

Consumption of raw and unprocessed foods among Indiana state university students: A bench report

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ABSTRACT

Background/Objective: The rise of nutrition-related diseases (e.g., heart disease, diabetes, obesity) is at all time high nationwide. Raw food diets typically consist of uncooked vegetables, fruit and grains as well as raw meat and dairy products. These foods could be slightly heated but not above 120°F as to preserve its natural components. College students have the habit of eating processed and fatty foods but diets rich in raw/unprocessed foods may break this pattern. This study explores the new trend and popularity of consuming raw and unprocessed foods on Indiana State University campus.

Methods: Thirty seven participants aged 19 years and older completed questionnaire on frequency, type and reasons for consuming raw/unprocessed foods such as vegetables, fruits, nuts and grains. Data was collated and analyzed using SPSS crosstab analysis.

Results: About 63% of participants consumed raw vegetables and fruits 1-2 times daily. However, fewer participants consumed raw nuts or grains. The reasons for eating raw foods were evenly split. Participants who ate raw foods for enjoyment or health reasons were 33% respectively while 30% did so for health and enjoyment. When assessed between genders, females ate more raw foods than males in all parameters examined.

Significance: Although many unhealthy food options are eaten on campuses, it is encouraging to find that students incorporate wholesome raw and unprocessed foods into their daily diets – a positive response to this new food trend. © 2013 Trade Science Inc. - INDIA

KEYWORDS

Raw and unprocessed
foods;
New food trend;
Healthy food choices.

INTRODUCTION

As rates of heart disease, diabetes, cancer, and obesity continue to rise in the U.S., there is an increasing interest in the quality and preparation of foods available for consumption. There are concerns about the effects of processed foods on cellular health and some believe that eating natural foods typical to those of our

ancestors is the key to reversing chronic disease. New dietary trends are emerging in some coastal regions of the U.S. that involve consuming raw and unprocessed foods for improved health and energy. It is claimed that these foods produce marked reduction in chronic ailments and fatigue^[1]. Fruits and vegetables are high in antioxidants (meals high in these foods should help prevent oxidative stress) and may help to prevent chronic

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disease and slow aging^[2]. These findings have led to the National Research Council to recommend consuming five or more servings of fruits and vegetables a day.

Raw food diets vary but may be described as uncooked food, uncooked vegan food, or uncooked vegan “living” food wherein foods are sprouted. Raw food diets typically consist of uncooked vegetables, fruit, and grains but can also incorporate raw meat and dairy products. Some foods can be slightly heated but not above 120° F as to preserve the food’s natural enzymes^[1]. The rationale given for the healthfulness of uncooked food is the food’s “higher order” (A condition of methodical arrangement among component parts such that proper functioning or appearance is achieved) and energy when it is in its natural state, although people usually consume raw foods for its increased antioxidant and vitamin value^[1]. Some of the reasons for consumption of raw foods are for protection from disease, better digestion, weight control, energy, needing less sleep and elevated mood^[1]. In addition, studies^[3,4] have shown that long-term intake of raw foods is associated with low serum LDL concentration and triglycerides, and reduced risk of cardiovascular disease and some cancers. The high content of vitamin A and carotenoids in raw foods may contribute to these positive health benefits.

Processed food is defined as food that has been subject to canning, cooking, freezing, dehydration, or milling^[5]. There’s increasing concern about the health consequences of consuming highly processed foods due to the effects of hydrogenated oils and food additives. A recent study showed a negative correlation between the amount of processed food consumed and intelligence quotient (IQ) in children^[6]. Diets rich in processed meat, chocolates, sweet desserts, fried food, refined cereals, and high-fat dairy products are associated with increased vulnerability to depression^[7]. Although there are limited reports on the effects of processed foods on health and longevity, new findings on the correlation between high consumption of processed foods and certain cancers are being reported.

College students are often thought to have poor diets with decreased nutrient value due to stress, time conflicts, and food availability. The aim of this study is to explore the popularity of consuming raw and unprocessed foods among college students in Indiana. The inclusion of raw and unprocessed vegetables, fruits, nuts, and grains in the diets of adult population at Indi-

ana State University is examined.

METHOD

Subjects & procedures

(a) Design

The investigation used an exploratory design protocol to collect information on adult students at ISU campus. The focus was on the new trend of consumption of raw and unprocessed foods among the population. The questionnaire was given to participants in-person. It contained multiple-choice questions on a Likert scale format. The questions sought answers on 1) the types and frequency of raw foods consumed participants, 2) the reasons for consumption of such foods, and 3) their understanding of what raw and unprocessed foods are. This study drew insight on review of Academy of Nutrition and Dietetics findings on nutrition trends^[8]. Survey questions were created based on the views of participants on the new trend of consuming raw and unprocessed foods. An application for IRB approval was made prior to completion of the study.

(b) Participants

There were 37 participants of varying ages and life stages. Participants’ wide age range (19-47 yrs) gave an insight on the age distribution of adult students at ISU. Although the study sample size is small, the age range covers the spectrum of adult ages in most campuses.

(c) Sampling

Participants were recruited by convenience sampling technique. They were given survey questionnaires at face-to-face sessions at Indiana State University campus. Participants were informed that participation in the study was optional and are free to withdraw at any point without consequences. They were informed that their responses would be kept confidential (although confidentiality may never be absolutely guaranteed). They received, read and signed the informed consent form prior to participating in the study; and completion of the survey indicated informed consent. The survey was completed within a 4-month period. Participants were asked about consumption of raw and unprocessed foods, their age, education level, gender, and ethnicity. A preliminary survey was done on a small sample size of 14 nutrition students class prior

to its being made available to survey participants – this pilot survey did not necessitate any changes to the survey. Data was also collected on the time of day each type of food was consumed. Information from participants was collated and entered into SPSS^[9] and analyzed using crosstab analysis.

RESULTS

Demographics

A total of 37 participants (include Caucasian females ages 19-25) completed the survey on the consumption of raw and unprocessed foods. About 54% of the respondents had high school diplomas or general education degrees and were working on attaining a bachelor’s degree. About 20% of participants held PhD degrees.

Time of food consumption

The survey provided data on the number of times in a typical day that participants consumed raw and unprocessed foods. The following data breaks down the frequency of consumption by age.

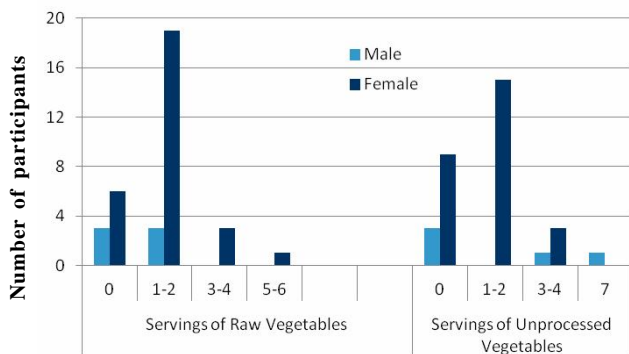


Figure 1 : The frequency of consumption of raw and unprocessed vegetables

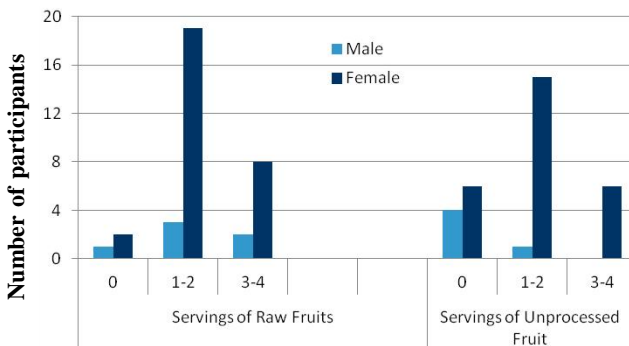


Figure 2 : The frequency of consumption of raw and unprocessed fruits

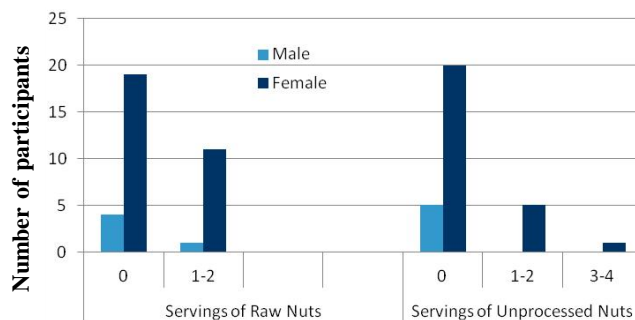


Figure 3 : The frequency of consumption of raw and unprocessed nuts

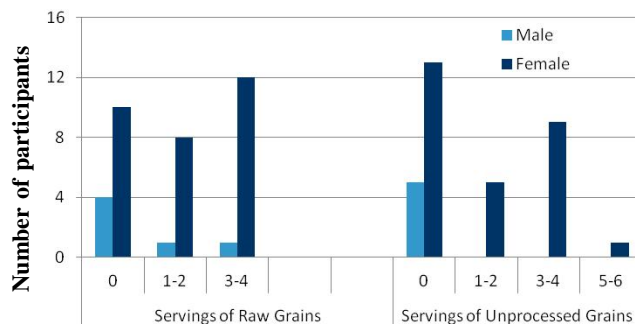


Figure 4 : The frequency of consumption of raw and unprocessed grains

Figures 1-4 illustrate the number of times in a typical day that males and females consumed raw and unprocessed foods. Data indicates that gender has influence on consumption of raw and unprocessed foods. Participants’ reasons for choosing these types of foods in their diets are shown in TABLES 1 and 2.

TABLE 1 : Why raw foods are selected among gender

Reasons for eating raw foods	Males	Females	Total
General health	2	9	11
Enjoy raw foods	3	8	11
General health/Enjoyment	1	10	11
Total	6	27	33

TABLE 2 : Why raw foods are selected among age groups

Reasons for eating raw foods	19-25	26-32	33-39	40-46	47+	Total
General health	8	1	1	0	1	11
Enjoy raw foods	7	2	1	1	0	11
General health/Enjoyment	8	0	1	0	2	11
Total	23	3	3	1	3	33

SUMMARY

About 69% of the respondents (19-25 yrs) tend to

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eat raw foods for health and enjoyment (TABLE 2).

Females (82%) are more likely to eat raw foods than male (18%). These pilot findings provide valuable background information for an on-going study on current consumer interests in raw and unprocessed foods. This growing trend has significance in health promotion; probably for foods developed specifically to meet demand for products that promote improved health often referred to as "Designer foods".

Although a significant portion of the study's population consumed raw vegetables and fruits, the result is different for raw and unprocessed nuts and grains, indicating that the raw and unprocessed food trends that are most common along the US coastal regions are not fully integrated into the diets of consumers at Indiana State University. While this study provides insight into the eating habits related to raw and unprocessed foods on the campus of Indiana State University, the results are not generalizable across or beyond campus. Limitations of this study are indicated by the lack of diversity in age, gender, level of education and ethnicity. Nevertheless, findings of this study are a good measure of the pulse of this group on raw and unprocessed food intake. How this population defines/understands the meaning of raw and unprocessed is under investigation.

CONCLUSION

Overall this study provides valuable information on the consumption of raw and unprocessed foods at Indiana State University campus. Although there are a lot of unhealthy options offered around campuses, it is encouraging to find that students are incorporating wholesome raw and unprocessed foods into their daily diets. This exploratory study provides insight that college students consume foods that support healthy lifestyle. Majority of students participants consume raw vegetables and fruits 1-2 times daily; and consume raw grains daily. Although some students did not consume unprocessed grains/nuts and raw nuts, the findings show a positive response to this new food trend. Study on how the population defines raw/unprocessed foods along with its accessibility is on-going in order to substantiate the data in this report.

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