could have requested information from blood samples, prior health conditions, and weight or Body Mass Index (BMI). This additional information would aid in studying eating habits and health by providing specific data about physical health. Additionally, a technological method of statistical analysis would enable a conclusive result.

CONCLUSION

Among the 96 Ouachita Baptist University faculty and staff who participated in the study, 68% consumed home-cooked meals. Overall, only 4% of faculty regularly consumed fast-food items as their main meal sources. Additionally, 78% of the faculty felt either good or excellent about their health. An adequate meal frequency may be indicative of overall feelings of health. Therefore, positive feelings of health are related to a high occurrence of home-cooked meals, a low consumption of fast-food meals, and adequate meal frequency. Future research is necessary to determine if this pattern is representative of other populations.

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