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EATING AND HEALTH BEHAVIORS OF COLLEGE STUDENTS  
IN OKLAHOMA AND SCOTLAND

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STEPHANIE KAY MCKINNEY

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EATING AND HEALTH BEHAVIORS OF COLLEGE STUDENTS  
IN OKLAHOMA AND SCOTLAND

APPROVED BY:

[REDACTED]

Allen W. Knehans, Ph.D., Chair

[REDACTED]

[REDACTED] Funderburg, MS., RD/LD

[REDACTED]

[REDACTED] Onley, Ph.D. RD/LD  
Professor Emeritus, Department of Nutritional Sciences

THESIS COMMITTEE

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I am grateful to everyone who also worked on this project. It truly took a group's hard work, interests and time to complete the process. From beginning to end, we each had a part. Thank you Dawn Sullivan for your foresight in nurturing the research relationship between the OUPISC and Scotland. Thank you to Carrie Thompson and Pooja Singhal, for their work with the survey. The data collection and statistical process was completed with assistance of the staff at the General Clinical Research Center which is supported in part by the National Institutes of Health, National Center for Research Resources, General Clinical Research Center Grant MD1 RR-14455. Don Parker, Christie Duggin and John Edman, your patience and willingness to help were appreciated.

Finally and most importantly, thank you to my family for their support and patience. To Mike, Abigail, Seth and Douglas, you bring me so much delight and meaning in life. Thank you for the sacrifices you all make. To my girls' grandparents, thank you for sharing

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## TABLE OF CONTENTS

LIST OF TABLES.....	8
LIST OF FIGURE.....	9
ABSTRACT.....	10
CHAPTER	
I. INTRODUCTION.....	11
a. Glossary of terms.....	14
II. LITERATURE REVIEW.....	15
a. Eating and Health Behaviors	
i. Soda	
1. Trends / portions.....	15
2. Energy Intake and BMI.....	16
3. Mechanisms.....	17
ii. Fast Food	
1. Trends in Use and Portion Sizes.....	18
2. Energy Intake.....	19
3. BMI.....	21
iii. Eating Patterns	
1. Meal frequency.....	22
2. Breakfast.....	24
3. Snacking.....	25
iv. Dietary Patterns	
1. Energy Density.....	28
2. Fruits and Vegetables	
a. Mechanisms.....	29
b. Trends.....	29
3. Cluster Analysis.....	31
v. Other Health Behaviors	
1. Dieting and Physical Activity.....	33
2. Breastfeeding.....	35

## TABLE OF CONTENTS CONTINUED

b. Obesity	
i. Obesity Prevalence	
1. United States .....	37
2. Adolescents .....	37
3. Scotland .....	39
4. College Students .....	40
ii. Burdens of Obesity	
1. Adults .....	42
2. Children .....	44
3. College Students .....	46
iii. Health Initiatives	
1. United States .....	47
2. Scotland .....	49
3. College Students .....	50
c. Summary .....	51
III. SPECIFIC AIMS .....	52
IV. METHODS	
a. Study Design .....	53
b. Study Measures .....	54
i. Demographics .....	54
ii. Anthropometrics .....	54
iii. Diet and Lifestyle .....	55
iv. Weight Control and Dieting Patterns .....	55
v. Miscellaneous .....	56
c. Statistical Analysis .....	56
V. RESULTS	
a. Subject Characteristics .....	58
b. Survey Results .....	60
c. Spearman Correlation .....	67
d. Mean BMI and Dieting and Breastfeeding .....	69

## TABLE OF CONTENTS CONTINUED

Table	Page
<b>VI. DISCUSSION</b>	
a. Overview.....	71
b. BMI.....	71
c. Eating Behaviors	
i. Meals, Breakfast and Snacking .....	73
ii. Fruit, Vegetable, and Meat Consumption.....	75
iii. Food Away From Home and Soda Consumption.....	78
d. Lifestyle Factors	
i. Physical Activity .....	80
ii. Supplement Use.....	81
iii. Alcohol and Cigarette Use.....	82
iv. Parental Influence and Breastfeeding .....	84
e. Dieting and Healthy Lifestyle Patterns .....	84
f. Strengths and Weaknesses .....	86
g. Conclusion .....	87
LIST OF REFERENCES .....	89
<b>APPENDIXES</b>	
Appendix A: Food and Intake and Behavior Surveys .....	103
Appendix B: IRB Approval Letters .....	116
Appendix C: Table of Frequencies .....	119
Appendix D: Table of Chi-Square Analysis .....	126
Appendix E: Spearman Correlation Table and Report .....	128

## LIST OF TABLES

Table	Page
1. Demographic description of male and female college students from Oklahoma and Scotland .....	58
2. Race/Ethnicity of Subjects.....	59
3. Anthropometric description of male and female college students from Oklahoma and Scotland.....	59
4. Distribution of weight status by BMI as characterized by BMI .....	60
5. Responses to survey questions about breakfast, fruit, vegetables, meat consumption.....	62
6. Responses to survey questions about fast food and restaurant meal consumption.....	63
7. Responses to survey questions about coffee, tea, smoking and alcohol consumption .....	64
8. Responses to survey questions about meal, soda, and snack consumption .....	65
9. Responses to survey questions about herbal and dietary supplement use and exercise .....	66
10. Responses to survey questions about diet and smoking as a weight control method ..	66
11. Responses to survey questions about knowledge of nutrition and importance of diet and exercise for good health .....	67
12. Spearman correlation (r values) of BMI with beliefs and eating and health behaviors .....	69
13. Mean BMI for responses to survey questions about dieting and breastfeeding .....	70



## LIST OF FIGURES

Figure	Page
1. Box Plot of Mean Body Mass Index of Subjects.....	60
2. Distribution weight status by BMI.....	71

The rise in prevalence of overweight and obesity has been seen worldwide. Overweight and obesity is impacting all age groups. College students represents a unique population that could be prime targets for obesity prevention and treatment. Dieting and health behaviors of students in the college population is sparse. In this study, a survey was used to collect information on eating and health behaviors of college students (n=157). Data was collected in two culturally distinct locations (Oklahoma and Scotland) to allow for comparison of behaviors. Self-reported height and weight were used to determine BMI and identify correlations of BMI with behaviors. Similar prevalence of overweight and obesity were found in the students from Oklahoma and Scotland. Mean BMI in male and female in the Oklahoma and Scotland were 25.0, 33.4, 24.1, and 23.0, respectively. Behaviors that have been proposed to contribute to obesity such as snacking consumption, inactivity, fast food and restaurant use, cigarette and alcohol use were found to be prevalent in college students. Other behaviors such as fast food and restaurant use, cigarette and alcohol use, and amount of meat, fruit and vegetable consumption were found to vary among college students. Positive correlations with behaviors such as accounts of meat consumption, snacking, and alcohol and cigarette use and BMI were found. Negative correlations between snacking, fast food consumption and dieting and BMI were found. In a period when lifetime health habits and behaviors are being developed, college students were found to participate in dieting, dieting increases their risk of overweight and obesity.

## ABSTRACT

The rise in prevalence of overweight and obesity has been seen worldwide. Overweight and obesity is impacting all age groups. College students represent a unique population that could be prime targets for obesity prevention and treatment. Data on eating and health behaviors of students in the college population is sparse. In this study, a survey was used to collect information on eating and health behaviors of college students (n=457). Data was collected in two culturally distinct locations (Oklahoma and Scotland) to allow for comparison of behaviors. Self-reported height and weight were used to determine BMI and identify correlations of BMI with behaviors. Similar prevalence of overweight and obesity were found in the students from Oklahoma and students from Scotland. Mean BMI in male and females in the Oklahoma and Scotland were 25.0, 22.4, 24.1, and 23.0, respectively. Behaviors that have been proposed to contribute to obesity such as soda consumption, inactivity, fast food and restaurant use, cigarette and alcohol use were found to be prevalent in college students. Other behaviors such as fast food and restaurant use, cigarette and alcohol use, and amounts of meat, fruit and vegetable consumption were found to vary among college students. Positive correlation with behaviors such as amounts of meat eaten, exercise, and alcohol and cigarette use and BMI were found. Negative correlations between snacking, soda consumption and dieting and BMI were found. In a period when lifetime health beliefs and behaviors are being developed, college students were found to participate in practices that may increase their risk of overweight and obesity.

## CHAPTER I

### INTRODUCTION

Prevalence of obesity has reached epidemic proportions in the United States. (Kelner et al., 2003) Equal growth has been seen in other Westernized countries. Globally there are more than one billion overweight adults and at least 300 million adults are obese. (WHO, 2004) Increases have not been limited to adults, as climbing trends have also been seen in children and adolescents throughout the world. (Wang et al., 2002)

While weight gain, or positive energy balance, simply occurs when energy intake exceeds energy expenditure, the picture is anything but simple. The storage of energy occurs when energy intake is increased, energy expenditure decreases or a combination of the two occur. Current obesity research is focusing on a broad spectrum of factors that play a role in energy intake and expenditure including genetic, behavioral and environmental.

As much as 50% of variability in body weight is governed by genetic causes. (Rossner, 2002) Given the short time frame of recent changes of obesity, it seems improbable that genetics could be solely responsible. On the other hand, social forces and our environment, which have changed substantially in the past, largely determine our behaviors. (Hill et al., 1998; Jeffery et al., 2003) A leading obesity expert described a new environment which he labeled as “obesogenic,” an environment in which “current social norms and values serve to reinforce behaviors that promote obesity.”

(Hill et al., 2003). The cultural environment or a country's foods, customs, laws and ways of life also influence a person's eating and health behaviors. A person's eating and health behaviors are also molded by experiences in life, particularly those leading up to, and through, adulthood.

Eating and health behaviors that are thought to play a role in energy balance include food and beverage choices, eating patterns, and physical activity. Additionally, lifestyle behaviors such as tobacco and alcohol use are thought to be associated with obesity. Collectively, these factors are a part of a complex grid-work that scientists must unravel to learn how they play a role in an individual's energy intake and expenditure.

Research is the key to developing strategies for successful interventions to treat and prevent obesity in adults and children alike. It is through research we learn information about our behaviors and better understand the environments we live in. Finding patterns within people's behavior and learning how their environment affects their behaviors will allow for better approaches in the prevention or treatment of obesity. Health initiatives for the prevention and treatment of obesity, which have been developed using current and ongoing data, can be found on international, national and even community levels.

College students, as a population, provide a prime opportunity for the promotion of healthy lifestyles to treat or prevent obesity. The college student is at a pivotal life-stage in which behaviors may be developed that will affect a lifetime of health, including weight. It has been shown that dietary habits and physical activity,

which are primary risk factors for obesity, are “subject to change during the college years.” (Patrick et al., 1992; Lowry et al., 2000)

In order for the development of strategic prevention and treatment programs, data must be gathered on this overlooked population. Current obesity research has focused on children, adults and the elderly. The college population is often overlooked due to their heterogeneous nature and their age group. The typical age group of the college population overlaps with both young adults and adolescence. Few large scale studies exist that explore the eating and health behaviors of college students.

In this research study, the goal was to broaden the limited research of eating and health behaviors in college students. Furthermore, we were able to compare college populations with two distinct cultures in Oklahoma and Scotland.

## **Glossary of terms:**

### CHAPTER II

*Adiposity rebound* – Refers to the body fatness of a child (BMI). After the age of two, the BMI falls to a minimum around age 6 before rising again. The point at which the rise begins is called adiposity rebound.

*Body mass index (BMI)* - BMI is the most common way to determine weight status. BMI does not measure body fatness, but is a simple method to estimate body fatness since the body weight is adjusted for height. Reference values for overweight and obesity have been set by the National Institute of Health, Center for Disease Control, and WHO. Overweight is defined by a BMI between 25.0 and 29.9 kg/m<sup>2</sup> and obesity is defined by a BMI greater than 30kg/m<sup>2</sup>.

*BMI z-score* - provides a relative measure of adiposity adjusted for age. BMI z-score can be used to determine changes in BMI between time periods in a study.

## CHAPTER II

### LITERATURE REVIEW

#### Eating and Health Behaviors

##### *Soda Consumption*

The rise in obesity and overweight has been seen with an increase in a number of eating behaviors. Specifically, soda consumption has increased by 500% since 1950. Individual intake has increased from 195ml in 1989 to 275ml in 1994-1995, with consumption among adolescents as high as 570ml per day in 1994-1995. Soda is the leading source of added sweetener in the American diet for all age-gender groups, accounting for 1/3 of sugar intake in American diets. (Guthrie et al., 2000) Though limited data exists showing detrimental health effects of sugar, data indicate excessive calories from soda may put individuals who drink large amounts of soda at risk for obesity. (Jones et al., 2003) Studies utilizing the data from the 1994 Continuing Survey of Food Intakes by Individuals (CSFII) have shown the amount of soda intake has risen throughout childhood and adolescence, peaking at age 18-34 years old. (Guthrie et al., 2000; Bowman, 2002) By age 5 and 13, soda pop is consumed more than milk and 100% fruit juice, respectively. (Rampersaud et al., 2003; WHO, 2004) Another study using this data included 1,810 persons, aged 2 to 18 years, and found almost one-fourth of adolescents drank more than 26oz of soda per day. Total energy intake was increased among those in the highest soda consumption category compared with those in the lowest

consumption category. This amounted to an average of 9 ounces more soda per day. (Harnack et al., 1999)

An observational study followed 548 girls and boys, mean age 11.7 years, over 2 academic years and found an increase from baseline consumption of soda in 57% of the population. One-quarter of boys and girls were drinking more than one extra serving daily. After adjustment for confounding variables such as physical activity, television viewing time, and total energy intake, BMI was increased for each serving per day at baseline, and further increased for every additional serving. The odds-ratio of becoming obese among children increased 1.6 times for each additional can or glass of sugar-sweetened drink that they consumed each day. (Ludwig et al., 2001)

Total energy had not increased in youths aged 2-19 years old according to a study utilizing the National Health and Nutrition Examination Survey (1988-1994) data. Despite this finding, higher consumption of sodas was found in overweight versus normal weight youth. (Troiano et al., 2000) Though data looking at soda consumption and BMI in adults is limited, strong evidence was found linking an increase in soda consumption to increased BMI in women. Dietary questionnaires and self-reported height and weight of 51,603 women were taken in 1991, 1995, and 1999 as part of the Nurses' Health Study II. The Nurses' Health Study is a prospective cohort study of US female nurses aged 24 to 44 years at study initiation in 1989. Intake of sugar-sweetened sodas was compared for two periods of time (1991-1995 and 1995-1999). Women who had increased their intake of sodas from low consumption (<1/week) to high consumptions (>1/day) had



significantly larger increases in weight and BMI than women who had no change or had reduced their intake of sodas. Total energy intake was found to increase by 358 kcal/d among the group who moved from the low to high soda consumption group. (Schulze et al., 2004) In another study, higher consumption of energy intake was significant among those who had a higher intake of bakery products, sweetened sodas and yogurt in food frequency questionnaires of 1112 children aged 6-7 years from 4 Spanish cities. No association was found with BMI with sweetened sodas.

The proposed mechanisms by which soda may contribute to positive energy balance typically involve lack of satiation or compensation of calories from a liquid form and lower metabolic rate after liquid consumption. A review of liquid calories and satiety by a panel of experts found evidence was inconclusive that liquids have less impact on satiety than do solid foods. (Almiron-Roig et al., 2003) It has also been proposed that nutrients typically low in diets of people consuming large amounts of soda play a role in weight management. Diets of persons who consume larger amounts of soda are also lower in levels of calcium intake due to lower milk consumption. (Harnack et al., 1999; Rodriguez-Artalejo et al., 2003; Bowman et al., 2004) Recent findings in the field of weight management have focused on the role of calcium. Associations of calcium are stronger with maintenance of weight rather than weight loss. (St-Onge et al., 2003) The replacement of soda for calcium in milk, in addition to added calories, may play a role in the increase in obesity.

### *Fast Food Consumption*

Consumption of meals from fast food restaurants has been implicated in the rise in obesity. On college and university campuses alone, an increase of 7.3% in food and drink sales has been seen since 2001. (NRA, 2003) The U.S. Department of Agriculture Economic Research Service reports that spending on food eaten away from home is 43% of the food dollar, up from 20% and 38% in the 1970s and 1992, respectively. (Harnack et al., 2000) Results of nationwide surveys conducted by the USDA show Americans consumed an average of 2.77 commercially prepared meals weekly, with almost 50% of men reporting eating three or more commercially prepared meals weekly in 1999-2000. (Kant et al., 2004) The greatest increases in consumption of food outside the home is reported in young adults. (Nielson et al., 2002; Paeratakul et al., 2003)

While total calories from meals has decreased, national surveys have shown the percentage of total calories consumed away from the home has increased from 18 to 32%. (Guthrie et al., 2002; Nielson et al., 2002; Nielson et al., 2003) This increase is probably due to the increased frequency of fast food eating occasions and the amount of calories consumed at each occasion. Young et al. found portion sizes in the marketplace began to grow in the 1970s, rose sharply in the 1980s, and still continues to rise. (Young et al., 2002) Foods examined in the study are major contributors of energy to the U.S. diet as reported in national surveys. Current single serving portions were weighed and compared to historical portion sizes. Historical portion sizes were determined from a

variety of sources, such as manufacturing information, publications, cookbooks, fast food guides and older food composition tables. Foods such as French fries, hamburgers and soda are 2 to 5 times larger than their original portion size. Data from nationally representative data also shows portion sizes have increased for all key foods since 1977, with the largest increases seen in fast food. (Nielsen et al., 2003) Frequenting fast food establishments may inadvertently result in higher energy intakes as the amount of food eaten has been shown to increase based on portion size.

Rolls et al. served 51 men and women lunch one day per week for a month. When larger portions were served, subjects consumed 30% more energy, independent of who placed the food on the plate, gender, body mass index, or scores for dietary restraint or disinhibition. (Rolls et al., 2002) A higher energy intake was also found in a study in which a cafeteria-style restaurant served larger size portions of a pasta entree on 10 days over a 5 month time period. When comparing consumption of normal and large portions, 43% more energy was consumed in the large size portion. Despite this difference, there was no difference in ratings of appropriateness of the portion size between those consuming the normal or larger size portion.

Studies able to compare subjects total calorie intake on days with and without fast food, all found total caloric intake was higher on days when fast food was consumed. Ebbeling et al. took four 24 hour dietary recall interviews of 26 lean and 28 obese adolescents (aged 13 to 17 years). (Ebbeling et al., 2004) Paeratakul et al. used data from the CSFII 1994-1996 and 1998, and compared total energy intake on two 24-hour recalls

in which fast food was eaten on one day for 5,383 adult and children. (Paeratakul et al., 2003) Bowman et al. used similar data including the CSFII 1994-1996 and the Supplemental Children's Survey in 1998 including 6,212 children and adolescents (4-19 years old) as subjects. (Bowman et al., 2004) Consumers of fast food had higher total energy intakes per day compared to non-consumers. The largest difference was seen in 14-19 year-olds at 16.8% (379 kcal/day). Analysis was also completed with subjects used as their own controls. Similar findings were found, thus showing high levels of confidence of association between fast food intake and energy intake. Similarly, a study that was intended to look at change in body weight annually over a 3 year period, found increases in frequency of fast food restaurant use were associated with increased total energy intake. Specifically, for an increase of one fast food meal per week, this would account for a 56 kcal/day increase if fast food were consumed. (French et al., 2000) In another study by French et al., a dose-response pattern was observed for energy intake and fast food restaurant use. This study examined fast food restaurant use among 4,746 adolescents, enrolled in 31 junior and senior high schools (grades 7 through 12) in a large metropolitan area of Minnesota. Students were asked about their frequency of fast food restaurant use in the past week. (French et al., 2001) A study investigating the eating habits of 129 premenopausal women enrolled in a study looking at smoking and energy balance, used a 7-day diet record to assess nutrient intake and frequency of eating out. (Eck-Clemens et al., 1999) When subjects were categorized as either a "low eating out

After controlling for physical activity, the strength of the association was increased. In

group” (5 or fewer times per week) or a “high eating out group” (6-13 times per week), those in the “high eating out group” consumed more total energy on a given day.

The majority of studies looking at fast food consumption in relation to body weight found positive associations. Binkley et al. used data from the 1994-1996 CSFII and found that food sources such as fast food significantly increased BMI of both males and females. (Binkley et al., 2000) It was found that if the subjects had eaten food away from home in the past 24 hours, they would be 1 kg heavier. Kant et al., who used data from the National Health Interview Survey 1987 and NHANES 1999-2000 for Americans over 18 years of age, found BMI was modestly associated with the reported number of commercially prepared meals consumed by women, but not by men. (Kant et al., 2004) In a longitudinal weight gain prevention study, 529 high-income and 332 low-income women were divided into two groups: one which would attend a low-intensity intervention and the other which would not be contacted until follow-up. (French et al., 2000) In the intervention group, monthly newsletters and opportunities to attend extra eating and exercise programs were offered. Fast food eating was positively associated with BMI in all subjects, but strongest among low-income women. A food frequency questionnaire and body fatness testing were completed in 73 healthy men and women by McCrory et al. (McCrory et al., 1999) Frequency of restaurant foods (fried chicken, burger, pizza, Chinese, Mexican, and fried fish) was positively associated with body fatness after controlling for educational level, smoking status, and alcohol intake. After controlling for physical activity, the strength of the association was increased. In

the three year study looking at weight gain previously mentioned by French et al., weight gain of 0.72 kg (1.6 lbs) in addition to the average weight gained, was seen in subjects for each increase in fast food meal per week. (French et al., 2000)

Frequency of fast food use has also been positively associated with BMI in adolescents. Thompson et al. studied 101 healthy girls, who were part of another longitudinal growth and development study. (Thompson et al., 2004) The girls completed two 7 day food diaries at a mean of 6 years apart which included time, place, type and amounts of all food and beverage consumed. At baseline, 4% of participants had a BMI at or above the 85<sup>th</sup> percentile, increasing to 9% at follow-up. At baseline 71% of participants ate food away from home with an increase to 86% at follow-up. The BMI z-score was significantly more likely to rise in girls who ate quick-service food twice a week or more at baseline versus those who ate quick-service once a week or not at all. On the other hand, in the CATCH study of 4,746 adolescents in Minnesota, though an increase in total calories from higher frequency of fast food use was found, there was not an association with overweight status. (French et al., 2001) In fact, BMI was significantly lower among males in the highest category of fast food use.

### *Eating Patterns, Breakfast and Snacking*

Soda and fast food consumption are eating behaviors which have received a large amount of attention in the media. Other components believed to play a role in development of obesity include eating pattern, frequency of meals and dietary variety.

As early as 1964, investigations were taking place to test the effects of frequency of meals on BMI. (Drummond et al., 1996) Currently data is inconclusive whether more meals and snacks or even a “grazing” meal pattern might be protective against obesity or advantageous in a weight loss program. Most recent studies have found inverse relationships between BMI or risk of obesity and meal frequency. Ma et al. utilized 24-hour dietary records (mean 13.4 per subject) for 499 men and women aged 20-70 years who were participants in a prospective study in Massachusetts designed to quantify the magnitude and timing of seasonal changes in blood lipids. (Ma et al., 2003) Ma et al. found a lower risk of obesity associated with the greater number of eating episodes each day after analysis adjusting for age, gender, physical activity and total energy intake. The participants ate an average of 3.92 times daily. Another cross-sectional study reviewed 3-day food records of 330 European men aged 45-64 years, and found similar mean eating occasions at 3.7 per day. (Ruidavets et al., 2002) Even after exclusion of confounders, including low energy records and dieters, BMI decreased with increases in eating frequency. In a retrospective study by Kant et al., data from NHANES I (1971-75) and its’ follow-up study (NHANES I Epidemiologic Follow-up Study 1982-84) was used to study weight change over a ten year period and its association with frequency of eating. (Kant et al., 1995) Baseline frequency of meals was inversely associated with BMI, yet on follow-up no association between weight gain, frequency of eating, and BMI were found.

The protective effect of increased frequency of eating is not well understood. It has been proposed that more frequent eating episodes may result in a metabolic advantage, such as higher thermic effect of feeding, which would result in more energy expended per day. A review of older studies by Bellisle et al. in 1997, found insufficient evidence to make any conclusion regarding meal frequency and obesity and concluded that “epidemiological evidence is at best very weak.” (Bellisle et al., 1997)

Studies by Dwyer et al., Ma et al. (Ma et al., 2003), and Cho et al. (Cho et al., 2003) look directly at exclusion or inclusion of breakfast and found persons skipping breakfast report higher BMI. This is despite the findings that lower total energy per day is found among breakfast skippers. Dwyer et al. reported on a cohort of 1,493 boys and girls who were tracked from third grade to eighth grade to test the effectiveness of a multicomponent intervention to promote cardiovascular health. (Dwyer et al., 2001) At least one 24-hour recall was obtained from the students during two different grade levels. Children were found to skip breakfast in all age groups. Siega-Riz et al. pooled nationally representative survey data for breakfast trend analysis. (Siega-Riz et al., 1998) A decline in breakfast consumption was seen through the school years with 5%, 9% and 13-20% of preschoolers, children and adolescents skipping breakfast, respectively. Lytle et al. also reported decreases in breakfast consumption among children, from 99% to 86%, moving from elementary to junior high and middle school. (Lytle et al., 2000) Data used by Lytle et al. was a part of the CATCH program previously discussed in Minnesota, which tracked the children (n=291) from third to eighth grade. A study



looking at post-high school population (aged 19-28 years) of the Bogalusa Heart Study found that 37% of young adults skipped breakfast. (Nicklas et al., 1998) Cho et al. found 20% of Americans skip breakfast, based on data from 1988-1994 NHANES III data. (Cho et al., 2003) Considerable evidence support, that skipping breakfast is a post hoc alteration in dietary patterns in response to weight gain. (Bellisle et al., 1997) In other words, following weight gain, persons may skip meals in an attempt to lose weight or to prevent further gain. If this were the case, this could create a false inverse relationship between eating frequency and BMI. On the other hand, patterns that support the protective effects of eating breakfast were identified in a study that randomized a group of obese adult women to a no-breakfast or a breakfast weight loss program, based on their baseline breakfast eating habits. Subjects kept a behavioral diary with a record of all meals, snacks, social, environmental, and emotional context and physical activity. Less impulsive snacking throughout the day was found when breakfast was eaten. (Schlundt et al., 1992) Ma et al. found energy intake to be higher on days when subjects reported skipping breakfast, which would imply a benefit to eating breakfast. (Ma et al., 2003)

Surveys of American eating patterns (NFCS 1977-78 and CSFII 1989-91, 1994-96, and 1998) indicate energy provided by meals has decreased from 89 to 81%, while energy from snacking has increased 7%. For adolescents the total energy from snacks has been variable, (Lytle et al., 2000; Nielson et al., 2002) but in young adults, it is reported to have “steadily increased by almost 100%.” (Nielson et al., 2002) Total

energy from snacking has increased as frequency of snacking and the energy content of snacks has risen. A study using the Nationwide Food Consumption Survey 1977-78 and CSFII 1989-91, 1994-96, and 1998 data which focused on portion sizes, found size of salty snacks increased from 132 kcal to 225 kcal per serving (93 kcal). (Nielson et al., 2003) Similar results were found in a study looking at the effect of snacking on total energy of diets in young adults (aged 19-29 years) using NFCS 1977-78 and CSFII 1989-91 and 1994-96 data. (Zizza et al., 2001) Zizza et al. found increases in total calories from snacking, with an increase of snacking occasions from 1.70 to 1.92 snacks per day. Each snacking occasion was found to be 26% higher in calories (66 kcal). Overall, they found increases in the prevalence of snacking from 77% (1977-78) to 84% (1994-96).

Investigation of snacking and BMI lead to less conclusive findings. In a study of elderly Greeks, diet history was taken in two groups (1988 – 104 subjects; 1992 – 189 subjects). (Wahlqvist et al., 1999) Diet history obtained only types of food, beverage and time of eating. Results showed those subjects with the greatest number of eating periods had significantly lower body fat. Conversely, baseline analysis in a group of 481 Italian men (22% obese, BMI > 28), found obesity was associated with snacking in the afternoon ( $p=0.0004$ ). (Adami et al., 2003) In a group of obese French women, in which 59% of subjects were snackers, there was a significant difference in total energy intake between snackers and non-snackers, but no association of BMI and snacking frequency was found. (Basdevant et al., 1993) The majority of the snackers had 1 or 2

snacks per day with 13% reporting 3-4 snacks per day. Results may have been skewed because some subjects were losing weight. Groups showed a significantly different snacking pattern, with less snacking among those losing weight. Similar results were found in another study comparing snackers and non-snackers in which subjects were part of a weight loss study. (Drent et al., 1995) Dietary intake, prior to the weight loss study, was obtained by different methods (dietary history or diary) among the three weight loss groups. Different methods of collection were used because subjects were initially part of three different studies. Subjects had stable weight for three months prior to study initiation. Snackers were those who reported greater than 5 snacks per day or 25% of total calories per day from snacks. Subjects who were snackers reported higher daily energy intake compared to non-snackers. Despite differences in calorie intake, BMI was similar between groups. Male snackers reported 2,839 kcal versus 2,262 and 2,226 kcal per day for non-snackers with a BMI of 32.2, 32.9, and 31.1, respectively. Female snackers reported 2,398 kcal versus 1,868 kcal and 1,704 kcal per day for non-snackers with a BMI of 31.6, 31.7, and 31.8, respectively.

As suggested by some of the studies above, snacking between meals may lead to an increase in total calories. This may occur when compensation for snacking calories does not occur at subsequent meals. Booth et al. concluded that beverages or snacks one hour prior to a meal, may lead to poor energy compensation. (Booth, 1988) In contrast, Yates et al. investigated the effects of a high-carbohydrate, high-fat snack consumed prior to lunch and dinner in ten free-living lean young men. (Kirk, 2000) With a washout

period in between, subjects were instructed to consume a snack either 0.5 or 1.5 hours prior to their meal. Snacking resulted in partial energy compensation in both groups, with the greatest compensation (70%) for the snack consumed 1.5 hours prior to the meal. A long-term study by Kirk et al. investigated the effects of snacking on weight status. (Kirk, 2000) In an experimental study with a control group, thirty-three active adult males were instructed to consume a high-fat snack in the afternoon on six days of the week for six months. Results suggested that energy compensation occurred in the group that consumed the snack, as no significant differences were seen in weight gain between the experimental and control groups. Similar to the benefits breakfast eating, in a review of frequency of eating and body-weight control, Kirk concluded that “snackers” have more control of their hunger because hunger does not build up as much which also improves ability for compensation of energy intake. (Kirk, 2000)

### *Energy Density, Fruits and Vegetable Intake*

Research focus has changed from individual macronutrients such as fat and carbohydrate to more complex analyses of energy density and food intake patterns. Energy density refers to the caloric or energy content in a given weight of food. The macronutrient make-up of food in part determines the energy density of the food. Calorically dense fat increases energy density. Also, higher water and fiber content reduce energy density. Energy density is thought to relate to calorie intake because persons tend to eat a similar weight of food over the period of a day.

(Drewnowski et al., 1996) Therefore, a person consuming a diet high in energy density would consume more calories. As implicated in the increases in the consumption of fast foods, high energy foods are more palatable, leading to greater consumption as well. On the other hand, foods with low energy density have been shown to be more satiating in some studies. (Rolls, 2000)

While studies are limited on the “satiating efficiency” for individual foods, a review of fruits and vegetables used in weight management found that fruits and vegetables may promote satiety as measured by ratings of hunger and fullness. (Rolls et al., 2004) Overall, fruits and vegetables were found to play an “important role in weight management.” Incorporation of fruits and vegetables into diets was also associated with decreased energy intake. A year-long study by Epstein et al. randomized families into two groups. (Epstein et al., 2001) Groups were instructed to change their food intake by either increasing fruits and vegetables or decreasing high-fat/high-sugar foods. While both groups decreased high-fat/high sugar foods, parents in the increased fruits and vegetables group showed significantly greater decreases in percentage of overweight than parents in the decreased high-fat/high-sugar group.

In a random telephone survey, 1,450 adults were surveyed about their fruit and vegetable intake, health status, and diet-related psychosocial factors to determine if the National Cancer Institute (NCI) 5-A-Day for Better Health is an effective intervention. Results showed an inverse association between BMI and fruit consumption in women, but not in men. (Trudeau et al., 1998) Similarly, results were found by

He et al., which examined weight changes of 74,063 women as a part a 12-year follow up of the Nurses' Health Study. (He et al., 2004) Food-frequency questionnaires (FFQ) were used to assess fruit and vegetable intake. An inverse association between increased intake of fruits or vegetables and risk of obesity was found. Women who had the largest increase in consumption of fruits and vegetables had a 21% lower risk of becoming obese. Baseline median daily intake of fruits and vegetables was 1.9 and 3.2 servings, respectively. In a similar study, Field et al. reviewed at least two FFQ collected over a three-year period of children aged 9-14 years. (Field et al., 2003) Children were offspring of women in the Nurses' Health Study. Only vegetable intake was inversely related to change in BMI z-score in boys. No association of fruit and vegetable intake and changes in BMI z-score was found among girls. Correlates of adolescents' fruit and vegetables consumption were examined using cross-sectional data from the Minnesota Adolescent Health Survey, in which questionnaires were taken from 36,284 adolescents in grades 7-12. (Neumark-Sztainer et al., 1996) After controlling for sociodemographic and personal variables, overweight adolescents were at greater risk of inadequate fruit consumption, but not vegetable consumption. While most studies have looked at levels of fruit and vegetable intake, dietary variety was examined by McCrory et al. using FFQ and body weight, height and composition. (McCrory et al., 1999) A low variety of vegetables was associated with increases in energy intake and body fatness.

Since studies have shown some advantages to consuming fruits and vegetables in relationship to weight, Americans may be putting themselves at risk for obesity with

less than one in four persons consuming at least five fruit and vegetable servings per day. (Li et al., 2000) U.S. Department of Health and Human Services and the NCI have set a national health goal for Americans to consume at least five servings of fruits and vegetables daily. CSFII from 1989-92 and 1994-94 indicate total fruit and vegetable intake for all persons aged > 2 years has increased from 4.5 servings to 4.9 servings. (Krebs-Smith et al., 2001) Similarly, NHANES III data also indicates Americans are consuming 3.4 servings of vegetables and 1.5 servings from fruits. (Krebs-Smith et al., 2001) Using Behavioral Risk Factors Surveillance Survey (BRFSS) data, Li et al. showed the proportion of adults who consumed fruits and vegetables at least five times per day has increased from 19.0 to 22.1% between 1990 and 1994. (Li et al., 2000) In 1996, consumption of five fruits and vegetables per day plateaued at only 22.7% of adults. While overall consumption patterns showed increases in fruit and vegetable intake, subgroups, such as obese persons, actually showed a decrease in fruit and vegetable consumption. It has been suggested by Stables et al., who reported similar increases using data from a random dial surveys conducted in 1991 and 1997 (2,755 and 2,544 subjects, respectively), that changes seen in fruit and vegetable consumption may be due to changes in demographics rather than dietary practices. (Stables et al., 2002) Specifically, demographic groups that are increasing in the population such as elderly, nonsmokers, and persons of higher education and income also tend to consume more fruits and vegetables. (Krebs-Smith et al., 2001)

Food intake patterns have incorporated eating trends of groups of foods in relation to chronic diseases, including overweight and obesity. (Millen et al., 2001) Studies examining food intake patterns using “cluster analysis” support previous data that indicate persons consuming foods such as vegetables and low fat or low energy density foods exhibit less change in BMI over time. Though variations from study to study exist, dietary patterns such as ‘healthy eating’ would include more low fat food choices, fruits and vegetables and whole grains, while a ‘meat and potato’ or ‘empty-calorie’ pattern would include more meats, saturated fats, and sweets, respectively. In a study by Newby et al., five clusters were derived from foods consumed in 7-day diet records. (Newby et al., 2003) Subjects included 449 adults (aged 30-79 years) participating in a longitudinal study designed to study the physical, mental, and emotional effects of aging among healthy, active persons. A mean change in BMI of 0.11 was seen in all subjects. Larger mean BMI changes were seen in the “meat-and-potatoes” patterns ( $0.30\pm 0.06$ ) than the “healthy” pattern ( $0.5\pm 0.06$ ). As a part of the Framingham Nutrition Studies (FNS), longitudinal weight gain was assessed looking at baseline dietary patterns. (Millen et al., 2001) While 29% of the cohort became overweight, those who followed an “Empty Calorie” diet had 17% higher risk of becoming overweight than those who followed a “Healthy Heart” pattern (Quatromoni et al., 2002). Examination of eating patterns has also led to speculation that variety of foods within a food group may increase consumption of food from that group. As reported previously, McCrory et al. found an inverse relationship with BMI and vegetable intake. (McCrory et al., 1999) On the other



hand, they found a variety in all other food groups (sweets, snacks, condiments, entrees and carbohydrates) was positively associated with BMI. Variety of food groups was also studied by Raynor et al., who examined changes in dietary intake in subjects within a weight loss study at 0, 6, and 18 months. (Raynor et al., 2004) It was hypothesized that during obesity treatment, in which a low-energy, low-fat diet was prescribed, variety would increase in foods lower in energy density (low fat breads and vegetables) and decrease in high-energy-dense foods (high-fat foods, fats, oils, and sweets). Hypothesized results were found with decreases in variety of high-energy-dense foods and increases in low-energy-dense foods being associated with weight loss. From baseline to treatment, weight loss participants significantly reversed variety from more variety in the fats, oils, and sweets group to more variety in the breads, cereals, rice and pasta, fruits, and vegetable groups.

### *Other Health Behaviors*

Physical activity and dietary modification along with behavioral therapy are established as major parts of weight loss or maintenance plans. (Van Horn et al., 1998; WHO, 2003; WHO, 2004) Moderate activity in amounts of 30 minutes per day most days of the week is recommended by the USDA's Dietary Guidelines and the National Heart, Lung and Blood Institute's Clinical Guidelines. (Bethesda, NHLBI, 1999; USDA, 2000) While the U.S. Dietary Guidelines (USDA, 2000) recommendation is to "make long-term changes in your eating behavior and physical activity" for weight management,

Americans too often view changes as a short-term diet and activity instead of a lifestyle change. In a three year intervention study, self-reported behaviors related to body weight were assessed in 1,120 US adults. (French et al., 1999) Authors found the median duration for decreased fat intake was ten months out of a four year time period. Sustaining physical activity behaviors was even less with a median of seven months. Using 1996 BRFSS data, Serdula et al. found that the prevalence of dieting was higher among women than men, 44% and 29%, respectively. (Serdula et al., 1999) While some type of diet modification was used by 90% of those who reported trying to lose weight in both genders, two-thirds of those trying to lose weight reported physical exercise. Only one in five persons was using a combination of reduced calories and exercising greater than 150 minutes per week. Dieting was more commonly associated with age and use of physical activity for weight management decreased with increasing age and BMI.

While this study showed dieting in persons 18 years of age and older, other studies have shown similar results in young adults and adolescents. Dieting in college students was reported by the National College Health Risk Behavior Survey in 1995, in which 60% of females and 30% of males reported dieting. (CDC, 1997) Another survey among adolescents (grades 9 to 12) in the Youth Risk Behavior Surveillance System (1993) showed 58% of girls and 20% of boys had attempted weight loss in the previous year. (Story et al., 1998) While moderate weight control behaviors were reported by 52% and 24% of girls and boys, these adolescents were more likely to exhibit other healthful

habits such as eating more fruits and vegetables, fewer high-fat foods, and engaging in more daily and vigorous physical activity than non-dieters.

A review of the intervention of dieting and exercise on weight loss concluded that a 15-week diet produced a loss of 11kg, with slightly more individuals maintaining weight loss after one year with diet ( $8.6 \pm 0.8\text{kg}$ ) and exercise versus diet only ( $6.6 \pm 0.5\text{kg}$ ). (Miller et al., 1997) Long-term studies were less common, reporting at about three years post-weight loss, the average maintenance was 6-7kg. Overall, moderate dieting behaviors appears to provide health benefits. (French et al., 1999)

### *Breastfeeding*

Due to the lack of success of sustained weight loss methods, (Serdula et al., 1999; Heo et al., 2002) investigation of prevention is a desirable angle. Several studies have attempted to determine if early feeding practices, such as breastfeeding, is linked to obesity later in life. Overall, data is inconclusive, as the strength of many studies are limited by sample size, the accuracy of self-reported feeding practices, and failure to control for confounding variables. A review of 18 studies dating from 1976 until 1999 by Butte found the “protective effect of breastfeeding on later obesity...controversial.” (Butte, 2001) A more recent review of 11 studies concluded that “the evidence to date suggest that breastfeeding reduces the risk of child overweight to a moderate extent.” (Dewey, 2003) Several recent studies found a dose-dependent effect of breastfeeding on obesity. (von Kries et al., 1999; Gillman et al., 2001;

Victora et al., 2003) In relation to duration of breastfeeding, Grummer and Mei (Grummer-Strawn et al., 2004) found breastfeeding protected “against overweight not by uniformly reducing BMI in all children, but by reducing the variability in BMI.” Hediger et al., on the other hand, found no strong dose-dependant effect on BMI and duration of breastfeeding. (Hediger et al., 2001) It is possible that the studies which investigated older children were more likely to see this dose dependent effect since those effects are typically seen after adiposity rebound is achieved. Overall, reductions of risk from overweight and obesity from breastfeeding ranged from 22-66%.

Proposed protective mechanisms of breastfeeding involve in both behavioral and metabolic effects. First, bottle-feeding may interfere with the development of internal regulation of energy intake. Breastfeeding takes away parental control which may lead to overfeeding and overriding of internal regulation signals. (Dietz, 2001) Gillman et al. suggests that infancy may be a critical period in which the body may program itself to defend against later energy imbalance. (Gillman et al., 2001) In studies of female baboons overfed during infancy only, overfed baboons had higher levels of adiposity at age five years compared to other baboons fed normally. Secondly, composition of formula (higher protein/nitrogen) versus breast milk has been shown to result in different hormonal responses such as higher serum concentrations of insulin which were found in infants fed formula (which may lead to excessive weight gain and fat deposition). (Gillman et al., 2001; Hediger et al., 2001) Finally, though additional investigation is needed, it is proposed that breastfeeding may increase the likelihood that

a child's diet would contain more fruit and vegetables, thus resulting a lower calorically dense diet. (Grummer-Strawn et al., 2004) In one study, infants breastfed adapted to novel food introduction more readily than formula-fed infants. (Dietz, 2001)

### Prevalence of Overweight and Obesity

#### *United States*

Most recent data on the prevalence of overweight and obesity in the U.S. is collected by the National Center for Health Statistics and CDC. The National Health and Nutrition Examination Survey (NHANES), a cross-sectional nationally representative health examination survey, has allowed for tracking of the trends of overweight and obesity since the 1960s. Most recent results (NHANES 2000) indicate a relatively constant increase across all demographic groups of overweight and obesity in the U.S. (Flegal et al., 2002) Levels of overweight and obesity have increased most significantly in the past twenty years, with fairly stable trends reported prior to the 1980s. (Chinn et al., 2001; Flegal et al., 2002) Data for those aged 20-74 years shows 64.5% and 30.9% of Americans are overweight and obese, respectively. (Flegal et al., 2002) The Behavioral Risk Factor Surveillance System (BRFSS), another cross-sectional survey conducted by the CDC, shows similar increases in obesity among Americans, yet to a lower degree. In 2001, according to the BRFSS, obesity prevalence had reached 20.9%, a 74% increase since 1990. (Mokdad et al., 2003) The lower level of prevalence

may be attributed to the method of self-reporting weight since the BRFSS is a telephone survey.

### *Children and Adolescents*

An increase in prevalence is being seen in all age populations. Identifying trends in adolescents and children has been more difficult due to varying methods of defining overweight and obesity in children. Childhood obesity has been reported in terms of absolute weight, tricep skinfolds, weight-for-height percentiles, percent of ideal body weight, and most recently by BMI. (Must et al., 1999) The majority of studies use a BMI greater than either the 85<sup>th</sup> or 95<sup>th</sup> percentile to define overweight in children and adolescents. Ogden et al. also used NHANES 2000 data and showed the prevalence of overweight (definition >95<sup>th</sup> percentile) at 15% in those of age 12-19 years old. (Ogden et al., 2002) No matter what the method, trends for increases in prevalence are similar over the years for each NHANES survey. As seen in adults, only small increases were reported in children prior to the 1980s. (Chinn et al., 2001) Wang et al. utilized nationally representative data from four countries (accounting for almost 1/3 of the world's children), looking at children age 6-18 years and "found a notable shift away from undernutrition toward overnutrition." (Wang et al., 2002) More specifically they found similar rates of average annual increase of 0.5% and 0.6% in the prevalence of overweight in Brazil and the U.S., respectively. Other parts of the world are seeing an even higher average annual increase in childhood obesity of 1%, such as Canada,

Australia and parts of Europe. (Lobstein et al., 2003) A study looking at European countries also found that prevalence of overweight was higher in the southern countries versus northern countries of Europe, ranging from 10-20% and 20-40%, respectively. (Lobstein et al., 2003) Specifically in the United Kingdom, prevalence of overweight children aged 7-11 years rose from 8% to 20% in the period from 1984-1998.

### *Scotland*

Temporal trends in overweight and obesity are similar in Scottish and American populations. As in the US, overall increases in the prevalence of obesity since the 1980s in Scotland has been reported. (Hughes et al., 1997; Chinn et al., 2001; Rossner, 2002) Using comparable calculations for BMI, prevalence has been shown to increase in European countries with the largest increases seen in the UK. (Rossner, 2002) In the 2001 National Health and Nutrition Survey in Scotland, overweight in men and women was found to be 41% and 33%, respectively. Obesity in men and women was found to be 33% and 20%, respectively. Those who were aged 19-24 years were least likely to be obese with only 18% of men and 14% of women obese. In 1994, prevalence of overweight and obesity in 4-11 year olds was 10% and 2.1% and 15.8% and 3.2% in Scottish boys and girls, respectively. Data was analyzed using internationally accepted BMI cut-off points of  $\geq 85^{\text{th}}$  percentile and  $\geq 95^{\text{th}}$ . (Chinn et al., 2001) In 1999, obesity was reported at 3.5% in people aged 15-24 years in the UK. (Rossner, 2002) In another study, also using measured height and weight, prevalence rates in England were reported

as higher. Within this study, the rates of overweight and obesity were higher in Scotland versus England. From data reported in the 1996 Health Survey for England, in children aged 6-15 years, overweight and obesity was 16.8% and 31.1%, respectively.

### *College Population*

In general, prevalence of overweight and obesity is not well characterized in college students. Current data on college students' weight status is limited. This may be due, in part, by the lack of general consensus of the definition or classification of age in college students. While almost 1 in 4 students in the college population in 2002 are considered adolescents based on CDC classification, in research the rest of the population group (older than 19 years) would often be grouped into studies with young adults, or even all adults. (CDC, 1997)

The overlap in age groups in the college population creates a unique obstacle for researchers, resulting in difficulty in comparison of data sets. Flegal et al. (Flegal, 2001) compared three widely used reference sets using NHANES III data. The first included those adopted by the CDC which are based on US growth charts for children aged 2-19 years. Second, reference sets developed by Must et al. based on NHANES I data. Third, reference sets developed by Cole et al. for international comparison which correspond to BMI values of 25 and 30 as used adults. The three methods did not give similar prevalence estimates, though did show similar trends in the increase overtime. Differences between the methods were not systematic, for example



differences may have occurred in the youngest or the oldest age groups, but not in all age ranges. Flegal et al. found that using the adult BMI cut-off of 25 for overweight gave higher prevalence than the other methods. Within a population of college students, Huang et al. (Huang et al., 2003) demonstrated how the prevalence is different when weight status is calculated with different methods. Using BMI percentile for those students less than 19 years of age, prevalence of overweight and obesity was lower than when using BMI directly.

Similarly, prevalence of overweight and obesity was found in a college population when using the adult BMI value sets versus those using the growth chart BMI percentiles by Lowry et al. (Lowry et al., 2000) Lowry used data from the National College Health Risk Behavior Survey (NCHRBS), which measures health-risk behaviors of college students across six important areas including unhealthy dietary behaviors. The NCHRBS is an expansion of the YRBSS developed by the CDC in 1990 to monitor priority health-risk behaviors among young persons. The YRBSS was expanded to include the NCHRBS in 1995. The NCHRBS includes a nationally representative sample of 4,838 undergraduate college students 18 years of age and older from 2- and 4-year colleges and universities. Using a BMI greater than 27.8 for men and greater than 27.3 for women (based on 85<sup>th</sup> percentile value from BMI among persons aged 20-29 years in NHANES II), 20.5% of college students were overweight. Students aged 18-24 years represented 63.6% of the population and they were significantly less likely to be overweight (15.5%) than students over 25 years of age (28.8%). (CDC, 1997; Lowry et

al., 2000) When using adult standards for classification of overweight (BMI 25-29.9) and obesity (BMI $\geq$ 30), 35% of college students were overweight or obese using self-reported height and weight.

More recent studies have focused on the “Freshman 15” weight gain and eating behaviors and concern over weight gain during the freshman year of college. A preliminary Tuft’s University study found that 20% of university students are overweight (scale unknown). This study, which is still in progress, has surveyed 315 students who have completed assessments pre- and post-freshman year. Results have shown body weight significantly increased during the first year of college in women and men, 4.5 and 5.5 pounds, respectively. (Economos et al., 2001) Similar findings of an average weight gain of 4.6 pounds was observed during the freshman year at a small Midwestern liberal arts college (mean age 18.5 years). (Graham et al., 2002)

## Burdens of Obesity

### *Adults*

With the obese population growing, the burden of obesity on society, as individuals and as a whole, has become more evident. The health burdens of obesity are manifested in the comorbidities of obesity. Overweight and obesity in adults have been associated with a higher risk of developing diseases including coronary heart disease, hypertension, type 2 diabetes, gallbladder disease, hyperlipidemia, asthma, osteoarthritis and some cancers. (Must et al., 1999; Mokdad et al., 2003; WHO, 2004)

The economic burden has probably received the most attention as government and health maintenance organizations are spending more than ever on health care costs related to overweight and obesity. Current estimates of monies spent on obesity-related causes are between 6% and 9.1% of total U.S. medical expenditure. (Finkelstein et al., 2003) These numbers reflect direct medical costs such as personal health, preventative healthcare, hospital care, physician and allied services and medications. Additionally, indirect costs of obesity include loss of productivity, which in 1994 accounted for 39.2 million days of lost work. Over just a six year period, physician office visits related to obesity accounted for 62.6 million physician visits. (Wolf et al., 1998; Wolf, 2002) With increasing numbers of those who are obese, we can only expect health care cost to increase as “the evidence of the relationship between obesity and medical-care use and cost has been consistent and generally dose-responsive.” (Wolf, 2002) A study by Pronk et al. found that for each one-unit increase in BMI, this translated to a 1.9% increase in median cost; with the population increases we have seen, this becomes a considerable amount. (Pronk et al., 1999)

One must not forget the burden that overweight and obesity have on the individual. Literature has demonstrated that overweight persons have lower health-related quality of life (HRQL), compared to their normal weight counterparts. In a review by Fontaine and Barofsky, a dose-relationship was found between degree of HRQL-impairments and BMI, particularly with physical domains such as bodily pain and vitality, even more so than with mental health. (Fontaine et al., 2001) Obesity not only

has an impact on HRQL and morbidity, but statistics show a reduced life expectancy with increasing body weight. It is estimated that overweight and obesity at age 40 are associated with a decrease in life expectancy of about 7 years. (Peeters et al., 2003)

### *Children and Adolescents*

Obesity-related diseases are also present in overweight and obese adolescents. Review articles in the late 1990s reported health consequences of childhood and adolescent obesity. (Dietz, 1998; Must et al., 1999) The most common adverse effects of obesity in children are lipid disorders, gallstones, hepatic steatosis and insulin resistance. Less commonly seen, overweight and obesity in childhood and adolescence increase the risk of sleep apnea, polycystic ovary disease, pseudotumor cerebri, and orthopedic abnormalities.

In a period (1979-1999) in which hospital length of stay is decreasing, there has been an increase in the length of stay reported in obesity-related conditions in children. While the pattern is stronger in adolescents than children, overall discharges with obesity-related diseases have increased. Specifically, discharges with diagnosis of diabetes have doubled, discharges with a diagnosis of gallbladder disease have tripled and discharges with a diagnosis of sleep apnea have increased fivefold. (Wang et al., 2002) Adult conditions such as cardiovascular disease, ovarian and colon cancer, gout, and arthritis have been shown to have a positive relationship to overweight in adolescence. (Dietz, 1998; Must et al., 1999; Jeffreys et al., 2003; Lubin et al., 2003)

Effects of obesity on children and adolescents are not limited to disease risks. Learning difficulties have been seen in overweight adolescents. Possible etiologies include sleep apnea or psychosocial problems. (Must et al., 1999) Inconclusive data exist pertaining to self-esteem. While self-image is often shaped as a reflection of parental messages as a child, lower self-esteem is often seen in adolescents due to peer messages. (Dietz, 1998) Body image developed during adolescence is also said to be lower than those who develop obesity in adulthood. (Must et al., 1999) Social and economic burdens have been reported. This has been shown in obese females, independent of income and education of family of origin, ethnicity, and self-esteem. Obesity is said to be “the worst socioeconomic handicap that women who were obese adolescents can suffer.” (Dietz, 1998) Specifically, females, obese as adolescents, were found to have fewer years of completed education, lower family income, lower rates of marriage, and higher rates of poverty.

Overweight and obesity during childhood and adolescence is not only impacting children and adolescents during development, but studies are showing persistence of obesity and increases in adulthood disease risks and mortality. While inconclusive data on persistence of obesity exist, (Wright et al., 2001; Must, 2003) others suggest that severe obesity at any age appears to persist, especially from adolescence into adulthood. (Dietz, 1998; Dietz, 1999; Must et al., 1999)

Two studies have shown increased mortality associated with overweight and obesity in childhood and young adulthood. Engeland et al. examined a Norwegian cohort

of 227,003 boys and girls aged 14-19 years to examine this issue. (Engeland et al., 2003) After persons were followed for a mean of 31.5 years, they found an increased risk of death of 30% and 80% in male adolescents with BMI between the 85-95<sup>th</sup> percentiles and  $\geq 95^{\text{th}}$  percentile, respectively. Similar numbers were found in female adolescents with an increased risk of death of 30% and 100% with BMI between the 85-95<sup>th</sup> percentiles and  $\geq 95^{\text{th}}$  percentile, respectively. While the oldest person in the study at follow-up was only 58 years of age, this study shows an association of mortality with middle age. Data from Jeffreys et al. showed an increased importance of BMI in young adulthood (22 years old) versus mid-adulthood (38 years old). (Jeffery et al., 2003) They found all-cause mortality only associated with overweight in their population at 22 years of age in a historical cohort of 629 men (mean age 22 years) with a mean follow-up of 35 years. Subjects had received an annual medical examination while enrolled at the University of Glasgow during 1948-1949. Follow-up for subjects was through a postal survey in 1963-66. BMI was found to have increased from a mean of 21.4 to 24.2. Adult morbidity was elevated in relation to overweight in childhood.

### *College Students*

While obesity as a young adult has been linked to higher risks of mortality, the number of obese young adults has increased in the U.S. In fact the largest increase in class 3 obesity (BMI >40) was seen in persons aged 18 to 24 years. A study of college students examining dieting behaviors by Heatherton et al. found a significant increase in

the number of overweight females (BMI>27.3) and nonsignificant increase for males (BMI>27.8) over a 10-year period since 1982. (Heatherton et al., 1995) As found in adults, indicators of health and well-being have shown to be low in obese young adults. Obesity, in a cohort of 14,779 of Australian young women aged 18-23 who were participants in the baseline survey of the Australian Longitudinal Study on Women's Health in 1996, was associated with increases in hypertension, asthma, headaches, backpain, irregular monthly periods, difficulty in sleeping and use of general practitioner services, as well as with lower health related quality of life (HRQL) scale scores for physical functioning, general health and vitality. (Brown et al., 2000)

## Health Initiatives

### *United States*

It is due to the sizeable effects that overweight and obesity have on individuals, that countries and world organizations have developed numerous health initiatives and publications to targeted prevention and reduction of obesity and overweight. In the U.S., government funded initiatives, programs and publications include Healthy People 2010, Healthier U.S., Nutrition and Your Health: Dietary Guidelines for Americans, and 5-A-Day for Better Health. Health initiatives and programs provide focus and education for target populations.

The 5-A-Day for Better Health program is supported by a unique private and public sector team. The goal of this partnership is to increase the number of daily

servings of fruits and vegetables Americans eat to 5 or more. (CDC, 2004) Nutrition and Your Health: Dietary Guidelines for Americans provides “authoritative advice about how good dietary habits can promote health and reduce risk for major chronic diseases.” President George W. Bush’s Healthier U.S. initiative encourages Americans to achieve better and longer life through steps such as being physically active each day, eating a nutritious diet, getting preventive screening and avoiding risky behaviors. (Healthier US, 2004) Healthy People 2010 is a comprehensive set of disease prevention and health promotion objectives for the nation to achieve over the first decade of the new century. Overweight and obesity is listed as one of the Leading Health Indicators, or major health issues, for the U.S. Healthy People 2010 is not the first of its kind. Healthy People 2010 is the third 10-year plan of the U.S. Public Health Service, which has included focus on nutrition and overweight. (Nestle et al., 1998)

Though some government programs such as Healthy People 2010 rely on some outside resources in addition to governmental agencies, other health initiatives are independent ventures. Shape Up America! is a high-profile initiative whose aim is to reach all Americans with its message about the “importance of achievement and maintenance of a healthy body weight through the adoption of increased physical activity and healthy eating.” Shape Up America! is supported by a coalition of industry, medical/health, nutrition, physical fitness, and related organizations and experts. Globally, the World Health Organization has supported the road to change with its Global



Strategy on Diet, Physical Activity and Health. This strategy hopes to improve public health through healthy eating and physical activity. (WHO, 2004)

### *Scotland*

As reported in the U.S., recommendations by the government of Scotland also include goals about dietary intake and physical activity to maintain healthy weight. Health is one of the devolved matters of the Scottish government (Scottish Executive). Scotland's goals on health can be found in the document, *Towards A Healthier Scotland – A White Paper on Health*. The paper is an extension of the 1998 Green Paper. While obesity is not among top priorities for which targets have been set to follow progress, diet and physical activity are among national priorities which focus on changing the lifestyles of Scottish people. (The Scottish Office, 1999) The Scottish Executive has recently launched a 'healthy living' campaign to improve activity levels, eating and general attitudes of the people of Scotland towards their health. The campaign is a renewed and focused effort towards the 1996 Scottish Diet Action Plan. In addition to the government supported programs, education efforts will be provided by primary producers, manufacturers, supermarkets, caterers, and media. In 2003, the 'healthy eating campaign' was launched "as a part of a long-term commitment to change Scotland's diet and produce a healthier population." (Scottish Executive, 2003) Also similar to the US, Scotland's Department of Health recommends at the least, moderate activity thirty minutes on at least five days of the week. (Health Education Board for Scotland, 2003)

## *College Population*

While national health initiatives are aimed at broad populations, focus on disease prevention and health promotion are often found locally in one's community, or even one's workplace. College students are a unique population which could be targeted through university health services. While the university health services scope of practice is changing, the campus community has become a center for education with increasing emphasis on prevention of illness and promotion of wellness. (Olson et al., 1999) Nutrition and eating disorders are commonly ranked among the top health concerns for university students. (Cornell University Website, 2002; Gosline et al., 2003) The university campus is becoming more heterogeneous, with only 40% of college students being the stereotypical student. The remaining 60% may include older students, disabled, commuting, distance-learning, minority and international students. (Olson et al., 1999) College students provide an exceptional population to target for early prevention and treatment of obesity. There are over 15 million students enrolled in 2- and 4-year institutions in the U.S. College students are often at a life-stage of dramatic change, leaving the confines of parental control and learning to be self-dependent. Dietary habits and physical activity are primary risk factors for obesity that are "subject to change during the college years." (Patrick et al., 1992; Lowry et al., 2000) Physical activity has been shown to significantly decrease between ages 18-24 years. (Patrick et al., 1992; Bowman, 2002) Eating habits, whether maintained from childhood or developed during these times, may affect a lifetime of health.

## Summary

In summary, it is well understood that obesity prevalence has increased in the U.S. in all age groups, including that of collage age. While the health consequences of overweight in college students are well-documented, little information exist regarding the eating behaviors of their group. Without this information, strategies for intervention are difficult to develop. Also, no comparison of eating behaviors have been made between college students from other countries, and therefore, different cultures. A better understanding of those issues should help guide those who are developing intervention strategies targeting college students.

## CHAPTER III

### SPECIFIC AIMS

Clearly, the magnitude of overweight and obesity is extensive throughout the world, increasing at an alarming rate. The complexity of overweight and obesity present a challenge individuals, practitioners and organizations whose endeavor is to prevent or treat the condition. This study will focus on exploring obesity in a college student population. The purpose of the study was to examine eating and health behaviors in two culturally distinct locations to identify patterns in Oklahoma and Scotland. The specific aims of this study are:

1. Describe the demographics, body mass index, dietary patterns, lifestyle, and beliefs related to eating and health behaviors of college students at the University of Oklahoma, United States.
2. Describe the demographics, body mass index, dietary patterns, lifestyle, and beliefs related to eating and health behaviors of college students at the University of Aberdeen, Scotland.
3. Compare patterns in demographics, body mass index, dietary patterns, lifestyle and beliefs in the Oklahoma and Scotland college populations.
4. Identify associations between demographics, body mass index, dietary patterns, lifestyle and beliefs and BMI in the Oklahoma and Scotland college populations.

## CHAPTER IV

### METHODS

#### Study Design

Data was collected for this study using a 44 question survey. The Food Intake and Behavior Survey was a compilation of questions from previously published surveys and items written specifically for this study (Appendix A). Content validity was based on review and pilot testing by survey developers, researchers and other nutrition experts. The survey was converted to teleform format by the General Research Center to assist with analysis. Subjects were recruited from general education science classes during the summer and fall of 2003. The survey was given in two geographic locations including the University of Oklahoma, Norman, Oklahoma, United States of America and University of Aberdeen, Aberdeen, Scotland, United Kingdom (UK). Fourteen of the questions on the survey were reworded for the Scotland survey, taking into account the metric system and other differences between the US and Scotland. Students were invited by researchers and/or assistants not associated with the general education class to complete the survey during normal lecture period very early during the semester. Instructions were given on filling out the survey and reading the consent forms. Surveys and consent forms were returned within the same lecture period. A research assistant collected additional surveys completed by students located in the student union at the University of Aberdeen in Aberdeen, Scotland. 313 surveys and 152 surveys were

completed in the Oklahoma and Scotland, respectively. Surveys with incomplete information such as missing height and weight were not used for analyses when BMI was necessary. There were 306 and 118 surveys with self-reported height and weight from the Oklahoma and Scotland, respectively.

The study was approved by the Institutional Review Board of the University of Oklahoma Health Sciences Center, IRB Number: 10887.

## Study Measures

### *Demographics*

Ethnicity, family income, gender, and marital status were collected by self-report during the survey.

### *Anthropometrics*

Anthropometrics were collected by self-reported height and weight. Height and weight were recorded in inches and pounds without shoes, respectively, in the Oklahoma. Height and weight were recorded in centimeters and stones without shoes, respectively, in Scotland. To avoid errors in reporting for weight or height, participants were allowed to write in other units of measure, such as kilograms on the survey, which was later converted by researchers. Body Mass Index (BMI) was calculated from reported weight and height  $[(\text{BMI} = (\text{weight in pounds} / (\text{height in inches}) \times (\text{height in inches})) \times 703)]$ . Using the reference values as recommended by the CDC, weight was

defined as follows: underweight = BMI < 18.5, normal weight = BMI between 18.5 and 24.9, overweight = BMI between 25 and 29.9 and obesity = BMI  $\geq$ 30.

### *Diet and Lifestyle*

Diet was assessed using quantitative questions about daily intake of water, fruit, vegetables, meat, coffee/tea, regular sodas, and diet sodas. Intake of fish was assessed per week. Dietary patterns pertaining to frequency of breakfast, fast food, and restaurant eating per week were obtained. Frequency of meals (500-700 kcal) and snacks (50-200kcal) per day was obtained. Time spent preparing and consuming individual meals were also obtained. Lifestyle behaviors such as regular herbal and dietary supplement (multivitamin and protein powder) use, cigarette smoking, alcohol use, amount of sleep and exercise were assessed.

### *Weight Control and Dieting Practices*

Participants beliefs about weight were assessed by the following questions:

- *Have you ever used smoking as a weight control method?*
- *Have you ever been on a diet for weight loss?*
- *How would you describe your weight?(very underweight, slightly underweight, about the right weight, slightly overweight, very overweight)*
- *Are you currently try to lose weight, gain weight, maintain weight, not doing anything about weight*

The following statements were used to assess the participants' beliefs about diet using a Likert scale:

- *Nutrition and exercise are important for good health*
- *It is hard to eat a variety of foods*
- *Food labels are useful and helpful in planning my meals*

### *Miscellaneous*

Participants were questioned about events in their development. Students were asked if they were breast-fed as an infant, how often their family ate dinner together and if dieting was an issue in their household growing up. Participants' opinion on obesity and self-rated knowledge of nutrition was also reported.

### Statistical Analysis

Analysis of data was completed using Statistical Analysis System software. Descriptive statistics were generated for demographics and anthropometric data. Chi-square analysis was used to assess differences in sociodemographic and behavioral factors, between gender and location. For valid Chi-square test, collapsing of some values was necessary due to sparseness within data. For instance, count value was less than five in 40% of the frequency cells in the question referring to meat consumption. By combining responses for '5-6 times/week' and '>6 times/week' count value was greater than 5 in a sufficient amount of cells to allow for a valid chi-square test analysis.



Spearman's correlation coefficients were determined to associate ranked variables of eating and health behaviors with BMI. The correlations were considered significant at  $p < 0.05$ .

The demographic characteristics of subjects are shown in Table 1. The percentage of male/female in Oklahoma and Scotland study populations was 37.4% 62.6% and 41.6% 58.4%, respectively. Mean age for the males and females from Oklahoma was 20.8 and 20.6 years, respectively, while the mean age for the males and females from Scotland was 20.7 and 20.7 years, respectively. Percentage of subjects current or past smoker and vegetarian was 28.1% and 96.4%, respectively.

Table 1. Demographic description of male and female college students from Oklahoma and Scotland

	Oklahoma		Scotland	
	Male (%)	Female (%)	Male (%)	Female (%)
Mean age (years)	20.8 (14)	20.6 (19)	20.7 (61)	20.7 (54)
Caucasian	37.4% (17)	46.3% (21)	92.4% (60)	100% (73)
Gender	37.4% (16)	62.6% (34)	41.6% (63)	58.4% (70)

The distribution of race among subjects is shown in Table 2. Race among subjects in Oklahoma was 75.3% Caucasian, 7.7% African American, 5.2% Hispanic, 5.2% Asian, 4.5% Native American/Indian, and 2.1% Other. Race of the subjects in Scotland was 86.7% Caucasian, 5.2% Asian, 4.4% other, and 0.7% African.

## CHAPTER V

### RESULTS

#### Subject Characteristics

The demographic characteristics of subjects are shown in Table 1. The percentage of male/female in Oklahoma and Scotland study populations was 37.4%/62.6% and 48.2%/51.9%, respectively. Mean age for the males and females from Oklahoma was 20.8 and 20.4 years, respectively, while the mean age for the males and females from Scotland was 23.4 and 20.7 years, respectively. Percentage of subjects unmarried in Oklahoma and Scotland was 98.1% and 96.4%, respectively.

**Table 1: Demographic description of male and female college students from Oklahoma and Scotland**

	<i>Oklahoma</i>		<i>Scotland</i>	
	<i>Male (n)</i>	<i>Female (n)</i>	<i>Male (n)</i>	<i>Female (n)</i>
<b>Mean age (yrs)</b>	21.7±3.3 (114)	20.6±1.7 (191)	23.4±7.6 (61)	20.7±5.36 (54)
<b>Unmarried</b>	97.4% (113)	98.5% (191)	92.3% (60)	100% (73)
<b>Gender</b>	37.4% (116)	62.6% (194)	48.2% (65)	51.9% (70)

The distribution of race among subjects is shown in Table 2. Race among subjects in Oklahoma was 75.5% Caucasian, 7.1% African American, 5.2% Hispanic, 5.2% Asian, 4.5% Native American Indian, and 2.6% Other. Race of the subjects in Scotland was 86.7% Caucasian, 8.2% Asian, 4.4% other, and 0.7% African.

**Table 2: Race/Ethnicity of Participants**

	<i>Oklahoma</i>		<i>Scotland</i>	
	<i>Male (n)</i>	<i>Female (n)</i>	<i>Male (n)</i>	<i>Female (n)</i>
<b>Race (%)</b>				
<b>Caucasian</b>	79.3% (92)	73.2% (142)	79.9% (50)	95.7% (67)
<b>African</b>	7.8% (9)	6.7% (13)	1.54% (1)	-
<b>Hispanic</b>	2.6% (3)	6.7% (13)	-	-
<b>Asian</b>	4.3% (5)	5.7% (11)	15.4% (10)	1.4% (1)
<b>Native American Indian</b>	3.5% (4)	5.2% (10)	-	-
<b>Other</b>	2.6% (3)	2.6% (5)	6.2% (4)	2.9% (2)

BMI for the total subject population was 23.4. Mean BMI for males and females from Oklahoma was 25.0 and 22.4, respectively. Mean BMI for males and females from Scotland was 23.0 and 23.4, respectively. (Figure 1 and Table 3). Distribution of weight status by BMI is shown in Table 4. In Oklahoma, 35.4% and 9.9% of male and female college students were found to be overweight, respectively, while in Scotland, 36.1% and 18.5% of male and female students were found to be overweight. In Oklahoma, 9.7% and 3.7% of male and female college students were found to be obese, respectively, while in Scotland, 3.3% and 3.7% of male and female students were found to be obese.

**Table 3: Anthropometric description of male and female college students from Oklahoma and Scotland**

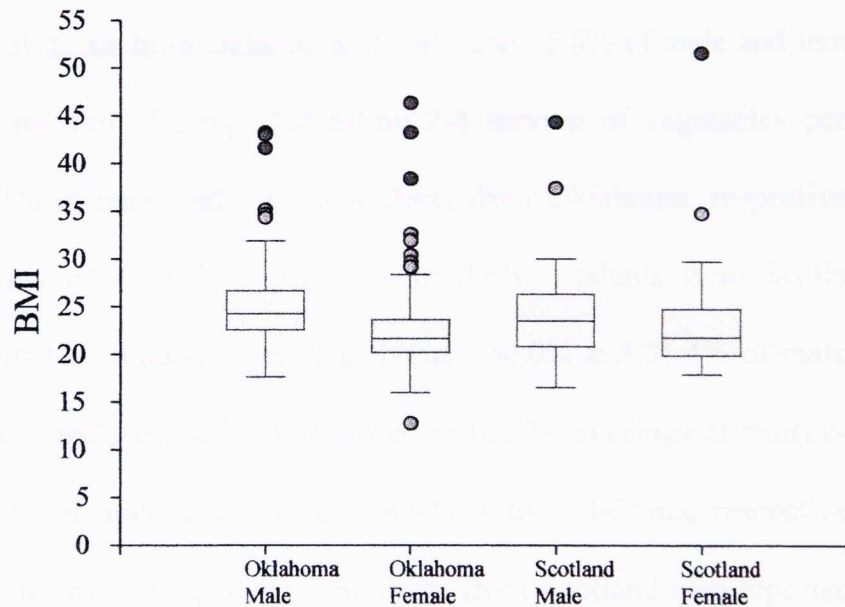
	<i>Oklahoma</i>		<i>Scotland</i>	
	<i>Male (n)</i>	<i>Female (n)</i>	<i>Male (n)</i>	<i>Female (n)</i>
<b>Height (in)</b>	70.9±3.4 (116)	65.0±3.0 (194)	69.9±4.6 (64)	65.4±3.7 (65)
<b>Weight (lbs)</b>	179.9±39 (113)	134.2±24 (191)	166.2±31 (61)	142.6±46 (56)
<b>BMI (kg/m<sup>2</sup>)</b>	25±4.5 (113)	22.4±3.9 (191)	24.1±4.5 (61)	21.8±5.4 (54)

**Table 4: Distribution of weight status as characterized by BMI\***

<i>Location Gender</i>	<i>Underweight</i>	<i>Normal</i>	<i>Overweight</i>	<i>Obese</i>
<b>OK Male</b>	<b>2.7%</b>	<b>52.2%</b>	<b>35.4%</b>	<b>9.7%</b>
<b>OK Female</b>	<b>5.8%</b>	<b>80.6%</b>	<b>9.9%</b>	<b>3.7%</b>
<b>SC Male</b>	<b>3.3%</b>	<b>57.4%</b>	<b>36.1%</b>	<b>3.3%</b>
<b>SC Female</b>	<b>9.3%</b>	<b>68.5%</b>	<b>18.5%</b>	<b>3.7%</b>

\* BMI: Underweight: <18.5, Normal: 18.5-24.9, Overweight: 25 -29.9, Obese: >30

**Figure 1: Box Plot of Mean Body Mass Index of Subjects**



Boxes indicate the middle half of the distribution of the data. T-bars include adjacent data. Dots indicate outliers within data.

### Survey Results

The frequencies of responses for each of the multiple choice questions from the four location/gender groups were examined by Chi Square analysis. A significant difference between groups was observed for the responses to 87% of the questions.

(Appendix C and D) No post hoc analysis was completed to determine differences between individual groups, as this was judged to add little, if anything, to data interpretation.

College students from Scotland more commonly reported behaviors that reflect an overall healthier lifestyle than college students from Oklahoma. (Table 5) Male and female college students from Scotland were more likely to consume breakfast daily (38.6% and 49.3%) compared to male and females students from Oklahoma (25.9% and 24.4%). Also, students from Scotland reported eating more fruits and vegetables than students from Oklahoma. 51.4% and 55.8% of male and female students from Scotland, respectively, reported eating 2-4 serving of vegetables per day, while 41.4% and 38.7% of male and female students from Oklahoma, respectively, reported eating 2-4 serving of vegetables per day. Similarly, students from Scotland reported eating more fruits than students from Oklahoma. 50.0% and 51.4% of male and female students from Scotland, respectively, reported eating 2-4 servings of fruits per day while 28.4% and 29.5% of male and female students from Oklahoma, respectively, reported eating 2-4 servings of fruits per day. Students from Scotland also reported eating less meat than students from Oklahoma. 55.7% and 31.1% of male and female students from Scotland, respectively, reported eating 2-4 servings per day of meat, while 64.7% and 60.8% of male and female students from Oklahoma reported eating 2-4 servings per day of meat.

Male and female students from Scotland reported fewer fast food and restaurant meals per week. (Table 6) Male and female students from Scotland reported eating fast food 2-4 times per week 35.3% and 16.4%, respectively, while students from Oklahoma reported eating fast food 2-4 times per week 54.3% and 50.3% of the time. Students from Scotland reported eating restaurant meals 2-4 times per week 13.4% and 2.6% of the time, respectively, while students from Oklahoma reported eating restaurant meals 2-4 times per week 41.1% and 34.9% of the time, respectively.

**Table 5: Responses to survey questions about breakfast, fruit, vegetable, and meat consumption**

Frequency of breakfast consumption

	OK Male (n)	OK Female (n)	SC Male (n)	SC Female(n)	Total (n)
Don't eat breakfast	24.1% (28)	18.1% (35)	20.0% (14)	12.0% (129)	19.0% (86)
1-3 times/week	37.1% (43)	36.3% (70)	28.6% (20)	28.3% (21)	34.0% (154)
4-6 times/week	12.9% (15)	21.2% (41)	12.9% (9)	10.7% (8)	16.0% (73)
Everyday	25.9% (30)	24.4% (47)	38.6% (27)	49.3% (37)	31.0% (141)

Servings of fruit per day

	OK Male (n)	OK Female (n)	SC Male (n)	SC Female (n)	Total (n)
0 servings	27.6% (32)	14.0% (27)	8.6% (6)	9.5% (7)	15.9% (72)
1 servings	42.2% (49)	54.9% (106)	35.7% (25)	29.7% (22)	44.6% (202)
2-4 servings	28.4% (33)	29.5% (57)	50.0% (35)	51.4% (38)	36.0% (163)
>4 servings	1.7% (2)	1.6% (3)	5.7% (4)	9.5% (7)	3.5% (16)

Servings of vegetable per day

	OK Male (n)	OK Female (n)	SC Male (n)	SC Female (n)	Total (n)
0 servings	9.5% (11)	9.8% (19)	10.0% (7)	5.2% (4)	9.0% (41)
1 servings	48.3% (56)	48.5% (94)	35.7% (25)	32.5% (25)	43.8% (200)
2-4 servings	41.4% (48)	38.7% (75)	51.4% (36)	55.8% (43)	44.2% (202)
>4 servings	0.9% (1)	3.1% (6)	2.9% (2)	6.5% (5)	3.1% (14)

Servings of meat per day

	OK Male (n)	OK Female (n)	SC Male (n)	SC Female (n)	Total (n)
1 servings	8.6% (10)	30.9% (60)	35.7% (25)	58.1% (43)	30.4% (138)
2-4 servings	64.7% (75)	60.8% (118)	55.7% (9)	31.1% (23)	56.2% (255)
5-6 servings	17.2% (20)	4.6% (9)	4.3% (3)	2.7% (2)	7.5% (34)
>6 servings	8.6% (10)	1.0% (2)	2.9% (2)	0.0% (0)	3.1% (14)
Don't eat meat	0.9% (1)	2.6% (5)	1.4% (1)	8.1% (6)	2.9% (13)

**Table 6: Responses to survey questions about fast food and restaurant meals consumption**

Frequency of eating fast food meals per week

	OK Male (n)	OK Female (n)	SC Male (n)	SC Female (n)	Total (n)
1 time / week	18.1% (21)	34.2% (66)	36.8% (25)	50.7% (37)	33.1% (149)
2-4 times / week	54.3% (63)	50.3% (97)	35.3% (24)	16.4% (12)	43.6% (196)
5-6 times / week	14.7% (17)	5.2% (10)	1.5% (1)	2.7% (2)	6.7% (30)
> 6 times / week	3.4% (4)	2.1% (4)	1.5% (1)	0.0% (0)	2.0% (9)
Don't eat fast food	9.5% (11)	8.3% (16)	25.0% (17)	30.1% (22)	14.7% (66)

Frequency of eating restaurant meals per week

	OK Male (n)	OK Female (n)	SC Male (n)	SC Female (n)	Total (n)
1 time / week	53.4% (62)	59.9% (115)	56.7% (38)	61.8% (47)	58.1% (262)
2-4 times / week	41.1% (48)	34.9% (67)	13.4% (9)	2.6% (2)	27.9% (126)
5-6 times / week	4.3% (5)	1.0% (2)	3.0% (2)	0.0% (0)	2.0% (9)
> 6 times / week	0.0% (0)	1.6% (3)	1.5% (1)	0.0% (0)	0.9% (4)
Don't eat restaurants	0.9% (1)	2.6% (5)	25.4% (17)	35.5% (27)	11.1% (50)

College students from Oklahoma did, however, report less coffee or tea consumption and cigarette and alcohol use than students from Scotland. (Table 7) 60.3% and 47.9% of male and female college students from Oklahoma reported not drinking tea or coffee, respectively, while, 30.4% and 27.3% of male and female college students from Scotland reported not drinking tea or coffee, respectively. 83.6% and 89.7% of male and female college students from Oklahoma reported no cigarette use, respectively, while 73.1% and 68.9% of male and female college students from Scotland reported no cigarette use, respectively. 32.8% and 37.6% of male and female students from Oklahoma reported no use of alcohol, respectively, while 28.6% and 8.2% of male and female college students from Scotland reported no use of alcohol, respectively.

**Table 7: Responses to survey questions about coffee, tea, smoking and alcohol consumption.**

Servings of coffee or tea per day

	OK Male (n)	OK Female (n)	SC Male (n)	SC Female (n)	Total (n)
1-2 servings	31.9% (97)	44.3% (86)	34.8% (24)	37.7% (29)	38.6%
3-4 servings	6.0% (7)	5.7% (11)	18.8% (13)	22.1% (17)	10.5% (48)
5-6 servings	1.7% (2)	1.5% (3)	8.7% (6)	6.5% (5)	3.5% (16)
>6 servings	0.0% (0)	0.5% (1)	7.2% (5)	6.5% (5)	2.4% (11)
Don't drink tea or coffee	60.3% (70)	47.9% (93)	30.4% (21)	27.3% (21)	45.0% (205)

Frequency of cigarette smoking per day

	OK Male (n)	OK Female (n)	SC Male (n)	SC Female (n)	Total (n)
1-4 cigarettes	7.8% (9)	7.2% (14)	9.0% (6)	6.8% (5)	7.5% (34)
5-10 cigarettes	6.0% (7)	2.1% (4)	7.5% (5)	13.5% (10)	5.8% (26)
11-15 cigarettes	0.9% (1)	1.0 (2)	1.5% (1)	6.7% (5)	2.0% (9)
>15 cigarettes	1.7% (2)	0.0% (0)	9.0% (6)	4.1% (3)	2.4% (11)
Don't smoke	83.6 (97)	89.7% (174)	73.1% (49)	68.9% (51)	82.3% (371)

Frequency of alcohol (beer, wine, liquor) use per week

	OK Male (n)	OK Female (n)	SC Male (n)	SC Female (n)	Total (n)
1 day/week	21.6% (25)	30.9% (60)	15.7% (11)	21.9% (16)	25.0% (112)
2-3 days/week	33.6% (39)	28.9% (56)	34.3% (24)	57.5% (42)	36.0% (161)
4-5 days/week	9.5% (11)	2.6% (5)	17.1% (12)	11.0% (8)	7.9% (36)
6-7 days/week	2.6% (3)	0.0% (0)	4.3% (3)	1.4% (1)	2.0% (7)
Don't drink alcohol	32.8% (38)	37.6% (73)	28.6% (20)	8.2% (6)	30.0% (137)

Servings of alcohol use per drinking occasion

	OK Male (n)	OK Female (n)	SC Male (n)	SC Female (n)	Total (n)
1 serving	7.7% (9)	15.1% (29)	21.7% (15)	19.1% (14)	15.0% (67)
2-4 servings	23.3% (27)	30.7% (59)	27.5% (19)	43.8% (32)	30.0% (137)
5-6 servings	14.7% (17)	10.9% (21)	8.7% (6)	15.1% (11)	12.0% (55)
> 6 servings	20.7% (24)	3.7 % (7))	13.0% (9)	12.3% (9)	11.0% (49)
Don't drink alcohol	33.6% (39)	39.6% (76)	29.0% (20)	9.6% (7)	32.0% (142)

College students from Oklahoma and Scotland were similar among other eating and health behaviors. (Table 8) Overall, most college students ate between 2 (38.5%) and 3 (49.7%) meals/day. The majority of college students ate 1-2 snacks per day (70.8%), with another 16.9% eating 3-4 snacks/day. While males from Scotland



appeared to drink larger amounts of soda (>3 sodas per day - 20.1%) than all other groups of students, 54% of all college students are drinking soda on a daily basis.

**Table 8: Responses to survey questions about meal, soda, and snack consumption.**

Meals per day ( Meal = 500-700 kcal)

	OK Male (n)	OK Female(n)	SC Male(n)	SC Female(n)	Total (n)
1 meal	0.9% (1)	3.1% (6)	10% (7)	3.9% (3)	3.7% (17)
2 meals	36.2% (42)	43.3% (84)	32.9% (23)	35.1% (27)	38.5% (176)
3 meals	44.8% (52)	49.5% (96)	50.0% (35)	57.1% (44)	49.7% (227)
4 meals	11.2% (13)	3.6% (7)	5.7% (4)	1.3% (1)	5.5% (25)
>4 meals	6.9% (8)	0.5% (1)	1.4% (1)	2.6% (2)	2.6% (12)

Servings of snacks per day

	OK Male (n)	OK Female (n)	SC Male (n)	SC Female (n)	Total (n)
1-2 snacks	65.5% (76)	77.7% (150)	59.4% (41)	71.4% (55)	70.8% (322)
3-4 snacks	21.6% (25)	10.9% (21)	23.2% (16)	19.5% (15)	16.9% (77)
>4 snacks	2.6% (3)	1.6% (3)	7.2% (5)	5.2% (4)	3.3% (15)
Don't eat snacks	10.3% (12)	9.8% (19)	10.1% (7)	3.9% (3)	9.0% (41)

Servings of soda per day

	OK Male (n)	OK Female (n)	SC Male (n)	SC Female (n)	Total (n)
1 serving	23.3% (27)	29.0% (56)	31.4% (22)	32.9% (25)	28.6% (130)
2-3 servings	25.9% (30)	18.1% (35)	20.0% (14)	17.1% (13)	20.2% (92)
3-4 servings	5.2% (6)	3.6% (7)	11.4% (8)	2.6% (2)	5.1% (23)
>5 servings	0.9% (1)	1.0% (2)	8.7% (4)	3.9% (3)	2.2% (10)
Don't drink soda	44.8% (52)	48.2% (93)	31.4% (22)	43.4% (33)	44.0% (200)

While use among all college students of herbal supplement use is rare (12.2%), dietary supplement use is more common (34%). (Table 9) The student group with the largest percentage of use of dietary supplements was males from Oklahoma (44.8%). Overall, over half of all students from both countries exercised at least 20 minutes in length, 1-4 times per week (53%). American male students were more likely than all the college students as a group, with 51.7% exercising 4-7 days a week. On average, only 10% of all college students didn't exercise.

**Table 9: Responses to survey questions about herbal and dietary supplement use and exercise.**

Use of herbal supplements					
	OK Male (n)	OK Female (n)	SC Male (n)	SC Female (n)	Total (n)
Yes	14.7% (17)	9.3% (18)	17.6% (12)	10.8% (8)	12.2% (55)
No	85.3% (99)	90.7% (175)	82.4% (56)	89.2% (66)	87.8% (396)

Use of dietary supplements					
	OK Male (n)	OK Female (n)	SC Male (n)	SC Female (n)	Total (n)
Yes	44.8% (52)	36.5% (70)	21.5% (14)	21.6% (16)	34.0% (152)
No	55.2% (64)	63.5% (122)	78.5% (51)	78.4% (58)	66.0% (295)

Days of exercise that's at least 20 minutes in length and also makes you sweat					
	OK Male (n)	OK Female (n)	SC Male (n)	SC Female (n)	Total (n)
1-2 days	16.4% (19)	28.5% (55)	27.5% (19)	29.0% (22)	25.0% (115)
3-4 days	25.0% (29)	33.7% (66)	27.5% (19)	21.1% (6)	28.0% (129)
4-5 days	25.0% (29)	13.0% (25)	13.0% (9)	21.1% (16)	17.0% (79)
6-7 days	26.7% (31)	16.1% (31)	21.8% (15)	14.5% (11)	19.0% (88)
Don't exercise	6.9% (8)	8.8% (17)	10.1% (7)	14.5% (11)	10.0% (43)

Forty-one percent of college students, as a group, reported dieting at some point for weight loss. (Table 10) While students from Oklahoma were more likely than students from Scotland to have dieted for weight loss (45.5% vs. 30.0%), females within each country reported the highest levels of dieting (OK 56.6%, SC 46.1%). Only 5% of all students had ever used smoking as a weight control method, with female college students from Scotland most likely to report yes (10.8%).

**Table 10: Responses to survey questions about diet and smoking as a weight control method**

Use of smoking as a weight control method					
	OK Male (n)	OK Female (n)	SC Male (n)	SC Female (n)	Total (n)
Yes	3.5% (4)	4.7% (9)	2.9% (2)	10.8% (8)	5.0% (23)
No	96.6% (112)	5.3% (184)	97.1% (66)	89.2% (66)	95.0% (428)

Use of dieting for weight loss					
	OK Male (n)	OK Female (n)	SC Male (n)	SC Female (n)	Total (n)
Yes	30.2% (35)	56.3% (108)	11.8% (8)	46.1% (35)	41.0% (186)
No	69.8% (81)	43.8% (84)	88.2% (60)	54.0% (41)	59.0% (266)

The majority of students in Oklahoma and in Scotland considered their knowledge of nutrition to be “average,” with almost 20% of participants reporting “excellent.” (Table 11) While most of the college students from Oklahoma and Scotland “strongly agreed” with the statement that “Nutrition and exercise are important for good health” (92.6% and 78.6%), some students from Scotland, especially female, reported only somewhat agreeing (13.6% and 25.7%).

**Table 11: Responses to survey questions about knowledge of nutrition and importance of diet and exercise for good health**

Self-rated knowledge about nutrition

	OK Male (n)	OK Female (n)	SC Male (n)	SC Female (n)	Total (n)
Poor	6.0% (7)	9.3% (18)	9.0% (6)	9.3% (7)	8.0% (38)
Average	69.0% (80)	73.6% (142)	64.2% (43)	72.0% (54)	71.0% (319)
Excellent	25.0% (29)	16.6% (32)	25.4% (17)	17.3% (13)	20.0% (91)
Nonexistent	0.0% (0)	0.5% (1)	1.5% (1)	1.3% (1)	0.7% (3)

“Nutrition and exercise are important for good health”

	OK Male (n)	OK Female (n)	SC Male (n)	SC Female (n)	Total (n)
Strongly agree	91.4% (106)	93.3% (181)	84.9% (56)	73.0% (54)	88.0% (397)
Somewhat agree	7.8% (9)	6.2% (12)	13.6% (9)	25.7% (19)	11.0% (49)
Somewhat disagree	0.0% (0)	0.0% (0)	1.5% (1)	0.0% (0)	0.2% (1)
Strongly disagree	0.9% (1)	0.5% (1)	0.0% (0)	0.0% (0)	0.4% (2)
No opinion	0.0% (0)	0.0% (0)	0.0% (0)	1.4% (1)	0.2% (1)

Spearman Correlation

Spearman’s correlation analyses (Table 12) revealed positive relationships between the servings of meat and BMI in male and female college students from Oklahoma (OK/male:  $r = 0.19$ ,  $p = 0.04$ , OK/female:  $r = 0.17$ ,  $p = .02$ ). A positive correlation of use of fast food and BMI trended toward significance in both female student groups in Oklahoma and Scotland (OK/female:  $r = 0.11$ ,  $p = 0.13$ , UK/female:  $r = 0.24$ ,  $p = 0.10$ ). BMI and days of exercise per week showed positive

correlation with BMI in male college students from Oklahoma (OK/male:  $r = 0.20$ ,  $p = 0.03$ ). Positive correlation between BMI and cigarette use was found in female college students from Scotland (SC/female:  $r = 0.37$ ,  $p = 0.008$ ). A significant positive correlation of servings of alcohol per day and BMI was found in male college students from Oklahoma (OK/male:  $r = 0.23$ ,  $p = 0.013$ ), while in the same group positive correlation of servings of alcohol per week and BMI trended towards significance (OK/male:  $r = 0.16$ ,  $p = 0.09$ ).

Negative correlations were found between BMI and servings of vegetables per day in female college students in Oklahoma (OK/females:  $r = -0.14$ ,  $p = 0.05$ ). Significant negative correlations with BMI was found among male college students from Oklahoma with the number of snacks per day (OK/male:  $r = -0.26$ ,  $p = 0.01$ ). Significant negative correlations were also found between soda and BMI among male college students from Oklahoma (OK/male;  $r = -0.31$ ,  $p = 0.0009$ ). A negative correlation of dietary supplement use and BMI was found in male college students from Oklahoma (OK/male:  $r = -0.20$ ,  $p = 0.03$ ).

College students history of dieting was negatively correlated with their BMI ( $r = -0.27$ ,  $p = 0.004$ ,  $r = -0.32$ ,  $p = 0.000004$ ,  $r = -0.42$ ,  $p = 0.0007$ ,  $r = -0.37$ ,  $p = 0.006$ ), in OK/male, OK/female, SC/male, SC/female, respectively. Similar negative correlations between use of smoking as weight control method in both females from Oklahoma and Scotland (OK/female:  $r = -0.17$ ,  $p = 0.016$ , SC/female:  $r = -.029$ ,  $p = 0.04$ ). Complete table of spearman correlation and BMI and raw data is available in Appendix E.

**Table 12: Spearman correlations (r values) of BMI with eating and health behaviors**

	<i>OK Males</i>	<i>OK Females</i>	<i>SC Males</i>	<i>SC Females</i>
Breakfast	-0.12	0.01	-0.13	-0.03
Meals per day	0.11	0.04	-0.24	0.02
Servings per day	0.04	-0.10	-0.18	0.04
Vegetable servings per day	*0.18	*-0.14	-0.13	-0.18
Meat servings per day	*0.19	*-0.17	0.10	0.17
Fish servings per week	*0.25	-0.03	-0.14	-0.06
Snacking occasions per day	** -0.26	-0.01	-0.01	0.05
Regular soda servings per day	*-0.31	0.09	-0.06	0.01
Fast food meals per day	0.01	0.11	0.08	0.24
Restaurant meals per day	-0.02	-0.03	-0.04	0.07
Herbal supplement use	-0.09	0.11	-0.01	-0.04
Dietary supplement use	*-0.20	0.05	0.00	-0.18
Cigarettes smoked per day	-0.11	0.07	-0.11	*0.37
Alcohol use, days per week	0.16	0.08	-0.23	0.12
Alcohol servings per day	**0.23	-0.03	-0.17	0.19
Days of exercise per week	*0.20	0.04	0.08	0.06
Use of smoking as weight control	-0.08	-0.17	0.00	*-0.29
Experience with dieting for weight loss	** -0.27	** -0.32	** -0.43	*-0.37
Frequency of family dining when growing up	0.00	-0.03	-0.20	0.20

\*p<.05, \*\*p=<.001

### Mean BMI and dieting and breastfeeding

When responses to questions were compared to mean BMI, a higher BMI was seen in students who reported that dieting was an issue in their household growing up. (Table 13) Lower mean BMI was reported in those who reported being breastfed versus

those who had not been breastfed. Inversely, US females and SC males reported higher BMI among those who were breastfed versus not breastfed.

**Table 13: Mean BMI for responses to survey questions about dieting and breastfeeding**

Breast-fed as an infant

Mean BMI	OK Male (kg/m <sup>2</sup> )	OK Female (kg/m <sup>2</sup> )	SC Male (kg/m <sup>2</sup> )	SC Female (kg/m <sup>2</sup> )
Yes	24.5	21.9	23.9	22.3
No	25.4	21.8	22.8	23.4
Don't know	24.8	25.0	23.8	22.1

Was weight and/or dieting an issue in your household?

Mean BMI	OK Male (kg/m <sup>2</sup> )	OK Female (kg/m <sup>2</sup> )	SC Male (kg/m <sup>2</sup> )	SC Female (kg/m <sup>2</sup> )
Yes	25.7	22.8	25.5	23.8
No	24.6	22.2	23.6	22.5
Don't know	33.7	20.6	24.5	25.6

## CHAPTER VI

### DISCUSSION

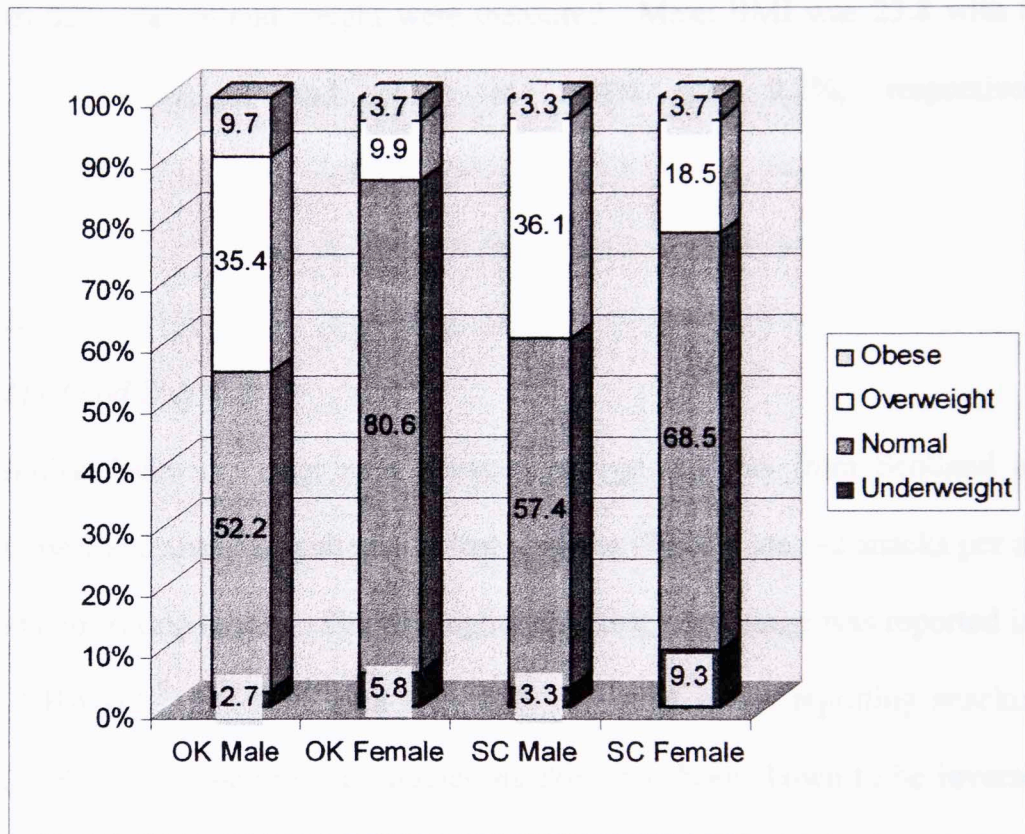
In this study, we set forth to describe and compare the eating and health behaviors of college students in two culturally distinct populations. Since limited epidemiological information on the eating and health behaviors of college students is available, this information will allow health care providers, including college health services and other community health providers, to develop programs that better serve the needs of college students. We also examined the relationship of their behaviors to their body mass index, which will provide additional insight into which health behaviors might be predictive of obesity development.

#### Body Mass Index

Because overall distributions of obesity are similar in both countries, we did not expect large differences between rates of overweight and obesity in our student populations. In our study, overall distribution of BMI was similar in the two countries (Figure 2). More men were overweight than women, with males from Oklahoma reporting the largest percent obese (9.7%). Overweight and underweight were more prevalent in females from Scotland (18.5% and 9.3%) than in females from Oklahoma (9.9% and 5.8%), with the same rate of obesity (3.7%). Similarly, results from NCHRBS

in the US, showed overweight and obesity in a sample of 4,609 undergraduate students to be 23.6% and 11.4%, respectively (Lowry et al., 2000).

**Figure 2: Distribution of BMI by weight status**



The mean BMI found in our college student populations was 23.4. Mean BMI for males and females from Oklahoma was 25.0 and 22.4, respectively. Mean BMI for males and females from Scotland was 23.0 and 23.4, respectively. As in nationally representative data and other studies, the percent of overweight and obese in the younger aged person, such as college students (the average age was 21.6 years in our subjects), is lower in comparison to older adults. (Heatheron et al., 1995; Flegal et al., 2002) In a



cross-sectional study of 736 college students, Huang et al. (Huang et al., 2003) also used self-reported height and weight and found a mean BMI of  $22.8 \pm 3.3$ . A similar study collected self-administered surveys on health-related behaviors of 116 women at a college health fair. Height and weight were measured. Mean BMI was 23.8 with the distribution of overweight and obese at 18.4% and 9.2%, respectively. (Clement et al., 2004)

### Eating Behaviors

#### *Meals, Breakfast and Snacking*

Similar behaviors were seen between college students from Scotland and Oklahoma in meal and snacking patterns. Most students (70.8%) ate 1-2 snacks per day with about 9% not eating snacks. Slightly higher snacking percentage was reported in a study using NHANES 1994-1996 data with 84% of young adults reporting snacking. (Zizza et al., 2001) In some previous studies snacking has been shown to be inversely correlated with BMI, as seen our study in college students from Oklahoma that were male. While other gender and population groups in our study showed no correlation with BMI and snacking frequency, in male students from Oklahoma, snacking frequency was negatively correlated with BMI ( $r = -0.26$ ,  $p < 0.001$ ). Because the majority of college students are snacking at some point during the day, particular attention should be made to snack choices and quantity. According to nationally representative surveys by USDA, energy per snacking occasion has been shown to increase in young adults.

(Zizza et al., 2001) While some studies suggest a “grazing” pattern may result in a more even hunger profile which may prevent over consumption calories, if snacks were consumed without compensation at meals or through expenditure, increased snacking could result in increased weight.

Meals were assessed separately from snacks. Most college students reported eating 2 meals (38.5%) or 3 meals (49.7%) per day in our study. Interestingly, number of meals per day was similar among the two populations, despite the fact that students from Scotland were found to consume breakfast on a more regular basis. Only one in four students from Oklahoma ate breakfast everyday, while almost one in two students from Scotland ate breakfast everyday. Breakfast consumption was lower than other reports in college students. Clement et al. reported 64.7% of females reported eating breakfast on most days. (Clement et al., 2004) Even if data were combined to report those students in Oklahoma eating breakfast greater than days per week, this total is still less than 50% of students. From the other perspective, almost one in four males from Oklahoma and one in five females from Oklahoma is skipping breakfast. While studies report a decrease in breakfast consumption in children and adolescent populations, (Siega-Riz et al., 1998; Lytle et al., 2000) a longitudinal study from 1982-1992 showed less college students were skipping breakfast. In 1992, they reported less than 10% of students were skipping breakfast. (Heatherton et al., 1995) Similarly, Ma et al. (Ma et al., 2003) reported only 3.6% of adults in a longitudinal cholesterol study skipped breakfast. Higher rates of skipping breakfast, as seen in our study, were reported in three

other studies. Utilizing NHANES data, Cho et al. reported 20% of Americans were skipping breakfast. (Cho et al., 2003) Using CSFII, Siega-Riz et al. reported 25% and 35% of boys and girls aged 15-18 years were not eating breakfast. (Siega-Riz et al., 1998) The highest percentage of skippers came from data in the Bogalusa Heart Study. Nicklas et al. reported 37% of young adults (mean age 23) were breakfast skippers. (Nicklas et al., 1998)

Since total number of meals was similar among students from Scotland and Oklahoma, there may be a difference in eating pattern that is unknown and requires more research. Students who skip breakfast may replace the meal with a late evening or nighttime meal. One study of American college students found the evening snack was a variable that explained weight gain in a study quantifying the weight gain in freshman students. (Levitsky et al., 2004)

Overall, breakfast eating and number of meals per day in our study showed no significant correlations with BMI. Our results are contrary to other reports suggesting that breakfast eating might reduce BMI. (Ma et al., 2003, Schlundt et al., 1992)

### *Fruit, Vegetable and Meat Consumption*

A study looking at the trends in health behaviors of European university students found an overall decrease in fruit consumption between 1990 and 2000. In students from an English university specifically, intake was actually stable. (Steptoe et al., 2002) In the US, national fruit and vegetable consumption is increasing.

(Li et al., 2000; Krebs-Smith et al., 2001) In our study, students from Scotland were eating more fruits and vegetables than those students from Oklahoma. Eating 2-4 servings of both fruits and vegetables per day was reported by half of male and female students from Scotland. On the other hand, students from Oklahoma reported eating 2-4 servings of fruits and vegetables only 29% and 39% of the time, respectively. Almost half of students in Oklahoma eat one serving of fruit and vegetable each per day. Comparison to other reports that combine fruit and vegetable servings is difficult due to our survey method; though we can conclude that at least half of college students from Oklahoma are not meeting recommendations in the USDA Food Guide Pyramid, with  $\leq 2$  servings of fruit and vegetable per day as reported in our study.

Though significant inverse associations of intake of fruits and vegetables and BMI was not found in our study as in other studies, (Trudeau et al., 1998; He et al., 2004), an inverse association of number of servings of fruits and vegetables and BMI trended towards significance found in our study. In females from Scotland, vegetable intake and BMI trended towards significance. (SC/female:  $r = -0.18$ ,  $p = 0.19$ ). Inverse correlations of BMI and servings of fruit also trended towards significance in females from Oklahoma ( $r = -0.10$ ,  $p = 0.19$ ) and males from Scotland ( $r = -0.18$ ,  $p = 0.16$ ).

Consistent findings with servings of meat eaten per day were found in our study. Significant positive correlation with BMI was found in male and female college students from Oklahoma (OK/male,  $r = 0.19$ ,  $p = 0.04$ ; OK/female,  $r = 0.17$ ,  $p = 0.02$ ). Positive correlation of BMI and meat consumption was also found by Maskarinec et al.

(Maskarinec et al., 2000) in a cross-sectional study of 514 multiethnic women using food-frequency questionnaire. The “meat” pattern, which was characterized by high intake of processed and red meats, fish, poultry, eggs, fats and oils, and condiments, was found to be positively associated with BMI. A positive association of meat consumption was found with weight change in a study using data from the Cancer Prevention Study II. The study was a prospective study which surveyed participants about personal and medical history, food frequencies, cigarette smoking and alcohol consumption. The follow-up nutrition survey was completed by 184,448 of participants 10 years later (baseline age 50-74 years). Higher BMI was also found in a study looking at the effect of breakfast type on BMI. Persons eating “meat and eggs” for breakfast ranked among the highest BMI. (Cho et al., 2003)

Overall, servings of meat eaten per day was higher in those college students from Oklahoma. While 35.7% of males from Scotland and 58.1% of females from Scotland reported eating one serving of meat per day, only 8.6% of males from Oklahoma and 30.9% of females from Oklahoma ate one serving of meat per day. The largest amounts of meat were eaten by males in the Oklahoma, with 25.8% eating  $\geq 5$  servings of meat per day. Conversely, 8.1% of women from Scotland reported not eating meat. Data from a national survey in Scotland indicates that while 20% of men and 34% of women reported eating meat once a week or less (including never), 54% of men and 52% of women report eating meat two to four times a week. (Scottish Health Statistics, 1998) Data from the CSFII 1994-96 in the US indicates the

national average of meat per day is 4.8 oz, which indicates the majority of college students from Oklahoma are reporting similar amounts of meat consumption per day. (Lin, 2003)

### *Food Away From Home and Soda Consumption*

Increased frequency of food away from the home, especially fast food consumption, is thought to increase the risk of obesity because of larger portions and higher energy density of food choices. (Young et al., 2003) Our data showed patterns that college students from Scotland are consuming fewer meals from fast food or restaurants than students from Oklahoma. Forty-four percent of male and fifty-nine percent of female students from Scotland are eating fast food or restaurant meals one day of the week. On the other hand, 28% of males and 31% of females from Scotland reported no consumption of fast food or restaurant foods. In Oklahoma, less than 10% of students report not eating fast food or restaurant foods. At a minimum, 28% of females from Oklahoma and 58% of males from Oklahoma have fast food and restaurant meals once a week. The majority of the remainder of college students from Oklahoma are reporting fast food and restaurant use 2-4 times per week 51% and 37%, respectively. The highest use of fast food meals (5-6 times/week) was reported by 15% of males in Oklahoma.

As seen in other studies, positive correlations of fast food consumption and BMI trended towards significance in women but not men in our study

(OK/female,  $r = 0.11$ ,  $p = 0.13$ ; SC/female,  $r = 0.23$ ,  $p = 0.10$ ). (Jeffery et al., 1998) Two other studies looking only at females, both girls and adults, also found a positive association of fast food consumption and BMI. (French et al., 2000; Thompson et al., 2004)

Soda consumption was common in both groups of college students. Fifty-four percent of college students are drinking at least one soda per day. Similar findings showed 56% of females (19 years of age) were found drinking soda on a given day in a study using 1994 CSFII data. (Bowman, 2002) Another study using 1994 CSFII found a higher percentage of adolescents (male and female) consuming sodas on at least one day of two days reported (64%). (Harnack et al., 1999) In general, students from Scotland are drinking slightly more soda than students from Oklahoma with 20% of males from Scotland drinking  $\geq 3$  servings of cola per day.

While regular soda consumption was not found to be positively correlated to BMI in our population, we can conclude that sodas are contributing a large amount of calories to a portion of the college student population total daily energy intake. Surprisingly, BMI was found to be negatively associated with BMI in males from Oklahoma ( $r = -0.31$ ,  $p < 0.001$ ). While 44.8% of males from Oklahoma reported not drinking regular soda, the majority of the remaining males limited sodas to less than three sodas per day. Similarly surprising findings were reported in a study of high school students in relation to use of fast food restaurants. This study also found a negative correlation between fast food restaurant use and BMI. Fast food restaurant use was also

positively associated with soda consumption. Authors suggested that results may be due to the fact that adolescents are “experiencing growth and currently have high energy needs.” (French et al., 2001) It is reasonable to consider the risks of obesity development that male college students put themselves into, if soda consumption remains the same as energy requirements decrease in coming years.

## Lifestyle Factors

### *Physical Activity*

Vigorous exercise that was 20 minutes in length was reported by 36.8% of college students on  $\geq 4-7$  days of the week in the current study. For comparison to other studies which generally report exercise for  $\geq 3$  days of the week, 65% of our sample reported exercise on  $\geq 3$  days of the week. In Scotland and Oklahoma, exercise on  $\geq 3$  days of the week was reported 59% and 68% of college students, respectively. Overall, 1 in 10 college students in the current study reported not exercising at all. While one study of college students reported a higher percentage of students exercising three or more days of the week, (Clement et al., 2004) just over one-third of college students were reported to be exercising three or more days of the week in a national and in an individual campus study. (Haberman et al., 1998; Lowry et al., 2000) The campus study consisted of a survey given in classrooms chosen by random selection on a large urban university. Students ( $n=302$ ) were asked about their diet and exercise behaviors. Thirty-nine percent of students reported exercising 3 or more times per week. (Haberman et al., 1998) In the



NCHRBS, as previously described, 37.6% of college students reported vigorous physical activity on 3 or more days of the week. (CDC, 1997)

Exercise was positively correlated with BMI in males from Oklahoma in our study ( $r = 0.20$ ,  $p = 0.03$ ). Again, we have observed another surprising correlation with BMI. The positive correlation may be due to overweight due to larger body mass versus body fatness. A similar relationship has been observed in a military population. (Prentice, 2001)

#### *Supplement Use*

Dietary supplement use in our population was reported in about one in three students. While reports of supplement use was equal among male and female students in Scotland, males in Oklahoma were more likely to use dietary supplements than females, 44.8% vs. 36.5% respectively. This may have been due in part because protein supplements were included as a dietary supplement in this question. A study, reporting on non-vitamin, non-mineral supplement (NVNM) use in college students ( $n=272$ ), reported 43-57% of students used vitamin/mineral supplements. Use of herbal supplements in our study was also considerably lower than reported in their study (12.2% vs. 48.5%). (Newberry et al., 2001) Another study of 26.3% of college students used NVNM supplements. (Perkin et al., 2002)

In our study, no significant association with BMI and dietary supplement use was seen in our subjects.

### *Alcohol and Cigarette Use*

Alcohol and cigarette use among college students was prevalent in both groups. While a larger portion of students in Oklahoma reported not drinking alcohol than in Scotland (35.8% vs 18.1%), we recognize that laws for alcohol consumption are different in Scotland and Oklahoma with lawful drinking at the age of 18 and 21, respectively. Similar to the numbers reported in the Oklahoma, 31.8% of students in the NCHRBS reported no use of alcohol in the past thirty days. (CDC, 1997) Overall, in Great Britain, it is reported that larger numbers of people are not drinking than numbers found in our study (26% of men and 41% in women). Though data also reports young people in Great Britain are more likely to exceed recommended levels of alcohol consumption. In our study, of those students drinking alcohol, the majority of college students were drinking 2-3 days per week, with 2-4 servings of alcohol per day. Most remarkable was the substantial amounts of alcohol consumption in males from Oklahoma and females from Scotland. 20.7% of males from Oklahoma were drinking greater than six servings of alcohol when drinking. When females from Scotland are consuming alcohol, 43.8% and 27.4% report drinking 2-4 servings or  $\geq 5$  servings per day, respectively. According to the General Household survey (National Statistics, 2004), the largest increase in excessive consumption over the recommended levels of alcohol consumption has been seen in women aged 16-24 years.

Consumption patterns may play a role in weight status, as different correlations with BMI were found males from Scotland and males from Oklahoma. A

positive correlation of days of alcohol consumption and BMI nearing significance was seen in males from Oklahoma (OK/male,  $r = 0.16$ ,  $p = 0.09$ ) while an inverse correlation of alcohol consumption and BMI nearing significance was seen in males from Scotland (SC/male,  $r = -0.22$ ,  $p = 0.07$ ). Furthermore, a significant positive correlation between amounts of alcohol consumed per occasion among male college students from Oklahoma. Our data reflects similar controversy in obesity research which also has found conflicting results. Even so, most data has supported the thought that use of alcohol is positively associated with obesity. (Yeomans, 2004) A prospective study of 7608 men aged 40-59 years in 24 British towns, examined the relationship of alcohol intake, body weight and changes in body weight over a 5 year period. Results found a dose-response relation between alcohol intake and BMI. (Wannamethee et al., 2003)

Similar to correlations found with alcohol use and BMI, use of cigarettes positively correlated with BMI in females from Scotland (SC/female,  $r = 0.37$ ,  $p = 0.008$ ). While smoking has been reported to be a method of dieting, smoking has been shown to increase risk of obesity in studies using dietary pattern analysis. (Tseng et al., 2001; Quatromoni et al., 2002) Results of a 10-year follow up study from participants in the Cancer Prevention Study II found smoking cessation typically resulted in an increase in BMI.

Overall, use of cigarettes was higher in Scotland than in Oklahoma with 70.9% and 87.1% reporting abstaining from cigarettes, respectively. Reports of use of cigarettes in the Oklahoma in our study is lower than reported in the NCHRBS.

(CDC, 1997) Reports of use of cigarettes in students from Scotland is similar to number seen in Great Britain. (National Statistics, 2004)

### *Parental Influence and Breastfeeding*

Parental influence on weight status has been shown to account for some of the variability in the development of obesity. (Birch et al., 1998) Parental influence shapes our early experiences with food and may lead to learned preferences and eating behaviors. Two behaviors associated with parental influence were reported in our study; breastfeeding and familial eating patterns. Since restrictive eating may result in uncontrolled eating, parental dieting practices may influence development of eating patterns. (Fulkerson et al., 2002) If poor eating habits develop, impact on BMI may be negative. Our data found a clear pattern with students who were exposed to dieting behaviors growing up reported higher BMI than those not exposed. Inconclusive data was found for breastfeeding.

### Dieting and Healthy Lifestyle Patterns

Our data is consistent with other research that shows dieting is prevalent in college students, with females in our study more likely to diet than males. (Peters et al., 1996) In our data, students from Oklahoma were more likely than students from Scotland to report dieting for weight loss (45.5% vs 29.9%). Universally, history of dieting was inversely associated with BMI. Students in our study

who had attempted weight loss at some point in time were more likely to have a lower BMI (OK/male,  $r = -0.27$ ,  $p = 0.004$ ; OK/female,  $r = -0.32$ ,  $p = 0.000004$ , SC/male,  $r = -0.42$ ,  $p = 0.0007$ , SC/female,  $r = -0.37$ ,  $p = 0.006$ ).

As seen in one study (Story et al., 1998), adolescents that reported moderate dieting activities as a whole were more likely to exhibit overall better eating habits. If extreme dieting behaviors are avoided, dieting may provide students with learning experiences and weight loss that are beneficial to health. Studies reporting subjects who have had a stable weight over a period of time have shown patterns of dieting or lifestyle behaviors that promote maintenance of weight or prevention of gain. Kelm et al. reported on subjects ( $n=784$ ) of the National Weight Control Registry, a large study of individuals with success of weight maintenance after weight loss. (Klem et al., 1997) Interestingly, 42% of the sample reported maintenance of weight loss was more difficult than weight loss. Behaviors associated with maintenance included regular meals, low frequency of eating out, and regular exercise. Similarly, cluster analysis have shown evidence that eating and lifestyle patterns that include fruits, vegetables, whole grain products, use of supplement, and activity with smaller contributions of meats, high fat foods, sweets alcohol and smoking are associated with lower BMI. (Millen et al., 2001; Tseng et al., 2001; Quatromoni et al., 2002; Newby et al., 2003)

Our data clearly shows that while some college students practice healthy behaviors, a good portion of college students have behaviors that increase their risk of overweight and obesity. Studies of college students have also demonstrated patterns of

behaviors, healthy or not healthy, often exist together. Students (n=116) who rated their health status as high in a questionnaire received at a health fair, also reported high levels of physical activity, lower BMI, and healthier food choice. The opposite was true for females who reported low level of health status. (Clement et al., 2004) Levitsky et al. reported environmental stimuli such as evening snacks, number of weekend meals, junk food and recent dieting contributed to weight gain during a freshman semester. (Levitsky et al., 2004) In a longitudinal health study on a college campus, students (n=412) who reported exercise, were more likely to report other health-promoting behaviors such as use of supplements and consuming recommend levels of dairy and fruit and vegetables. (Economos et al., 2000) Interestingly, motivators for the behaviors varied depending on gender. Males reported participating in exercise for a sport and fun, whereas, females participated in exercise for transportation or weight control.

### Strengths and Weaknesses

Study strengths and limitations should be considered. Strength is found in the large population studied. Generalizations to the college population as a whole should be fairly unrestricted since subjects were recruited from a general science education course. Ethnic diversity in our sample was similar to regional and national demographics. Because the study design is cross-sectional, results are limited to correlations only and causal relationships cannot be established. Self-reported data is known to be subject to recall error and subject bias; thus overweight would be underestimated in this study.

(Rowland, 1990) Due to survey design, a wide variety of information is available, yet specific information about behaviors is limited. In the future, additional detailed questions that might lead us to understand about certain behaviors could be asked. Survey questions could be worded to allow for better comparison to national standards such as in the questions looking at individual food groups.

### Conclusion

While there were not large differences in our study in the mean BMI between the two populations, we did find differences in eating and health behaviors that theoretically could result in different BMIs. The similarities of the mean BMI, despite these differences in lifestyles, emphasize the complexity of obesity. As previously discussed, there is not a single cause for obesity. College students exhibit behaviors that have been widely proposed to contribute to obesity, such as soda and fast food consumption, alcohol and cigarette use and breakfast skipping. Low levels of behaviors that would be considered health-promoting were also seen in college students, such as physical activity and higher consumption of fruits, vegetables, and multi-vitamins.

Our data has also shown that certain behaviors may impact the weight status of gender and cultures differently. Significant positive correlations between BMI and behaviors such as amounts of meat eaten and alcohol and cigarettes use in some populations were seen. Significant inverse correlations between BMI and behaviors such as fruit, and vegetable use and dieting were seen in some populations.

In conclusion, college students are prime targets for health prevention. Our study has confirmed other prevalence data of overweight and obesity in the college student population. While overweight and obesity are present at lower levels than in the national population, we have shown troubling rates of poor eating and health behaviors. If poor health behaviors continue, students may be increasing their risk of overweight and obesity later in life. In a life-stage when lifetime health and eating behaviors are being developed (Lightdale et al., 2002), students should have the opportunity to learn about healthy lifestyles and make decisions about modifying current behaviors. A variety of health-promoting lifestyles were discussed that should be promoted and adopted by students to begin lifetime habits. Our data provides the groundwork for information on eating and health behaviors of college students. Further data should focus on the reasons why students make decisions. An in-depth study of student health beliefs, knowledge and their development of eating behaviors will allow for stronger and more effective public awareness campaigns.



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## APPENDIX A

Food Intake and Behavior Survey – Oklahoma  
Food Intake and Behavior Survey – Scotland

## Food Intake and Behavior Survey

### Questions 1-6 are about your background:

1. Are you?
  - A. male
  - B. female
2. What is your current height in inches without shoes?
3. What is your current weight in pounds without shoes?
4. How would you describe yourself?
  - A. Hispanic
  - B. African American
  - C. Native American
  - D. Asian American
  - E. Caucasian
  - F. Other
5. What is your family income per year?
  - A. \$ 10,000
  - B. \$10,000 - 30,000
  - C. \$30,000 - 50,000
  - D. \$50,000 - 70,000
  - E. \$70,000 - 100,000
  - F. > \$100,000

6. Are you married?
  - A. Yes
  - B. No

### Questions 7-23 are about your diet:

7. How often do you eat breakfast?
  - A. Everyday
  - B. 1-3 times/week
  - C. 4-6 times/week
  - D. Don't eat breakfast
8. How many meals do you eat a day?  
Meal = 500-700 kcal
  - A. 1 meal
  - B. 2 meals
  - C. 3 meals
  - D. 4 meals
  - E. >4 meals
9. How much water do you drink each day?
  - A. 0-10 oz.
  - B. 11-20 oz
  - C. 21-30 oz
  - D. 31-40 oz
  - E. 41-50 oz.
  - F. 51-60 oz
  - G. > 60 oz.



10. How many servings of fruit do you eat each day? 1 serving = 1 piece of fruit,  $\frac{1}{2}$  cup canned fruit,  $\frac{1}{4}$  cup fruit juice.
- 0 servings
  - 1 serving
  - 2-4 servings
  - >4 servings
11. How many servings of vegetables do you eat each day? 1 serving = 1 cup raw leafy vegetables,  $\frac{1}{2}$  cup cooked vegetables,  $\frac{1}{4}$  c vegetable juice.
- 0 servings
  - 1 serving
  - 2-4 servings
  - >4 servings
12. How many servings of meat (poultry, beef, pork) do you eat each day? 1 serving = 2-3 oz. (a typical chicken breast = 5 oz.)
- 1 serving
  - 2-4 servings
  - 5-6 servings
  - > 6 servings
  - Don't eat meat
13. How often do you eat fish per week?
- 1 time per week
  - 2-4 times per week
  - > 4 times per week
  - Don't eat fish
14. Do you snack between meals? If yes, how many snacks do you eat each day?  
Snack = 50-200 kcal
- 1-2 snacks
  - 3-4 snacks
  - >4 snacks
  - Don't eat snacks
15. Do you drink coffee or tea? If yes, how many servings per day? 1 serving = 8 oz./1 cup.
- 1-2 servings
  - 3-4 servings
  - 5-6 servings
  - >6 servings
  - Don't drink coffee or tea
16. Do you drink regular (as opposed to diet) soda/soft drinks/pop? If yes, how many servings per day? 1 serving = 8 fl. oz (1 can = 12 oz.)
- 1 serving
  - 2-3 servings
  - 4-5 servings
  - > 5 servings
  - Don't drink soda

17. Do you drink diet soda/soft drinks/pop? If yes, how many servings per day? 1 serving = 8 fl. oz (1 can = 12 oz.)
- 1 serving
  - 2-3 servings
  - 4-5 servings
  - > 5 servings
  - Don't drink diet soda
18. How often do you eat fast food?
- 1 time/week
  - 2-4 times/week
  - 5-6 times/week
  - > 6 times/week
  - Don't eat fast food
19. How often do you eat in restaurants, excluding fast food?
- 1 time/week
  - 2-4 times/week
  - 5-6 times/week
  - > 6 times/week
  - Don't eat in restaurants
20. On average, how much time do you spend preparing a meal?
- < 10 minutes
  - 10-20 minutes
  - 20-30 minutes
  - > 30 minutes
  - Don't prepare meals
21. On average, how long does it take you to eat a meal?
- < 10 minutes
  - 10-20 minutes
  - 20-30 minutes
  - 30-45 minutes
  - > 45 minutes
22. Do you regularly take any herbal supplements (herbs are plants used for therapeutic purposes)?
- Yes
  - No
23. Do you regularly take any dietary supplement (i.e. protein powder, multivitamin)?
- Yes
  - No
- Questions 24- 28 are about your lifestyle:**
24. How many cigarettes a day do you smoke?
- 1-4 cigarettes
  - 5-10 cigarettes
  - 11-15 cigarettes
  - > 15 cigarettes
  - Don't smoke

25. Do you drink alcohol (beer, wine, liquor)?  
If yes, how many days per week?
- A. 1 day/week
  - B. 2-3 days/week
  - C. 4-5 days/week
  - D. 6-7 days/week
  - E. Don't drink alcohol
26. If you drink alcohol, how many servings per day do you drink? 1 serving = 1 can beer, 5 oz. wine.
- A. 1 serving
  - B. 2-4 servings
  - C. 5-6 servings
  - D. >6 servings
  - E. Don't drink alcohol

27. On average, how much sleep do you get each night?

- A. 1-4 hours
- B. 5-7 hours
- C. >7 hours

28. How many days of the week do you perform exercise that's at least 20 minutes in length and also makes you sweat? (Exercise can include walking, running, swimming, cycling, etc.)

- A. 1-2 days
- B. 3-4 days
- C. 4-5 days
- D. 6-7 days
- E. Don't exercise

**Questions 29-37 are about your attitudes toward weight and diet:**

29. Have you ever used smoking as a weight control method?
- A. Yes
  - B. No
30. Have you ever been on a diet for weight loss? (excluding diets for medical reasons)
- A. Yes
  - B. No

31. How would you describe your weight?
- A. Very underweight
  - B. Slightly underweight
  - C. About the right weight
  - D. Slightly overweight
  - E. Very overweight

32. Are you currently trying to:
- A. Lose weight
  - B. Gain weight
  - C. Maintain weight
  - D. Not doing anything about weight
33. "Nutrition and exercise are important for good health." – do you:
- A. Strongly agree
  - B. Somewhat agree
  - C. Somewhat disagree
  - D. Strongly disagree
  - E. No opinion
36. If you were going to buy a food item, which label would appeal to you more?
- A. 95% fat-free
  - B. 5% fat
  - C. would not make a difference
37. What type of foods do you prefer?
- A. Salty
  - B. Sweet
  - C. Sour
  - D. Bitter
  - E. No preference

**Questions 38-44 are miscellaneous:**

38. Were you breast-fed as an infant?
- A. Yes
  - B. No
  - C. Don't know
39. Are you sexually active?
- A. Yes
  - B. No
40. Growing up, how often did you eat dinner together as a family?
- A. Never
  - B. 1-2 times/week
  - C. 3-5 times/week
  - D. Every day

34. "It is hard to eat a variety of foods." – do you:
- A. Strongly agree
  - B. Somewhat agree
  - C. Somewhat disagree
  - D. Strongly disagree
  - E. No opinion
35. "Food labels are useful and helpful in planning my meals." – do you:
- A. Strongly agree
  - B. Somewhat agree
  - C. Somewhat disagree
  - D. Strongly disagree
  - E. No opinion

41. Growing up, was weight and/or dieting an issue in your household?

- A. Yes
- B. No
- C. Don't know

42. Compared to your parent's diet, is your current diet

- A. Similar
- B. Different
- C. Mix

43. What is your opinion on obesity?

- A. It's a problem
- B. It's not a problem
- C. No opinion

44. Do you consider your knowledge about nutrition to be:

- A. Poor
- B. Average
- C. Excellent
- D. Nonexistent

**Thank you for filling out this survey.**

## Food Intake and Behavior Survey

### Questions 1-6 are about your background:

1. Are you?
  - A. male
  - B. female
2. What is your current height in meters without shoes?
3. What is your current weight in kilograms without shoes?
4. What is your racial/ethnic background?
5. What is your family income per year?
  - A. < £ 6,300
  - B. £ 6,300 – £ 19,000
  - C. £ 19,000 – £ 31,500
  - D. £ 31,500 – £ 44,000
  - E. £ 44,000 – £ 63,000
  - F. > £ 63,000
6. Are you married?
  - A. Yes
  - B. No

### Questions 7-23 are about your diet:

7. How often do you eat breakfast?
  - A. Everyday
  - B. 1-3 times/week
  - C. 4-6 times/week
  - D. Don't eat breakfast
8. How many meals do you eat a day?  
Meal = 2,100 - 2,950 kJ, 500 - 700 kcal
  - A. 1 meal
  - B. 2 meals
  - C. 3 meals
  - D. 4 meals
  - E. >4 meals
9. How much water do you drink each day?
  - A. 0-300 ml
  - B. 301- 600 ml
  - C. 601-900 ml
  - D. 901-1,200 ml
  - E. 1,201 -1,500 ml
  - F. 1,501-1,800 ml
  - G. > 1,800 ml

10. How many servings of fruit do you eat each day? 1 serving = 1 piece of fruit, 2 - 3 tablespoons of canned fruit, 150 ml fruit juice.
- 0 servings
  - 1 serving
  - 2-4 servings
  - >4 servings
11. How many servings of vegetables do you eat each day? 1 serving = 2 - 3 tablespoons raw, cooked, or canned, 150 ml vegetable juice.
- 0 servings
  - 1 serving
  - 2-4 servings
  - >4 servings
12. How many servings of meat (poultry, beef, pork) do you eat each day? 1 serving = 60 - 90 grams (a typical chicken breast = 150 grams)
- 1 serving
  - 2-4 servings
  - 5-6 servings
  - > 6 servings
  - Don't eat meat
13. How often do you eat fish per week?
- 1 time per week
  - 2-4 times per week
  - > 4 times per week
  - Don't eat fish
14. Do you snack between meals? If yes, how many snacks do you eat each day? Snack = 210 - 830 kJ, 50 - 200 kcal
- 1-2 snacks
  - 3-4 snacks
  - >4 snacks
  - Don't eat snacks
15. Do you drink coffee or tea? If yes, how many servings per day? 1 serving = 237 ml, .48 L
- 1-2 servings
  - 3-4 servings
  - 5-6 servings
  - >6 servings
  - Don't drink coffee or tea
16. Do you drink regular (as opposed to diet) soda/soft drinks/pop? If yes, how many servings per day? 1 serving = 237 ml, .24 L (1 can = 355 ml)
- 1 serving
  - 2-3 servings
  - 4-5 servings
  - > 5 servings
  - Don't drink soda

17. Do you drink diet soda/soft drinks/pop? If yes, how many servings per day? 1 serving = 237 ml, 24 L (1 can = 355 ml)
- 1 serving
  - 2-3 servings
  - 4-5 servings
  - > 5 servings
  - Don't drink diet soda
18. How often do you eat fast food?
- 1 time/week
  - 2-4 times/week
  - 5-6 times/week
  - > 6 times/week
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19. How often do you eat in restaurants, excluding fast food?
- 1 time/week
  - 2-4 times/week
  - 5-6 times/week
  - > 6 times/week
  - Don't eat in restaurants
20. On average, how much time do you spend preparing a meal?
- < 10 minutes
  - 10-20 minutes
  - 20-30 minutes
  - > 30 minutes
  - Don't prepare meals
21. On average, how long does it take you to eat a meal?
- < 10 minutes
  - 10-20 minutes
  - 20-30 minutes
  - 30-45 minutes
  - > 45 minutes
22. Do you regularly take any herbal supplements (herbs are plants used for therapeutic purposes)?
- Yes
  - No
23. Do you regularly take any dietary supplement (i.e. protein powder, multivitamin)?
- Yes
  - No

**Questions 24- 28 are about your lifestyle:**

24. How many cigarettes a day do you smoke?
- 1-4 cigarettes
  - 5-10 cigarettes
  - 11-15 cigarettes
  - > 15 cigarettes
  - Don't smoke



25. Do you drink alcohol (beer, wine, liquor)? If yes, how many days per week?

- A. 1 day/week
- B. 2-3 days/week
- C. 4-5 days/week
- D. 6-7 days/week
- E. Don't drink alcohol

26. If you drink alcohol, how many servings per day do you drink?

- A. 1 serving
- B. 2-4 servings
- C. 5-6 servings
- D. >6 servings
- E. Don't drink alcohol

27. On average, how much sleep do you get each night?

- A. 1-4 hours
- B. 5-7 hours
- C. > 7 hours

28. How many days of the week do you perform exercise that's at least 20 minutes in length and also makes you sweat? (Exercise can include walking, running, swimming, cycling, etc.)

- A. 1-2 days
- B. 3-4 days
- C. 4-5 days
- D. 6-7 days
- E. Don't exercise

**Questions 29-37 are about your attitudes toward weight and diet.**

29. Have you ever used smoking as a weight control method?

- A. Yes
- B. No

30. Have you ever been on a diet for weight loss? (excluding diets for medical reasons)

- A. Yes
- B. No

31. How would you describe your weight?

- A. Very underweight
- B. Slightly underweight
- C. About the right weight
- D. Slightly overweight
- E. Very overweight

32. Are you currently trying to:
- Lose weight
  - Gain weight
  - Maintain weight
  - Not doing anything about weight
33. "Nutrition and exercise are important for good health." – do you:
- Strongly agree
  - Somewhat agree
  - Somewhat disagree
  - Strongly disagree
  - No opinion
34. "It is hard to eat a variety of foods." – do you:
- Strongly agree
  - Somewhat agree
  - Somewhat disagree
  - Strongly disagree
  - No opinion
35. "Food labels are useful and helpful in planning my meals." – do you:
- Strongly agree
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  - Somewhat disagree
  - Strongly disagree
  - No opinion
36. If you were going to buy a food item, which label would appeal to you more?
- 95% fat-free
  - 5% fat
  - would not make a difference
37. What type of foods do you prefer?
- Salty
  - Sweet
  - Sour
  - Bitter
  - No preference
- Questions 38-44 are miscellaneous:**
38. Were you breast-fed as an infant?
- Yes
  - No
  - Don't know
39. Are you sexually active?
- Yes
  - No
40. Growing up, how often did you eat supper together as a family?
- Never
  - 1-2 times/week
  - 3-5 times/week
  - Every day

## APPENDIX B

### IBD Approval Letter - Oklahoma IBB Approval Letter - Scotland

41. Growing up, was weight and/or dieting an issue in your household?
- A. Yes
  - B. No
  - C. Don't know
42. Compared to your parent's diet, is your current diet
- A. Similar
  - B. Different
  - C. Mix
43. What is your opinion on obesity?
- A. It's a problem
  - B. It's not a problem
  - C. No opinion
44. Do you consider your knowledge about nutrition to be:
- A. Poor
  - B. Average
  - C. Excellent
  - D. Nonexistent

**Thank you for filling out this survey.**



The University of Oklahoma

Humanities Center

101 Lincoln Hall

IRB Number: 12077

Approval: 03

Approval Date: 08/06/13

## APPENDIX B

### IRB Approval Letter – Oklahoma IRB Approval Letter – Scotland

June 11, 2013

Dr. [Name],  
Dept. of [Department],  
[Address],  
[City, State, ZIP]

Dear Dr. [Name]:

Re: [Project Title]

The [Institution] IRB has reviewed the above information and has determined that the project meets the criteria for approval. The IRB has approved the project on the condition that you agree to the terms and conditions of the IRB approval. You must provide a copy of the IRB approval to the [Institution] IRB office and to the [Institution] IRB office in Scotland.

If you have any questions, please contact the [Institution] IRB office at [Phone Number] or [Email Address].

Sincerely,

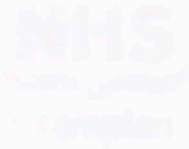
[Signature]

[Name]

[Title]



The University of Oklahoma  
Health Sciences Center  
INSTITUTIONAL REVIEW BOARD



IRB Number: 10887  
Exemption: #2  
Approval Date: June 12, 2003

June 13, 2003

Allen Knehans, Ph.D.  
Dept of Nutritional Sciences  
801 N. E. 13th, CHB 465  
Oklahoma City, OK 73104-5072


Dear Dr. Knehans:

**RE: Eating Behavior and Health of College Students.**

The Chair of the Institutional Review Board (IRB) has reviewed the above-referenced research project and determined that it meets the criteria in 45 CFR 46 or 21 CFR 50 and 56, as amended, for exemption from IRB review. You may proceed with the research as proposed. Please note that the IRB Chair will need to review any changes in the protocol as changes could affect this determination of exempt status. Also note that you should notify the IRB office when this project is completed, so we can remove it from our files.

If you have any questions or need additional information, please do not hesitate to call the IRB office at (405) 271-2045 or send an email to [irb@ouhsc.edu](mailto:irb@ouhsc.edu).

Sincerely yours,

  
Alberta Yadack, R.N., M.P.H.  
Assistant Director, Human Research Participant Protection

Ltr\_Prot\_Fappv\_X

Post Office Box 26901 • 1000 S.L. Young Blvd., Room 176  
Oklahoma City, Oklahoma 73190 • (405) 271-2045 • FAX: (405) 271-1677

Please do not disseminate this information; all data identification and communication should be controlled and managed by the Committee.

Please do not disseminate this information to all correspondence.

GRAMPIAN RESEARCH ETHICS COMMITTEE

Chairmen

Committee One

Dr John Dean  
Consultant  
Department of Medical Genetics  
Medical School  
Foresterhill  
Aberdeen  
AB25 2ZD

Committee Two

Professor Nigel Webster  
Professor of Anaesthesia & Intensive Care  
Institute of Medical Sciences  
Foresterhill  
Aberdeen  
AB25 2ZD

Clerk to the Committee

Mrs Diane Murray  
Dept of Public Health  
NHS Grampian  
Summerfield House  
2 Eday Road  
ABERDEEN, AB15 6RE  
Email: [diane.murray@ghb.grampian.scot.nhs.uk](mailto:diane.murray@ghb.grampian.scot.nhs.uk)

Tel: (01224) 552120  
Fax: (01224) 559390  
24<sup>th</sup> July 2003

Tel: (01224) 555167  
Fax: (01224) 555766

Tel: (01224) 558503  
Fax: (01224) 558609

Project No: 03/0170

Ms Carrie Thompson  
Apt 41, The Spires  
505 Gt Western Road  
ABERDEEN  
AB10 6WD

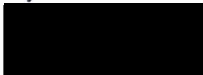
Dear Ms Thompson

**Food intake and behaviour survey**

The above project was considered at the Grampian Research Ethics Committee (2) meeting of 17/07/2003, and I am pleased to confirm that full ethical approval for this project has been granted. The Committee would like to point out that you are not required to put out a information sheet/consent form as part of this study.

We would be very glad to receive in due course, copies of any publications arising from this research. Thank you for bringing this study to the Committee's attention.

Yours sincerely



Mrs Kellie MacLeod  
Grampian Research Ethics Committee Manager

Please note that this study may not commence until these clarifications and amendments have been received and approved by the Committee.

Please quote project number in all correspondence

Answers Table

Year	Number of Answers	Percentage
2010	100	100%
2011	100	100%
2012	100	100%
2013	100	100%
2014	100	100%
2015	100	100%
2016	100	100%
2017	100	100%
2018	100	100%
2019	100	100%
2020	100	100%

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2010	100	100%
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2014	100	100%
2015	100	100%
2016	100	100%
2017	100	100%
2018	100	100%
2019	100	100%
2020	100	100%

**APPENDIX C**

Data: Table of Frequencies

Year	Number of Answers	Percentage
2010	100	100%
2011	100	100%
2012	100	100%
2013	100	100%
2014	100	100%
2015	100	100%
2016	100	100%
2017	100	100%
2018	100	100%
2019	100	100%
2020	100	100%

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2019	100	100%
2020	100	100%

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2013	100	100%
2014	100	100%
2015	100	100%
2016	100	100%
2017	100	100%
2018	100	100%
2019	100	100%
2020	100	100%

Table of MARRIAGE by County

County	Number of Marriages	Percentage
Alameda	100	100%
Contra Costa	100	100%

Table of DIVORCE by County

County	Number of Divorces	Percentage
Alameda	100	100%
Contra Costa	100	100%

Table of MARRIAGE by County

County	Number of Marriages	Percentage
Alameda	100	100%
Contra Costa	100	100%

## Frequency Tables

### Height (Inches)

Variables	Oklahoma Male	Oklahoma Female	Scotland Male	Scotland Female	Total
N	116	194	64	65	439
MEAN	71	65	70	65	67
MEDIAN	71	65	70	65	67
Std. Dev.	3.4	3.0	4.6	3.7	4.4
Min	62	52	51	55	51
Max	79	76	63	74	83

### Weight (Pounds)

Variables	Oklahoma Male	Oklahoma Female	Scotland Male	Scotland Female	Total
N	113	191	61	56	421
MEAN	180	134	166	143	152
MEDIAN	175	133	161	128	143
Std. Dev.	38.7	23.7	31.2	43.5	38.3
Min	115	84	99	98	84
Max	310	270	307	372	372

### BMI (kg/in<sup>2</sup>)

Variables	Oklahoma Male	Oklahoma Female	Scotland Male	Scotland Female	Total
N	113	191	61	54	419
MEAN	25.0	22.4	24.1	23.0	23.4
MEDIAN	24.4	21.8	23.6	21.8	22.6
Std. Dev.	4.5	3.9	4.5	5.4	4.5
Min	17.6	12.8	16.5	17.8	12.8
Max	43.2	46.3	44.3	51.5	51.5

### Years

Variables	Oklahoma Male	Oklahoma Female	Scotland Male	Scotland Female	Total
N	114	191	68	73	446
MEAN	21.7	20.6	23.4	20.7	
MEDIAN	20.8	20.4	19.5	18.7	
Std. Dev.	3.3	1.7	7.6	5.4	
Max	44	31	48	48	48

### Table of RACE or ETHNICITY by Country

	Oklahoma (N)	Oklahoma (%)	Scotland (N)	Scotland (%)
Hispanic	16	5.2%	0	0%
African American	22	7.1%	1 (N. African)	0.7%
Native American	14	4.5%	0	0%
Asian	16	5.2%	11	8.2%
Caucasian	234	75.5%	117	86.7%
Other	8	2.6%	6	4.4%
Total	310	100%	135	100%

### Table of MARRIAGE by Country

	Oklahoma	Scotland
Married	6 / 1.9%	5 / 3.6%
Not Married	304 / 98.1%	133 / 96.4%

### Table of GENDER by Country

	Oklahoma	Scotland
Male	116 / 37.4%	65 / 48.2%
Female	194 / 62.6%	70 / 51.9%

### Table of INCOME by Country (Dollars per year)

	Oklahoma	Scotland
<10,000	4 / 1.3%	8 / 6.35%
10,000-30,000	26 / 8.6%	31 / 24.6%
30,000-50,000	46 / 15.1%	38 / 30.2%
50,000-70,000	65 / 21.4%	21 / 16.7%
70,000-100,000	65 / 21.4%	20 / 15.9%
>100,000	98 / 32%	8 / 6.4%



Question 7: How often do you eat breakfast?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female(%)	Total (%)
Don't eat breakfast	28 (24.1)	35 (18.1)	14 (20.0)	9 (12.0)	86 (19.0)
1-3 times/week	43 (37.1)	70 (36.3)	20 (28.6)	21 (28.3)	154 (34.0)
4-6 times/week	15 (12.9)	41 (21.2)	9 (12.9)	8 (10.7)	73 (16.0)
Everyday	30 (25.9)	47 (24.4)	27 (38.6)	37 (49.3)	141 (31.0)
Total	113	193	70	75	454

Question 8: How many meals do you eat a day? Meal = 500-700 kcal

	OK Male (%)	OK Female(%)	SC Male(%)	SC Female(%)	Total (%)
1 meal	1 (0.9)	6 (3.1)	7 (10)	3 (3.9)	17 (3.7)
2 meals	42 (36.2)	84 (43.3)	23 (32.9)	27 (35.1)	176 (38.5)
3 meals	52 (44.8)	96 (49.5)	35 (50.0)	44 (57.1)	227 (49.7)
4 meals	13 (11.2)	7 (3.6)	4 (5.7)	1 (1.3)	25 (5.5)
>4 meals	8 (6.9)	1 (0.5)	1 (1.4)	2 (2.6)	12 (2.6)

Question 9: How much water do you drink each day?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
0-10oz	4 (3.5)	14 (7.2)	6 (8.7)	13 (16.9)	37 (8.1)
11-20oz	14 (12.2)	44 (22.7)	15 (21.7)	21 (27.3)	94 (20.7)
21-30oz	21 (18.3)	46 (23.7)	25 (36.2)	23 (29.9)	115 (25.3)
31-40oz	15 (13.0)	35 (18.0)	16 (23.2)	10 (13.0)	76 (16.7)
41-50oz	17 (14.8)	15 (7.7)	4 (5.8)	3 (3.9)	39 (8.6)
51-60oz	10 (8.7)	20 (10.3)	3(4.3)	7 (9.1)	40 (8.8)
>60oz	34 (29.6)	20 (10.3)	0 (0.0)	0 (0.0)	54 (11.9)

Question 10: How many servings of fruit do you eat each day?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
0 servings	32 (27.6)	27 (14.0)	6 (8.6)	7 (9.5)	72 (15.9)
1 servings	49 (42.2)	106 (54.9)	25 (35.7)	22 (29.7)	202 (44.6)
2-4 servings	33 (28.4)	57 (29.5)	35 (50.0)	38 (51.4)	163 (36.0)
>4 servings	2 (1.7)	3 (1.6)	4 (5.7)	7 (9.5)	16 (3.5)

Question 11: How many servings of vegetable do you eat each day?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
0 servings	11 (9.5)	19 (9.8)	7 (10.0)	4 (5.2)	41 (9.0)
1 servings	56 (48.3)	94 (48.5)	25 (35.7)	25 (32.5)	200 (43.8)
2-4 servings	48 (41.4)	75 (38.7)	36 (51.4)	43 (55.8)	202 (44.2)
>4 servings	1 (0.9)	6 (3.1)	2 (2.9)	5 (6.5)	14 (3.1)

Question 12: How many servings of meat eat each day?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
1 servings	10 (8.6)	60 (30.9)	25 (35.7)	43 (58.1)	138 (30.4)
2-4 servings	75 (64.7)	118 (60.8)	39 (55.7)	23 (31.1)	255 (56.2)
5-6 servings	20 (17.2)	9 (4.6)	3 (4.3)	2 (2.7)	34 (7.5)
>6 servings	10 (8.6)	2 (1.0)	2 (2.9)	0 (0.0)	14 (3.1)
Don't eat meat	1 (0.9)	5 (2.6)	1 (1.4)	6 (8.1)	13 (2.9)

Question 13: How often do you eat fish per week?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
1 time per week	58 (50.0)	87 (44.8)	32 (47.1)	32 (41.6)	209 (45.9)
2-4 times per week	22 (19.0)	17 (8.8)	19 (27.9)	12 (15.6)	70 (15.4)
>4 times per week	1 (0.9)	1 (0.5)	2 (2.9)	4 (5.2)	8 (1.8)
Don't eat fish	35 (30.2)	89 (45.9)	15 (22.1)	29 (37.7)	168 (36.9)

Question 14: Do you snack between meals? If so, how many snacks do you eat each day?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
1-2 snacks	76 (65.5)	150 (77.7)	41 (59.4)	55 (71.4)	322 (70.8)
3-4 snacks	25 (21.6)	21 (10.9)	16 (23.2)	15 (19.5)	77 (16.9)
>4 snacks	3 (2.6)	3 (1.6)	5 (7.2)	4 (5.2)	15 (3.3)
Don't eat snacks	12 (10.3)	19 (9.8)	7 (10.1)	3 (3.9)	41 (9.0)

Question 15: Do you drink coffee or tea? If yes, how many servings per day?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
1-2 servings	97 (31.9)	86 (44.3)	24 (34.8)	29 (37.7)	176 (38.6)
3-4 servings	7 (6.0)	11 (5.7)	13 (18.8)	17 (22.1)	48 (10.5)
5-6 servings	2 (1.7)	3 (1.5)	6 (8.7)	5 (6.5)	16 (3.5)
>6 servings	0 (0.0)	1 (0.5)	5 (7.2)	5 (6.5)	11 (2.4)
Don't drink tea or coffee	70 (60.3)	93 (47.9)	21 (30.4)	21 (27.3)	205 (45.0)

Question 16: Do you drink regular soda/soft drinks/pop? If yes, how many servings per day?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
1 serving	27 (23.3)	56 (29.0)	22 (31.4)	25 (32.9)	130 (28.6)
2-3 servings	30 (25.9)	35 (18.1)	14 (20.0)	13 (17.1)	92 (20.2)
3-4 servings	6 (5.2)	7 (3.6)	8 (11.4)	2 (2.6)	23 (5.1)
>5 servings	1 (0.9)	2 (1.0)	4 (8.7)	3 (3.9)	10 (2.2)
Don't drink soda	52 (44.8)	93 (48.2)	22 (31.4)	33 (43.4)	200 (44.0)

Question 17: Do you drink diet soda/soft drinks/pop? If yes, how many servings per day?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
1 serving	6 (5.2)	22 (11.5)	14 (20.6)	18 (23.7)	60 (13.3)
2-3 servings	10 (8.6)	27 (14.4)	7 (10.3)	5 (6.6)	49 (10.8)
3-4 servings	2 (1.7)	6 (3.1)	1 (1.5)	2 (2.6)	11 (2.4)
>5 servings	2 (1.7)	2 (1.0)	1 (1.5)	5 (6.6)	10 (2.2)
Don't drink diet soda	96 (82.8)	135 (70.3)	45 (66.2)	46 (60.5)	321 (71.2)

Question 18: How often do you eat fast food?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
1 time / week	21 (18.1)	66 (34.2)	25 (36.8)	37 (50.7)	149(33.1)
2-4 times / week	63 (54.3)	97 (50.3)	24 (35.3)	12 (16.4)	196(43.6)
5-6 times / week	17 (14.7)	10 (5.2)	1 (1.5)	2 (2.7)	30(6.7)
> 6 times / week	4 (3.4)	4 (2.1)	1 (1.5)	0 (0.0)	9(2.0)
Don't eat fast food	11 (9.5)	16 (8.3)	17 (25.0)	22 (30.1)	66(14.7)

Question 19: How often do you eat in restaurants, excluding fast food?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
1 time / week	62 (53.4)	115 (59.9)	38 (56.7)	47 (61.8)	262 (58.1)
2-4 times / week	48 (41.1)	67 (34.9)	9 (13.4)	2 (2.6)	126 (27.9)
5-6 times / week	5 (4.3)	2 (1.0)	2 (3.0)	0 (0.0)	9 (2.0)
> 6 times / week	0 (0.0)	3 (1.6)	1 (1.5)	0 (0.0)	4 (0.9)
Don't eat restaurants	1(0.9)	5 (2.6)	17 (25.4)	27 (35.5)	50 (11.1)

Question 20: On average, how much time do you spend preparing a meal?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
<10 minutes	28 (24.1)	41 (21.2)	9 (12.9)	10 (13.2)	88 (19.3)
10-20 minutes	55 (47.4)	77 (39.9)	22 (31.4)	27 (35.5)	181 (39.8)
20-30 minutes	17 (14.7)	50 (25.9)	21 (30.0)	19 (25.0)	107 (23.5)
>30 minutes	3 (2.6)	9 (4.7)	11 (15.7)	7 (9.2)	30 (6.6)
Don't prepare meals	13 (11.2)	16 (8.3)	7 (10.0)	13 (17.1)	49 (10.8)

Question 21: On average, how long does it take you to eat a meal?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
<10 minutes	31 (36.7)	22 (11.4)	15 (21.4)	16 (20.8)	84 (18.4)
10-20 minutes	74 (63.8)	124 (64.2)	36 (51.4)	41 (53.2)	275 (60.3)
20-30 minutes	8 (6.9)	41 (21.2)	12 (17.1)	18 (23.4)	79 (17.3)
30-45 minutes	3 (2.6)	5 (2.6)	4 (5.7)	2 (2.6)	14 (3.1)
>45 minutes	0 (0.0)	1 (0.5)	3 (4.3)	0 (0.0)	4 (0.9)

Question 22: Do you regularly take any herbal supplements?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
Yes	17 (14.7)	18 (9.3)	12 (17.6)	8 (10.8)	55 (12.2)
No	99 (85.3)	175 (90.7)	56 (82.4)	66 (89.2)	396 (87.8)

Question 23: Do you regularly take any dietary supplements?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
Yes	52 (44.8)	70 (36.5)	14 (21.5)	16 (21.6)	152 (34.0)
No	64 (55.2)	122 (63.5)	51 (78.5)	58 (78.4)	295 (66.0)

Question 24: How many cigarettes a day do you smoke?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
1-4 cigarettes	9 (7.8)	14 (7.2)	6 (9.0)	5 (6.8)	34 (7.5)
5-10 cigarettes	7 (6.0)	4 (2.1)	5 (7.5)	10 (13.5)	26 (5.8)
11-15 cigarettes	1 (0.9)	2 (1.0)	1 (1.5)	5 (6.7)	9 (2.0)
>15 cigarettes	2 (1.7)	0 (0.0)	6 (9.0)	3 (4.1)	11 (2.4)
Don't smoke	97 (83.6)	174 (89.7)	49 (73.1)	51 (68.9)	371 (82.3)

Question 25: Do you drink alcohol (beer, wine, liquor)?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
1 day/week	25 (21.6)	60 (30.9)	11 (15.7)	16 (21.9)	112 (25.0)
2-3 days/week	39 (33.6)	56 (28.9)	24 (34.3)	42 (57.5)	161 (36.0)
4-5 days/week	11 (9.5)	5 (2.6)	12 (17.1)	8 (11.0)	36 (7.9)
6-7 days/week	3 (2.6)	0 (0.0)	3 (4.3)	1 (1.4)	7 (2.0)
Don't drink alcohol	38 (32.8)	73 (37.6)	20 (28.6)	6 (8.2)	137 (30.0)

Question 26: If you drink alcohol, how many servings per day do you drink?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
1 serving	9 (7.7)	29 (15.1)	15 (21.7)	14 (19.1)	67 (15.0)
2-4 servings	27 (23.3)	59 (30.7)	19 (27.5)	32 (43.8)	137 (30.0)
5-6 servings	17 (14.7)	21 (10.9)	6 (8.7)	11 (15.1)	55 (12.0)
> 6 servings	24 (20.7)	7 (3.7)	9 (13.0)	9 (12.3)	49 (11.0)
Don't drink alcohol	39 (33.6)	76 (39.6)	20 (29.0)	7 (9.6)	142 (32.0)

Question 27: On average, how much sleep do you get each night?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
1-4 hours	3 (2.6)	6 (3.1)	3 (4.3)	1 (1.3)	13 (3.0)
5-7 hours	83 (71.6)	141 (72.7)	38 (54.3)	50 (65.8)	312 (68.0)
>7 hours	30 (25.9)	47 (24.2)	29 (41.4)	25 (32.9)	131 (29.0)

Question 28: How many days of the week do you perform exercise that's at least 20 minutes in length and also makes you sweat?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
1-2 days	19 (16.4)	55 (28.5)	19 (27.5)	22 (29.0)	115 (25.0)
3-4 days	29 (25.0)	65 (33.7)	19 (27.5)	16 (21.1)	129 (28.0)
4-5 days	29 (25.0)	25 (13.0)	9 (13.0)	16 (21.1)	79 (17.0)
6-7 days	31 (26.7)	31 (16.1)	15 (21.8)	11 (14.5)	88 (19.0)
Don't exercise	8 (6.9)	17 (8.8)	7 (10.1)	11 (14.5)	43 (10.0)

Question 29: Have you ever used smoking as a weight control method?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
Yes	4 (3.5)	9 (4.7)	2 (2.9)	8 (10.8)	23 (5.0)
No	112 (96.6)	184 (95.3)	66 (97.1)	66 (89.2)	428 (95.0)

Question 30: Have you ever been on a diet for weight loss?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
Yes	35 (30.2)	108 (56.3)	8 (11.8)	35 (46.1)	186 (41.0)
No	81 (69.8)	84 (43.8)	60 (88.2)	41 (54.0)	266 (59.0)

Question 31: How would you describe your weight?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
Very underweight	2 (1.7)	1 (0.5)	4 (6.0)	0 (0.0)	7 (2.0)
Slightly underweight	18 (15.5)	11 (5.7)	3 (4.5)	10 (13.2)	42 (9.0)
About the right weight	74 (63.8)	105 (54.1)	39 (58.2)	36 (47.4)	254 (56.0)
Slightly overweight	20 (17.2)	68 (35.1)	19 (28.4)	26 (34.2)	133 (29.0)
Very overweight	2 (1.7)	9 (4.6)	2 (3.0)	4 (5.3)	17 (4.0)

Question 32: Are you currently trying to:

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
Lose weight	30 (25.9)	110 (56.7)	17 (25.0)	33 (42.9)	190 (42.0)
Gain weight	31 (26.7)	3 (1.6)	9 (13.2)	1 (1.3)	44 (10.0)
Maintain weight	32 (27.6)	50 (25.8)	9 (13.2)	15 (19.5)	106 (23.0)
Not doing anything about weight	23 (19.8)	31 (16.0)	33 (48.5)	28 (36.4)	115 (25.0)

Question 33: "Nutrition and exercise are important for good health," do you:

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
Strongly agree	106 (91.4)	181 (93.3)	56 (84.9)	54 (73.0)	397 (88.0)
Somewhat agree	9 (7.8)	12 (6.2)	9 (13.6)	19 (25.7)	49 (11.0)
Somewhat disagree	0 (0.0)	0 (0.0)	1 (1.5)	0 (0.0)	1 (0.2)
Strongly disagree	1 (0.9)	1 (0.5)	0 (0.0)	0 (0.0)	2 (0.4)
No opinion	0 (0.0)	0 (0.0)	0 (0.0)	1 (1.4)	1 (0.2)

Question 34: "It is hard to eat a variety of foods." – do you:

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
Strongly agree	25 (21.6)	33 (17.0)	3 (4.6)	10 (13.3)	71 (16.0)
Somewhat agree	47 (40.5)	97 (50.0)	23 (34.9)	37 (49.3)	204 (45.0)
Somewhat disagree	34 (29.3)	44 (22.7)	16 (24.2)	15 (20.0)	109 (24.0)
Strongly disagree	8 (6.9)	17 (8.8)	21 (31.8)	12 (16.0)	58 (13.0)
No opinion	2 (1.7)	3 (1.6)	3 (4.6)	1 (1.3)	9 (2.0)

Question 35: "Food labels are useful and helpful in planning my meals." – do you:

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
Strongly agree	31 (26.7)	61 (31.4)	10 (14.5)	6 (7.9)	108 (24.0)
Somewhat agree	43 (37.1)	81 (41.8)	29 (42.0)	31 (40.8)	184 (40.0)
Somewhat disagree	18 (15.5)	25 (12.9)	9 (13.0)	14 (18.4)	66 (15.0)
Strongly disagree	11 (9.5)	7 (3.6)	6 (8.7)	5 (6.6)	29 (6.0)
No opinion	13 (11.2)	20 (10.3)	15 (21.7)	20 (26.3)	68 (1.0)

Question 36: If you were going to buy a food item, which label would appeal to you more?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
95% fat-free	44 (37.9)	115 (59.9)	14 (20.9)	32 (43.2)	205 (46.0)
5% fat	15 (12.9)	8 (4.2)	2 (3.0)	3 (4.1)	28 (6.0)
would not make a difference	57 (49.1)	69 (34.9)	51 (76.1)	39 (52.7)	216 (48.0)

Question 37: What type of food do you prefer?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
Salty	36 (31.0)	59 (30.4)	12 (17.7)	15 (19.5)	122 (27.0)
Sweet	25 (21.6)	58 (29.9)	12 (17.7)	18 (23.4)	113 (25.0)
Sour	3 (2.6)	3 (1.6)	2 (2.9)	4 (5.2)	12 (3.0)
Bitter	1 (0.9)	0 (0.0)	0 (0.0)	1 (1.3)	2 (0.4)
No Preference	51 (44.0)	74 (38.1)	42 (61.8)	39 (50.7)	206 (45.0)

Question 38: Were you breast-fed as an infant?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
Yes	75 (64.7)	136 (70.5)	49 (71.0)	47 (64.4)	307 (68.0)
No	17 (14.7)	45 (23.3)	8 (11.6)	16 (21.9)	86 (19.0)
Don't know	24 (20.7)	12 (6.2)	12 (17.4)	10 (13.7)	58 (13.0)
Mean BMI	OK Male (kg/m <sup>2</sup> )	OK Female (kg/m <sup>2</sup> )	SC Male (kg/m <sup>2</sup> )	SC Female (kg/m <sup>2</sup> )	
Yes	24.5	21.9	23.9	22.3	
No	25.4	21.8	22.8	23.4	
Don't know	24.8	25.0	23.8	22.1	

Question 39: Are you sexually active?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
Yes	69 (60.5)	103 (53.7)	49 (76.6)	53 (72.6)	274 (62.0)
No	45 (39.5)	89 (46.4)	15 (23.4)	20 (27.4)	169 (38.0)

Question 40: Growing up, how often did you eat dinner together as a family?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
Never	3 (2.6)	4 (2.1)	2 (3.0)	6 (8.0)	15 (3.0)
1-2 times/week	18 (15.5)	34 (17.6)	5 (7.5)	7 (9.3)	64 (14.0)
3-5 times/week	66 (56.9)	88 (45.6)	24 (35.8)	20 (26.7)	198 (44.0)
Everyday	29 (25.0)	67 (24.7)	36 (53.7)	42 (56.0)	174 (39.0)

Question 41: Growing up, was weight and/or dieting an issue in your household?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
Yes	26 (22.4)	69 (35.8)	11 (16.2)	21 (27.6)	127 (28.0)
No	88 (75.9)	120 (62.2)	52 (76.5)	51 (67.1)	311 (69.0)
Don't know	2 (1.7)	4 (2.1)	5 (7.4)	4 (5.3)	15 (3.0)
Mean BMI	OK Male (kg/m <sup>2</sup> )	OK Female (kg/m <sup>2</sup> )	SC Male (kg/m <sup>2</sup> )	SC Female (kg/m <sup>2</sup> )	
Yes	25.7	22.8	25.5	23.8	
No	24.6	22.2	23.6	22.5	
Don't know	33.7	20.6	24.5	25.6	

Question 42: Compared to your parent's diet, is your current diet:

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
Similar	37 (31.9)	86 (44.6)	25 (36.8)	28 (37.3)	176 (39.0)
Different	65 (56.0)	57 (29.5)	28 (41.2)	26 (34.7)	176 (39.0)
Mix	14 (12.1)	50 (25.9)	15 (22.1)	21 (28.0)	100 (22.0)

Question 43: What is your opinion on obesity?

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
It's a problem	98 (84.5)	178 (92.2)	54 (81.8)	63 (84.0)	393 (87.0)
It's not a problem	5 (4.3)	2 (1.0)	0 (0.0)	1 (1.3)	8 (2.0)
No opinion	13 (11.2)	13 (6.7)	12 (18.2)	11 (14.7)	49 (11.0)

Question 44: Do you consider your knowledge about nutrition to be:

	OK Male (%)	OK Female (%)	SC Male (%)	SC Female (%)	Total (%)
Poor	7 (6.0)	18 (9.3)	6 (9.0)	7 (9.3)	38 (8.0)
Average	80 (69.0)	142 (73.6)	43 (64.2)	54 (72.0)	319 (71.0)
Excellent	29 (25.0)	32 (16.6)	17 (25.4)	13 (17.3)	91 (20.0)
Nonexistent	0 (0.0)	1 (0.5)	1 (1.5)	1 (1.3)	3 (0.7)

Chi Square Analysis of Eating and Health Behaviors in Oklahoma and Scotland

	Significant*	Not significant
Smoked	0.000	
Meals per day	0.000	
Water servings per day	< .0001	
Fruit servings per day	< .0001	
Vegetable servings per day		0.0002
Meat servings per day	< .0001	
Fish servings per week	0.0002	
Snacking occasions per day	0.0005	
Coffee/Tea servings per day	< .001	
Regular soda servings per day	0.0005	
Diet soda servings per day	0.0017	
Fast food meals per day	< .0001	
Restaurant meals per day	< .0001	
Time devoted to eating meals	0.0002	
Herbal supplement use		0.0044
Botany supplement use	0.0001	
Cigarettes smoked per day	< .0001	
Alcohol use, days per week	< .0001	
Alcohol servings per day	< .0001	
Average # of sleep each night		0.0008
Days of exercise per week	0.0017	
Use of smoking at night instead		0.0002
Experiences with dieting for weight loss	< .0001	
Track the weight	0.0005	
Describe weight plan	< .0001	
Meal times and size	0.0002	
Variety of foods	< .0001	
Meat intake for growing	0.0005	
Fruit intake	< .0001	
Type food	0.0007	
Smoked	0.0002	
Smoking status	0.0013	
Frequency of family dining when growing up	< .0001	
Sex	0.0005	
Parent's diet	0.0004	
Opinion on obesity	0.0002	
Nutrition knowledge		0.0001

APPENDIX D

Chi Square Analysis

### Chi Square Analysis of Eating and Health Behaviors in Oklahoma and Scotland

	Significant*	Not significant
Breakfast	0.003	
Meals per day	0.003	
Water servings per day	<.0001	
Fruit servings per day	<.0001	
Vegetable servings per day		0.0705
Meat servings per day	<.0001	
Fish servings per week	0.0002	
Snacking occasions per day	0.0225	
Coffee/Tea servings per day	<.001	
Regular soda servings per day	0.0355	
Diet soda servings per day	0.0017	
Fast food meals per day	<.0001	
Restaurant meals per day	<.0001	
Time devoted to eating meals	0.0003	
Herbal supplement use		0.2448
Dietary supplement use	0.0011	
Cigarettes smoked per day	<.0001	
Alcohol use, days per week	<.0001	
Alcohol servings per day	<.0001	
Amount of sleep each night		0.1208
Days of exercise per week	0.017	
Use of smoking as weight control		0.0949
Experience with dieting for weight loss	<.0001	
Describe weight	0.0005	
Describe weight plan	<.0001	
Nutrition and exercise	0.0005	
Variety of foods	<.0001	
Food labels for planning	0.0005	
Food labels	<.0001	
Type food	0.0387	
Breastfed	0.0038	
Sexually active	0.0018	
Frequency of family dining when growing up	<.0001	
Issue	0.0076	
Parent's diet	0.0004	
Opinion on obesity	0.0267	
Nutrition knowledge		0.5787

Spearman correlation of BMI of 10 adults with eating and health behaviors

	BC Male	BC Female	AC Male	AC Female
Breastfeed	0.17	0.01	-0.13	-0.03
Meats per day	0.17	0.05	-0.09	0.02
Grains per day	0.22	0.18	-0.19	0.04
Vegetable servings per day	0.12	0.13	-0.13	-0.12
Meat servings per day	0.13	0.13	0.19	0.17
Fish servings per week	0.13	0.05	-0.14	-0.05
Smoking cessation per day	0.13	0.11	-0.08	0.05
Regular exercise	0.13	0.11	-0.08	0.05
Fast food meals per day	0.13	0.11	-0.08	0.05
Meats meal meals per day	0.13	0.11	-0.08	0.05
Medicinal supplement use	0.13	0.11	-0.08	0.05
Beauty supplement use	0.13	0.11	-0.08	0.05
Cigarettes smoked per day	0.13	0.11	-0.08	0.05
Alcohol use (1 to 3) per week	0.13	0.11	-0.08	0.05
Alcohol servings per day	0.13	0.11	-0.08	0.05
Days of exercise per week	0.13	0.11	-0.08	0.05
Hours of walking or weight loss per day	0.13	0.11	-0.08	0.05
Insulin use (1 to 3) per week	0.13	0.11	-0.08	0.05
Protein use (1 to 3) per week	0.13	0.11	-0.08	0.05
Plant protein (1 to 3) per week	0.13	0.11	-0.08	0.05
Plant protein (4 to 6) per week	0.13	0.11	-0.08	0.05
Plant protein (7 to 9) per week	0.13	0.11	-0.08	0.05
Plant protein (10 to 12) per week	0.13	0.11	-0.08	0.05
Plant protein (13 to 15) per week	0.13	0.11	-0.08	0.05
Plant protein (16 to 18) per week	0.13	0.11	-0.08	0.05
Plant protein (19 to 21) per week	0.13	0.11	-0.08	0.05
Plant protein (22 to 24) per week	0.13	0.11	-0.08	0.05
Plant protein (25 to 27) per week	0.13	0.11	-0.08	0.05
Plant protein (28 to 30) per week	0.13	0.11	-0.08	0.05
Plant protein (31 to 33) per week	0.13	0.11	-0.08	0.05
Plant protein (34 to 36) per week	0.13	0.11	-0.08	0.05
Plant protein (37 to 39) per week	0.13	0.11	-0.08	0.05
Plant protein (40 to 42) per week	0.13	0.11	-0.08	0.05
Plant protein (43 to 45) per week	0.13	0.11	-0.08	0.05
Plant protein (46 to 48) per week	0.13	0.11	-0.08	0.05
Plant protein (49 to 51) per week	0.13	0.11	-0.08	0.05
Plant protein (52 to 54) per week	0.13	0.11	-0.08	0.05
Plant protein (55 to 57) per week	0.13	0.11	-0.08	0.05
Plant protein (58 to 60) per week	0.13	0.11	-0.08	0.05
Plant protein (61 to 63) per week	0.13	0.11	-0.08	0.05
Plant protein (64 to 66) per week	0.13	0.11	-0.08	0.05
Plant protein (67 to 69) per week	0.13	0.11	-0.08	0.05
Plant protein (70 to 72) per week	0.13	0.11	-0.08	0.05
Plant protein (73 to 75) per week	0.13	0.11	-0.08	0.05
Plant protein (76 to 78) per week	0.13	0.11	-0.08	0.05
Plant protein (79 to 81) per week	0.13	0.11	-0.08	0.05
Plant protein (82 to 84) per week	0.13	0.11	-0.08	0.05
Plant protein (85 to 87) per week	0.13	0.11	-0.08	0.05
Plant protein (88 to 90) per week	0.13	0.11	-0.08	0.05
Plant protein (91 to 93) per week	0.13	0.11	-0.08	0.05
Plant protein (94 to 96) per week	0.13	0.11	-0.08	0.05
Plant protein (97 to 99) per week	0.13	0.11	-0.08	0.05
Plant protein (100 to 102) per week	0.13	0.11	-0.08	0.05
Plant protein (103 to 105) per week	0.13	0.11	-0.08	0.05
Plant protein (106 to 108) per week	0.13	0.11	-0.08	0.05
Plant protein (109 to 111) per week	0.13	0.11	-0.08	0.05
Plant protein (112 to 114) per week	0.13	0.11	-0.08	0.05
Plant protein (115 to 117) per week	0.13	0.11	-0.08	0.05
Plant protein (118 to 120) per week	0.13	0.11	-0.08	0.05
Plant protein (121 to 123) per week	0.13	0.11	-0.08	0.05
Plant protein (124 to 126) per week	0.13	0.11	-0.08	0.05
Plant protein (127 to 129) per week	0.13	0.11	-0.08	0.05
Plant protein (130 to 132) per week	0.13	0.11	-0.08	0.05
Plant protein (133 to 135) per week	0.13	0.11	-0.08	0.05
Plant protein (136 to 138) per week	0.13	0.11	-0.08	0.05
Plant protein (139 to 141) per week	0.13	0.11	-0.08	0.05
Plant protein (142 to 144) per week	0.13	0.11	-0.08	0.05
Plant protein (145 to 147) per week	0.13	0.11	-0.08	0.05
Plant protein (148 to 150) per week	0.13	0.11	-0.08	0.05
Plant protein (151 to 153) per week	0.13	0.11	-0.08	0.05
Plant protein (154 to 156) per week	0.13	0.11	-0.08	0.05
Plant protein (157 to 159) per week	0.13	0.11	-0.08	0.05
Plant protein (160 to 162) per week	0.13	0.11	-0.08	0.05
Plant protein (163 to 165) per week	0.13	0.11	-0.08	0.05
Plant protein (166 to 168) per week	0.13	0.11	-0.08	0.05
Plant protein (169 to 171) per week	0.13	0.11	-0.08	0.05
Plant protein (172 to 174) per week	0.13	0.11	-0.08	0.05
Plant protein (175 to 177) per week	0.13	0.11	-0.08	0.05
Plant protein (178 to 180) per week	0.13	0.11	-0.08	0.05
Plant protein (181 to 183) per week	0.13	0.11	-0.08	0.05
Plant protein (184 to 186) per week	0.13	0.11	-0.08	0.05
Plant protein (187 to 189) per week	0.13	0.11	-0.08	0.05
Plant protein (190 to 192) per week	0.13	0.11	-0.08	0.05
Plant protein (193 to 195) per week	0.13	0.11	-0.08	0.05
Plant protein (196 to 198) per week	0.13	0.11	-0.08	0.05
Plant protein (199 to 201) per week	0.13	0.11	-0.08	0.05
Plant protein (202 to 204) per week	0.13	0.11	-0.08	0.05
Plant protein (205 to 207) per week	0.13	0.11	-0.08	0.05
Plant protein (208 to 210) per week	0.13	0.11	-0.08	0.05
Plant protein (211 to 213) per week	0.13	0.11	-0.08	0.05
Plant protein (214 to 216) per week	0.13	0.11	-0.08	0.05
Plant protein (217 to 219) per week	0.13	0.11	-0.08	0.05
Plant protein (220 to 222) per week	0.13	0.11	-0.08	0.05
Plant protein (223 to 225) per week	0.13	0.11	-0.08	0.05
Plant protein (226 to 228) per week	0.13	0.11	-0.08	0.05
Plant protein (229 to 231) per week	0.13	0.11	-0.08	0.05
Plant protein (232 to 234) per week	0.13	0.11	-0.08	0.05
Plant protein (235 to 237) per week	0.13	0.11	-0.08	0.05
Plant protein (238 to 240) per week	0.13	0.11	-0.08	0.05
Plant protein (241 to 243) per week	0.13	0.11	-0.08	0.05
Plant protein (244 to 246) per week	0.13	0.11	-0.08	0.05
Plant protein (247 to 249) per week	0.13	0.11	-0.08	0.05
Plant protein (250 to 252) per week	0.13	0.11	-0.08	0.05
Plant protein (253 to 255) per week	0.13	0.11	-0.08	0.05
Plant protein (256 to 258) per week	0.13	0.11	-0.08	0.05
Plant protein (259 to 261) per week	0.13	0.11	-0.08	0.05
Plant protein (262 to 264) per week	0.13	0.11	-0.08	0.05
Plant protein (265 to 267) per week	0.13	0.11	-0.08	0.05
Plant protein (268 to 270) per week	0.13	0.11	-0.08	0.05
Plant protein (271 to 273) per week	0.13	0.11	-0.08	0.05
Plant protein (274 to 276) per week	0.13	0.11	-0.08	0.05
Plant protein (277 to 279) per week	0.13	0.11	-0.08	0.05
Plant protein (280 to 282) per week	0.13	0.11	-0.08	0.05
Plant protein (283 to 285) per week	0.13	0.11	-0.08	0.05
Plant protein (286 to 288) per week	0.13	0.11	-0.08	0.05
Plant protein (289 to 291) per week	0.13	0.11	-0.08	0.05
Plant protein (292 to 294) per week	0.13	0.11	-0.08	0.05
Plant protein (295 to 297) per week	0.13	0.11	-0.08	0.05
Plant protein (298 to 300) per week	0.13	0.11	-0.08	0.05

Table of Spearman Correlation of eating and health behaviors and BMI

Raw Data: Spearman Correlation Report



### Spearman correlation of BMI with beliefs and eating and health behaviors

	<i>OK Males</i>	<i>OK Females</i>	<i>SC Males</i>	<i>SC Females</i>
Breakfast	-0.12	0.01	-0.13	-0.03
Meals per day	0.11	0.04	-0.24	0.02
Servings per day	0.04	-0.10	-0.18	0.04
Vegetable servings per day	*0.18	*-0.14	-0.13	-0.18
Meat servings per day	*0.19	*-0.17	0.10	0.17
Fish servings per week	*0.25	-0.03	-0.14	-0.06
Snacking occasions per day	**0.26	-0.01	-0.01	0.05
Regular soda servings per day	*-0.31	0.09	-0.06	0.01
Fast food meals per day	0.01	0.11	0.08	0.24
Restaurant meals per day	-0.02	-0.03	-0.04	0.07
Herbal supplement use	-0.09	0.11	-0.01	-0.04
Dietary supplement use	*-0.20	0.05	0.00	-0.18
Cigarettes smoked per day	-0.11	0.07	-0.11	*0.37
Alcohol use, days per week	0.16	0.08	-0.23	0.12
Alcohol servings per day	**0.23	-0.03	-0.17	0.19
Days of exercise per week	*0.20	0.04	0.08	0.06
Use of smoking as weight control	-0.08	-0.17	0.00	*-0.29
Experience with dieting for weight loss	**0.27	**0.32	**0.43	*-0.37
Frequency of family dining when growing up	0.00	-0.03	-0.20	0.20
Time devoted to preparing meals	*0.21	-0.11	-0.06	-0.2
Time devoted to eating meals	-0.01	-0.06	-0.09	-0.07
Amount of sleep each night	*-0.20	0.04	0.00	-0.15
Water servings per day	**0.25	-0.04	0.16	0.14
Coffee/Tea servings per day	-0.11	0.05	-0.07	-0.06
Diet Soda servings per day	*0.23	0.04	0.11	0.22
Age (years)	0.06	-0.08	0.18	-0.19

\*p<.05, \*\*p<.001

Correlation Report - OU / Male

	HEIGHT	WEIGHT	BREAKFAS	MEALS	WATER	SERVFRUI
HEIGHT	1.000000	0.840190	-0.01397	-0.003552	0.072993	0.111284
	0.000000	0.000000	0.903359	0.969814	0.438379	0.234529
WEIGHT	115.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	0.840190	1.000000	-0.105423	0.094114	0.217448	0.089992
	0.000000	0.000000	0.296436	0.321427	0.021275	0.344946
BREAKFAS	113.000000	112.000000	113.000000	113.000000	112.000000	113.000000
	-0.01397	-0.105423	1.000000	0.469541	0.273330	0.375367
	0.903359	0.296436	0.000000	0.000000	0.003121	0.000033
	116.000000	113.000000	115.000000	116.000000	115.000000	116.000000
MEALS	-0.003552	0.094114	0.469541	1.000000	0.244396	0.426070
	0.969814	0.321427	0.000000	0.000000	0.008463	0.000002
WATER	116.000000	113.000000	116.000000	115.000000	115.000000	116.000000
	0.072993	0.217448	0.273330	0.244396	1.000000	0.372800
	0.438379	0.021275	0.003121	0.008463	0.000000	0.000041
SERVFRUI	115.000000	112.000000	115.000000	115.000000	114.000000	115.000000
	0.111284	0.089992	0.375367	0.426070	0.372800	1.000000
	0.234529	0.344946	0.000033	0.000002	0.000041	0.000000
SERVVEGE	116.000000	113.000000	116.000000	116.000000	115.000000	115.000000
	0.092938	0.023226	0.228449	0.269452	0.237086	0.435016
	0.322830	0.031096	0.013643	0.003446	0.010736	0.000001
SERVMEAT	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	0.084630	0.218507	-0.054985	0.141176	0.129496	0.222159
	0.366397	0.020096	0.557714	0.130624	0.167800	0.018537
FISH	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	0.090415	0.238588	0.252162	0.248101	0.102335	0.289482
	0.334428	0.010931	0.006319	0.007246	0.276467	0.001623
SNACK	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	-0.007117	-0.202946	-0.011788	0.022696	0.046599	-0.025893
	0.939561	0.031096	0.509992	0.808911	0.620937	0.782619
COFFEETE	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	0.151591	-0.034562	0.059690	0.059709	-0.048944	-0.030875
	0.104288	0.716365	0.524530	0.524347	0.610137	0.742146
REGULARS	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	-0.132915	-0.286151	-0.365071	-0.284486	-0.455741	-0.288063
	0.154624	0.002123	0.000096	0.001968	0.000000	0.001715
DIETSODA	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	-0.009917	0.187293	-0.189574	0.054487	-0.090050	-0.116683
	0.915855	0.046986	0.041532	0.561224	0.338530	0.212264
FASTFOOD	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	0.061009	0.075726	-0.238346	-0.154375	-0.201158	-0.276757
	0.515316	0.425351	0.009980	0.098008	0.031107	0.002634
RESTAURA	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	0.113839	0.049656	-0.172938	-0.118270	-0.250239	0.002431
	0.223693	0.601457	0.063391	0.206068	0.006991	0.679335
PREPARED	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	-0.041520	0.108711	0.076271	0.083645	0.204959	-0.032201
	0.658101	0.247396	0.415785	0.497300	0.027998	0.731484
EATINGTI	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	-0.079615	-0.056398	0.088478	0.088478	0.229144	0.088822
	0.365581	0.532221	0.164242	0.478309	0.013796	0.343049
HERBALSU	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	-0.204237	-0.145639	-0.049070	-0.010200	-0.222939	-0.171820
	0.027870	0.123763	0.600914	0.913463	0.016627	0.065146
DIETARYS	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	-0.042351	-0.151408	-0.284840	-0.287354	-0.252171	-0.343967
	0.651708	0.109414	0.001941	0.001762	0.006552	0.000156
CIGARETT	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	0.091455	-0.050110	-0.195049	-0.072063	-0.169607	-0.081493
	0.328873	0.598134	0.035899	0.442048	0.099968	0.384480
ALCOHOL	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	0.109988	0.169189	-0.258911	-0.117718	0.036656	0.018989
	0.239856	0.073221	0.005010	0.208208	0.942006	0.000013
SERVALCO	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	0.106221	0.214654	-0.216834	-0.064102	0.021886	-0.155462
	0.256436	0.022423	0.019396	0.494213	0.818057	0.095571
SLEEP	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	-0.052162	-0.185210	0.057295	0.193930	0.005828	-0.009090
	0.578141	0.052093	0.541475	0.039987	0.950706	0.948521
EXERCISE	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	0.007300	0.150203	0.245426	0.196774	0.458831	0.392314
	0.938009	0.112298	0.007921	0.034251	0.000000	0.000000
SMOKINGW	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	0.075064	-0.036733	0.207172	0.004562	-0.050313	0.130804
	0.423225	0.699296	0.025654	0.961234	0.593345	0.161642
DIETING	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	-0.075444	-0.266018	-0.030773	-0.109422	-0.167319	-0.114455
	0.420877	0.004401	0.742965	0.242298	0.073887	0.221182
DESCRIPT	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	0.117057	0.486484	-0.368525	-0.044384	0.198170	-0.003199
	0.210790	0.000000	0.484835	0.836153	0.033752	0.972810
CURRENTC	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	-0.008624	-0.236769	0.153717	0.061998	-0.129200	0.121939
	0.926791	0.011573	0.099464	0.508523	0.168773	0.162244
QUOTE1	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	0.126358	-0.029768	-0.106152	-0.217640	-0.242047	-0.174021
	0.176501	0.754282	0.256746	0.018932	0.009156	0.061727
QUOTE2	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	0.211684	0.021194	0.225811	0.175562	0.196215	0.291745
	0.022541	0.024050	0.014888	0.058423	0.035583	0.001485
QUOTE_3	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	0.161406	0.138748	-0.206315	-0.197792	-0.162253	-0.001841
	0.063462	0.142755	0.025295	0.134482	0.083191	0.984352
LABEL	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	-0.035035	-0.044599	-0.125621	-0.129836	-0.028446	-0.021014
	0.708875	0.639028	0.179060	0.164797	0.762796	0.622835
FAMILYDI	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	-0.017174	0.039892	-0.023154	-0.019790	0.021298	0.017038
	0.854813	0.674842	0.805135	0.833002	0.821260	0.855951
BMI	116.000000	113.000000	116.000000	116.000000	115.000000	116.000000
	0.218435	0.861746	-0.120754	0.109006	0.252619	0.039661
	0.020108	0.000000	0.202652	0.250421	0.007205	0.674162
YEARS	113.000000	113.000000	113.000000	113.000000	112.000000	113.000000
	0.045443	0.074507	0.017837	0.135261	0.020957	-0.088451
	0.629627	0.434949	0.649929	0.149500	0.824841	0.347209
	115.000000	112.000000	115.000000	115.000000	114.000000	115.000000

Correlation Report - OU / Male

	SERVVEGE	SERVMEAT	FISH	SNACK	COFFEETE	REGULARS
HEIGHT	0.092838 0.322630 116.000000	0.084630 0.395397 116.000000	0.090415 0.334428 116.000000	0.015191 0.939661 116.000000	0.151591 0.104288 116.000000	-0.132915 0.154924 116.000000
WEIGHT	0.213422 0.023226 113.000000	0.218507 0.020086 113.000000	0.218507 0.010831 113.000000	0.031086 -0.202946 113.000000	0.031086 -0.034552 0.716395	-0.286151 0.002123 113.000000
BREAKFAS	0.228449 0.013643 116.000000	-0.054986 0.557714 116.000000	0.252182 0.006319 116.000000	-0.061788 0.509662 116.000000	0.059680 0.524530 116.000000	-0.365071 0.000056 116.000000
MEALS	0.289452 0.003445 116.000000	0.130624 0.007246 116.000000	0.141178 0.007246 116.000000	0.222996 0.808911 116.000000	0.056706 0.524347 116.000000	-0.284486 0.001968 116.000000
WATER	0.237086 0.010736 115.000000	0.129493 0.167800 115.000000	0.102335 0.274687 115.000000	0.102335 0.274687 115.000000	0.048596 0.610137 115.000000	-0.455741 0.000000 115.000000
SERVFRUI	0.435016 0.000001 116.000000	0.222159 0.016537 116.000000	0.289482 0.001623 116.000000	-0.025863 0.782619 116.000000	-0.036875 0.742146 116.000000	-0.268993 0.001715 116.000000
SERVVEGE	1.000000 0.000000 115.000000	0.163331 0.079787 116.000000	0.290770 0.001543 0.203289	0.290770 0.110050 0.047996	0.178224 0.055608 -0.019932	-0.292950 0.001416 -0.108019
SERVMEAT	0.163331 0.079787 116.000000	1.000000 0.000000 116.000000	0.000000 0.203289 0.029619	0.000000 0.608908 0.029619	0.000000 0.831818 0.000000	0.248425 -0.108019 0.028099
FISH	0.290770 0.001543 116.000000	0.203289 0.028619 116.000000	1.000000 0.000000 115.000000	0.000000 0.000000 0.298699	0.759831 0.000000 0.000000	0.000000 0.470098 0.000000
SNACK	-0.149152 0.110050 116.000000	-0.047996 0.608908 116.000000	0.298699 0.759831 116.000000	1.000000 0.000000 115.000000	0.000000 0.470098 0.000000	0.000000 0.470098 116.000000
COFFEETE	0.178224 0.055608 116.000000	-0.019932 0.831818 116.000000	0.038028 0.685285 116.000000	0.067722 0.470098 116.000000	0.067722 0.470098 116.000000	0.044976 0.831818 116.000000
REGULARS	-0.292950 0.001416 116.000000	-0.108019 0.248425 116.000000	-0.203289 0.028099 116.000000	0.238546 0.010574 0.191029	0.000000 0.000000 0.191029	0.000000 0.000000 0.191029
DIETSODA	-0.102790 0.272201 116.000000	0.070418 0.452596 116.000000	0.074453 0.420721 116.000000	-0.122270 0.191029 116.000000	0.000000 0.000000 116.000000	0.000000 0.000000 116.000000
FASTFOOD	0.163331 -0.049109 0.623075	0.092012 0.325925 116.000000	0.264345 0.000000 116.000000	0.333596 0.090576 0.333596	0.000000 0.131924 0.158051	0.000000 0.331296 0.000281
RESTAURA	-0.075467 0.420731 116.000000	0.105429 0.260015 116.000000	-0.019011 0.839588 116.000000	0.017747 0.850028 116.000000	0.212566 0.085097 0.085097	0.001410 116.000000 116.000000
PREPARED	0.021298 0.820482 116.000000	-0.144504 0.121710 116.000000	-0.009109 0.931158 116.000000	-0.075679 0.419423 116.000000	0.085097 0.363748 116.000000	0.028565 0.777128 116.000000
EATINGTI	0.160830 0.085174 116.000000	0.033400 116.000000 116.000000	0.727880 116.000000 116.000000	-0.002217 0.981154 116.000000	0.040414 0.696665 116.000000	0.068029 0.347363 116.000000
HERBALSU	-0.047953 0.609228 116.000000	-0.090726 0.332761 116.000000	-0.192522 0.038408 116.000000	-0.019037 0.839282 116.000000	0.103975 0.296684 116.000000	0.141238 0.130457 116.000000
DIETARYS	-0.319233 0.000478 116.000000	-0.145166 0.119993 116.000000	-0.311381 0.000669 116.000000	0.107980 0.249878 116.000000	0.085259 0.486435 116.000000	0.257198 0.005172 116.000000
CIGARETT	0.011666 0.901086 116.000000	-0.152026 0.103286 116.000000	0.095245 0.309143 116.000000	0.115621 0.216483 116.000000	0.207582 0.025356 116.000000	0.142842 0.126104 116.000000
ALCOHOL	0.007912 0.932821 116.000000	0.117387 0.209577 116.000000	-0.012532 0.409099 116.000000	-0.044922 0.693781 116.000000	0.188763 0.042428 116.000000	0.107307 0.251577 116.000000
SERVALCO	0.007912 0.932821 116.000000	0.117387 0.209577 116.000000	-0.054535 0.590949 116.000000	-0.042520 0.650407 116.000000	0.125893 0.178908 116.000000	0.100201 0.284528 116.000000
SLEEP	-0.106705 0.254262 116.000000	-0.018886 0.840526 116.000000	-0.035185 0.707867 116.000000	-0.031689 0.735595 116.000000	-0.096498 0.478178 116.000000	-0.000565 0.985230 116.000000
EXERCISE	0.359695 0.000073 116.000000	0.099205 0.289364 116.000000	0.151541 0.104406 116.000000	-0.091437 0.328969 116.000000	-0.190984 0.040012 116.000000	-0.410596 0.000005 116.000000
SMOKINGW	0.089820 0.337632 116.000000	0.133544 0.152961 116.000000	0.177727 0.056305 116.000000	0.177727 0.837175 116.000000	-0.060376 0.519693 116.000000	-0.071446 0.445978 116.000000
DIETING	-0.185689 0.045994 116.000000	-0.189596 0.041507 116.000000	-0.201553 0.030037 116.000000	0.185685 0.045975 116.000000	-0.028920 0.774227 116.000000	0.059195 -0.227777 116.000000
DESCRIPT	0.055960 0.550745 116.000000	0.006822 0.942058 116.000000	0.015009 0.872953 116.000000	-0.315978 0.000550 116.000000	0.076151 0.418524 116.000000	-0.190134 0.040622 116.000000
CURRENTC	-0.079346 0.397185 116.000000	-0.035254 0.707140 116.000000	0.038986 0.680271 116.000000	0.189053 0.042105 116.000000	-0.077007 0.411285 116.000000	-0.010126 0.914093 116.000000
QUOTE1	-0.155643 0.095246 116.000000	0.015144 0.871776 116.000000	0.007457 0.936979 116.000000	-0.073151 0.435173 116.000000	0.028911 0.758026 116.000000	0.269041 0.003497 116.000000
QUOTE2	0.259242 0.004953 116.000000	0.091858 0.326738 116.000000	0.053534 0.588174 116.000000	-0.127219 0.173548 116.000000	0.032081 0.732449 116.000000	0.000000 0.013829 116.000000
QUOTE_3	0.012586 0.895336 116.000000	-0.110810 0.236341 116.000000	-0.145111 0.120134 116.000000	0.043431 0.643424 116.000000	-0.051863 0.580328 116.000000	0.115602 0.215360 116.000000
LABEL	-0.067424 0.298154 116.000000	0.023507 0.802220 116.000000	0.033284 0.722819 116.000000	0.134102 0.151237 116.000000	0.181438 0.051272 116.000000	0.057928 0.536796 116.000000
FAMILYDI	-0.003958 0.966394 116.000000	-0.008290 0.929874 116.000000	0.033675 0.719696 116.000000	-0.033698 0.719706 116.000000	-0.047821 0.610215 116.000000	0.031328 0.736498 116.000000
BMI	0.178497 0.058549 113.000000	0.189786 0.044077 113.000000	0.253588 0.006725 113.000000	-0.260541 0.005318 113.000000	-0.111531 0.239564 113.000000	0.307870 0.000906 113.000000
YEARS	0.077312 0.411501 115.000000	-0.046485 0.621941 115.000000	-0.046895 0.618713 115.000000	-0.182155 0.051368 115.000000	0.097508 0.298873 115.000000	-0.093263 0.321348 115.000000



Correlation Report - OU / Male

	DIETARYS	CIGARETT	ALCOHOL	SERVALCO	SLEEP	EXERCISE
HEIGHT	0.042351	0.091455	0.109988	0.106221	-0.052162	0.007300
	0.051706	0.328873	0.239858	0.296436	0.578141	0.939606
WEIGHT	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.151408	-0.050110	0.186196	0.214654	-0.183210	0.152203
	0.109414	0.598134	0.073221	0.022423	0.052968	0.112298
BREAKFAS	113.000000	113.000000	113.000000	113.000000	113.000000	113.000000
	-0.284840	-0.195049	-0.258911	-0.216834	0.057295	0.245426
	0.001941	0.035889	0.005010	0.019396	0.541475	0.007921
MEALS	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.287354	-0.072063	-0.117718	-0.064102	0.193930	0.196774
	0.001762	0.442048	0.208206	0.494213	0.036987	0.034251
WATER	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.252171	-0.169907	0.009859	0.021688	0.005828	0.458631
	0.006552	0.069989	0.942005	0.819057	0.950709	0.000000
SERFRUJ	115.000000	115.000000	115.000000	115.000000	115.000000	115.000000
	-0.343687	-0.081493	-0.218111	-0.155492	-0.006090	0.362314
	0.000159	0.384490	0.018969	0.095571	0.948521	0.000013
SERVVEGE	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.319233	0.011666	-0.030539	0.007912	-0.106705	0.359696
	0.000478	0.901086	0.744890	0.932821	0.254262	0.000073
SERVMEAT	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.145166	-0.152029	0.077367	0.117367	-0.018886	0.096205
	0.119983	0.103298	0.409099	0.209577	0.840526	0.286364
FISH	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.311361	0.095245	-0.012532	-0.054635	-0.035185	0.151541
	0.000869	0.309143	0.863781	0.560946	0.707687	0.104406
SNACK	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.107890	0.115821	-0.044622	-0.042520	-0.031869	-0.091437
	0.249878	0.218483	0.632005	0.650407	0.735595	0.328999
COFFEETE	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.065259	0.207582	0.188763	0.125693	-0.066496	-0.190884
	0.486435	0.625358	0.042426	0.178808	0.478178	0.040012
REGULARS	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.005172	0.142842	0.107307	0.100201	-0.000581	-0.410596
	116.000000	0.126104	0.251577	0.284526	0.995230	0.000005
DIETSODA	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.135403	-0.101935	-0.016504	-0.032839	-0.034638	-0.084446
	0.147275	0.276230	0.860422	0.726373	0.712026	0.367428
FASTFOOD	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.111096	0.184932	0.106940	0.052882	-0.099216	-0.246837
	0.226130	0.046880	0.257252	0.572901	0.289310	0.007558
RESTAURA	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.052287	0.187133	0.225516	0.202871	-0.062254	-0.228413
	0.577233	0.044276	0.014932	0.028956	0.390055	0.019658
PREPARED	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.208381	-0.064956	0.142776	0.107808	-0.014778	-0.029900
	0.024786	0.364546	0.126280	0.249356	0.874890	0.750019
EATINGTI	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.146623	-0.172819	-0.042012	0.008807	0.081205	0.038539
	0.116282	0.063576	0.854314	0.925245	0.386180	0.673461
HERBALSU	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.263984	-0.088746	0.003423	-0.009546	0.147888	-0.011607
DIETARYS	0.004239	0.343465	0.979112	0.928936	0.113131	0.901585
	0.000000	0.122200	0.144145	0.062823	0.081431	-0.263599
	115.000000	0.191285	0.122649	0.502884	0.384856	0.004246
CIGARETT	0.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.122200	1.000000	0.416005	0.348151	-0.037214	-0.211219
	0.191295	0.000000	0.000003	0.000141	0.691658	0.022846
ALCOHOL	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.144145	0.416006	1.000000	0.803506	0.132524	-0.243671
	0.122649	0.000003	0.000000	0.000000	0.158152	0.008393
SERVALCO	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.062823	0.346151	0.803509	0.803509	0.179733	-0.146262
	0.502884	0.000141	0.000000	0.000000	0.117182	0.117182
SLEEP	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.081431	-0.037214	0.132524	0.179733	1.000000	-0.007190
	0.384856	0.891858	0.158152	0.053536	0.000000	0.938941
EXERCISE	116.000000	116.000000	116.000000	116.000000	115.000000	116.000000
	-0.263599	-0.211219	-0.243671	-0.146262	-0.007190	1.000000
	0.004249	0.022846	0.008393	0.117182	0.938941	0.000000
SMOKINGSW	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.075345	-0.149001	-0.089977	-0.211301	-0.004493	0.099422
	0.421483	0.110414	0.353204	0.022736	0.981824	0.286307
DIETING	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.351805	0.044859	-0.140639	-0.109196	-0.035362	-0.073564
	0.000109	0.632539	0.131281	0.243277	0.706279	0.432577
DESCRIPT	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.081102	-0.098935	0.189807	0.214159	-0.028921	0.070151
	0.386783	0.353439	0.041277	0.020975	0.757948	0.454286
CURRENTC	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.115646	0.105682	0.000143	-0.121270	0.133081	0.007671
	0.216383	0.258989	0.998782	0.194714	0.154402	0.934869
QUOTE1	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.153446	0.289648	0.089382	0.074782	-0.207451	0.115898
	0.098071	0.001812	0.340001	0.424972	0.025451	0.015898
QUOTE2	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.208131	-0.018490	-0.195599	-0.083954	-0.023848	0.264227
	0.024963	0.843822	0.035359	0.370249	0.799416	0.004156
QUOTE_3	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.147288	0.095227	0.034583	0.053112	-0.133983	-0.080338
	0.114617	0.309233	0.712621	0.571231	0.151808	0.391286
LABEL	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.148499	0.167239	-0.032500	-0.048954	0.011390	0.053958
	0.111634	0.072754	0.729091	0.801798	0.903963	0.565106
FAMILYDI	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.005601	-0.041548	-0.018373	-0.094519	-0.064725	0.005481
	0.950724	0.657888	0.861517	0.312890	0.480014	0.853434
BMI	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.198730	-0.113629	0.180537	0.231830	-0.204396	0.204910
	0.034947	0.230783	0.086397	0.013483	0.029887	0.029469
YEARS	113.000000	113.000000	113.000000	113.000000	113.000000	113.000000
	-0.100006	0.077724	0.215405	0.146485	-0.073342	-0.132219
	0.287903	0.409005	0.020781	0.118251	0.438002	0.158954
	115.000000	115.000000	115.000000	115.000000	115.000000	115.000000

Correlation Report - OU / Male

	SMOKINGW	DIETING	DESCRIPT	CURRENTC	QUOTE1	QUOTE2
HEIGHT	0.075064	-0.075444	0.117057	-0.006624	0.126356	0.211664
	0.423225	0.420877	0.210790	0.926791	0.176501	0.022541
WEIGHT	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.036733	-0.286018	0.488484	-0.236789	-0.029786	0.212194
	0.696298	0.004401	0.000000	0.011573	0.754232	0.024050
BREAKFAS	113.000000	113.000000	113.000000	113.000000	113.000000	113.000000
	0.207172	-0.030773	-0.068525	0.153717	-0.106152	0.225611
	0.025954	0.742965	0.464836	0.069464	0.256746	0.014886
MEALS	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.004582	-0.109422	-0.044384	0.061998	-0.217640	0.175562
	0.961234	0.242298	0.636153	0.508523	0.018932	0.056423
WATER	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.050313	-0.167319	0.198170	-0.129200	-0.242047	0.186215
	0.593345	-0.073867	0.033752	0.166773	0.006156	0.039563
SERVFRUI	115.000000	115.000000	115.000000	115.000000	115.000000	115.000000
	0.130804	-0.114455	-0.003199	0.121936	-0.174021	0.281745
	0.161842	0.221182	0.972810	0.192244	0.061727	0.001485
SERVVEGE	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.086820	-0.185699	0.055680	-0.079346	-0.155643	0.256242
	0.337632	0.045964	0.550745	0.387185	0.095246	0.004953
SERVMEAT	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.133554	-0.189596	0.009822	-0.035254	0.015149	0.091858
	0.152961	0.041507	0.942058	0.707140	0.871776	0.326738
FISH	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.177727	-0.201553	0.015009	0.038695	0.007457	0.053534
	0.056305	0.030037	0.872963	0.680272	0.639678	0.568174
SNACK	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.019288	0.185685	-0.315678	0.189053	-0.073151	-0.127219
	0.837175	0.045975	0.000650	0.042105	0.435173	0.173546
COFFEETE	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.060376	-0.026920	-0.076151	-0.077007	-0.028911	-0.032081
	0.519669	0.174227	0.416524	0.411285	0.758026	0.732449
REGULARS	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.071446	0.059195	-0.190134	-0.010126	0.269041	-0.227777
	0.445978	0.527914	0.040922	0.914093	0.005497	0.013629
DIETSODA	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.023802	-0.285114	0.289130	-0.175189	-0.048820	-0.114754
	0.801442	0.001300	0.001107	0.059673	0.517728	0.219971
FASTFOOD	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.096026	-0.006157	0.525679	-0.109096	0.285407	0.086727
	0.305171	0.947701	0.11600000	0.243755	0.003984	0.354599
RESTAURA	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.009607	-0.032781	0.094791	-0.026260	0.175596	-0.170866
	0.918473	0.728837	0.311485	0.739619	0.11600000	0.096675
PREPARED	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.061849	-0.277644	0.194603	-0.209868	0.001373	0.167438
	0.509545	0.002549	0.036322	0.024443	0.988327	0.072408
EATINGTI	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.108007	-0.061761	-0.134355	-0.178024	-0.184343	0.108780
	0.248479	0.510147	0.150462	0.055887	0.047597	0.240750
HERBALSU	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.078312	0.152449	-0.147239	0.114061	-0.044905	-0.077586
	0.403383	0.102319	0.114737	0.222786	0.632189	0.407766
DIETARYS	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.075345	0.351605	-0.081102	0.115646	0.154546	-0.208131
	0.421483	0.000109	0.386783	0.216383	0.098071	0.024963
CIGARETT	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.149001	0.044859	-0.086835	0.105682	0.289648	-0.016490
	0.110414	0.632539	0.353439	0.258869	0.001612	0.843822
ALCOHOL	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.088977	-0.140939	0.189807	0.000143	0.089382	-0.195599
	0.353204	0.131281	0.041277	0.998782	0.340001	0.035359
SERVALCO	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.211301	-0.109196	0.214159	-0.121270	0.074782	-0.083954
	0.022792	0.243277	0.020975	0.194714	0.424972	0.370248
SLEEP	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.004493	-0.056362	-0.028921	0.133081	-0.207451	-0.023848
	0.961824	0.706279	0.757948	0.154402	0.025451	0.799416
EXERCISE	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.099422	-0.073564	0.070151	0.007671	-0.223875	0.264227
	0.288307	0.432577	0.454286	0.934869	0.015696	0.004156
SMOKINGW	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	1.000000	-0.021296	-0.072563	0.160517	0.058024	-0.010422
	0.000000	0.820497	0.438756	0.085201	0.536118	0.090852
DIETING	115.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.021296	1.000000	-0.423620	0.213181	-0.135513	0.115886
	0.820497	0.000000	0.000000	0.021582	0.146945	0.332067
DESCRIPT	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.072583	-0.423620	1.000000	-0.264352	-0.108497	0.053414
	0.438755	0.000002	0.000000	0.004137	0.246325	0.569045
CURRENTC	116.000000	116.000000	115.000000	116.000000	116.000000	116.000000
	0.160517	0.213181	-0.294352	1.000000	0.025895	-0.008097
	0.085201	0.021582	0.004137	0.000000	0.782908	0.931254
QUOTE1	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.058024	0.135513	-0.108497	0.025895	1.000000	0.168496
	0.536118	0.146945	0.246325	0.782908	0.000000	0.088921
QUOTE2	116.000000	116.000000	116.000000	116.000000	115.000000	116.000000
	-0.010422	0.090852	0.053414	-0.008097	0.169495	1.000000
	0.911596	0.332087	0.569045	0.931254	0.068821	0.000000
QUOTE_3	116.000000	116.000000	116.000000	116.000000	116.000000	115.000000
	-0.162190	0.283962	-0.079941	0.092123	0.228312	0.103425
	0.061954	0.002015	0.411990	0.325340	0.013701	0.266237
LABEL	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.121995	0.161202	-0.099752	0.153800	0.196261	0.132084
	0.192146	0.083859	0.286702	0.096278	0.034730	0.157542
FAMILYDI	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	0.016600	-0.111867	0.141125	-0.089236	0.053874	0.362772
	0.856616	0.231872	0.130769	0.340767	0.589790	-0.085270
BMI	116.000000	116.000000	116.000000	116.000000	116.000000	116.000000
	-0.080754	-0.271790	0.536611	-0.294010	-0.123039	0.188043
	0.395171	0.003590	0.000000	0.001573	0.194177	0.075217
YEARS	113.000000	113.000000	113.000000	113.000000	113.000000	113.000000
	-0.102225	-0.163967	0.101641	0.007046	-0.186130	-0.051306
	0.278984	0.079943	0.279753	0.940424	0.075690	0.568051
	115.000000	115.000000	115.000000	115.000000	115.000000	115.000000

Correlation Report - OU / Male

	QUOTE_3	LABEL	FAMILYDI	BMI	YEARS
HEIGHT	0.161406	-0.035036	-0.017174	0.218436	0.045443
	0.083462	0.708875	0.854813	0.020108	0.829627
WEIGHT	116.000000	116.000000	116.000000	113.000000	115.000000
	0.138746	-0.044596	0.039882	0.861746	0.074507
	0.142756	0.639028	0.874842	0.000000	0.434946
BREAKFAS	113.000000	113.000000	113.000000	113.000000	112.000000
	-0.206315	-0.125521	-0.023154	0.202662	0.017837
	0.026285	0.179090	0.805135	-0.120754	0.846629
MEALS	116.000000	116.000000	116.000000	113.000000	115.000000
	-0.138792	-0.129636	-0.019790	0.109009	0.135281
	0.134482	0.164797	0.833002	0.250421	0.149500
WATER	116.000000	116.000000	116.000000	113.000000	115.000000
	-0.162253	0.762796	0.021298	0.252619	0.020967
	0.083191	0.110000	0.821280	0.007205	0.824841
SERVFRUI	115.000000	115.000000	115.000000	112.000000	114.000000
	-0.001841	-0.021014	0.855951	0.039681	-0.068451
	0.984352	0.822835	0.017038	0.674162	0.347206
SERVVEGE	116.000000	116.000000	116.000000	113.000000	115.000000
	0.012585	-0.097424	-0.003058	0.178497	0.077312
	0.893336	0.298154	0.996364	0.058549	0.411501
SERVMEAT	116.000000	116.000000	116.000000	113.000000	115.000000
	-0.110610	0.023507	-0.008260	0.189786	-0.046965
	0.236341	0.802220	0.929874	0.044077	0.821941
FISH	116.000000	116.000000	116.000000	113.000000	115.000000
	-0.145111	0.033284	0.033675	0.263588	-0.046695
	0.120134	0.7222819	0.719698	0.008725	0.618713
SNACK	116.000000	116.000000	116.000000	113.000000	115.000000
	0.043431	0.134102	-0.033969	-0.260541	-0.182155
	0.643424	0.151237	0.719789	0.005518	0.051368
COFFEETE	116.000000	116.000000	116.000000	113.000000	115.000000
	-0.051863	-0.181438	-0.047821	-0.111531	0.097508
	0.580328	0.051272	0.610215	0.239564	0.296873
REGULARS	116.000000	116.000000	116.000000	113.000000	115.000000
	0.115922	0.057928	0.031328	-0.307870	-0.063293
	0.215380	0.536796	0.738498	0.000909	0.321348
DIETSODA	116.000000	116.000000	116.000000	113.000000	115.000000
	-0.107325	-0.123829	0.083329	0.225967	0.027160
	0.251498	-0.185389	0.319022	0.016103	0.773246
FASTFOOD	116.000000	116.000000	116.000000	113.000000	115.000000
	0.114593	0.052544	0.018443	0.006847	-0.078077
	0.220621	0.575361	0.844218	0.942621	0.406875
RESTAURA	116.000000	116.000000	116.000000	113.000000	115.000000
	0.014496	-0.005023	0.125421	-0.024149	-0.065932
	0.877261	0.957325	0.179758	0.799583	0.483875
PREPARED	116.000000	116.000000	116.000000	113.000000	115.000000
	-0.049623	-0.072172	-0.061255	0.212733	0.113249
	0.596812	0.441358	0.513627	0.023686	0.228174
EATINGTI	116.000000	116.000000	116.000000	113.000000	115.000000
	-0.133157	-0.089184	-0.060301	-0.008890	0.081295
	0.154168	0.460544	0.335042	0.942280	0.387751
HERBALSU	116.000000	116.000000	116.000000	113.000000	115.000000
	0.095418	-0.052906	0.020382	-0.085160	-0.005536
	0.308260	0.572725	0.827998	0.369808	0.953179
DIETARYS	116.000000	116.000000	116.000000	113.000000	115.000000
	0.147286	0.148489	0.005801	-0.198730	-0.100006
	0.114617	0.111634	0.950724	0.034647	0.287603
CIGARETT	116.000000	116.000000	116.000000	113.000000	115.000000
	0.095227	-0.167239	-0.041548	-0.113629	0.077774
	0.309233	0.072754	0.657888	0.230783	0.409005
ALCOHOL	116.000000	116.000000	116.000000	113.000000	115.000000
	0.034563	-0.032500	-0.016373	0.160537	0.215405
	0.712621	0.729091	0.861517	0.089397	0.020781
SERVALCO	116.000000	116.000000	116.000000	113.000000	115.000000
	0.053112	-0.048954	-0.094519	0.231830	0.146485
	0.571231	0.601768	0.312860	0.013483	0.118251
SLEEP	116.000000	116.000000	116.000000	113.000000	115.000000
	-0.133983	0.011360	-0.064725	-0.204395	-0.073342
	0.151606	0.903983	0.490014	0.029887	0.436002
EXERCISE	116.000000	116.000000	116.000000	113.000000	115.000000
	-0.080338	0.053958	0.005481	0.204910	-0.132219
	0.391286	0.565109	0.953434	0.029499	0.158954
SMOKINGW	116.000000	116.000000	116.000000	113.000000	115.000000
	-0.162190	0.121985	0.018600	-0.080754	-0.102225
	0.081954	0.192146	0.859616	0.395171	0.276984
DIETING	116.000000	116.000000	116.000000	113.000000	115.000000
	0.283862	0.181202	-0.111867	-0.271790	-0.163967
	0.002215	0.083859	0.231872	0.003590	0.079643
DESCRIPT	116.000000	116.000000	116.000000	113.000000	115.000000
	-0.078941	-0.099752	0.141125	0.536611	0.101641
	0.411690	0.286702	0.130789	0.000000	0.279753
CURRENTC	116.000000	116.000000	116.000000	113.000000	115.000000
	0.092123	0.153800	-0.089236	-0.294010	0.007046
	0.325340	0.099278	0.340797	0.001573	0.940424
QUOTE1	116.000000	116.000000	116.000000	113.000000	115.000000
	0.228312	0.196261	0.050574	-0.123039	-0.186130
	0.013701	0.034730	0.586780	0.194177	0.075990
QUOTE2	116.000000	116.000000	116.000000	113.000000	115.000000
	0.103425	0.132284	-0.085270	0.168043	-0.051308
	0.289237	0.157542	0.362772	0.075217	0.589051
QUOTE_3	116.000000	116.000000	116.000000	113.000000	115.000000
	1.000000	0.177828	0.121620	0.052103	-0.218262
	0.000000	0.056447	0.193418	0.583638	0.018111
LABEL	115.000000	116.000000	116.000000	113.000000	115.000000
	0.177626	1.000000	-0.096435	-0.045648	-0.172151
	0.056447	0.000000	0.303109	0.631157	0.085811
FAMILYDI	116.000000	115.000000	116.000000	113.000000	115.000000
	0.121620	-0.096435	1.000000	-0.002870	-0.183011
	0.193418	0.303109	0.000000	0.975678	0.050285
BMI	116.000000	115.000000	115.000000	113.000000	115.000000
	0.052103	-0.045648	-0.002870	1.000000	0.080291
	0.583638	0.631157	0.975678	0.000000	0.527728
YEARS	113.000000	113.000000	113.000000	112.000000	112.000000
	-0.218262	-0.172151	-0.183011	0.080291	1.000000
	0.019111	0.085811	0.050285	0.527728	0.000000
	115.000000	115.000000	115.000000	112.000000	112.000000

Correlation Report - OU / Female

	HEIGHT	WEIGHT	BREAKFAS	MEALS	WATER	SERVFRUI
HEIGHT	1.000000 0.000000 191.000000	0.446045 0.000000 191.000000	0.446045 0.000000 191.000000	0.019516 0.787628 193.000000	0.124478 0.063756 194.000000	0.052579 0.467711 193.000000
WEIGHT	0.446045 0.000000 191.000000	1.000000 0.000000 191.000000	1.000000 0.000000 191.000000	0.016298 0.791888 1.000000	0.102022 0.067345 191.000000	-0.037404 0.608400 190.000000
BREAKFAS	0.019516 0.787628 193.000000	0.019268 0.791888 190.000000	1.000000 0.000000 190.000000	1.000000 0.000000 190.000000	0.331528 0.000002 1.000000	0.306893 0.000002 0.165132
MEALS	0.124478 0.063756 194.000000	0.137776 0.057345 191.000000	0.331528 0.000002 193.000000	1.000000 0.000000 191.000000	1.000000 0.165132 0.000000	0.168278 0.021393 1.000000
WATER	0.121490 0.091510 194.000000	0.102022 0.192053 191.000000	0.165132 0.000012 193.000000	0.021393 0.000000 194.000000	1.000000 0.000000 191.000000	0.168278 0.019319 193.000000
SERVFRUI	0.052579 0.467711 193.000000	-0.037404 0.608400 190.000000	0.288408 0.000050 192.000000	0.126673 0.079182 193.000000	0.182278 0.019319 193.000000	1.000000 0.000000 190.000000
SERVVEGE	0.070345 0.329728 194.000000	-0.045681 0.530329 191.000000	0.085185 0.238856 193.000000	0.051804 0.473145 194.000000	0.135286 0.060001 194.000000	0.284402 0.000061 193.000000
SERVMEAT	0.040816 0.572035 194.000000	0.015386 0.066828 191.000000	0.652871 0.030867 193.000000	0.236450 0.139022 194.000000	0.356908 -0.041784 194.000000	0.060056 193.000000 0.229043
FISH	-0.033167 0.646183 194.000000	-0.022815 0.754070 191.000000	0.030867 0.869705 193.000000	0.190222 0.052307 194.000000	-0.041784 0.562852 194.000000	192.000000 0.001365 193.000000
SNACK	0.055611 0.442403 193.000000	0.047916 0.511510 190.000000	0.024200 0.738696 192.000000	0.067975 0.175249 193.000000	-0.083477 0.248424 193.000000	0.111703 0.122944 192.000000
COFFEETE	-0.026790 0.711102 194.000000	0.018073 0.825331 191.000000	0.026013 0.719524 193.000000	0.032539 0.652415 194.000000	-0.045671 0.527163 194.000000	0.046554 0.520292 193.000000
REGULARS	0.025158 0.728377 193.000000	0.066828 0.356908 190.000000	-0.174076 0.015745 192.000000	-0.015219 0.833620 193.000000	-0.421593 0.000000 193.000000	-0.185528 0.010190 192.000000
DIETSODA	0.065080 0.369605 192.000000	0.082112 0.261328 189.000000	0.054481 0.454124 191.000000	0.081058 0.263646 192.000000	0.088483 0.222296 192.000000	0.144814 0.045632 191.000000
FASTFOOD	-0.009929 0.890998 193.000000	0.110636 0.128608 190.000000	-0.202675 0.004770 192.000000	0.094847 0.189500 193.000000	-0.327753 0.000003 193.000000	-0.298610 0.000026 192.000000
RESTAURA	0.095359 0.188273 192.000000	0.018649 0.798948 189.000000	-0.062541 0.168052 191.000000	0.721900 0.125561 192.000000	0.085673 -0.124395 192.000000	192.000000 0.074711 192.000000
PREPARED	-0.096334 0.182624 193.000000	-0.188315 0.020268 190.000000	0.038161 0.599226 192.000000	-0.002590 0.971488 193.000000	0.098791 0.180546 193.000000	-0.039557 0.585520 192.000000
EATINGTI	0.132765 0.065679 193.000000	0.042510 0.560325 190.000000	0.039137 0.589913 192.000000	0.088629 0.220317 193.000000	-0.051810 0.474259 193.000000	0.004314 0.952646 192.000000
HERBALSU	0.051059 0.480993 193.000000	0.142418 0.049979 190.000000	0.022330 0.758515 192.000000	0.126938 0.080952 193.000000	-0.067504 0.350943 193.000000	0.003229 0.964547 192.000000
DIETARYS	-0.031369 0.865794 192.000000	0.008859 0.925374 189.000000	-0.022671 0.755572 191.000000	0.012182 0.866820 192.000000	-0.256800 0.000324 192.000000	-0.186414 0.009629 192.000000
CIGARETT	-0.080211 0.266229 194.000000	-0.002304 0.974765 191.000000	0.086693 0.342497 193.000000	0.053303 0.480419 194.000000	0.108500 0.132090 194.000000	-0.083422 0.248738 193.000000
ALCOHOL	0.090779 0.252951 194.000000	-0.031598 0.964340 191.000000	-0.003948 0.959543 193.000000	0.028372 0.894538 194.000000	0.037684 0.801900 194.000000	-0.012168 0.869619 193.000000
SERVALCO	0.038153 0.599303 192.000000	-0.019271 0.792397 189.000000	0.011280 0.877136 191.000000	0.043185 0.552003 192.000000	0.033559 0.644042 192.000000	-0.024353 0.738078 191.000000
SLEEP	0.051111 0.479098 194.000000	0.061573 0.397456 191.000000	0.112819 0.118256 193.000000	0.113138 0.116253 194.000000	0.086653 0.226599 194.000000	-0.011857 0.872173 193.000000
EXERCISE	0.059679 0.431241 193.000000	0.070896 0.331043 190.000000	0.184090 0.010587 192.000000	0.099437 0.168893 193.000000	0.413826 0.000000 193.000000	0.190708 0.007893 193.000000
SMOKINGW	0.127784 0.076567 193.000000	-0.028234 0.698989 190.000000	-0.034981 0.630224 192.000000	-0.074792 0.301256 193.000000	0.005606 0.938300 193.000000	0.011132 0.878299 192.000000
DIETING	0.108145 0.142832 192.000000	-0.207583 0.004155 189.000000	-0.072294 0.320286 191.000000	0.025599 0.724496 192.000000	-0.046347 0.496694 192.000000	0.032848 0.851052 192.000000
DESCRIPT	-0.150941 0.035656 194.000000	0.451722 0.000000 191.000000	-0.075722 0.295270 193.000000	0.007281 0.919742 194.000000	-0.012610 0.861465 194.000000	0.036680 0.612547 193.000000
CURRENTC	0.125330 0.081842 194.000000	-0.290072 0.000347 191.000000	0.017788 0.808947 193.000000	-0.019880 0.783212 194.000000	-0.088428 0.343119 194.000000	-0.011655 0.872193 193.000000
QUOTE1	-0.015032 0.835210 194.000000	-0.064495 0.375363 191.000000	0.022487 0.756480 193.000000	-0.042365 0.557522 194.000000	-0.137500 0.055863 194.000000	-0.135288 0.060868 193.000000
QUOTE2	0.095603 0.184830 194.000000	-0.085346 0.240436 191.000000	0.144641 0.044758 193.000000	0.044771 0.535346 194.000000	0.128264 0.074694 194.000000	0.253433 0.000376 193.000000
QUOTE_3	0.026087 0.718054 194.000000	0.080048 0.270990 191.000000	-0.218541 0.002263 193.000000	0.074620 0.301104 194.000000	-0.123270 0.086824 194.000000	-0.222673 0.001828 193.000000
LABEL	0.046201 0.524554 192.000000	0.046235 0.527550 189.000000	-0.112871 0.120000 191.000000	-0.081323 0.262140 192.000000	0.001142 0.987455 192.000000	-0.238419 0.000886 192.000000
FAMILYDI	-0.043690 0.547223 193.000000	-0.038695 0.593318 190.000000	0.152353 0.034892 192.000000	0.013105 0.859482 193.000000	-0.018550 0.787296 193.000000	0.012323 0.865288 192.000000
BMI	0.000024 191.000000	0.000000 191.000000	0.861949 190.000000	0.575336 191.000000	0.585752 191.000000	0.186674 190.000000
YEARS	-0.015149 0.835231 191.000000	-0.089467 0.222093 188.000000	-0.152905 0.036557 190.000000	-0.105353 0.146921 191.000000	-0.154298 0.033071 191.000000	-0.131161 0.071263 190.000000



Correlation Report - OU / Female

	SERVEVEGE	SERVMEAT	FISH	SNACK	COFFEETE	REGULARS
HEIGHT	0.070345	0.040816	-0.033167	0.055611	-0.026780	0.025158
	0.329726	0.572035	0.546163	0.442403	0.711102	0.726377
WEIGHT	194.000000	194.000000	194.000000	193.000000	194.000000	193.000000
	-0.045681	0.175170	-0.022815	0.047916	0.016073	0.066626
	0.530329	0.015360	0.754070	0.511510	0.825331	0.359608
BREAKFAS	191.000000	191.000000	191.000000	190.000000	191.000000	190.000000
	0.085165	-0.032569	0.030897	0.024200	0.026013	-0.174076
	0.238966	0.852971	0.738698	0.026900	0.719524	0.015746
MEALS	193.000000	193.000000	193.000000	192.000000	193.000000	192.000000
	0.051804	0.065366	0.139022	0.097975	0.032539	-0.015218
	0.473145	0.236450	0.053207	0.175249	0.852415	-0.833620
WATER	194.000000	194.000000	194.000000	193.000000	194.000000	193.000000
	0.135288	-0.061128	-0.041794	-0.083477	-0.045671	-0.421593
	0.080001	0.359608	0.562852	0.248424	0.527163	0.000000
SERVFRUI	0.284402	194.000000	194.000000	193.000000	194.000000	193.000000
	0.000001	-0.135608	0.229043	0.111703	0.046554	-0.185028
	193.000000	193.000000	0.001365	0.122944	0.520282	0.010190
SERVVEGE	1.000000	0.028390	0.026595	192.000000	193.000000	192.000000
	0.000000	0.714916	0.712803	0.296422	0.170384	-0.121303
	191.000000	194.000000	194.000000	193.000000	194.000000	193.000000
SERVMEAT	0.026390	1.000000	0.101032	-0.048371	0.074681	0.132683
	0.714916	0.000000	0.161003	0.504125	0.300710	0.065846
FISH	194.000000	191.000000	194.000000	193.000000	194.000000	193.000000
	0.028585	0.101032	1.000000	0.122233	0.105267	0.009618
	0.712803	0.161003	0.000000	0.090373	0.144073	0.927223
SNACK	194.000000	194.000000	191.000000	193.000000	194.000000	193.000000
	0.080389	-0.048371	0.122233	0.000000	0.142852	0.173105
	0.266422	0.504125	0.090373	0.000000	0.047497	0.016345
COFFEETE	193.000000	193.000000	193.000000	190.000000	193.000000	192.000000
	0.170384	0.074681	0.105267	0.142852	1.000000	0.004542
	0.017538	0.300710	0.144073	0.047497	0.000000	0.850013
REGULARS	194.000000	194.000000	194.000000	193.000000	191.000000	193.000000
	-0.111899	0.132683	0.009618	0.173105	0.004542	1.000000
	0.121303	0.065846	0.927223	0.016345	0.950013	0.000000
DIETSODA	193.000000	193.000000	193.000000	192.000000	193.000000	190.000000
	0.195334	-0.058335	0.114827	0.355109	0.246995	-0.248222
	0.006624	0.421558	0.112750	0.448932	0.000554	0.000536
FASTFOOD	192.000000	192.000000	192.000000	191.000000	192.000000	191.000000
	-0.138305	0.028671	0.019362	0.233812	-0.086356	0.323224
	0.055093	0.712739	0.788271	0.001096	0.232425	0.000005
RESTAURA	193.000000	193.000000	193.000000	192.000000	193.000000	193.000000
	-0.026758	0.025813	0.163344	0.187526	0.034098	0.133283
	0.712559	0.722296	0.023586	0.020534	0.638689	0.065329
PREPARED	192.000000	192.000000	192.000000	191.000000	192.000000	192.000000
	0.082996	0.042126	0.084500	0.035012	-0.004140	-0.050911
	0.251172	0.560778	0.372837	0.626721	0.954434	0.481973
EATINGTI	193.000000	193.000000	193.000000	192.000000	193.000000	193.000000
	0.049156	0.082421	0.137256	0.085792	-0.076633	0.100209
	0.497221	0.254481	0.056962	0.236736	0.289463	0.185565
HERBALSU	193.000000	193.000000	193.000000	192.000000	193.000000	193.000000
	-0.014933	-0.025072	0.064147	0.057458	-0.091746	0.009151
	0.836702	0.729296	0.375468	0.426581	0.204448	0.899491
DIETARYS	SERVEVEGE	SERVMEAT	FISH	SNACK	COFFEETE	REGULARS
	193.000000	193.000000	193.000000	192.000000	193.000000	193.000000
	-0.196265	0.001704	0.034058	0.105907	-0.120091	0.063842
	0.006365	0.981289	0.838199	0.144797	0.097081	0.195432
CIGARETT	192.000000	192.000000	192.000000	191.000000	192.000000	192.000000
	0.133346	0.064433	0.162708	0.080471	0.069729	-0.044328
	0.063800	0.372087	0.023405	0.403494	0.195498	0.540453
ALCOHOL	194.000000	194.000000	194.000000	193.000000	194.000000	193.000000
	0.045308	-0.063566	0.087653	0.077971	0.060192	-0.048953
	0.530453	0.378596	0.224246	0.281116	0.404443	0.498897
SERVALCO	194.000000	194.000000	194.000000	193.000000	194.000000	193.000000
	0.052838	-0.118638	0.044875	0.046380	0.059594	0.405896
	0.468373	0.101221	0.536539	0.524047	192.000000	-0.020792
SLEEP	192.000000	192.000000	192.000000	191.000000	192.000000	191.000000
	0.068751	0.001201	-0.149907	-0.208259	-0.088432	-0.025792
	0.355091	0.986737	0.036963	0.003657	0.220139	0.711486
EXERCISE	194.000000	194.000000	194.000000	193.000000	194.000000	193.000000
	0.101134	0.001026	0.032899	0.048346	0.025843	-0.231785
	0.161674	0.988697	0.648787	0.505467	0.720242	0.001217
SMOKINGW	193.000000	193.000000	193.000000	192.000000	193.000000	192.000000
	0.040221	-0.156153	-0.138998	-0.097979	-0.128968	0.028578
	0.578650	0.030115	0.054399	0.178385	0.073787	0.693981
	193.000000	193.000000	193.000000	192.000000	193.000000	192.000000
DIETING	0.003435	-0.113611	-0.041803	-0.062373	0.000097	0.153117
	0.962286	0.116638	0.564816	0.361341	0.000097	0.153117
DESCRIPT	192.000000	192.000000	192.000000	191.000000	192.000000	191.000000
	0.033815	0.079676	0.064059	-0.093317	0.082354	0.019188
	0.639726	0.269447	0.243896	0.196774	0.253628	0.791121
CURRENTC	194.000000	194.000000	194.000000	193.000000	194.000000	193.000000
	-0.015839	-0.073499	-0.060838	0.027793	-0.081263	0.069517
	0.826494	0.308447	0.399410	0.701214	0.259990	0.336730
QUOTE1	194.000000	194.000000	194.000000	193.000000	194.000000	193.000000
	-0.140512	0.111894	-0.078407	-0.016080	-0.011188	0.147311
	0.050883	0.120347	0.289646	0.824346	0.878987	0.040916
QUOTE2	194.000000	194.000000	194.000000	193.000000	194.000000	193.000000
	0.225846	-0.167528	0.047319	0.074285	0.133850	0.000000
	0.001544	0.019552	0.0152348	0.304556	0.082782	-0.018319
QUOTE_3	194.000000	194.000000	194.000000	193.000000	194.000000	193.000000
	-0.218869	-0.040369	-0.204555	0.057542	-0.153779	0.223258
	0.002199	0.576255	0.004223	0.429689	0.032290	0.001803
LABEL	194.000000	194.000000	194.000000	193.000000	194.000000	193.000000
	-0.100127	0.017941	0.011088	0.060236	-0.169075	0.048064
	0.167030	0.804908	0.878886	0.407807	0.019056	0.600290
FAMILYDI	192.000000	192.000000	192.000000	191.000000	192.000000	191.000000
	0.011538	-0.121824	-0.007894	-0.013065	0.023540	0.018553
	0.873465	0.091484	0.913238	0.857375	0.745223	0.798396
	193.000000	193.000000	193.000000	192.000000	193.000000	192.000000
BMI	-0.139964	0.165892	-0.028508	-0.012887	0.048851	0.080028
	0.053463	0.021979	0.995460	0.859626	0.502159	0.218740
	191.000000	191.000000	191.000000	190.000000	191.000000	190.000000
YEARS	-0.030971	-0.017559	0.064947	-0.026790	0.148257	0.127995
	0.870606	0.809481	0.372054	0.693358	0.040675	0.078426
	191.000000	191.000000	191.000000	190.000000	191.000000	190.000000

Correlation Report – OU / Female

HEIGHT	DIETSODA	FASTFOOD	RESTAURA	PREPARED	EATINGTI	HERBALSU
0.065080	0.366060	-0.009029	0.095356	-0.086324	0.132795	0.051056
192.000000	0.19200000	0.890968	0.186273	0.182624	0.065676	0.480663
WEIGHT	0.082112	0.110636	0.018646	-0.168315	0.042510	0.142418
0.261328	0.128608	0.094847	0.798648	0.020268	0.580325	0.049679
BREAKFAS	189.000000	190.000000	189.000000	190.000000	190.000000	190.000000
0.054481	-0.202875	0.004770	-0.093541	0.038161	0.039137	0.022330
0.454124	192.000000	192.000000	0.198062	0.599226	0.589913	0.758515
MEALS	0.081068	0.094847	191.000000	192.000000	192.000000	192.000000
0.263645	0.189500	-0.025851	-0.025851	-0.002290	0.088629	0.125636
WATER	192.000000	193.000000	192.000000	193.000000	193.000000	193.000000
0.088483	-0.327753	0.000003	-0.124365	0.096791	-0.051810	-0.067504
0.222298	0.000003	0.085673	0.180546	0.180546	0.474259	0.350643
SERVFRUI	192.000000	193.000000	192.000000	193.000000	193.000000	193.000000
0.144814	-0.298610	0.027524	-0.039557	-0.004314	0.003229	0.003229
0.046632	0.000026	0.704711	0.585920	0.952646	0.952646	0.964547
SERVVEGE	191.000000	192.000000	192.000000	192.000000	192.000000	192.000000
0.195334	-0.138305	-0.026758	-0.026758	0.082996	0.049156	-0.014933
0.008624	0.055093	0.712556	0.712556	0.251172	0.497221	0.836702
SERVMEAT	192.000000	193.000000	193.000000	193.000000	193.000000	193.000000
-0.058335	0.026671	0.025813	0.025813	0.042126	0.084242	-0.025072
0.421558	0.712739	0.722298	0.722298	0.580776	0.254481	0.729206
FISH	192.000000	193.000000	192.000000	193.000000	193.000000	193.000000
0.114827	0.019362	0.163344	0.163344	0.064500	0.137256	0.064147
0.112750	0.789271	0.023586	0.023586	0.372837	0.056982	0.375468
SNACK	192.000000	193.000000	192.000000	193.000000	193.000000	193.000000
0.055109	0.233812	0.167526	0.167526	0.035012	0.085792	0.057458
0.448932	0.001096	0.020534	0.020534	0.629721	0.236736	0.428581
COFFEETE	191.000000	192.000000	191.000000	192.000000	192.000000	192.000000
0.246965	-0.086356	-0.004140	-0.004140	-0.076633	-0.081746	-0.081746
0.000554	0.232425	0.638898	0.638898	0.954434	0.284483	0.284448
REGULARS	192.000000	193.000000	192.000000	193.000000	193.000000	193.000000
-0.248222	0.323224	0.133283	0.133283	-0.050911	0.100209	0.009151
0.000536	0.000005	0.065329	0.065329	0.481973	0.165565	0.899491
DIETSODA	191.000000	193.000000	192.000000	193.000000	193.000000	193.000000
1.000000	-0.018974	-0.033152	-0.033152	-0.158802	-0.068824	0.025741
0.000000	0.794454	0.649777	0.649777	0.030292	0.344126	0.723733
FASTFOOD	189.000000	191.000000	190.000000	191.000000	191.000000	191.000000
-0.018974	1.000000	0.285395	0.285395	0.000000	-0.073906	0.057137
0.794454	0.000000	0.000000	0.000000	0.388408	0.307035	0.429981
RESTAURA	191.000000	190.000000	192.000000	193.000000	193.000000	193.000000
-0.033152	0.285395	1.000000	1.000000	-0.042452	0.077773	0.111859
0.649777	0.000060	0.000000	0.000000	0.558782	0.914789	0.122421
PREPARED	190.000000	192.000000	189.000000	192.000000	192.000000	192.000000
-0.156802	-0.062430	-0.042452	-0.042452	1.000000	0.256205	-0.048555
0.030292	0.388408	0.558782	0.558782	0.000000	0.000323	0.502496
EATINGTI	191.000000	193.000000	192.000000	190.000000	193.000000	193.000000
-0.068624	-0.073906	0.007773	0.007773	0.256205	1.000000	0.046426
0.344126	0.307035	0.000000	0.000000	0.388408	0.000000	0.521437
HERBALSU	191.000000	193.000000	192.000000	193.000000	190.000000	193.000000
0.025741	0.057137	0.111859	0.111859	-0.048555	0.046426	1.000000
0.723733	0.429981	0.122421	0.122421	0.502499	0.521437	0.000000
DIETARYS	191.000000	193.000000	192.000000	193.000000	193.000000	190.000000
0.009938	0.136210	0.146130	0.146130	-0.072164	-0.004833	0.350363
0.891758	0.059587	0.043126	0.043126	0.319881	0.946951	0.000001
CIGARETT	190.000000	192.000000	192.000000	192.000000	192.000000	192.000000
0.063937	-0.026959	0.094434	0.094434	0.064323	0.028280	0.052335
0.247526	0.709777	0.192613	0.192613	0.191971	0.996236	0.469783
ALCOHOL	192.000000	193.000000	192.000000	193.000000	193.000000	193.000000
0.125951	0.097689	0.154605	0.154605	-0.063743	-0.164148	-0.058212
0.081723	0.176518	0.032261	0.032261	0.378489	0.022542	0.421320
SERVALCO	192.000000	193.000000	192.000000	193.000000	193.000000	193.000000
0.188948	0.099796	0.117782	0.117782	-0.144105	-0.222435	-0.052843
0.009032	0.169568	0.105587	0.105587	0.046713	0.001983	0.467832
SLEEP	190.000000	191.000000	190.000000	191.000000	191.000000	191.000000
-0.053814	-0.061276	-0.031468	-0.031468	0.043797	0.003309	0.068485
0.458489	0.206789	0.664800	0.664800	0.545325	0.963571	0.358423
EXERCISE	192.000000	193.000000	192.000000	193.000000	193.000000	193.000000
0.037715	-0.323251	-0.011970	-0.011970	-0.012457	0.018263	-0.108273
0.804462	0.000005	0.869114	0.869114	0.787686	0.790855	0.134948
SMOKINGW	191.000000	192.000000	192.000000	192.000000	192.000000	192.000000
0.018776	-0.034859	-0.049349	-0.049349	-0.022428	0.015916	0.013208
0.796024	0.631221	0.497797	0.497797	0.757484	0.826566	0.855709
DIETING	192.000000	192.000000	191.000000	192.000000	192.000000	192.000000
-0.301702	0.090153	-0.000668	-0.000668	0.175699	0.126726	0.102018
0.000023	0.214869	0.992984	0.992984	0.015048	0.080648	0.180219
DESCRIPT	190.000000	191.000000	191.000000	191.000000	191.000000	191.000000
0.175750	0.057410	-0.069403	-0.069403	-0.093593	0.002462	0.011464
0.014754	0.427759	0.338793	0.338793	0.195445	0.972894	0.874272
CURRENTC	192.000000	193.000000	192.000000	193.000000	193.000000	193.000000
-0.130479	-0.011746	0.045562	0.045562	0.102786	0.033571	0.035987
0.071250	0.871208	0.530310	0.530310	0.154888	0.643019	0.410411
QUOTE1	192.000000	193.000000	192.000000	193.000000	193.000000	193.000000
-0.124508	0.067296	0.086141	0.086141	-0.040988	0.015505	0.015467
0.085310	0.352646	0.362036	0.362036	0.571416	0.830538	0.830642
QUOTE2	192.000000	193.000000	192.000000	193.000000	193.000000	193.000000
0.065920	-0.127632	-0.057318	-0.057318	0.083916	-0.023605	-0.169340
0.363644	0.076920	0.429712	0.429712	0.245636	0.744538	0.018558
QUOTE_3	192.000000	193.000000	192.000000	193.000000	193.000000	193.000000
-0.303298	0.277046	0.022937	0.022937	-0.049030	-0.002623	0.079372
0.000019	0.000096	0.684236	0.684236	0.498321	0.971121	0.272536
LABEL	192.000000	193.000000	192.000000	193.000000	193.000000	193.000000
-0.271003	0.092367	0.136638	0.136638	0.146526	0.054636	-0.009822
0.000156	0.203773	0.059453	0.059453	0.043108	0.452840	0.862724
FAMILYDI	190.000000	191.000000	191.000000	191.000000	191.000000	191.000000
-0.031055	-0.169989	0.045396	0.045396	0.010596	0.126028	-0.110012
0.669762	0.018411	0.532984	0.532984	0.884096	0.081537	0.128756
BMI	191.000000	192.000000	191.000000	192.000000	192.000000	192.000000
0.037839	0.110015	-0.033377	-0.033377	-0.111528	-0.055360	0.111959
0.607116	0.130781	0.648429	0.648429	0.125537	0.448072	0.124072
YEARS	189.000000	190.000000	189.000000	190.000000	190.000000	190.000000
-0.028848	0.068121	0.073350	0.073350	0.159010	-0.098929	-0.085696
0.693567	0.350396	0.315836	0.315836	0.028430	0.358881	0.188053
189.000000	190.000000	189.000000	189.000000	190.000000	190.000000	190.000000

Correlation Report - OU / Female

	DIETARYS	CIGARETT	ALCOHOL	SERVALCO	SLEEP	EXERCISE
HEIGHT	0.031369	-0.080211	0.080779	0.038153	0.051111	0.056979
	0.665794	0.266229	0.252261	0.596303	0.479096	0.431241
WEIGHT	192.000000	194.000000	194.000000	192.000000	194.000000	193.000000
	0.006859	-0.002304	-0.031598	-0.019271	0.061573	0.070896
	0.925374	0.974765	0.664340	0.762397	0.397456	0.331043
BREAKFAS	189.000000	191.000000	191.000000	186.000000	191.000000	190.000000
	-0.022871	0.068693	-0.003948	0.011260	0.112819	0.184090
	0.755572	0.342497	0.966543	0.877136	0.118256	0.010587
MEALS	191.000000	193.000000	193.000000	191.000000	193.000000	192.000000
	0.012182	0.053303	0.028372	0.043186	0.113138	0.099437
	0.866820	0.460419	0.694538	0.562003	0.116253	0.168863
WATER	192.000000	194.000000	194.000000	192.000000	194.000000	193.000000
	-0.256800	0.108500	0.037884	0.033556	0.066653	0.413825
	0.000324	0.132090	0.601900	0.644042	0.229596	0.000000
SERVFRUI	192.000000	194.000000	194.000000	192.000000	194.000000	193.000000
	-0.186414	-0.083422	-0.012168	-0.024353	-0.011857	0.190708
	0.006929	0.248738	0.869619	0.738078	0.872173	0.007893
SERVVEGE	192.000000	193.000000	193.000000	191.000000	193.000000	193.000000
	-0.196295	0.133346	0.045308	0.052639	0.066751	0.101134
	0.006395	0.063800	0.530453	0.468373	0.355091	0.161674
SERVMEAT	192.000000	194.000000	194.000000	192.000000	194.000000	193.000000
	0.001704	0.064433	-0.063565	-0.118638	0.001201	0.001028
	0.981289	0.372087	0.378568	0.101221	0.986737	0.968697
FISH	192.000000	194.000000	194.000000	192.000000	194.000000	193.000000
	0.034056	0.162708	0.087653	0.044875	-0.149907	0.032989
	0.639109	0.023408	0.224246	0.536539	0.036953	0.648787
SNACK	192.000000	194.000000	194.000000	192.000000	194.000000	193.000000
	0.105907	0.060471	0.077971	0.046380	-0.208259	0.048346
	0.144797	0.403494	0.281116	0.524047	0.003657	0.505487
COFFEETE	191.000000	193.000000	193.000000	191.000000	193.000000	192.000000
	-0.120091	0.089729	0.090192	0.059594	-0.086432	0.025843
	0.097081	0.166498	0.404443	0.411583	0.220139	0.720242
REGULARS	192.000000	194.000000	194.000000	192.000000	194.000000	193.000000
	0.093842	-0.044328	-0.048953	-0.060506	-0.026792	-0.231785
	0.195432	0.540453	0.498997	0.405698	0.711495	0.001217
DIETSODA	192.000000	193.000000	193.000000	191.000000	193.000000	192.000000
	0.009936	0.083837	0.125951	0.188948	-0.053814	0.037715
	0.891758	0.247626	0.081723	0.009032	0.458488	0.604482
FASTFOOD	190.000000	192.000000	192.000000	190.000000	192.000000	191.000000
	-0.136210	-0.028959	0.097689	0.099798	-0.091276	-0.323251
	0.059587	0.709777	0.176518	0.168568	0.206789	0.000005
RESTAURA	192.000000	193.000000	193.000000	191.000000	193.000000	192.000000
	0.146130	0.094434	0.154605	0.117782	-0.031468	-0.011970
	0.043126	0.192613	0.032261	0.105567	0.664800	0.869114
PREPARED	192.000000	192.000000	192.000000	190.000000	192.000000	192.000000
	-0.072164	0.094323	-0.063743	-0.144105	0.043797	0.021457
	0.319881	0.191971	0.378489	0.046713	0.545325	0.767896
EATINGTI	192.000000	193.000000	193.000000	191.000000	193.000000	192.000000
	-0.004833	0.026280	-0.164148	-0.222435	0.003309	0.019263
	0.949951	0.896236	0.022542	0.001983	0.963571	0.790855
HERBALSU	192.000000	193.000000	193.000000	191.000000	193.000000	192.000000
	0.350363	0.052335	-0.058212	-0.052843	0.064495	-0.082273
	0.000001	0.469783	0.421320	0.467832	0.358423	0.134946
DIETARYS	192.000000	193.000000	193.000000	191.000000	193.000000	192.000000
	1.000000	0.083284	-0.077285	-0.068568	0.087915	-0.167500
	0.000000	0.250770	0.286854	0.347211	0.225292	0.009208
CIGARETT	189.000000	192.000000	192.000000	190.000000	192.000000	192.000000
	0.083284	1.000000	0.382164	0.307559	-0.005508	0.009102
	0.250770	0.000000	0.000000	0.000014	0.936245	0.900025
ALCOHOL	192.000000	191.000000	192.000000	192.000000	194.000000	193.000000
	-0.077285	0.382164	1.000000	0.845501	-0.062334	-0.002444
	0.286854	0.000000	0.000000	0.000000	0.253744	0.973139
SERVALCO	192.000000	194.000000	191.000000	192.000000	194.000000	193.000000
	-0.085668	0.307559	0.845501	1.000000	-0.020754	-0.015445
	0.347211	0.000014	0.000000	0.000000	0.775089	0.832051
SLEEP	190.000000	192.000000	192.000000	189.000000	192.000000	191.000000
	0.087915	-0.005508	-0.062334	-0.020754	1.000000	-0.106256
	0.225292	0.939245	0.253744	0.775089	0.000000	0.141383
EXERCISE	192.000000	194.000000	194.000000	192.000000	191.000000	193.000000
	-0.187500	0.009102	-0.002444	-0.015445	-0.106256	1.000000
	0.009208	0.900025	0.917139	0.832051	0.141383	0.000000
SMOKINGW	192.000000	193.000000	193.000000	191.000000	193.000000	190.000000
	-0.096581	-0.425570	-0.141843	-0.183703	0.149735	-0.018862
	0.360113	0.000000	0.049102	0.010964	0.037672	0.797238
DIETING	191.000000	193.000000	193.000000	191.000000	193.000000	192.000000
	0.009181	0.019208	-0.112486	-0.143450	0.081534	-0.262796
	0.899688	0.791445	0.120327	0.048325	0.260901	0.000231
DESCRIPT	191.000000	192.000000	190.000000	192.000000	192.000000	192.000000
	0.042465	0.120619	0.001139	0.059964	0.028244	-0.085519
	0.558658	0.093875	0.967421	0.408686	0.695851	0.296998
CURRENTC	192.000000	194.000000	194.000000	192.000000	194.000000	193.000000
	0.064984	0.022250	-0.024601	-0.059792	0.077284	-0.193394
	0.370512	0.758131	0.733492	0.410039	0.264133	0.007047
QUOTE1	192.000000	194.000000	194.000000	192.000000	194.000000	193.000000
	0.106620	0.105068	0.046263	0.060660	0.051030	-0.180775
	0.141040	0.144838	0.521814	0.403260	0.479792	0.011874
QUOTE2	192.000000	194.000000	194.000000	192.000000	194.000000	193.000000
	-0.070083	-0.041017	0.011425	-0.025619	0.053180	0.140754
	0.334074	0.570138	0.874374	0.724295	0.461456	0.050885
QUOTE_3	192.000000	194.000000	194.000000	192.000000	194.000000	193.000000
	0.055243	-0.022908	-0.020052	-0.048653	0.000406	-0.235622
	0.446629	0.754376	0.781382	0.502761	0.965513	0.000671
LABEL	192.000000	194.000000	194.000000	192.000000	194.000000	193.000000
	0.133955	0.083333	-0.002935	-0.049088	-0.073132	-0.047290
	0.084677	0.250493	0.967773	0.494953	0.313416	0.514818
FAMILYDI	191.000000	192.000000	192.000000	190.000000	192.000000	192.000000
	0.039730	0.078210	-0.054822	-0.066177	0.007702	-0.046953
	0.585281	0.279644	0.448913	0.363044	0.915340	0.517823
BMI	191.000000	193.000000	193.000000	191.000000	193.000000	192.000000
	0.045021	0.067069	-0.079072	-0.028330	0.038828	0.037425
	0.538459	0.356596	0.276894	0.698777	0.593829	0.608205
YEARS	189.000000	191.000000	191.000000	189.000000	191.000000	190.000000
	-0.045228	0.144321	0.169802	0.115638	-0.152905	-0.121563
	0.536596	0.046382	0.019098	0.113074	0.034708	0.094785
	189.000000	191.000000	191.000000	189.000000	191.000000	190.000000

Correlation Report - OU / Female

	SMOKINGW	DIETING	DESCRIPT	CURRENTC	QUOTE1	QUOTE2
HEIGHT	0.127784	0.106146	-0.150941	0.125330	-0.015032	0.066603
	0.076567	0.142832	0.035656	0.081642	0.835210	0.164830
WEIGHT	193.000000	192.000000	194.000000	194.000000	194.000000	194.000000
	-0.028234	-0.207583	0.451722	-0.290072	-0.064496	-0.085546
	0.698969	0.004155	0.000000	0.000047	0.375365	0.240436
BREAKFAS	190.000000	189.000000	191.000000	191.000000	191.000000	191.000000
	-0.034961	-0.072294	-0.075722	0.017788	0.022467	0.144641
	0.630224	0.320286	0.295270	0.806047	0.756460	0.044756
MEALS	192.000000	191.000000	193.000000	193.000000	193.000000	193.000000
	-0.074792	0.025569	0.007261	-0.019880	-0.042365	0.044771
	0.301256	0.724498	0.919742	0.783212	0.557522	0.535346
WATER	193.000000	192.000000	194.000000	194.000000	194.000000	194.000000
	0.005606	-0.049347	-0.012610	-0.068426	-0.137500	0.126264
	0.938300	0.496684	0.861405	0.343119	0.055893	0.074694
SERVFRUI	193.000000	192.000000	194.000000	194.000000	194.000000	194.000000
	0.011132	0.032848	0.036980	-0.011655	-0.135286	0.253433
	0.878209	0.651052	0.612547	0.872193	0.060668	0.000376
SERVVEGE	192.000000	192.000000	193.000000	193.000000	193.000000	193.000000
	0.040221	0.003435	0.033815	-0.015839	-0.140512	0.225846
	0.578650	0.962289	0.639726	0.626494	0.050683	0.001544
SERVMEAT	193.000000	192.000000	194.000000	194.000000	194.000000	194.000000
	-0.158153	-0.113611	0.079676	-0.073499	0.111894	-0.167526
	0.030115	0.116638	0.269447	0.308447	0.120347	0.019552
FISH	193.000000	192.000000	194.000000	194.000000	194.000000	194.000000
	-0.138698	-0.041803	0.084056	-0.060838	-0.076407	0.047319
	0.054399	0.564816	0.243898	0.399410	0.289646	0.512348
SNACK	193.000000	192.000000	194.000000	194.000000	194.000000	194.000000
	-0.097979	-0.062373	-0.093317	0.027793	-0.016080	0.074285
	0.176365	0.391341	0.196774	0.701214	0.824346	0.304556
COFFEETE	192.000000	191.000000	193.000000	193.000000	193.000000	193.000000
	-0.128998	-0.277652	0.082354	-0.081263	-0.011188	0.133656
	0.073787	0.000097	0.253626	0.259960	0.876957	0.062782
REGULARS	193.000000	192.000000	194.000000	194.000000	194.000000	194.000000
	0.028578	0.103772	0.019188	0.069517	0.147311	-0.018319
	0.693961	0.153117	0.791121	0.336730	0.040916	-0.800377
DIETSODA	192.000000	191.000000	193.000000	193.000000	193.000000	193.000000
	0.018776	-0.301702	0.175750	-0.130476	-0.124508	0.065620
	0.796024	0.000023	0.014754	0.071250	0.065310	0.363644
FASTFOOD	192.000000	190.000000	192.000000	192.000000	192.000000	192.000000
	-0.034859	0.090153	0.057410	-0.011746	0.067286	-0.127632
	0.531221	0.214869	0.427758	0.871206	0.352646	0.076920
RESTAURA	192.000000	191.000000	193.000000	193.000000	193.000000	193.000000
	-0.049349	-0.000668	-0.069403	0.045562	0.066141	-0.057316
	0.497797	0.962684	0.338793	0.530310	0.362039	0.429712
PREPARED	191.000000	191.000000	192.000000	192.000000	192.000000	192.000000
	-0.022428	0.175699	-0.093593	0.102788	-0.040968	0.083916
	0.757484	0.015048	0.195445	0.154888	0.571416	0.245636
EATINGTI	192.000000	191.000000	193.000000	193.000000	193.000000	193.000000
	0.015916	0.126726	0.002462	0.033571	0.015505	-0.023605
	0.826566	0.080648	0.972894	0.643019	0.830538	0.744538
HERBALSU	192.000000	191.000000	193.000000	193.000000	193.000000	193.000000
	0.013209	0.102018	0.011464	0.059587	0.015467	-0.169340
	0.855709	0.162219	0.874272	0.410411	0.830942	0.018556
DIETARYS	192.000000	191.000000	193.000000	193.000000	193.000000	193.000000
	-0.066581	0.009181	0.042465	0.064984	0.106620	-0.070083
	0.360113	0.896688	0.558658	0.370512	0.141040	0.334074
CIGARETT	191.000000	191.000000	192.000000	192.000000	192.000000	192.000000
	-0.425570	0.019206	0.120619	0.022250	0.105068	-0.041017
	0.000000	0.791445	0.093875	0.758131	1.144838	0.570138
ALCOHOL	193.000000	192.000000	194.000000	194.000000	194.000000	194.000000
	-0.141843	-0.112488	0.001139	-0.024601	0.046263	0.011425
	0.046102	0.120327	0.967421	0.733482	0.521814	0.674374
SERVALCO	193.000000	192.000000	194.000000	194.000000	194.000000	194.000000
	-0.183703	-0.143450	0.059964	-0.059792	0.060690	-0.025619
	0.010964	0.048325	0.408696	0.410039	0.403260	0.724295
SLEEP	191.000000	190.000000	192.000000	192.000000	192.000000	192.000000
	0.149735	0.081534	0.028244	0.077284	0.051030	0.053180
	0.037672	0.260901	0.695851	0.284133	0.479792	0.461456
EXERCISE	193.000000	192.000000	194.000000	194.000000	194.000000	194.000000
	-0.018662	-0.262796	-0.085619	-0.193384	-0.180775	0.140754
	0.797238	0.000231	0.236998	0.007047	0.011874	0.050885
SMOKINGW	192.000000	192.000000	193.000000	193.000000	193.000000	193.000000
	1.000000	0.147252	-0.148230	0.144010	-0.038093	0.076252
	0.000000	0.042073	0.039659	0.045708	0.598915	0.291827
DIETING	190.000000	191.000000	193.000000	193.000000	193.000000	193.000000
	0.147252	1.000000	-0.321196	0.486082	0.077021	0.080918
	0.042073	0.000000	0.000006	0.000000	0.288309	0.264533
DESCRIPT	191.000000	189.000000	192.000000	192.000000	192.000000	192.000000
	-0.148230	-0.321196	1.000000	-0.498023	-0.049637	-0.147685
	0.039659	0.000006	0.000000	0.000000	0.490140	0.039678
CURRENTC	193.000000	192.000000	191.000000	194.000000	194.000000	194.000000
	0.144010	0.486082	-0.498023	1.000000	0.173240	0.074369
	0.045708	0.000000	0.000000	0.000000	0.015707	0.302740
QUOTE1	193.000000	192.000000	194.000000	191.000000	194.000000	194.000000
	-0.038093	0.077021	-0.049637	0.173240	1.000000	0.019651
	0.598915	0.288309	0.490140	0.015707	0.000000	0.786652
QUOTE2	193.000000	192.000000	194.000000	191.000000	191.000000	194.000000
	0.076262	0.080918	-0.147685	0.074369	0.019651	1.000000
	0.291827	0.264533	0.039678	0.302740	0.785652	0.000000
QUOTE_3	193.000000	192.000000	194.000000	194.000000	194.000000	191.000000
	-0.052751	0.174210	0.006990	0.159382	0.144933	-0.102318
	0.466255	0.015963	0.922944	0.026433	0.043769	0.155711
LABEL	193.000000	192.000000	194.000000	194.000000	194.000000	194.000000
	-0.006771	0.194801	-0.100812	0.139408	0.173240	0.017463
	0.925927	0.006984	0.164971	0.053792	0.692298	0.810037
FAMILYDI	191.000000	191.000000	192.000000	192.000000	192.000000	192.000000
	0.017283	0.082209	-0.047968	0.096684	0.082050	0.207907
	0.811932	0.258222	0.507508	0.356832	0.202948	0.003716
BMI	192.000000	191.000000	193.000000	193.000000	193.000000	193.000000
	-0.173934	-0.328574	0.608373	-0.428735	-0.039222	-0.176728
	0.016396	0.000004	0.000000	0.000000	0.590086	0.014458
YEARS	190.000000	189.000000	191.000000	191.000000	191.000000	191.000000
	-0.044728	0.080239	-0.016149	0.144119	0.020887	-0.079508
	0.540023	0.272386	0.824521	0.046692	0.774261	0.274242
	190.000000	189.000000	191.000000	191.000000	191.000000	191.000000

Correlation Report – QU / Female

	QUOTE_3	LABEL	FAMILYDI	BMI	YEARS
HEIGHT	0.026087 0.718054 194.000000	0.046201 0.524554 192.000000	-0.043560 0.547223 193.000000	-0.300763 0.000024 191.000000	-0.015149 0.836221 191.000000
WEIGHT	0.080048 0.270960 191.000000	0.046235 0.527550 189.000000	-0.038985 0.593318 190.000000	0.662067 0.000000 191.000000	-0.089467 0.222063 188.000000
BREAKFAS	-0.218541 0.002263 193.000000	-0.112871 0.120030 191.000000	0.152353 0.034892 192.000000	0.012899 0.861949 190.000000	-0.152605 0.035557 190.000000
MEALS	0.074620 0.301104 194.000000	-0.081323 0.262140 192.000000	0.013105 0.856462 193.000000	0.040786 0.575336 191.000000	-0.105353 0.146921 191.000000
WATER	-0.123270 0.086824 194.000000	0.001142 0.987455 192.000000	-0.019550 0.787296 193.000000	-0.041813 0.565752 191.000000	-0.154296 0.033071 191.000000
SERVFRUI	-0.222873 0.001828 193.000000	-0.238419 0.000868 192.000000	0.012323 0.865288 192.000000	-0.096167 0.186874 190.000000	-0.131161 0.071263 190.000000
SERVVEGE	-0.218989 0.002189 194.000000	-0.100127 0.187030 192.000000	0.011538 0.873485 193.000000	-0.139964 0.053463 191.000000	-0.030671 0.670606 191.000000
SERVMEAT	-0.040369 0.576255 194.000000	0.017941 0.804908 192.000000	-0.121824 0.091484 193.000000	0.185662 0.021979 191.000000	-0.017559 0.809481 191.000000
FISH	-0.204555 0.004223 194.000000	0.011088 0.878688 192.000000	-0.007894 0.913238 193.000000	-0.028506 0.895460 191.000000	0.064947 0.372054 191.000000
SNACK	0.067542 0.428989 193.000000	0.060236 0.407807 191.000000	-0.013055 0.857375 192.000000	-0.012887 0.856926 190.000000	-0.028790 0.893358 190.000000
COFFEETE	-0.153779 0.032290 194.000000	-0.169075 0.019059 192.000000	0.023540 0.745223 193.000000	0.048951 0.502159 191.000000	0.146257 0.040675 191.000000
REGULARS	0.223258 0.001803 193.000000	0.049064 0.500290 191.000000	0.018553 0.798395 192.000000	0.090026 0.216740 190.000000	0.127995 0.078426 190.000000
DIETSODA	-0.303298 0.000019 192.000000	-0.271003 0.000156 190.000000	-0.031055 0.689762 191.000000	0.037639 0.807116 189.000000	-0.028846 0.893567 189.000000
FASTFOOD	0.277046 0.000096 193.000000	0.082367 0.203773 191.000000	-0.169989 0.018411 192.000000	0.110015 0.130781 190.000000	0.068121 0.350386 190.000000
RESTAURA	0.684236 192.000000	0.059453 191.000000	0.532984 191.000000	0.648429 189.000000	0.315836 189.000000
PREPARED	-0.049030 0.498321 193.000000	0.146526 0.043108 191.000000	0.010589 0.884099 192.000000	-0.111528 0.125537 190.000000	0.159010 0.028430 190.000000
EATINGTI	-0.002623 0.971121 193.000000	0.054636 0.452840 191.000000	0.126028 0.081537 192.000000	-0.055380 0.448072 190.000000	-0.066929 0.358881 190.000000
HERBALSU	0.079372 0.272535 193.000000	-0.009822 0.892724 191.000000	-0.110012 0.128755 192.000000	0.111959 0.124072 190.000000	-0.085696 0.189053 190.000000
DIETARYS	0.055243 0.448629 192.000000	0.133955 0.064677 191.000000	0.039730 0.585281 191.000000	0.045021 0.538459 189.000000	-0.045226 0.538596 189.000000
CIGARETT	-0.022606 0.754378 194.000000	0.083333 0.250493 192.000000	0.078210 0.279644 193.000000	0.087099 0.356596 191.000000	0.144321 0.046382 191.000000
ALCOHOL	-0.020052 0.781382 194.000000	-0.020052 0.967773 192.000000	-0.054822 0.448913 193.000000	-0.079072 0.276894 191.000000	0.168052 0.019089 191.000000
SERVALCO	-0.048653 0.502761 192.000000	-0.049808 0.494953 190.000000	-0.066177 0.363044 191.000000	-0.028330 0.698777 189.000000	0.115638 0.113074 189.000000
SLEEP	0.000406 0.995513 194.000000	-0.073132 0.133416 192.000000	0.007702 0.915340 193.000000	0.038828 0.593829 191.000000	-0.152905 0.034708 191.000000
EXERCISE	-0.235622 0.000971 193.000000	-0.047290 0.514818 192.000000	-0.049953 0.517823 192.000000	0.037425 0.608205 190.000000	-0.121563 0.094785 190.000000
SMOKINGW	-0.052751 0.466255 193.000000	-0.006771 0.925927 191.000000	0.017283 0.811932 192.000000	-0.173934 0.016395 190.000000	-0.044728 0.540023 190.000000
DIETING	0.174210 0.015663 192.000000	0.194601 0.006984 191.000000	0.082209 0.258222 191.000000	-0.328574 0.000004 189.000000	0.080239 0.272396 189.000000
DESCRIPT	0.006990 0.922944 194.000000	-0.100812 0.164971 192.000000	-0.047988 0.575508 193.000000	0.808373 0.000000 191.000000	-0.016149 0.824521 191.000000
CURRENTC	0.159382 0.028433 194.000000	0.139406 0.053792 192.000000	0.066684 0.358832 193.000000	-0.428735 0.000000 191.000000	0.144119 0.048682 191.000000
QUOTE1	0.144933 0.043769 194.000000	-0.028942 0.690268 192.000000	0.092050 0.202948 193.000000	-0.039222 0.590086 191.000000	0.020887 0.774261 191.000000
QUOTE2	-0.102318 0.155711 194.000000	0.017463 0.810007 192.000000	0.207907 0.003716 193.000000	-0.176728 0.014458 191.000000	-0.079508 0.274242 191.000000
QUOTE_3	1.000000 0.000000 191.000000	0.212794 0.003043 192.000000	0.029010 0.688794 193.000000	0.055576 0.445092 191.000000	-0.010697 0.883239 191.000000
LABEL	0.212794 0.003043 192.000000	1.000000 0.000000 189.000000	0.172174 0.017233 191.000000	0.186338 0.799073 189.000000	0.050521 0.489953 189.000000
FAMILYDI	0.029010 0.888794 193.000000	0.172174 0.017233 191.000000	1.000000 0.000000 191.000000	-0.034147 0.639991 190.000000	0.046980 0.518868 191.000000
BMI	0.055576 0.445092 191.000000	0.018638 0.799073 189.000000	-0.034147 0.639991 190.000000	1.000000 0.000000 189.000000	-0.062425 0.260788 188.000000
YEARS	-0.010697 0.883239 191.000000	0.050521 0.489953 189.000000	0.046980 0.518868 191.000000	-0.062425 0.260788 188.000000	1.000000 0.000000 188.000000

Correlation Report - Scotland / Male

	HEIGHT	WEIGHT	BREAKFAS	MEALS	WATER	SERVFRUI
HEIGHT	1.000000	0.414445	0.032714	0.210918	-0.189796	0.027922
	0.000000	0.000898	0.074969	0.264534	0.136259	0.026635
	82.000000	61.000000	64.000000	64.000000	63.000000	64.000000
WEIGHT	0.414445	1.000000	-0.153541	-0.112380	-0.036492	-0.186574
	0.000898	0.000000	0.237442	0.388528	0.770293	0.149646
	61.000000	59.000000	61.000000	61.000000	60.000000	61.000000
BREAKFAS	0.032714	-0.153541	1.000000	0.548715	0.049585	0.298315
	0.797469	0.237442	0.000000	0.000001	0.685886	0.012130
	64.000000	61.000000	68.000000	70.000000	69.000000	70.000000
MEALS	0.210918	-0.112380	0.548715	1.000000	0.070508	0.287229
	0.094334	0.388528	0.000001	0.000000	0.564816	0.015913
	64.000000	61.000000	70.000000	68.000000	69.000000	70.000000
WATER	-0.189796	-0.036492	0.049585	0.070508	1.000000	0.019678
	0.136259	0.770293	0.685886	0.564816	0.000000	0.870569
	63.000000	60.000000	69.000000	69.000000	67.000000	69.000000
SERVFRUI	0.027922	-0.186574	0.298315	0.287229	0.019678	1.000000
	0.829635	0.149946	0.012130	0.015913	0.870569	0.000000
	64.000000	61.000000	70.000000	70.000000	69.000000	68.000000
SERVVEGE	0.153944	-0.043027	-0.018415	0.068551	0.290048	0.200477
	0.224545	0.741967	0.879733	0.572841	0.015627	0.096103
	64.000000	61.000000	70.000000	70.000000	69.000000	70.000000
SERVMEAT	0.162447	0.179081	0.039894	0.139305	0.023989	0.127099
	0.196956	0.167301	0.753949	0.250385	0.845522	0.294457
	64.000000	61.000000	70.000000	70.000000	69.000000	70.000000
FISH	0.187963	0.061640	0.123116	0.304335	-0.008551	0.051646
	0.140089	0.639884	0.317200	0.011628	0.945245	0.675750
	63.000000	60.000000	68.000000	68.000000	67.000000	68.000000
SNACK	0.246891	0.178302	-0.192356	0.130014	0.127782	-0.149289
	0.051091	0.177824	0.113315	0.286978	0.299061	0.220637
	63.000000	60.000000	69.000000	69.000000	68.000000	69.000000
COFFEETE	0.131295	-0.027270	-0.020524	0.099763	0.027325	0.110426
	0.305033	0.836147	0.967066	0.414736	0.823694	0.396378
	63.000000	60.000000	69.000000	69.000000	68.000000	69.000000
REGULARS	0.116802	0.020000	-0.339048	-0.238295	-0.269977	-0.028243
	0.358017	0.878410	0.004208	0.046974	0.024867	0.816468
	64.000000	61.000000	70.000000	70.000000	69.000000	70.000000
DIETSODA	0.028089	0.116043	0.037630	-0.111096	-0.133905	0.062372
	0.828428	0.381446	0.760628	0.367093	0.280006	0.613355
	62.000000	59.000000	68.000000	68.000000	67.000000	68.000000
FASTFOOD	-0.110454	0.011486	-0.272032	-0.197950	0.014821	-0.215551
	0.392755	0.931199	0.024823	0.056534	0.905245	0.077536
	62.000000	59.000000	68.000000	68.000000	67.000000	68.000000
RESTAURA	-0.078308	-0.010695	-0.032428	0.109588	0.065461	0.060773
	0.548590	0.936482	0.794469	0.377344	0.601523	0.625169
	61.000000	58.000000	67.000000	67.000000	66.000000	67.000000
PREPARED	0.171569	0.084889	-0.171129	-0.115874	-0.152711	0.105401
	0.175233	0.515391	0.158641	0.339459	0.210313	0.385179
	64.000000	61.000000	70.000000	70.000000	69.000000	70.000000
EATINGTI	-0.051968	-0.028680	-0.178623	-0.112226	0.163193	0.088030
	0.683403	0.626331	0.138337	0.354991	0.180305	0.468963
	64.000000	61.000000	70.000000	70.000000	69.000000	70.000000
HERBALSU	0.061893	-0.093344	0.085433	0.024730	0.203047	-0.043008
	0.633830	0.481938	0.488492	0.841343	0.098362	0.727656
	62.000000	59.000000	68.000000	68.000000	67.000000	68.000000
DIETARYS	-0.049697	-0.075139	0.000000	-0.049631	-0.213290	0.267640
	0.707435	0.582053	1.000000	0.694603	0.090604	0.031130
	59.000000	58.000000	65.000000	65.000000	64.000000	65.000000
CIGARETT	-0.034422	-0.099100	-0.329598	-0.228784	0.011185	-0.259633
	0.792274	0.606285	0.006456	0.062572	0.629105	0.033861
	61.000000	59.000000	67.000000	67.000000	66.000000	67.000000
ALCOHOL	0.113192	-0.143359	0.118033	0.156916	-0.008628	0.132091
	0.373196	0.270370	0.330574	0.194538	0.943903	0.275895
	64.000000	61.000000	70.000000	70.000000	69.000000	70.000000
SERVALCO	-0.004856	-0.191134	0.074577	0.112504	-0.050609	0.134900
	0.969867	0.143495	0.542512	0.357374	0.661909	0.269093
	63.000000	60.000000	69.000000	69.000000	68.000000	69.000000
SLEEP	-0.018603	-0.050953	0.188137	0.031190	0.022785	0.179020
	0.896394	0.696557	0.118834	0.797703	0.852575	0.138120
	64.000000	61.000000	70.000000	70.000000	69.000000	70.000000
EXERCISE	0.144382	0.127543	0.057976	0.071751	0.390305	0.140622
	0.258910	0.331491	0.636083	0.557958	0.001100	0.248102
	63.000000	60.000000	69.000000	69.000000	68.000000	69.000000
SMOKINGW	-0.306499	-0.297190	0.041918	0.026798	0.147827	0.308955
	0.015398	0.022264	0.734301	0.828342	0.232549	0.010440
	62.000000	59.000000	68.000000	68.000000	67.000000	68.000000
DIETING	0.128539	-0.296185	0.224707	0.201763	-0.096053	0.196544
	0.327067	0.041571	0.085436	0.098953	0.439363	0.108184
	62.000000	59.000000	68.000000	68.000000	67.000000	68.000000
DESCRIPT	0.125690	0.624043	-0.273141	-0.304982	-0.064400	-0.232756
	0.330349	0.000000	0.025328	0.012090	0.607442	0.058031
	62.000000	59.000000	67.000000	67.000000	66.000000	67.000000
CURRENTC	0.094915	-0.308979	0.009453	0.259701	0.041182	0.181467
	0.483396	0.017280	0.939017	0.032461	0.740987	0.138540
	62.000000	59.000000	68.000000	68.000000	67.000000	68.000000
QUOTE1	-0.177190	-0.105459	-0.111015	-0.059573	0.154866	0.032801
	0.175616	0.434956	0.374861	0.634683	0.218026	0.783743
	60.000000	57.000000	66.000000	66.000000	65.000000	66.000000
QUOTE2	0.121192	-0.125341	-0.046190	-0.081182	0.183957	-0.040236
	0.356315	0.352884	0.712670	0.516989	0.142407	0.748390
	60.000000	57.000000	66.000000	66.000000	65.000000	66.000000
QUOTE_3	0.173298	0.181830	-0.102745	-0.008528	-0.155990	0.052940
	0.174377	0.164394	0.409852	0.944566	0.203987	0.667506
	63.000000	60.000000	69.000000	69.000000	68.000000	69.000000
LABEL	0.186504	-0.056303	0.000776	0.110515	0.099298	0.159326
	0.146963	0.671888	0.995027	0.373298	0.427630	0.197796
	62.000000	59.000000	67.000000	67.000000	66.000000	67.000000
FAMILYDI	0.148154	-0.132442	-0.130902	-0.062632	-0.080591	-0.117588
	0.250483	0.317332	0.292147	0.506190	0.520056	0.343294
	62.000000	59.000000	67.000000	67.000000	66.000000	67.000000
BMI	-0.245389	0.727718	-0.133488	-0.241587	0.158736	-0.181885
	0.056951	0.000000	0.305078	0.060695	0.222788	0.160644
	61.000000	61.000000	61.000000	61.000000	60.000000	61.000000
YEARS	-0.020078	0.217754	-0.169798	-0.023624	0.144879	-0.102235
	0.876905	0.097567	0.196270	0.848351	0.242101	0.406784
	62.000000	59.000000	68.000000	68.000000	67.000000	68.000000

Correlation Report - Scotland / Male

	SERVEVEGE	SERVMEAT	FISH	SNACK	COFFEETE	REGULARS
HEIGHT	0.153644	0.182447	0.187993	0.246891	0.131296	0.116802
	0.224545	0.199666	0.140289	0.305033	0.359017	0.359017
WEIGHT	64.000000	64.000000	63.000000	63.000000	64.000000	64.000000
	-0.043027	0.179081	0.061640	0.176302	-0.027270	0.020000
	0.741967	0.187301	0.838884	0.177824	0.836147	0.878410
BREAKFAS	61.000000	61.000000	60.000000	60.000000	60.000000	61.000000
	-0.018415	0.038664	0.123116	-0.192356	-0.020524	-0.338046
	0.879733	0.750646	0.317200	0.113315	0.867096	0.004208
	70.000000	70.000000	68.000000	66.000000	66.000000	70.000000
MEALS	0.068551	0.139305	0.304335	0.130014	0.069763	-0.238295
	0.572841	0.250085	0.011628	0.286978	0.414736	0.046674
	70.000000	70.000000	68.000000	68.000000	68.000000	70.000000
WATER	0.290048	0.023889	-0.008551	0.127782	0.027525	-0.269977
	0.015627	0.845522	0.945245	0.299061	0.823684	0.024867
SERVFRUI	69.000000	69.000000	67.000000	68.000000	68.000000	69.000000
	0.200477	0.127086	0.051646	-0.149289	0.110426	-0.028243
	0.098103	0.294457	0.675750	0.220837	0.369378	0.816468
	70.000000	70.000000	68.000000	69.000000	69.000000	70.000000
SERVEVEGE	1.000000	0.140225	0.090996	0.181120	0.231294	0.080730
	0.000000	0.246942	0.460519	0.136393	0.055852	0.506456
	68.000000	70.000000	68.000000	68.000000	68.000000	70.000000
SERVMEAT	0.140225	1.000000	-0.061373	0.000000	0.154626	0.000000
	0.246942	0.000000	0.619082	0.001011	0.175624	0.043243
	70.000000	68.000000	68.000000	69.000000	69.000000	70.000000
FISH	0.090996	-0.061373	1.000000	0.067943	0.199202	-0.193143
	0.460519	0.619082	0.000000	0.584868	0.106074	0.114551
	68.000000	68.000000	66.000000	67.000000	67.000000	68.000000
SNACK	0.181120	0.450817	0.067943	1.000000	0.087299	0.353070
	0.136393	0.000101	0.584858	0.000000	0.479181	0.002923
	69.000000	69.000000	67.000000	67.000000	68.000000	69.000000
COFFEETE	0.231294	0.246942	0.199202	0.220293	1.000000	-0.069574
	0.055852	0.175624	0.106074	0.479181	0.000000	0.596778
	69.000000	69.000000	67.000000	68.000000	67.000000	69.000000
REGULARS	0.080730	0.242347	-0.193143	0.353070	-0.069574	1.000000
	0.506456	0.043243	0.114551	0.002923	0.586779	0.000000
	70.000000	70.000000	68.000000	69.000000	69.000000	68.000000
DIETSODA	0.011285	0.089830	0.308193	0.016118	0.087202	0.142588
	0.927226	0.466307	0.011818	0.896999	0.482876	0.246070
	69.000000	68.000000	66.000000	67.000000	67.000000	68.000000
FASTFOOD	-0.088128	0.058290	0.001456	0.220293	-0.178234	0.426886
	0.425969	0.684839	0.960742	0.073242	0.149010	0.000283
	68.000000	68.000000	66.000000	67.000000	67.000000	68.000000
RESTAURA	-0.031641	0.086108	0.135012	0.080197	0.122701	-0.033337
	0.799353	0.488406	0.283584	0.522100	0.322589	0.788844
	67.000000	67.000000	65.000000	66.000000	67.000000	67.000000
PREPARED	0.355637	-0.149809	0.189099	-0.042008	0.324389	0.134371
	0.002517	0.215782	0.122489	0.731807	0.006542	0.267421
	70.000000	70.000000	68.000000	69.000000	69.000000	70.000000
EATINGTI	0.172562	-0.050776	-0.072681	-0.114220	-0.049851	-0.129627
	0.153100	0.676356	0.555855	0.350038	0.684167	0.263707
	70.000000	70.000000	68.000000	69.000000	69.000000	70.000000
HERBALSU	-0.148217	0.367231	-0.228715	-0.017008	-0.218555	0.032596
	0.227722	0.002095	0.064725	0.891342	0.078378	0.791879
	68.000000	68.000000	66.000000	67.000000	67.000000	68.000000
DIETARYS	0.007720	0.157205	0.034577	-0.031859	-0.127129	-0.055905
	0.951330	0.211070	0.787903	0.801094	0.316800	0.658257
	65.000000	65.000000	63.000000	65.000000	64.000000	65.000000
CIGARETT	-0.112348	-0.089195	-0.158277	0.235443	0.123797	0.250365
	0.365373	0.577943	0.213813	0.057035	0.320212	0.041010
	67.000000	67.000000	65.000000	66.000000	66.000000	67.000000
ALCOHOL	-0.045889	0.145940	-0.111106	0.083856	0.050972	0.062708
	0.706010	0.228010	0.367050	0.493316	0.677451	0.809054
	70.000000	70.000000	68.000000	69.000000	69.000000	70.000000
SERVALCO	0.064514	0.151206	-0.013519	0.063166	0.008997	0.144817
	0.598435	0.214897	0.913537	0.608838	0.941948	0.235135
	69.000000	69.000000	67.000000	68.000000	68.000000	69.000000
SLEEP	0.142358	-0.009998	-0.019556	-0.239805	-0.145838	-0.087506
	0.239752	0.934532	0.874228	0.047184	0.231491	0.471320
	70.000000	70.000000	68.000000	69.000000	69.000000	70.000000
EXERCISE	0.127890	0.205134	0.197153	0.086232	-0.079964	-0.140544
	0.295028	0.089283	0.109790	0.470955	0.516889	0.249386
	69.000000	69.000000	67.000000	69.000000	68.000000	69.000000
SMOKINGW	-0.088215	0.117875	-0.268024	-0.122849	0.009446	-0.013809
	0.474394	0.338392	0.030853	0.318256	0.939526	0.911007
	68.000000	68.000000	66.000000	68.000000	67.000000	68.000000
DIETING	0.120791	-0.128890	-0.257246	-0.128846	-0.11672	0.036208
	0.326496	0.294858	0.037053	0.295025	0.368285	0.769413
	68.000000	68.000000	66.000000	68.000000	67.000000	68.000000
DESCRIPT	-0.127226	0.117672	-0.094093	0.147708	-0.065035	0.085698
	0.304807	0.342946	0.455945	0.236587	0.603897	0.490484
	67.000000	67.000000	65.000000	66.000000	66.000000	67.000000
CURRENTC	0.187175	0.149030	0.047013	-0.034600	0.194415	-0.145896
	0.126410	0.225154	0.707775	0.779392	0.114912	0.234939
	68.000000	68.000000	66.000000	68.000000	67.000000	68.000000
QUOTE1	0.041752	-0.075746	-0.277513	0.154894	0.075106	0.101822
	0.738243	0.545527	0.026408	0.217944	0.552100	0.415821
	66.000000	66.000000	64.000000	65.000000	65.000000	66.000000
QUOTE2	0.114109	-0.042181	-0.088057	0.061257	-0.056827	-0.198084
	0.361811	0.736656	0.488960	0.625120	0.650399	0.110860
	66.000000	66.000000	64.000000	66.000000	66.000000	66.000000
QUOTE_3	-0.089332	0.125505	-0.027568	0.067654	-0.046110	-0.015139
	0.485419	0.304184	0.824743	0.583571	0.708861	0.901741
	69.000000	69.000000	67.000000	68.000000	68.000000	69.000000
LABEL	0.178562	0.202706	-0.198145	0.075256	-0.256052	0.244006
	0.152853	0.099445	0.110748	0.548140	0.037971	0.046802
	67.000000	67.000000	66.000000	66.000000	66.000000	67.000000
FAMILYDI	-0.129771	0.085696	0.261344	0.085802	-0.106795	-0.073423
	0.295253	0.490497	0.035480	0.493340	0.393394	0.554866
	67.000000	67.000000	65.000000	66.000000	66.000000	67.000000
BMI	-0.125458	0.099754	-0.142536	-0.006789	-0.069601	-0.062211
	0.335347	0.444332	0.277297	0.959084	0.597203	0.633885
	61.000000	61.000000	60.000000	60.000000	60.000000	61.000000
YEARS	0.095815	-0.193828	0.038796	-0.036526	0.443513	-0.177082
	0.437012	0.113246	0.757152	0.766180	0.000171	0.148563
	68.000000	68.000000	66.000000	67.000000	67.000000	68.000000

Correlation Report - Scotland / Male

	DIETSODA	FASTFOOD	RESTAURA	PREPARED	EATINGTI	HERBALSU
HEIGHT	0.028086 0.828428 62.000000	-0.110454 0.392755 62.000000	-0.078306 0.548580 61.000000	0.171566 0.175233 64.000000	-0.061968 0.663405 64.000000	0.061693 0.633630 62.000000
WEIGHT	0.116043 0.381446 59.000000	0.011488 0.931199 59.000000	-0.010695 0.936492 58.000000	0.084899 0.515391 61.000000	-0.028680 0.826331 61.000000	-0.063344 0.481938 56.000000
BREAKFAS	0.037630 0.780628 68.000000	-0.272032 0.024823 68.000000	-0.032428 0.794469 67.000000	-0.171129 0.158641 70.000000	-0.178923 0.138337 70.000000	0.085433 0.488492 68.000000
MEALS	-0.111098 0.367093 68.000000	0.105634 68.000000 0.905245	0.109588 0.377344 67.000000	-0.115874 0.339459 70.000000	-0.112226 0.354981 70.000000	0.024730 0.841343 66.000000
WATER	-0.133905 0.280006 67.000000	0.014821 68.000000 0.905245	0.065461 68.000000 0.601523	-0.152711 0.085461 0.601523	0.163193 0.189305 69.000000	0.203647 0.099362 67.000000
SERVFRUI	0.062372 0.613355 68.000000	-0.215551 0.077508 68.000000	0.060773 0.625169 67.000000	0.105401 0.385179 70.000000	0.088030 0.468663 70.000000	-0.043006 0.727659 68.000000
SERVVEGE	0.011285 0.927228 68.000000	-0.098128 0.425969 68.000000	-0.031641 0.799353 67.000000	0.356537 0.002517 70.000000	0.172582 0.153100 70.000000	-0.148217 0.227722 68.000000
SERVMEAT	0.089830 0.486307 68.000000	0.056290 0.848439 68.000000	0.096108 0.488406 67.000000	-0.149909 0.215782 70.000000	-0.050776 0.678356 70.000000	0.367231 0.022086 68.000000
FISH	0.308193 0.011818 66.000000	0.001456 0.990742 66.000000	0.135012 0.283584 65.000000	0.189099 0.122486 68.000000	-0.072681 0.555855 66.000000	-0.228715 0.064726 66.000000
SNACK	0.016118 0.896999 67.000000	0.220293 0.073242 67.000000	0.080197 0.522100 66.000000	-0.042008 0.731807 66.000000	-0.114220 0.350038 69.000000	-0.017006 0.891342 67.000000
COFFEETE	0.087202 0.482876 67.000000	-0.178234 0.149010 67.000000	0.322599 0.077547 67.000000	0.008542 0.825482 68.000000	0.684167 68.000000 -0.129927	0.078376 67.000000 0.032596
REGULARS	0.142588 0.246070 68.000000	0.426888 0.000283 68.000000	-0.033337 0.788844 67.000000	0.134371 0.287421 70.000000	-0.129927 0.283707 70.000000	0.032596 0.791679 68.000000
DIETSODA	1.000000 0.000000 66.000000	0.170859 0.170171 66.000000	0.023022 0.854422 66.000000	0.023483 0.849245 68.000000	-0.206753 0.090712 68.000000	-0.116239 0.340287 66.000000
FASTFOOD	0.170859 0.170171 66.000000	0.170859 0.170171 66.000000	0.023022 0.854422 66.000000	0.023483 0.849245 68.000000	-0.206753 0.090712 68.000000	-0.116239 0.340287 66.000000
RESTAURA	0.023022 0.854422 66.000000	0.220508 0.077547 65.000000	0.000000 0.000000 65.000000	0.000000 0.855764 67.000000	0.449826 67.000000 0.175094	0.359812 65.000000 -0.244572
PREPARED	0.023483 0.849245 68.000000	-0.027238 0.825482 68.000000	-0.022630 0.855764 67.000000	1.000000 0.000000 68.000000	0.175094 0.147118 70.000000	-0.244572 0.044427 68.000000
EATINGTI	-0.206753 0.090712 68.000000	-0.133637 0.277281 68.000000	0.093887 0.448826 67.000000	0.175094 0.147118 70.000000	1.000000 0.000000 68.000000	-0.073575 0.550962 68.000000
HERBALSU	-0.119239 0.340287 66.000000	0.060117 0.631584 66.000000	0.115441 0.359812 65.000000	-0.244572 0.044427 68.000000	-0.073575 0.550962 68.000000	0.115441 0.000000 66.000000
DIETARYS	0.340287 0.596206 64.000000	0.631584 -0.002292 0.985773	0.359812 0.090179 0.485775	0.044427 0.037133 0.769014	0.550962 0.041609 0.742085	0.115441 0.000000 64.000000
CIGARETT	0.039142 0.755013 66.000000	0.302474 0.014327 65.000000	-0.089233 0.478154 66.000000	-0.011615 0.925678 67.000000	-0.12857 0.917757 67.000000	-0.144936 0.249348 65.000000
ALCOHOL	0.039142 0.755013 66.000000	0.302474 0.014327 65.000000	-0.089233 0.478154 66.000000	-0.011615 0.925678 67.000000	-0.12857 0.917757 67.000000	-0.144936 0.249348 65.000000
SERVALCO	0.205620 0.095061 67.000000	0.099727 0.422010 67.000000	0.004962 0.969091 66.000000	-0.031959 0.794332 69.000000	-0.145138 0.234087 69.000000	0.222433 0.070426 67.000000
SLEEP	0.032296 0.793911 68.000000	-0.308149 0.010574 68.000000	0.119429 0.335738 67.000000	-0.015165 0.900841 70.000000	0.072247 0.552275 70.000000	-0.011205 0.927742 68.000000
EXERCISE	0.057254 0.845369 67.000000	-0.145597 0.229749 67.000000	-0.083052 0.507349 66.000000	0.091506 0.454596 68.000000	0.099739 0.599079 69.000000	0.114827 0.156822 67.000000
SMOKINGW	-0.096987 0.434933 67.000000	0.027080 0.828238 66.000000	0.119872 0.337709 66.000000	-0.098500 0.424208 68.000000	0.136387 0.267422 68.000000	0.145833 0.242654 66.000000
DIETING	-0.344863 0.004288 67.000000	-0.054781 0.682208 66.000000	-0.098650 0.430986 66.000000	-0.012013 0.822548 68.000000	0.224605 0.065563 68.000000	-0.034794 0.781508 66.000000
DESCRIPT	0.138002 0.299157 66.000000	0.026376 0.834786 65.000000	0.006209 0.960850 65.000000	0.153686 0.214351 67.000000	-0.011632 0.925570 67.000000	0.045611 0.718262 65.000000
CURRENTC	-0.265017 0.031517 66.000000	-0.263144 0.032783 66.000000	-0.050574 0.889098 65.000000	-0.046860 0.704348 68.000000	0.168375 0.175098 68.000000	0.030873 0.805621 66.000000
QUOTE1	-0.036833 0.772618 64.000000	0.194419 0.123701 64.000000	-0.223867 0.077772 63.000000	-0.078978 0.528988 66.000000	-0.104854 0.403004 66.000000	0.080862 0.525307 64.000000
QUOTE2	-0.159923 0.206838 64.000000	-0.347947 0.004843 64.000000	-0.014941 0.908716 64.000000	-0.028462 0.820540 66.000000	0.156910 0.208320 66.000000	0.022305 0.861124 64.000000
QUOTE_3	-0.114125 0.357790 67.000000	-0.053506 0.667170 67.000000	-0.233209 0.059501 66.000000	-0.081343 0.506405 66.000000	-0.187914 0.122050 69.000000	0.125057 0.313293 67.000000
LABEL	-0.227977 0.095617 68.000000	0.123315 0.327753 65.000000	-0.111131 0.378146 65.000000	0.031502 0.800217 67.000000	0.142984 0.248447 67.000000	0.201627 0.107263 65.000000
FAMILYDI	0.060300 0.833253 65.000000	0.009647 0.939204 65.000000	-0.060187 0.639616 64.000000	0.008975 0.942538 67.000000	0.069436 0.576596 67.000000	0.082382 0.514137 65.000000
BMI	0.112077 0.398041 59.000000	0.078016 0.556962 59.000000	-0.034648 0.796248 58.000000	-0.063624 0.626183 61.000000	-0.089492 0.492792 61.000000	-0.010222 0.938750 59.000000
YEARS	-0.149210 0.231800 66.000000	-0.296440 0.015654 66.000000	0.025524 0.840059 65.000000	0.124709 0.310931 68.000000	0.092897 0.451184 68.000000	-0.340250 0.005185 66.000000



Correlation Report – Scotland / Male

	DIETARYS	CIGARETT	ALCOHOL	SERVALCO	SLEEP	EXERCISE
HEIGHT	-0.046897 0.707435 59.000000	-0.034422 0.722274 0.000000	0.113192 0.373166 64.000000	-0.004856 0.969867 63.000000	-0.016603 0.896394 64.000000	0.144382 0.258610 63.000000
WEIGHT	-0.075139 0.582053 56.000000	-0.089100 0.606265 58.000000	-0.143359 0.270370 61.000000	-0.191134 0.143495 60.000000	-0.050953 0.698557 61.000000	0.127543 0.331481 60.000000
BREAKFAS	0.000000 1.000000 65.000000	-0.329598 0.006456 67.000000	0.118009 0.330574 70.000000	0.074577 0.542512 69.000000	0.188137 0.118834 70.000000	0.057978 0.636083 69.000000
MEALS	-0.049631 0.694603 65.000000	-0.228784 0.062572 67.000000	0.156916 0.194538 70.000000	0.112504 0.357374 69.000000	0.031190 0.797703 70.000000	0.071751 0.557958 69.000000
WATER	-0.213290 0.090604 64.000000	0.011185 0.929105 66.000000	0.008628 0.943903 69.000000	-0.050609 0.681906 68.000000	0.022785 0.852575 69.000000	0.390305 0.001000 66.000000
SERVFRUI	0.267640 0.031130 65.000000	-0.259633 0.033861 67.000000	0.132091 0.275695 70.000000	0.134900 0.289093 69.000000	0.179020 0.138120 70.000000	0.140622 0.248102 69.000000
SERVVEGE	0.007720 0.951330 65.000000	-0.112348 0.365373 67.000000	-0.045889 0.706010 70.000000	0.064514 0.598435 66.000000	0.142358 0.239752 70.000000	0.127880 0.295028 69.000000
SERVMEAT	-0.157205 0.211070 65.000000	0.577943 -0.069195 66.000000	0.000000 -0.069195 70.000000	0.145940 0.228010 69.000000	-0.009998 0.934532 70.000000	0.206134 0.089263 69.000000
FISH	0.034577 0.787903 63.000000	-0.156277 0.213813 65.000000	-0.111106 0.367050 68.000000	-0.013519 0.913537 67.000000	-0.019556 0.874226 68.000000	0.197153 0.109790 67.000000
SNACK	-0.031859 0.801094 65.000000	0.235443 0.057035 66.000000	0.083856 0.493316 69.000000	0.063186 0.608838 68.000000	-0.239806 0.047184 69.000000	0.086232 0.470955 69.000000
COFFEETE	-0.127129 0.316800 64.000000	0.123797 0.322012 66.000000	0.050972 0.677451 69.000000	0.008997 0.919448 68.000000	-0.145638 0.231491 69.000000	-0.079994 0.516888 68.000000
REGULARS	-0.055905 0.658257 65.000000	0.250365 0.041010 67.000000	0.082708 0.606054 70.000000	0.144817 0.235135 69.000000	-0.087536 0.471320 70.000000	-0.140544 0.249398 69.000000
DIETSODA	-0.067488 0.596206 64.000000	0.039142 0.755013 66.000000	0.012458 0.919683 68.000000	0.205620 0.095061 67.000000	0.032299 0.793911 68.000000	0.057254 0.645399 67.000000
FASTFOOD	-0.002292 0.985773 63.000000	0.302474 0.014327 65.000000	0.057289 0.642619 68.000000	0.098727 0.422010 67.000000	-0.308149 0.010574 68.000000	-0.145597 0.239746 67.000000
RESTAURA	0.090179 0.485775 62.000000	-0.089233 0.476154 66.000000	-0.047984 0.699794 67.000000	0.049862 0.969091 66.000000	0.119429 0.335738 67.000000	-0.083052 0.507346 66.000000
PREPARED	0.037133 0.769014 65.000000	-0.011615 0.925676 67.000000	-0.005457 0.964237 70.000000	-0.031959 0.794332 69.000000	-0.015195 0.900841 70.000000	0.091506 0.454586 69.000000
EATINGTI	0.041809 0.742085 65.000000	-0.012857 0.917757 67.000000	-0.083044 0.494313 70.000000	-0.145138 0.234087 69.000000	0.072247 0.552275 70.000000	0.069736 0.569079 69.000000
HERBALSU	0.229986 0.067516 64.000000	-0.144936 0.248348 65.000000	0.049898 0.680000 68.000000	0.222433 0.070426 67.000000	-0.011205 0.927742 68.000000	0.174827 0.156822 67.000000
DIETARYS	1.000000 0.000000 63.000000	-0.059190 0.644838 63.000000	0.082973 0.511115 65.000000	0.123562 0.330680 64.000000	0.128753 0.306703 65.000000	0.014380 0.909485 65.000000
CIGARETT	-0.059190 0.644938 63.000000	0.000000 0.000000 65.000000	1.000000 0.021308 67.000000	0.203956 0.100465 66.000000	-0.445039 0.000161 67.000000	-0.280220 0.022674 66.000000
ALCOHOL	0.082973 0.511115 65.000000	0.280890 0.021308 67.000000	1.000000 0.000000 68.000000	0.715903 0.000000 69.000000	-0.209151 0.082272 70.000000	0.066599 0.586639 69.000000
SERVALCO	0.123562 0.330680 64.000000	0.203956 0.100465 66.000000	0.715903 0.000000 69.000000	1.000000 0.000000 67.000000	-0.123480 0.312062 69.000000	0.039496 0.749178 68.000000
SLEEP	0.128753 0.306703 65.000000	-0.445039 0.000161 67.000000	-0.209151 0.082272 70.000000	-0.123480 0.312062 69.000000	1.000000 0.000000 68.000000	0.067046 0.584110 69.000000
EXERCISE	0.014380 0.909485 65.000000	-0.280220 0.022674 66.000000	0.066599 0.586639 69.000000	0.039499 0.749178 68.000000	0.067046 0.584110 69.000000	1.000000 0.000000 67.000000
SMOKINGW	0.122152 0.336110 64.000000	-0.132969 0.287176 66.000000	0.080859 0.513197 68.000000	-0.023359 0.851185 67.000000	0.228322 0.059955 68.000000	0.015971 0.897149 68.000000
DIETING	-0.085714 0.500667 64.000000	0.004762 0.969731 66.000000	0.134145 0.275440 68.000000	-0.042887 0.730400 67.000000	0.068718 0.577651 68.000000	-0.083751 0.497127 68.000000
DESCRIPT	0.007105 0.955924 63.000000	-0.035480 0.779026 65.000000	-0.073511 0.554393 67.000000	-0.044634 0.721948 66.000000	-0.019412 0.876098 67.000000	-0.044711 0.721489 66.000000
CURRENTC	0.118736 0.346199 65.000000	-0.179586 0.149063 66.000000	-0.022986 0.852400 68.000000	-0.041030 0.741652 67.000000	0.127127 0.301585 68.000000	-0.007473 0.951775 68.000000
QUOTE1	-0.008821 0.945753 62.000000	-0.008821 0.348478 64.000000	0.084851 0.499180 66.000000	0.123201 0.328204 65.000000	-0.202359 0.103214 66.000000	0.017236 0.891586 65.000000
QUOTE2	0.788152 62.000000	0.859977 63.000000	0.291259 66.000000	0.721411 65.000000	0.627220 66.000000	0.625886 66.000000
QUOTE_3	0.263099 0.035687 64.000000	0.051010 0.684188 66.000000	0.139007 0.254650 69.000000	0.088319 0.473873 68.000000	0.088391 0.470152 69.000000	0.203181 0.096555 68.000000
LABEL	-0.023254 0.957826 62.000000	-0.029871 0.813271 65.000000	0.161942 0.700000 67.000000	0.191700 0.66.000000	-0.058172 0.64.000000	0.149846 0.229793 68.000000
FAMILYDI	0.141929 0.271164 62.000000	0.075008 0.555816 64.000000	0.050890 0.882554 67.000000	0.117938 0.345619 66.000000	-0.061118 0.623201 67.000000	0.171796 0.167805 66.000000
BMI	-0.002781 0.983772 56.000000	-0.105437 0.430870 58.000000	-0.227056 0.078452 61.000000	-0.169187 0.196258 60.000000	-0.004301 0.973758 61.000000	0.078796 0.549526 60.000000
YEARS	-0.264557 0.036145 63.000000	0.180887 0.149306 65.000000	-0.142698 0.245701 68.000000	-0.228519 0.062885 67.000000	0.105549 0.391646 68.000000	-0.205698 0.094932 67.000000

Correlation Report - Scotland / Male

	SMOKINGW	DIETING	DESCRIPT	CURRENTC	QUOTE1	QUOTE2
HEIGHT	0.126539 0.015398 62.000000	0.126539 0.327087 62.000000	0.126590 0.330349 62.000000	0.064915 0.463006 62.000000	-0.177190 0.175616 60.000000	0.121192 0.356315 60.000000
WEIGHT	-0.297190 0.022264 59.000000	-0.296185 0.041571 59.000000	0.624043 0.000000 59.000000	-0.398979 0.000000 59.000000	-0.105459 0.434956 57.000000	-0.125341 0.352864 57.000000
BREAKFAS	0.041918 0.734301 68.000000	0.224707 0.065436 68.000000	-0.273141 0.025326 67.000000	0.009453 0.939017 68.000000	-0.111015 0.374861 66.000000	-0.046190 0.712670 66.000000
MEALS	0.026796 0.828342 68.000000	0.969663 0.000000 68.000000	-0.304982 0.012090 67.000000	0.259701 0.032461 68.000000	-0.056573 0.634683 66.000000	-0.061182 0.516969 66.000000
WATER	0.147827 0.232549 67.000000	-0.096053 0.439393 67.000000	-0.064400 0.807442 66.000000	0.041192 0.740967 67.000000	0.154866 0.218026 65.000000	0.163957 0.142407 65.000000
SERVFRUI	0.308855 0.010440 68.000000	0.196544 0.108184 68.000000	-0.232756 0.058031 67.000000	0.181497 0.138540 68.000000	0.032801 0.793743 66.000000	-0.040236 0.748390 66.000000
SERVVEGE	-0.088215 0.474394 68.000000	0.120791 0.326496 68.000000	-0.127226 0.304907 67.000000	0.187175 0.126410 68.000000	0.041752 0.739243 66.000000	0.114109 0.361611 66.000000
SERVMEAT	0.117875 0.338392 68.000000	-0.128890 0.294858 68.000000	0.117872 0.342946 67.000000	-0.149030 0.225154 68.000000	-0.075746 0.545527 66.000000	-0.042181 0.739656 66.000000
FISH	-0.266024 0.030853 66.000000	-0.257246 0.037053 66.000000	-0.094093 0.455945 65.000000	0.047013 0.707775 66.000000	-0.277513 0.026408 64.000000	-0.086057 0.488990 64.000000
SNACK	-0.122849 0.318258 68.000000	-0.128846 0.295025 68.000000	0.147708 0.236587 66.000000	-0.034800 0.779392 68.000000	0.154894 0.217944 65.000000	0.061257 0.625120 65.000000
COFFEETE	0.009446 0.939528 67.000000	-0.111672 0.368285 67.000000	-0.065035 0.903887 66.000000	0.194415 0.114912 67.000000	0.075106 0.552100 65.000000	-0.056827 0.650390 65.000000
REGULARS	-0.013809 0.911007 68.000000	0.036208 0.769413 68.000000	0.085698 0.490484 67.000000	-0.145968 0.234936 68.000000	0.101622 0.415621 66.000000	-0.198064 0.110680 66.000000
DIETSODA	-0.096987 0.434933 67.000000	-0.344663 0.004288 67.000000	0.138002 0.269157 66.000000	-0.285017 0.031517 66.000000	-0.036833 0.772618 64.000000	-0.159623 0.206838 64.000000
FASTFOOD	0.027090 0.829236 66.000000	-0.054781 0.962206 66.000000	0.026376 0.634789 65.000000	-0.263144 0.032783 66.000000	0.194419 0.123701 64.000000	-0.347947 0.004843 64.000000
RESTAURA	0.119872 0.337709 66.000000	-0.098650 0.430696 66.000000	0.006209 0.960850 65.000000	-0.050574 0.869096 65.000000	-0.223967 0.077772 63.000000	-0.014941 0.905716 64.000000
PREPARED	-0.098500 0.424208 68.000000	-0.012013 0.922548 68.000000	0.153686 0.214351 67.000000	-0.046860 0.704348 68.000000	-0.078879 0.528966 66.000000	-0.028462 0.820540 66.000000
EATINGTI	0.136387 0.267422 68.000000	0.224605 0.065563 68.000000	-0.011632 0.925570 67.000000	0.166375 0.175099 68.000000	-0.104654 0.403004 66.000000	0.156910 0.208320 66.000000
HERBALSU	0.145833 0.242654 66.000000	-0.034794 0.781508 66.000000	0.045811 0.718262 65.000000	0.030873 0.805621 66.000000	0.080862 0.525307 64.000000	0.022305 0.981124 64.000000
DIETARYS	0.122192 0.336110 64.000000	-0.085714 0.500667 64.000000	0.007105 0.955924 63.000000	0.118736 0.346169 65.000000	-0.008821 0.945753 62.000000	-0.034825 0.788152 62.000000
CIGARETT	-0.132969 0.287176 66.000000	0.004762 0.969731 66.000000	-0.035480 0.779026 65.000000	-0.179586 0.149063 66.000000	0.119123 0.348478 64.000000	0.022840 0.858977 63.000000
ALCOHOL	0.080659 0.513197 68.000000	0.134145 0.275440 68.000000	-0.073511 0.654363 67.000000	-0.022998 0.852400 68.000000	0.084651 0.489180 66.000000	0.131857 0.291256 66.000000
SERVALCO	-0.023359 0.851165 67.000000	-0.042887 0.730400 67.000000	-0.044634 0.721948 66.000000	-0.041030 0.71852 67.000000	0.123201 0.328204 65.000000	0.045080 0.721411 65.000000
SLEEP	0.228322 0.059955 68.000000	0.068718 0.577651 68.000000	-0.019412 0.878098 67.000000	0.127127 0.301585 68.000000	-0.202359 0.103214 66.000000	0.060686 0.627220 66.000000
EXERCISE	0.015971 0.897149 68.000000	-0.083751 0.497127 68.000000	-0.044711 0.721489 66.000000	-0.007473 0.951775 68.000000	0.017238 0.891589 65.000000	0.061121 0.625889 66.000000
SMOKINGW	1.000000 0.000000 66.000000	0.206584 0.090983 66.000000	0.012079 0.130853 65.000000	0.000000 0.144079 66.000000	0.072572 0.072572 65.000000	0.183909 0.142514 65.000000
DIETING	0.090683 68.000000	0.000000 68.000000	0.005030 65.000000	0.012079 67.000000	0.228293 64.000000	0.230155 65.000000
DESCRIPT	-0.130853 0.298815 65.000000	-0.343920 0.005030 65.000000	1.000000 0.000000 65.000000	-0.329996 0.007263 65.000000	-0.147285 0.249353 63.000000	0.081407 0.525810 63.000000
CURRENTC	0.144079 0.244739 67.000000	0.305018 0.012079 67.000000	-0.329996 0.007263 65.000000	1.000000 0.000000 66.000000	0.054981 0.863585 65.000000	0.258534 0.037579 65.000000
QUOTE1	0.072572 0.568758 64.000000	0.152721 0.228293 64.000000	-0.147285 0.248353 63.000000	0.054981 0.863585 65.000000	1.000000 0.000000 65.000000	-0.132617 0.300145 0.000000
QUOTE2	0.183909 0.142514 65.000000	0.150911 0.230155 65.000000	0.081407 0.525910 63.000000	0.258534 0.037579 65.000000	-0.132617 0.300145 63.000000	1.000000 0.000000 66.000000
QUOTE_3	-0.247181 0.043737 67.000000	-0.091055 0.463699 67.000000	-0.034093 0.785810 66.000000	0.018244 0.896196 67.000000	0.223323 0.071474 66.000000	-0.234612 0.057942 66.000000
LABEL	-0.096978 0.426321 68.000000	0.346495 0.004372 68.000000	-0.118110 0.352623 64.000000	0.247849 0.046522 65.000000	0.030490 0.810976 64.000000	0.140213 0.289181 64.000000
FAMILYDI	0.096103 0.800857 65.000000	-0.143159 0.255262 65.000000	0.009971 0.937164 65.000000	0.033354 0.791980 65.000000	-0.100583 0.429054 64.000000	0.219692 0.081111 64.000000
BMI	0.000000 1.000000 59.000000	-0.427361 0.000736 59.000000	0.598552 0.000001 59.000000	-0.396087 0.001900 59.000000	0.030739 0.820434 57.000000	-0.194556 0.149997 57.000000
YEARS	0.069596 0.578706 66.000000	-0.036554 0.770754 66.000000	0.177187 0.157948 65.000000	0.032856 0.793401 66.000000	-0.064046 0.812255 65.000000	0.078331 0.531862 66.000000

Correlation Report - Scotland / Male

	QUOTE_3	LABEL	FAMILYDI	BMI	YEARS
HEIGHT	0.173298	0.186504	0.148154	-0.245369	-0.020078
	0.174377	0.148683	0.250483	0.056651	0.876965
	63.000000	62.000000	62.000000	61.000000	62.000000
WEIGHT	0.181830	-0.056303	-0.132442	0.727718	0.217754
	0.164394	0.671888	0.317332	0.000000	0.067567
	60.000000	59.000000	59.000000	61.000000	59.000000
BREAKFAS	-0.102745	0.000778	-0.130602	-0.133486	-0.169796
	0.400862	0.995027	0.292147	0.305078	0.166270
	69.000000	67.000000	67.000000	61.000000	68.000000
MEALS	-0.008526	0.110515	-0.062632	-0.241567	-0.023624
	0.944586	0.373298	0.508190	0.060696	0.848351
	69.000000	67.000000	67.000000	61.000000	68.000000
WATER	-0.155990	0.099298	-0.980591	0.158739	0.144679
	0.203987	0.427630	0.520058	0.222788	0.242101
	68.000000	66.000000	66.000000	60.000000	67.000000
SERVFRUI	0.052640	0.159328	-0.117588	-0.181885	-0.102235
	0.667508	0.197796	0.343294	0.160644	0.406764
	69.000000	67.000000	67.000000	61.000000	68.000000
SERVVEGE	-0.089332	0.176592	-0.129771	-0.125458	0.065815
	0.465419	0.152853	0.295253	0.335347	0.437012
	69.000000	67.000000	67.000000	61.000000	68.000000
SERVMEAT	0.125505	0.202708	0.085986	0.099754	-0.193628
	0.304164	0.099645	0.490497	0.444332	0.113246
	69.000000	67.000000	67.000000	61.000000	68.000000
FISH	-0.027568	-0.198145	0.261344	-0.142536	0.038789
	0.824743	0.110748	0.035480	0.277297	0.757152
	67.000000	66.000000	65.000000	60.000000	66.000000
SNACK	0.067654	0.075256	0.085802	-0.006799	-0.036526
	0.583571	0.548140	0.493340	0.958064	0.769180
	68.000000	66.000000	66.000000	60.000000	67.000000
COFFEETE	-0.046110	-0.258052	-0.106795	-0.069601	0.443513
	0.708861	0.037971	0.393394	0.597203	0.000171
	68.000000	66.000000	66.000000	60.000000	67.000000
REGULARS	-0.015139	0.244009	-0.073423	-0.062211	-0.177082
	0.901741	0.046602	0.554968	0.833965	0.148563
	69.000000	67.000000	67.000000	61.000000	68.000000
DIETSODA	-0.114125	-0.227977	0.060300	0.112077	-0.149210
	0.357790	0.065617	0.633253	0.398041	0.231800
	67.000000	66.000000	65.000000	59.000000	66.000000
FASTFOOD	-0.063506	0.123315	0.009647	0.078016	-0.296440
	0.667170	0.327753	0.938204	0.556982	0.015654
	67.000000	65.000000	65.000000	59.000000	66.000000
RESTAURA	-0.233209	-0.111131	-0.060187	-0.034648	0.025524
	0.059501	0.378146	0.639616	0.796248	0.840056
	66.000000	65.000000	64.000000	58.000000	65.000000
PREPARED	-0.081343	0.031502	0.008975	-0.063624	0.124709
	0.506406	0.800217	0.942538	0.626163	0.310631
	69.000000	67.000000	67.000000	61.000000	68.000000
EATINGTI	-0.187914	0.142964	0.069439	-0.069492	0.062897
	0.122050	0.248447	0.578596	0.492792	0.451164
	69.000000	67.000000	67.000000	61.000000	68.000000
HERBALSU	0.125057	0.201627	0.082382	-0.010222	-0.340250
	0.313293	0.107263	0.514137	0.938750	0.005185
	67.000000	65.000000	65.000000	59.000000	66.000000
DIETARYS	0.263099	-0.023254	0.141929	-0.002781	-0.264557
	0.035687	0.857626	0.271164	0.983772	0.036145
	64.000000	62.000000	62.000000	56.000000	63.000000
CIGARETT	0.051010	-0.029871	0.075008	-0.105437	0.180887
	0.684188	0.813271	0.556816	0.430870	0.149306
	66.000000	65.000000	64.000000	58.000000	65.000000
ALCOHOL	0.139007	0.161942	0.050980	-0.227056	-0.142998
	0.254650	0.190444	0.662554	0.079452	0.245701
	69.000000	67.000000	67.000000	61.000000	68.000000
SERVALCO	0.088319	0.191700	0.117938	-0.189187	-0.228519
	0.473873	0.123082	0.345619	0.196258	0.062885
	68.000000	66.000000	66.000000	60.000000	67.000000
SLEEP	-0.088391	-0.058172	-0.061118	-0.004301	0.105549
	0.470152	0.640075	0.623201	0.973758	0.381646
	69.000000	67.000000	67.000000	61.000000	68.000000
EXERCISE	0.203181	0.149846	0.171798	0.078799	-0.205698
	0.066565	0.229785	0.167805	0.548528	0.094932
	68.000000	66.000000	66.000000	60.000000	67.000000
SMOKINGW	-0.247181	-0.099578	0.086103	0.000000	0.089596
	0.043737	0.426321	0.600857	1.000000	0.578706
	67.000000	66.000000	65.000000	59.000000	66.000000
DIETING	-0.091055	0.346495	-0.143159	-0.427361	-0.036554
	0.463869	0.004372	0.255262	0.000736	0.770754
	67.000000	66.000000	65.000000	59.000000	66.000000
DESCRIPT	-0.034093	-0.118110	0.009971	0.598552	0.177187
	0.785810	0.352623	0.937164	0.000001	0.157948
	66.000000	64.000000	65.000000	59.000000	65.000000
CURRENTC	0.016244	0.247849	0.033354	-0.390067	0.032856
	0.896198	0.048522	0.791980	0.001900	0.793401
	67.000000	65.000000	65.000000	59.000000	66.000000
QUOTE1	0.223323	0.030490	-0.100583	0.030739	-0.064046
	0.071474	0.810978	0.429054	0.820434	0.612255
	66.000000	64.000000	64.000000	57.000000	65.000000
QUOTE2	-0.234612	0.140213	0.219882	-0.194556	0.078331
	0.057942	0.269131	0.081111	0.146997	0.531862
	66.000000	64.000000	64.000000	57.000000	66.000000
QUOTE_3	1.000000	0.133132	0.039684	0.083163	-0.182645
	0.000000	0.282815	0.768208	0.527567	0.136020
	68.000000	67.000000	67.000000	60.000000	68.000000
LABEL	0.133132	1.000000	-0.057749	-0.122781	-0.332230
	0.262815	0.000000	0.647717	0.354299	0.006423
	67.000000	66.000000	65.000000	59.000000	66.000000
FAMILYDI	0.039684	-0.057749	1.000000	-0.203423	-0.135340
	0.782208	0.647717	0.000000	0.122274	0.278589
	67.000000	65.000000	66.000000	58.000000	66.000000
BMI	0.083163	-0.122781	-0.203423	1.000000	0.179751
	0.527567	0.354299	0.122274	0.000000	0.173110
	60.000000	59.000000	59.000000	58.000000	59.000000
YEARS	-0.182645	-0.332230	-0.136340	0.179751	1.000000
	0.136020	0.006423	0.278589	0.173110	0.000000
	68.000000	66.000000	66.000000	58.000000	59.000000

Correlation Report - Scotland / Female

	HEIGHT	WEIGHT	BREAKFAS	MEALS	WATER	SERVFRUI
HEIGHT	1.000000	0.483560	-0.024349	-0.041416	0.114626	0.220802
	0.000000	0.000212	0.848538	0.743241	0.363236	0.062036
WEIGHT	62.000000	54.000000	64.000000	65.000000	65.000000	63.000000
	0.483560	1.000000	0.004587	0.031333	0.253277	0.296048
	0.000212	0.000000	0.973485	0.818681	0.059641	0.029737
BREAKFAS	54.000000	55.000000	55.000000	56.000000	56.000000	54.000000
	-0.024349	0.004587	1.000000	0.496877	0.043890	0.192098
	0.848538	0.973485	0.000000	0.000006	0.708543	0.103490
MEALS	64.000000	65.000000	72.000000	75.000000	75.000000	73.000000
	-0.041416	0.031333	0.496877	1.000000	0.110122	0.173031
	0.743241	0.818681	0.000006	0.000000	0.340379	0.146407
WATER	65.000000	56.000000	75.000000	77.000000	74.000000	74.000000
	0.114626	0.253277	0.043890	0.110122	1.000000	1.000000
	0.363236	0.059641	0.708543	0.340379	0.000000	0.009060
SERVFRUI	65.000000	56.000000	75.000000	77.000000	74.000000	74.000000
	0.220802	0.296048	0.192098	0.173031	0.301421	1.000000
	0.082035	0.029737	0.103490	0.140407	0.009060	0.000000
SERVVEGE	63.000000	54.000000	73.000000	74.000000	74.000000	71.000000
	0.235692	0.059255	0.231858	0.278443	0.200359	0.244721
	0.058750	0.864430	0.945329	0.014204	0.080612	0.035606
SERVMEAT	65.000000	56.000000	75.000000	77.000000	77.000000	74.000000
	-0.022507	0.016230	0.096986	0.109793	-0.022653	-0.075777
	0.862154	0.908171	0.415795	0.351743	0.982100	0.526964
FISH	62.000000	53.000000	73.000000	74.000000	74.000000	72.000000
	-0.137072	-0.051380	0.276785	0.250325	-0.013341	0.053151
	0.276236	0.706866	0.016220	0.028110	0.908321	0.652887
SNACK	65.000000	56.000000	75.000000	77.000000	77.000000	74.000000
	0.057990	0.146532	-0.192556	0.234686	-0.141182	0.063943
	0.546347	0.281192	0.097904	0.039691	0.220686	0.588338
COFFEE	65.000000	56.000000	75.000000	77.000000	77.000000	74.000000
	0.000627	-0.108579	0.073572	0.036743	-0.024561	0.085030
	0.996043	0.425708	0.530460	0.751050	0.832084	0.471335
REGULARS	65.000000	56.000000	75.000000	77.000000	77.000000	74.000000
	-0.107649	-0.024888	-0.227510	-0.249800	-0.211075	-0.253753
	0.393362	0.855529	0.051243	0.029637	0.067206	0.029143
DIETSODA	65.000000	56.000000	74.000000	76.000000	76.000000	74.000000
	0.076305	0.208193	-0.239479	-0.065723	-0.202902	-0.003730
	0.548982	0.127183	0.039878	0.572702	0.078768	0.975016
FASTFOOD	64.000000	55.000000	74.000000	76.000000	76.000000	73.000000
	0.029598	0.243168	-0.314556	0.008539	-0.272277	-0.224169
	0.819543	0.079341	0.005721	0.942942	0.019785	0.060197
RESTAURA	62.000000	53.000000	73.000000	73.000000	73.000000	71.000000
	-0.089747	-0.014354	-0.042000	0.103628	-0.011609	0.115989
	0.480657	0.917159	0.722360	0.373018	0.920716	0.328464
PREPARED	64.000000	55.000000	74.000000	76.000000	76.000000	73.000000
	-0.015497	-0.208775	-0.073625	0.056859	0.140406	0.012324
	0.903264	0.126098	0.533017	0.625645	0.226376	0.917578
EATINGTI	64.000000	55.000000	74.000000	76.000000	76.000000	73.000000
	-0.006134	-0.084943	0.020196	-0.159657	0.155614	0.076488
	0.961323	0.533648	0.863448	0.165714	0.176590	0.517158
HERBALSU	65.000000	56.000000	75.000000	77.000000	77.000000	74.000000
	0.029048	-0.139956	-0.134296	-0.004632	-0.180305	-0.286262
	0.822669	0.312794	0.260715	0.968755	0.124229	0.014776
DIETARYS	62.000000	54.000000	72.000000	74.000000	74.000000	71.000000
	0.075965	-0.051778	-0.037217	-0.047169	-0.068804	-0.117559
	0.557320	0.712720	0.754583	0.689833	0.560238	0.325370
CIGARETT	62.000000	53.000000	73.000000	74.000000	74.000000	72.000000
	0.042929	0.312588	-0.256043	-0.281011	-0.062398	-0.031550
	0.740421	0.022876	0.028782	0.015287	0.587401	0.792481
ALCOHOL	62.000000	53.000000	73.000000	74.000000	74.000000	72.000000
	0.008677	0.060225	-0.118093	0.022911	-0.087344	-0.026863
	0.949634	0.865304	0.322561	0.847429	0.571324	0.824021
SERVALCO	62.000000	54.000000	71.000000	73.000000	73.000000	71.000000
	0.026990	0.134705	-0.292808	-0.132827	0.083831	-0.003237
	0.835050	0.336213	0.013211	0.262602	0.480730	0.978625
SLEEP	62.000000	53.000000	71.000000	73.000000	73.000000	71.000000
	0.134835	-0.054561	0.287095	0.128336	0.047907	0.124227
	0.288110	0.892375	0.013135	0.269230	0.681105	0.295036
EXERCISE	64.000000	55.000000	74.000000	76.000000	76.000000	73.000000
	0.039694	0.000870	0.118503	0.176789	0.064675	0.504486
	0.761522	0.337416	0.058172	0.316580	0.311128	0.412971
SMOKINGW	64.000000	55.000000	74.000000	76.000000	76.000000	73.000000
	-0.068770	-0.302562	0.134102	0.221267	0.029400	-0.003576
	0.595347	0.027645	0.261411	0.058151	0.803627	0.976388
DIETING	62.000000	53.000000	72.000000	74.000000	74.000000	71.000000
	-0.075573	-0.387983	0.008903	0.155918	-0.115637	-0.080277
	0.549626	0.003424	0.939991	0.178633	0.319865	0.499585
DESCRIPT	65.000000	55.000000	74.000000	76.000000	76.000000	73.000000
	-0.127116	0.811308	-0.183052	-0.158571	-0.047340	-0.078810
	0.316850	0.000001	0.118503	0.176789	0.064675	0.504486
CURRENTC	64.000000	55.000000	74.000000	76.000000	76.000000	74.000000
	-0.075004	0.379038	0.147383	0.105464	-0.030297	-0.122086
	0.552641	0.003968	0.207006	0.361321	0.793653	0.300097
QUOTE1	65.000000	56.000000	75.000000	77.000000	77.000000	74.000000
	0.046084	-0.040311	-0.196184	-0.146232	-0.142090	-0.125982
	0.722090	0.772266	0.098809	0.213789	0.227190	0.295156
QUOTE2	62.000000	54.000000	72.000000	74.000000	74.000000	71.000000
	0.163067	0.053114	0.098206	0.236864	0.223433	0.289185
	0.197933	0.700145	0.408471	0.040750	0.053989	0.021284
QUOTE_3	64.000000	55.000000	73.000000	75.000000	75.000000	73.000000
	0.133442	-0.024328	-0.143638	0.037890	0.061297	0.035169
	0.293165	0.860054	0.222112	0.745473	0.598878	0.787894
LABEL	64.000000	55.000000	74.000000	76.000000	76.000000	73.000000
	0.175559	-0.029735	-0.008064	-0.128593	0.019479	0.180300
	0.168739	0.830986	0.946402	0.274873	0.869158	0.181748
FAMILYDI	63.000000	54.000000	72.000000	74.000000	74.000000	71.000000
	-0.100815	0.088001	0.092436	0.078264	0.173553	0.230161
	0.431784	0.526882	0.439682	0.504467	0.136463	0.051775
BMI	63.000000	54.000000	73.000000	75.000000	75.000000	72.000000
	-0.244299	0.682686	-0.032946	0.017618	0.138741	0.039812
	0.075027	0.000000	0.814831	0.899381	0.317057	0.779307
YEARS	54.000000	54.000000	53.000000	54.000000	54.000000	52.000000
	0.003246	-0.214986	0.096293	0.014224	0.222452	0.040196
	0.980025	0.115176	0.580775	0.904281	0.056784	0.739267
	62.000000	55.000000	72.000000	74.000000	74.000000	71.000000

Correlation Report - Scotland / Female

	SERVVEGE	SERVMEAT	FISH	SNACK	COFFEETE	REGULARS
HEIGHT	0.235662	-0.022507	-0.137072	0.057990	0.006627	-0.107649
	0.058750	0.862154	0.276236	0.646347	0.996043	0.393362
	65.000000	62.000000	65.000000	65.000000	65.000000	65.000000
WEIGHT	0.059255	0.018230	-0.051380	0.146532	-0.106878	-0.024888
	0.664430	0.908171	0.706896	0.281192	0.425708	0.855526
	56.000000	53.000000	56.000000	56.000000	56.000000	56.000000
BREAKFAS	0.231858	0.096686	0.276785	-0.192556	0.073572	-0.227510
	0.045329	0.415796	0.016220	0.097904	0.530460	0.051243
	75.000000	73.000000	75.000000	75.000000	75.000000	74.000000
MEALS	0.278443	0.106793	0.250325	0.234686	0.036743	-0.249600
	0.014204	0.351743	0.028110	0.039631	0.751050	0.029537
	77.000000	74.000000	77.000000	77.000000	77.000000	76.000000
WATER	0.200359	-0.002653	-0.013341	-0.141182	-0.024561	-0.211075
	0.080612	0.982100	0.908321	0.220668	0.832064	0.067206
	77.000000	74.000000	77.000000	77.000000	77.000000	76.000000
SERVFRUI	0.244721	-0.075777	0.053151	0.063943	0.085030	-0.253753
	0.035806	0.528964	0.852887	0.588338	0.471335	0.029145
	74.000000	72.000000	74.000000	74.000000	74.000000	74.000000
SERVVEGE	1.000000	-0.089006	-0.021232	-0.016613	0.164489	0.137211
	0.000000	0.450775	0.854578	0.885673	0.152851	0.237225
	74.000000	74.000000	77.000000	77.000000	77.000000	76.000000
SERVMEAT	-0.069006	1.000000	0.207247	-0.183911	0.022203	0.013713
	0.450775	0.000000	0.076437	0.116754	0.851055	0.908326
	74.000000	71.000000	74.000000	74.000000	74.000000	73.000000
FISH	-0.021232	0.207247	1.000000	-0.070625	-0.003813	0.031670
	0.854578	0.076437	0.000000	0.541626	0.973743	0.785645
	77.000000	74.000000	74.000000	77.000000	77.000000	76.000000
SNACK	-0.016613	-0.183911	-0.070625	1.000000	0.078906	0.038987
	0.885973	0.116754	0.541626	0.000000	0.495155	0.738063
	77.000000	74.000000	77.000000	74.000000	77.000000	76.000000
COFFEETE	0.164489	0.022203	-0.003813	0.078906	1.000000	-0.037390
	0.152851	0.851055	0.973743	0.495155	0.000000	0.748461
	77.000000	74.000000	77.000000	77.000000	74.000000	76.000000
REGULARS	0.137211	0.013713	0.031670	0.038987	-0.037390	1.000000
	0.237225	0.908326	0.785943	0.738063	0.748461	0.000000
	76.000000	73.000000	76.000000	76.000000	76.000000	73.000000
DIETSODA	-0.247706	0.022888	-0.035423	0.259679	0.067927	-0.000069
	0.030974	0.847584	0.761287	0.023327	0.559671	0.999530
	76.000000	73.000000	76.000000	76.000000	76.000000	75.000000
FASTFOOD	-0.043362	0.178036	-0.141404	0.275760	-0.066572	0.414510
	0.715962	0.137432	0.232746	0.018205	0.575752	0.000296
	73.000000	71.000000	73.000000	73.000000	73.000000	72.000000
RESTAURA	0.013759	0.203283	0.045948	0.160986	0.037014	-0.062636
	0.906097	0.089330	0.693483	0.164745	0.750908	0.480944
	76.000000	73.000000	76.000000	76.000000	76.000000	75.000000
PREPARED	-0.012300	-0.055664	-0.104585	0.096801	0.141584	0.029128
	0.916011	0.839666	0.368597	0.391020	0.222463	0.804078
	76.000000	73.000000	76.000000	76.000000	76.000000	75.000000
EATINGTI	0.096210	-0.249296	-0.021120	-0.238830	0.038868	0.131833
	0.410129	0.032218	0.855335	0.036455	0.737164	0.256288
	77.000000	74.000000	77.000000	77.000000	77.000000	76.000000
HERBALSU	0.012564	-0.095344	-0.193425	0.158595	-0.029638	0.166445
	0.915399	0.424139	0.098696	0.177139	0.800104	0.159310
	74.000000	71.000000	74.000000	74.000000	74.000000	73.000000
DIETARYS	0.104820	-0.063998	-0.294270	-0.044528	0.031306	0.094473
	0.374115	0.595021	0.010930	0.706386	0.791173	0.426900
	74.000000	72.000000	74.000000	74.000000	74.000000	73.000000
CIGARETT	-0.247205	-0.204178	-0.139562	-0.017981	0.069810	0.057218
	0.033720	0.085366	0.235647	0.879143	0.554504	0.630641
	74.000000	72.000000	74.000000	74.000000	74.000000	73.000000
ALCOHOL	-0.143579	0.190183	0.178083	-0.022956	0.012484	-0.017626
	0.225567	0.114804	0.131719	0.847136	0.271106	0.882320
	73.000000	70.000000	73.000000	73.000000	73.000000	73.000000
SERVALCO	-0.241974	-0.028523	0.073977	0.138395	0.028540	-0.132986
	0.039160	0.826212	0.533938	0.242975	0.810575	0.262082
	73.000000	71.000000	73.000000	73.000000	73.000000	73.000000
SLEEP	0.236830	0.121332	-0.042203	-0.093363	-0.166596	-0.115682
	0.039415	0.306519	0.717369	0.422445	0.150334	0.322946
	76.000000	73.000000	76.000000	76.000000	76.000000	75.000000
EXERCISE	0.035351	0.014965	0.153554	0.091910	-0.096313	-0.098566
	0.761759	0.900002	0.185382	0.429735	0.398159	0.400168
	76.000000	73.000000	76.000000	76.000000	76.000000	75.000000
SMOKINGW	0.185373	0.175504	-0.023960	0.062174	0.088497	0.063246
	0.113826	0.143203	0.836423	0.596716	0.453378	0.483797
	74.000000	71.000000	74.000000	74.000000	74.000000	73.000000
DIETING	0.138305	0.164723	0.011633	0.025702	-0.035180	0.095785
	0.233471	0.163729	0.820555	0.825571	0.762880	0.413660
	76.000000	73.000000	76.000000	76.000000	76.000000	75.000000
DESCRIPT	-0.227882	-0.049774	-0.166217	0.128502	-0.117163	0.152053
	0.047923	0.675806	0.151277	0.276189	0.313478	0.192819
	76.000000	73.000000	76.000000	76.000000	76.000000	75.000000
CURRENTC	0.010409	0.257061	0.166721	-0.046867	0.054073	0.025641
	0.929411	0.027038	0.142419	0.685657	0.640450	0.823674
	77.000000	74.000000	77.000000	77.000000	77.000000	76.000000
QUOTE1	-0.003778	-0.204553	-0.172032	0.297021	0.109042	0.156485
	0.974514	0.087054	0.142749	0.010174	0.355068	0.186136
	74.000000	71.000000	74.000000	74.000000	74.000000	73.000000
QUOTE2	0.358837	0.174162	0.188019	-0.037899	-0.069682	-0.195352
	0.001570	0.143424	0.106228	0.748122	0.551449	0.063034
	75.000000	72.000000	75.000000	75.000000	75.000000	75.000000
QUOTE_3	0.043102	0.057168	-0.037031	0.091520	-0.062723	0.187148
	0.711610	0.630937	0.750795	0.431702	0.590388	0.107886
	76.000000	73.000000	76.000000	76.000000	76.000000	75.000000
LABEL	0.006220	0.079598	0.131081	-0.085482	-0.051107	0.044765
	0.959065	0.509364	0.285815	0.411831	0.865424	0.708675
	74.000000	71.000000	74.000000	74.000000	74.000000	73.000000
FAMILYDI	0.067220	-0.033330	0.108794	-0.102771	0.188610	-0.044639
	0.568636	0.781059	0.352827	0.380288	0.108921	0.703807
	75.000000	72.000000	75.000000	75.000000	75.000000	74.000000
BMI	-0.181958	0.170854	-0.055517	0.046243	-0.063959	0.012746
	0.187894	0.230633	0.690067	0.739890	0.645895	0.927116
	54.000000	51.000000	54.000000	54.000000	54.000000	54.000000
YEARS	0.061406	-0.176745	-0.016799	-0.064451	0.247246	-0.200052
	0.803252	0.140352	0.887030	0.585372	0.033687	0.086707
	74.000000	71.000000	74.000000	74.000000	74.000000	73.000000

Correlation Report – Scotland / Female

	DIETSODA	FASTFOOD	RESTAURA	PREPARED	EATINGTI	HERBALSU
HEIGHT	0.076305	-0.029568	-0.089747	-0.015497	-0.006134	0.029048
	0.548962	0.819543	0.486957	0.903294	0.961323	0.622696
WEIGHT	64.000000	82.000000	64.000000	64.000000	65.000000	62.000000
	0.208193	0.243168	-0.014354	-0.206775	-0.064943	-0.139956
	0.127183	0.079341	0.917159	0.126969	0.533648	0.312794
BREAKFAS	55.000000	53.000000	55.000000	55.000000	56.000000	54.000000
	-0.239479	-0.314556	-0.042000	-0.073625	0.020196	-0.134296
	0.039678	0.006721	0.722360	0.533017	0.863448	0.260715
MEALS	74.000000	73.000000	74.000000	74.000000	75.000000	72.000000
	-0.065723	0.006539	0.103628	0.056859	-0.156657	-0.004632
	0.572702	0.942942	0.373018	0.625645	0.166714	0.968756
WATER	76.000000	73.000000	76.000000	76.000000	77.000000	74.000000
	-0.202902	-0.272277	-0.011609	0.140406	0.155614	-0.180305
	0.078768	0.019785	0.920716	0.228378	0.176560	0.124229
SERVFRUI	76.000000	73.000000	76.000000	76.000000	77.000000	74.000000
	-0.003730	-0.224169	0.115989	0.012324	0.076498	-0.286262
	0.975016	0.080197	0.328464	0.917578	0.517158	0.014776
SERVVEGE	73.000000	71.000000	73.000000	73.000000	74.000000	71.000000
	-0.247706	-0.043362	0.013759	-0.012300	0.095210	0.012564
	0.030974	0.715962	0.906097	0.916011	0.410126	0.915389
SERVMEAT	76.000000	73.000000	76.000000	76.000000	77.000000	74.000000
	0.022886	0.178036	0.200283	-0.059564	-0.246296	-0.096344
	0.847584	0.137432	0.089330	0.639966	0.052218	0.424136
FISH	73.000000	71.000000	73.000000	73.000000	74.000000	71.000000
	-0.035423	-0.141404	0.045948	-0.104585	-0.021120	-0.193425
	0.781287	0.232746	0.693483	0.368597	0.855335	0.098966
SNACK	76.000000	73.000000	76.000000	76.000000	77.000000	74.000000
	0.259679	0.275790	0.160989	0.096901	-0.236830	0.158596
	0.023327	0.018205	0.164745	0.391020	0.036455	0.177138
COFFEETE	76.000000	73.000000	76.000000	76.000000	77.000000	74.000000
	0.067827	-0.099572	0.037014	0.141584	0.038868	-0.029936
	0.559871	0.575752	0.759991	0.222463	0.737164	0.800104
REGULARS	76.000000	73.000000	76.000000	76.000000	77.000000	74.000000
	-0.000069	0.414510	-0.082630	0.029128	0.131833	0.196445
	0.999530	0.000295	0.480944	0.804078	0.256288	0.156310
DIETSODA	75.000000	72.000000	75.000000	75.000000	76.000000	73.000000
	1.000000	0.417373	0.197543	-0.186677	-0.141915	0.128445
	0.000000	0.000265	0.089353	0.104986	0.221374	0.278813
FASTFOOD	74.000000	72.000000	75.000000	75.000000	76.000000	73.000000
	0.417373	1.000000	0.169636	-0.252350	-0.123967	0.431946
	0.000265	0.000000	0.154530	0.032474	0.297236	0.000189
RESTAURA	72.000000	70.000000	72.000000	72.000000	73.000000	70.000000
	0.197543	0.189536	1.000000	0.012926	-0.190672	-0.051877
	0.089353	0.154530	0.000000	0.912354	0.098970	0.662921
PREPARED	75.000000	72.000000	73.000000	75.000000	76.000000	73.000000
	-0.188677	-0.262350	0.012926	1.000000	0.139537	0.035712
	0.104986	0.032474	0.912354	0.000000	0.228282	0.764215
EATINGTI	75.000000	72.000000	75.000000	73.000000	76.000000	73.000000
	-0.141915	-0.123667	-0.190672	0.139537	1.000000	0.080901
	0.221374	0.297236	0.098970	0.228282	0.000000	0.493209
HERBALSU	76.000000	73.000000	76.000000	76.000000	74.000000	74.000000
	0.128445	0.431946	-0.051877	0.035712	0.080901	1.000000
	0.278813	0.000189	0.662921	0.764215	0.493209	0.000000
DIETARYS	73.000000	70.000000	73.000000	73.000000	74.000000	71.000000
	-0.066227	0.294309	-0.012125	0.143540	0.046945	0.293402
	0.968299	0.012082	0.918907	0.225696	0.691237	0.012373
CIGARETT	73.000000	72.000000	73.000000	73.000000	74.000000	72.000000
	0.109631	0.050176	-0.085120	-0.017162	0.186288	-0.005727
	0.355849	0.877739	0.473983	0.885412	0.112022	0.962197
ALCOHOL	73.000000	71.000000	73.000000	73.000000	74.000000	71.000000
	0.282432	0.185259	0.024149	-0.216158	-0.085919	0.021363
	0.016228	0.157477	0.840424	0.068200	0.471387	0.858829
SERVALCO	72.000000	89.000000	72.000000	72.000000	73.000000	72.000000
	0.145814	0.083312	-0.083315	-0.407348	-0.178907	0.049661
	0.221645	0.496137	0.597239	0.000383	0.129914	0.683081
SLEEP	72.000000	69.000000	72.000000	72.000000	73.000000	70.000000
	-0.162850	-0.153537	-0.036593	-0.058565	0.020945	0.059997
	0.162722	0.197867	0.755278	0.617711	0.857479	0.614107
EXERCISE	75.000000	72.000000	75.000000	75.000000	76.000000	73.000000
	-0.012431	-0.013111	0.364356	0.129621	-0.089472	-0.180316
	0.915703	0.912960	0.001311	0.267696	0.556718	0.126866
SMOKINGW	75.000000	72.000000	75.000000	75.000000	76.000000	73.000000
	-0.105310	-0.040989	0.025741	0.329139	-0.039577	0.031967
	0.371870	0.736188	0.828856	0.004465	0.737782	0.793835
DIETING	74.000000	70.000000	73.000000	73.000000	74.000000	71.000000
	-0.177302	0.164395	-0.087130	-0.024323	0.088918	0.153086
	0.128066	0.167808	0.457295	0.835902	0.444965	0.196002
DESCRIPT	75.000000	72.000000	75.000000	75.000000	76.000000	73.000000
	0.218676	0.295480	0.099230	-0.053336	-0.095653	-0.060726
	0.059449	0.011739	0.396987	0.649491	0.411105	0.609796
CURRENTC	75.000000	72.000000	75.000000	75.000000	76.000000	73.000000
	-0.194309	-0.005592	-0.042857	0.038450	0.072024	0.018563
	0.092579	0.962549	0.713175	0.741575	0.533627	0.875052
QUOTE1	76.000000	73.000000	76.000000	76.000000	77.000000	74.000000
	0.001194	0.074423	-0.074055	0.054040	-0.056525	0.121658
	0.992001	0.540333	0.530617	0.649772	0.632398	0.308669
QUOTE2	73.000000	70.000000	74.000000	73.000000	74.000000	72.000000
	-0.026316	-0.071463	0.079980	-0.055200	0.161530	-0.137111
	0.823876	0.553700	0.499776	0.640414	0.186203	0.247382
QUOTE_3	74.000000	71.000000	74.000000	74.000000	75.000000	73.000000
	0.128058	0.264055	0.082195	-0.106484	-0.094672	0.083674
	0.273559	0.025006	0.483284	0.363202	0.415943	0.478460
LABEL	75.000000	72.000000	75.000000	75.000000	76.000000	73.000000
	-0.218168	-0.036995	-0.050151	0.111596	0.119977	-0.061711
	0.063702	0.762986	0.671322	0.347240	0.308584	0.609182
FAMILYDI	73.000000	70.000000	74.000000	73.000000	74.000000	71.000000
	0.045455	-0.081628	0.012439	-0.117439	0.194047	-0.081044
	0.700563	0.495457	0.916230	0.319004	0.095282	0.498556
BMI	74.000000	72.000000	74.000000	74.000000	75.000000	72.000000
	0.222029	0.235425	0.069439	-0.202700	-0.071509	-0.036945
	0.110072	0.096301	0.621262	0.145490	0.607356	0.794845
YEARS	53.000000	51.000000	53.000000	53.000000	54.000000	52.000000
	-0.096993	-0.273107	-0.025435	0.352950	0.213462	0.036886
	0.411018	0.022166	0.830862	0.002213	0.067832	0.760067
	74.000000	70.000000	73.000000	73.000000	74.000000	71.000000

Correlation Report – Scotland / Female

	DIETARYS	CIGARETT	ALCOHOL	SERVALCO	SLEEP	EXERCISE
HEIGHT	0.075985	0.042929	0.008677	0.026990	0.134836	0.038694
	0.557320	0.740421	0.946634	0.835050	0.288110	0.761522
WEIGHT	82.000000	62.000000	62.000000	62.000000	64.000000	64.000000
	-0.051778	0.312586	0.060225	0.134705	-0.054561	0.131812
	0.712720	0.022676	0.665304	0.336213	0.692375	0.337416
BREAKFAS	53.000000	53.000000	54.000000	53.000000	55.000000	55.000000
	-0.037217	-0.256043	-0.119093	-0.292808	0.287066	0.058772
	0.754583	0.028782	0.322561	0.013211	0.013136	0.618907
MEALS	73.000000	73.000000	71.000000	71.000000	74.000000	74.000000
	-0.047169	-0.281011	0.022911	-0.132827	0.128336	0.116419
	0.689833	0.015297	0.847429	0.262602	0.266230	0.316580
WATER	74.000000	74.000000	73.000000	73.000000	76.000000	76.000000
	-0.068804	-0.052398	-0.067344	0.480730	0.047907	0.311128
	0.580238	0.597401	0.571324	0.571324	0.681105	0.006226
SERVFRUI	74.000000	74.000000	73.000000	73.000000	76.000000	76.000000
	-0.117559	-0.031550	-0.026863	-0.003237	0.124227	0.412671
	0.325370	0.792481	0.824021	0.978625	0.295036	0.000285
SERVVEGE	72.000000	72.000000	71.000000	71.000000	73.000000	73.000000
	0.104820	-0.247205	-0.143579	-0.241974	0.236830	0.035351
	0.374115	0.033720	0.225567	0.039160	0.039415	0.761759
SERVMEAT	74.000000	74.000000	73.000000	73.000000	76.000000	76.000000
	-0.063698	-0.204178	0.190183	-0.026523	0.121332	0.014965
	0.595021	0.085396	0.114804	0.826212	0.306519	0.900002
FISH	72.000000	72.000000	70.000000	71.000000	73.000000	73.000000
	-0.294270	-0.139562	0.178083	0.073977	-0.042203	0.153554
	0.010930	0.235647	0.131719	0.533838	0.717369	0.185362
SNACK	74.000000	74.000000	73.000000	73.000000	76.000000	76.000000
	-0.044528	-0.017981	-0.022956	0.138385	-0.093363	0.061910
	0.706388	0.879143	0.847135	0.242975	0.422445	0.429735
COFFEETE	74.000000	74.000000	73.000000	73.000000	76.000000	76.000000
	0.031306	0.069810	0.212484	0.028540	-0.166596	-0.068313
	0.791173	0.554504	0.071106	0.810575	0.150334	0.398158
REGULARS	74.000000	74.000000	73.000000	73.000000	76.000000	76.000000
	0.094473	0.057218	-0.017628	-0.132968	-0.115692	-0.096596
	0.426600	0.630641	0.882320	0.262092	0.322948	0.400168
DIETSODA	73.000000	73.000000	73.000000	73.000000	75.000000	75.000000
	-0.066227	0.109631	0.282432	0.145814	-0.162850	-0.012431
	0.958299	0.355849	0.016229	0.221645	0.162722	0.915703
FASTFOOD	73.000000	73.000000	72.000000	72.000000	75.000000	75.000000
	0.294309	0.050176	0.165259	0.083312	-0.153537	-0.013111
	0.012092	0.677739	0.174777	0.496137	0.197667	0.912960
RESTAURA	72.000000	71.000000	69.000000	69.000000	72.000000	72.000000
	-0.012125	-0.085120	0.024149	-0.063315	-0.036593	0.364356
	0.918907	0.473983	0.840424	0.597239	0.755278	0.001311
PREPARED	73.000000	73.000000	72.000000	72.000000	75.000000	75.000000
	0.143540	-0.017162	-0.216158	-0.407348	-0.058565	0.129621
	0.225695	0.885412	0.068200	0.000383	0.617711	0.267696
EATINGTI	73.000000	73.000000	72.000000	72.000000	75.000000	75.000000
	0.046945	0.186288	-0.085619	-0.178907	0.020945	-0.068472
	0.691237	0.112022	0.471387	0.129914	0.857479	0.556718
HERBALSU	74.000000	74.000000	73.000000	73.000000	76.000000	76.000000
	0.293402	-0.005727	0.021363	0.049661	0.059997	-0.180316
	0.012373	0.962197	0.858829	0.683081	0.614107	0.126868
DIETARYS	72.000000	71.000000	72.000000	70.000000	73.000000	73.000000
	1.000000	-0.047045	-0.185915	-0.296909	-0.045303	-0.159942
	0.000000	0.694746	0.186722	0.025567	0.703509	0.176479
CIGARETT	71.000000	72.000000	71.000000	70.000000	73.000000	73.000000
	-0.047045	1.000000	0.039011	0.301186	-0.242042	-0.112692
	0.694746	0.000000	0.748488	0.011288	0.039103	0.342493
ALCOHOL	72.000000	71.000000	70.000000	70.000000	73.000000	73.000000
	-0.165915	0.039011	1.000000	0.382862	-0.063322	0.000598
	0.166722	0.748488	0.000000	0.000690	0.597200	0.996021
SERVALCO	71.000000	70.000000	0.000000	0.000000	71.000000	72.000000
	-0.269809	0.301186	0.382862	1.000000	-0.219405	0.027840
	0.025567	0.011288	0.000990	0.000000	0.064060	0.816426
SLEEP	70.000000	70.000000	71.000000	70.000000	72.000000	72.000000
	-0.045303	-0.242042	-0.063322	-0.219405	1.000000	-0.024301
	0.703509	0.039103	0.597200	0.064060	0.000000	0.836048
EXERCISE	73.000000	73.000000	72.000000	72.000000	73.000000	75.000000
	-0.159942	-0.112692	0.000598	0.027840	-0.024301	1.000000
	0.176479	0.342493	0.996021	0.816426	0.836048	0.000000
SMOKINGW	73.000000	73.000000	72.000000	72.000000	75.000000	73.000000
	0.142932	-0.552532	-0.110318	-0.418962	0.119123	0.053281
	0.234400	0.000000	0.363271	0.000329	0.315474	0.654375
DIETING	71.000000	72.000000	70.000000	70.000000	73.000000	73.000000
	-0.053190	-0.211689	-0.036202	-0.197809	0.014348	-0.114573
	0.654928	0.072194	0.762726	0.095794	0.902761	0.327661
DESCRIPT	73.000000	73.000000	72.000000	72.000000	75.000000	75.000000
	0.081101	0.327072	0.202676	0.151488	-0.204955	0.053793
	0.495180	0.004737	0.087742	0.203991	0.077744	0.646890
CURRENTC	73.000000	73.000000	72.000000	72.000000	75.000000	75.000000
	-0.068622	-0.250703	-0.152703	-0.065272	0.157467	-0.043808
	0.463944	0.031205	0.197135	0.422681	0.174302	0.707087
QUOTE1	74.000000	74.000000	73.000000	73.000000	76.000000	76.000000
	0.000000	0.335224	-0.013109	0.167792	-0.150450	-0.158464
	1.000000	0.003996	0.913594	0.185005	0.203906	0.180563
QUOTE2	71.000000	72.000000	71.000000	70.000000	73.000000	73.000000
	-0.082354	-0.111001	0.004872	-0.050034	0.265783	0.058910
	0.488517	0.353272	0.967399	0.676396	0.022094	0.630079
QUOTE_3	73.000000	72.000000	73.000000	72.000000	74.000000	74.000000
	-0.060447	-0.014833	0.070787	0.171607	0.062234	0.029019
	0.608931	0.900877	0.551881	0.149480	0.595818	0.804798
LABEL	74.000000	73.000000	73.000000	72.000000	75.000000	75.000000
	-0.133842	0.047194	-0.048816	-0.039949	0.274600	0.127744
	0.265806	0.693889	0.888161	0.742648	0.018719	0.281470
FAMILYDI	71.000000	72.000000	70.000000	70.000000	73.000000	73.000000
	-0.128198	0.136995	0.341514	0.115343	0.140381	-0.106697
	0.283185	0.252218	0.003560	0.338140	0.232884	0.362236
BMI	72.000000	72.000000	71.000000	71.000000	74.000000	75.000000
	-0.183397	0.366585	0.114552	0.184732	-0.150459	0.058557
	0.197875	0.008149	0.418727	0.194373	0.282206	0.677050
YEARS	51.000000	51.000000	52.000000	51.000000	53.000000	53.000000
	-0.126271	0.041312	0.170447	0.038905	0.014437	-0.064526
	0.294039	0.732298	0.158324	0.751019	0.903508	0.477085
	71.000000	71.000000	70.000000	70.000000	73.000000	73.000000

Correlation Report - Scotland / Female

	SMOKINGW	DIETING	DESCRIPT	CURRENTC	QUOTE1	QUOTE2
HEIGHT	-0.068770 0.595347 62.000000 -0.302592 0.027645 53.000000 0.134102 0.261411	-0.075573 0.549526 65.000000 -0.387983 0.030424 55.000000 0.038903 0.939691	-0.127116 0.316850 64.000000 0.611308 0.000001 55.000000 -0.183052 0.118503	-0.075004 0.552641 65.000000 -0.379038 0.003966 56.000000 0.147383 0.207008	0.046084 0.722060 62.000000 -0.040311 0.772286 54.000000 -0.196184 0.098609	0.163067 0.187933 64.000000 0.053114 0.700146 56.000000 0.098206 0.408471
WEIGHT	0.027645 53.000000 0.134102 0.261411	0.038903 0.939691 74.000000 0.155918 0.178633 76.000000 -0.115637 0.319866	0.611308 0.000001 55.000000 -0.183052 0.118503 74.000000 0.155918 0.178633	-0.379038 0.003966 56.000000 0.147383 0.207008 75.000000 0.105484 0.381321	-0.040311 0.772286 54.000000 -0.196184 0.098609 72.000000 -0.146232 0.213789	0.053114 0.700146 56.000000 0.098206 0.408471 75.000000 0.223433 0.053989
BREAKFAS	0.134102 0.261411	0.038903 0.939691	0.611308 0.000001	-0.379038 0.003966	-0.040311 0.772286	0.053114 0.700146
MEALS	0.261411	0.939691	0.000001	0.003966	0.772286	0.700146
WATER	0.029400 0.803627 74.000000 -0.003576 0.978388 71.000000 0.185373 0.113826 74.000000 0.175504 0.143203 71.000000 -0.023960 0.839423 74.000000 0.062174 0.598716 74.000000 0.088497 0.453378	-0.115637 0.319866 76.000000 -0.080277 0.492585 73.000000 0.138305 0.233471 76.000000 0.164723 0.163729 73.000000 0.011633 0.920555 78.000000 0.025702 0.825571 76.000000 -0.035180 0.762880	-0.047340 0.684675 76.000000 -0.078610 0.504498 74.000000 -0.227682 0.047623 76.000000 -0.049774 0.675806 73.000000 -0.168217 0.151277 78.000000 0.129502 0.276189 76.000000 -0.117163 0.313478 78.000000 0.152053 0.192819 75.000000 0.219878 0.059448 75.000000 0.295480 0.011739 72.000000 0.099230 0.396987 75.000000 -0.053536 0.649461 75.000000 -0.095853 0.411105 76.000000 -0.060728 0.609798 73.000000 0.081101 0.485180 73.000000 0.327072 0.004737 73.000000 0.202676 0.087742 72.000000 0.151488 0.422391 73.000000 0.204955 0.077744 75.000000 0.053793 0.646990 75.000000 -0.148818 0.208911 73.000000 -0.489512 0.000000 73.000000 -0.544618 1.000000 76.000000 0.132580 0.283498 73.000000 -0.489512 0.252113 75.000000 0.008822 0.940123 74.000000 0.104179 0.380416 73.000000 0.000000 74.000000 0.030237 0.940123 75.000000 0.104179 0.380416 74.000000 0.000000 75.000000 0.008822 0.940123 74.000000 0.104179 0.380416 74.000000 0.000000 75.000000 0.008822 0.940123 74.000000 0.104179 0.380416 74.000000 0.000000 75.000000 0.008822 0.940123			
SERVFRI	0.029400 0.803627 74.000000 -0.003576 0.978388 71.000000 0.185373 0.113826 74.000000 0.175504 0.143203 71.000000 -0.023960 0.839423 74.000000 0.062174 0.598716 74.000000 0.088497 0.453378	-0.115637 0.319866 76.000000 -0.080277 0.492585 73.000000 0.138305 0.233471 76.000000 0.164723 0.163729 73.000000 0.011633 0.920555 78.000000 0.025702 0.825571 76.000000 -0.035180 0.762880	-0.047340 0.684675 76.000000 -0.078610 0.504498 74.000000 -0.227682 0.047623 76.000000 -0.049774 0.675806 73.000000 -0.168217 0.151277 78.000000 0.129502 0.276189 76.000000 -0.117163 0.313478 78.000000 0.152053 0.192819 75.000000 0.219878 0.059448 75.000000 0.295480 0.011739 72.000000 0.099230 0.396987 75.000000 -0.053536 0.649461 75.000000 -0.095853 0.411105 76.000000 -0.060728 0.609798 73.000000 0.081101 0.485180 73.000000 0.327072 0.004737 73.000000 0.202676 0.087742 72.000000 0.151488 0.422391 73.000000 0.204955 0.077744 75.000000 0.053793 0.646990 75.000000 -0.148818 0.208911 73.000000 -0.489512 0.000000 73.000000 -0.544618 1.000000 76.000000 0.132580 0.283498 73.000000 -0.489512 0.252113 75.000000 0.008822 0.940123 74.000000 0.104179 0.380416 73.000000 0.000000 74.000000 0.030237 0.940123 75.000000 0.104179 0.380416 74.000000 0.000000 75.000000 0.008822 0.940123 74.000000 0.104179 0.380416 74.000000 0.000000 75.000000 0.008822 0.940123			
SERVEVEG	0.185373 0.113826 74.000000 0.175504 0.143203 71.000000 -0.023960 0.839423 74.000000 0.062174 0.598716 74.000000 0.088497 0.453378	0.138305 0.233471 76.000000 0.164723 0.163729 73.000000 0.011633 0.920555 78.000000 0.025702 0.825571 76.000000 -0.035180 0.762880	0.611308 0.000001 55.000000 -0.183052 0.118503 74.000000 0.155918 0.178633 76.000000 -0.049774 0.675806 73.000000 -0.168217 0.151277 78.000000 0.129502 0.276189 76.000000 -0.117163 0.313478 78.000000 0.152053 0.192819 75.000000 0.219878 0.059448 75.000000 0.295480 0.011739 72.000000 0.099230 0.396987 75.000000 -0.053536 0.649461 75.000000 -0.095853 0.411105 76.000000 -0.060728 0.609798 73.000000 0.081101 0.485180 73.000000 0.327072 0.004737 73.000000 0.202676 0.087742 72.000000 0.151488 0.422391 73.000000 0.204955 0.077744 75.000000 0.053793 0.646990 75.000000 -0.148818 0.208911 73.000000 -0.489512 0.000000 73.000000 -0.544618 1.000000 76.000000 0.132580 0.283498 73.000000 -0.489512 0.252113 75.000000 0.008822 0.940123 74.000000 0.104179 0.380416 73.000000 0.000000 74.000000 0.030237 0.940123 75.000000 0.104179 0.380416 74.000000 0.000000 75.000000 0.008822 0.940123			
SERVMEAT	0.175504 0.143203 71.000000 -0.023960 0.839423 74.000000 0.062174 0.598716 74.000000 0.088497 0.453378	0.164723 0.163729 73.000000 0.011633 0.920555 78.000000 0.025702 0.825571 76.000000 -0.035180 0.762880	0.611308 0.000001 55.000000 -0.183052 0.118503 74.000000 0.155918 0.178633 76.000000 -0.049774 0.675806 73.000000 -0.168217 0.151277 78.000000 0.129502 0.276189 76.000000 -0.117163 0.313478 78.000000 0.152053 0.192819 75.000000 0.219878 0.059448 75.000000 0.295480 0.011739 72.000000 0.099230 0.396987 75.000000 -0.053536 0.649461 75.000000 -0.095853 0.411105 76.000000 -0.060728 0.609798 73.000000 0.081101 0.485180 73.000000 0.327072 0.004737 73.000000 0.202676 0.087742 72.000000 0.151488 0.422391 73.000000 0.204955 0.077744 75.000000 0.053793 0.646990 75.000000 -0.148818 0.208911 73.000000 -0.489512 0.000000 73.000000 -0.544618 1.000000 76.000000 0.132580 0.283498 73.000000 -0.489512 0.252113 75.000000 0.008822 0.940123 74.000000 0.104179 0.380416 73.000000 0.000000 74.000000 0.030237 0.940123 75.000000 0.104179 0.380416 74.000000 0.000000 75.000000 0.008822 0.940123			
FISH	0.143203 71.000000 -0.023960 0.839423 74.000000 0.062174 0.598716 74.000000 0.088497 0.453378	0.163729 73.000000 0.011633 0.920555 78.000000 0.025702 0.825571 76.000000 -0.035180 0.762880	0.611308 0.000001 55.000000 -0.183052 0.118503 74.000000 0.155918 0.178633 76.000000 -0.049774 0.675806 73.000000 -0.168217 0.151277 78.000000 0.129502 0.276189 76.000000 -0.117163 0.313478 78.000000 0.152053 0.192819 75.000000 0.219878 0.059448 75.000000 0.295480 0.011739 72.000000 0.099230 0.396987 75.000000 -0.053536 0.649461 75.000000 -0.095853 0.411105 76.000000 -0.060728 0.609798 73.000000 0.081101 0.485180 73.000000 0.327072 0.004737 73.000000 0.202676 0.087742 72.000000 0.151488 0.422391 73.000000 0.204955 0.077744 75.000000 0.053793 0.646990 75.000000 -0.148818 0.208911 73.000000 -0.489512 0.000000 73.000000 -0.544618 1.000000 76.000000 0.132580 0.283498 73.000000 -0.489512 0.252113 75.000000 0.008822 0.940123 74.000000 0.104179 0.380416 73.000000 0.000000 74.000000 0.030237 0.940123 75.000000 0.104179 0.380416 74.000000 0.000000 75.000000 0.008822 0.940123			
SNACK	0.062174 0.598716 74.000000 0.088497 0.453378	0.025702 0.825571 76.000000 -0.035180 0.762880	0.611308 0.000001 55.000000 -0.183052 0.118503 74.000000 0.155918 0.178633 76.000000 -0.049774 0.675806 73.000000 -0.168217 0.151277 78.000000 0.129502 0.276189 76.000000 -0.117163 0.313478 78.000000 0.152053 0.192819 75.000000 0.219878 0.059448 75.000000 0.295480 0.011739 72.000000 0.099230 0.396987 75.000000 -0.053536 0.649461 75.000000 -0.095853 0.411105 76.000000 -0.060728 0.609798 73.000000 0.081101 0.485180 73.000000 0.327072 0.004737 73.000000 0.202676 0.087742 72.000000 0.151488 0.422391 73.000000 0.204955 0.077744 75.000000 0.053793 0.646990 75.000000 -0.148818 0.208911 73.000000 -0.489512 0.000000 73.000000 -0.544618 1.000000 76.000000 0.132580 0.283498 73.000000 -0.489512 0.252113 75.000000 0.008822 0.940123 74.000000 0.104179 0.380416 73.000000 0.000000 74.000000 0.030237 0.940123 75.000000 0.104179 0.380416 74.000000 0.000000 75.000000 0.008822 0.940123			
COFFEETE	0.088497 0.453378	-0.035180 0.762880	0.611308 0.000001	-0.379038 0.003966	-0.040311 0.772286	0.053114 0.700146
REGULARS	0.088497 0.453378	-0.035180 0.762880	0.611308 0.000001	-0.379038 0.003966	-0.040311 0.772286	0.053114 0.700146
DIETSODA	0.088497 0.453378	-0.035180 0.762880	0.611308 0.000001	-0.379038 0.003966	-0.040311 0.772286	0.053114 0.700146
FASTFOOD	0.088497 0.453378	-0.035180 0.762880	0.611308 0.000001	-0.379038 0.003966	-0.040311 0.772286	0.053114 0.700146
RESTAURA	0.088497 0.453378	-0.035180 0.762880	0.611308 0.000001	-0.379038 0.003966	-0.040311 0.772286	0.053114 0.700146
PREPARED	0.088497 0.453378	-0.035180 0.762880	0.611308 0.000001	-0.379038 0.003966	-0.040311 0.772286	0.053114 0.700146
EATINGTI	0.088497 0.453378	-0.035180 0.762880	0.611308 0.000001	-0.379038 0.003966	-0.040311 0.772286	0.053114 0.700146
HERBALSU	0.088497 0.453378	-0.035180 0.762880	0.611308 0.000001	-0.379038 0.003966	-0.040311 0.772286	0.053114 0.700146
DIETARYS	0.088497 0.453378	-0.035180 0.762880	0.611308 0.000001	-0.379038 0.003966	-0.040311 0.772286	0.053114 0.700146
CIGARETT	0.088497 0.453378	-0.035180 0.762880	0.611308 0.000001	-0.379038 0.003966	-0.040311 0.772286	0.053114 0.700146
ALCOHOL	0.088497 0.453378	-0.035180 0.762880	0.611308 0.000001	-0.379038 0.003966	-0.040311 0.772286	0.053114 0.700146
SERVALCO	0.088497 0.453378	-0.035180 0.762880	0.611308 0.000001	-0.379038 0.003966	-0.040311 0.772286	0.053114 0.700146
SLEEP	0.088497 0.453378	-0.035180 0.762880	0.611308 0.000001	-0.379038 0.003966	-0.040311 0.772286	0.053114 0.700146
EXERCISE	0.088497 0.453378	-0.035180 0.762880	0.611308 0.000001	-0.379038 0.003966	-0.040311 0.772286	0.053114 0.700146
SMOKINGW	0.088497 0.453378	-0.035180 0.762880	0.611308 0.000001	-0.379038 0.003966	-0.040311 0.772286	0.053114 0.700146
DIETING	0.088497 0.453378	-0.035180 0.762880	0.611308 0.000001	-0.379038 0.003966	-0.040311 0.772286	0.053114 0.700146
DESCRIPT	0.088497 0.453378	-0.035180 0.762880	0.611308 0.000001	-0.379038 0.003966	-0.040311 0.772286	0.053114 0.700146
CURRENTC	0.088497 0.453378	-0.035180 0.762880	0.611308 0.000001	-0.379038 0.003966	-0.040311 0.772286	0.053114 0.700146
QUOTE1	0.088497 0.453378	-0.035180 0.762880	0.611308 0.000001	-0.379038 0.003966	-0.040311 0.772286	0.053114 0.700146



Correlation Report - Scotland / Female

	QUOTE_3	LABEL	FAMILYDI	BMI	YEARS
HEIGHT	0.133442	0.175559	-0.100815	-0.244299	0.003246
	0.293165	0.168739	0.431764	0.075027	0.980025
WEIGHT	64.000000	63.000000	63.000000	54.000000	62.000000
	-0.024328	-0.029735	0.088001	0.682685	-0.214866
	0.860054	0.830986	0.526882	0.000000	0.115176
BREAKFAS	55.000000	54.000000	54.000000	54.000000	55.000000
	-0.143638	-0.009054	0.092436	-0.032946	0.066293
	0.222112	0.946402	0.436682	0.814831	0.580075
MEALS	74.000000	72.000000	73.000000	53.000000	72.000000
	0.037850	-0.128593	0.078264	0.017618	0.014224
	0.745473	0.274873	0.504497	0.899381	0.904261
WATER	76.000000	74.000000	75.000000	54.000000	74.000000
	0.061297	0.019479	0.173553	0.138741	0.222452
	0.598878	0.869158	0.136463	0.317057	0.056784
SERVFRUI	76.000000	74.000000	75.000000	54.000000	74.000000
	0.035189	0.180300	0.230161	0.039812	0.040196
	0.787894	0.181748	0.051775	0.779307	0.736267
SERVVEGE	73.000000	71.000000	72.000000	52.000000	71.000000
	0.043102	0.006220	0.067220	-0.181956	0.061406
	0.711610	0.958055	0.566636	0.187894	0.603252
SERVMEAT	76.000000	74.000000	75.000000	54.000000	74.000000
	0.057168	0.079596	-0.033330	0.170654	-0.176745
	0.630937	0.509364	0.781059	0.230633	0.140352
FISH	73.000000	71.000000	72.000000	51.000000	71.000000
	-0.037031	0.131081	0.108794	-0.055517	-0.016799
	0.150795	0.265615	0.352627	0.690097	0.887030
SNACK	76.000000	74.000000	75.000000	54.000000	74.000000
	0.091520	-0.065482	-0.102771	0.046243	-0.064451
	0.431702	0.418381	0.380268	0.739860	0.585372
COFFEETE	76.000000	74.000000	75.000000	54.000000	74.000000
	-0.062723	-0.051107	0.186610	-0.063959	0.247248
	0.590388	0.665424	0.108621	0.645895	0.033687
REGULARS	76.000000	74.000000	75.000000	54.000000	74.000000
	0.187148	0.044765	-0.044939	0.012746	-0.200052
	0.107886	0.706875	0.703807	0.927116	0.089707
DIETSODA	75.000000	73.000000	74.000000	54.000000	73.000000
	0.280588	-0.218168	0.045455	0.222029	-0.086963
	0.273559	0.063702	0.700563	0.110072	0.411018
FASTFOOD	75.000000	73.000000	74.000000	53.000000	74.000000
	0.264055	-0.036695	-0.081628	0.235425	-0.273107
	0.025006	0.762966	0.495457	0.096301	0.022166
RESTAURA	72.000000	70.000000	72.000000	51.000000	70.000000
	0.082195	-0.050151	0.012439	0.069439	-0.025435
	0.483264	0.671322	0.916230	0.621262	0.830862
PREPARED	75.000000	74.000000	74.000000	53.000000	73.000000
	-0.106484	0.111596	-0.117439	-0.202700	0.352850
	0.363202	0.347240	0.319004	0.145490	0.032213
EATINGTI	75.000000	73.000000	74.000000	53.000000	73.000000
	-0.094672	0.119977	0.194047	-0.071509	0.213462
	0.415943	0.308584	0.065282	0.607359	0.067832
HERBALSU	76.000000	74.000000	75.000000	54.000000	74.000000
	0.083674	-0.061711	-0.081044	-0.036945	0.036886
	0.478460	0.609182	0.498556	0.794845	0.760067
DIETARYS	74.000000	71.000000	72.000000	52.000000	71.000000
	-0.060447	-0.133842	-0.128198	-0.183397	-0.126271
	0.608931	0.265806	0.283185	0.197875	0.294036
CIGARETT	74.000000	71.000000	72.000000	51.000000	71.000000
	-0.014833	0.047184	0.136695	0.396585	0.041312
	0.900877	0.693889	0.252218	0.008149	0.732296
ALCOHOL	73.000000	72.000000	72.000000	51.000000	71.000000
	0.070767	-0.048616	0.341514	0.114552	0.170447
	0.551881	0.688191	0.003560	0.418727	0.158324
SERVALCO	73.000000	70.000000	71.000000	52.000000	70.000000
	0.171607	-0.039949	0.115343	0.184732	0.038605
	0.149480	0.742648	0.338140	0.194373	0.751019
SLEEP	72.000000	70.000000	71.000000	51.000000	70.000000
	0.062234	0.274800	0.140381	-0.150459	-0.170080
	0.595818	0.018719	0.232884	0.282206	0.903508
EXERCISE	75.000000	73.000000	74.000000	53.000000	73.000000
	0.029019	0.127744	-0.106697	0.058557	-0.084526
	0.804798	0.281470	0.362238	0.677050	0.477085
SMOKINGW	75.000000	73.000000	75.000000	53.000000	73.000000
	0.072519	0.033856	-0.072009	-0.286458	0.068048
	0.542053	0.777891	0.547771	0.041557	0.570056
DIETING	73.000000	72.000000	72.000000	51.000000	72.000000
	0.127108	0.079954	-0.046463	-0.372397	-0.170080
	0.277194	0.501322	0.694090	0.005554	0.150267
DESCRIPT	75.000000	73.000000	74.000000	54.000000	73.000000
	-0.081258	-0.180909	0.026132	0.722699	-0.108776
	0.488284	0.125602	0.825090	0.000000	0.359633
CURRENTC	75.000000	73.000000	74.000000	53.000000	73.000000
	0.068592	0.322198	0.058470	-0.300107	-0.078941
	0.396811	0.005117	0.618281	0.027467	0.503775
QUOTE1	76.000000	74.000000	75.000000	54.000000	74.000000
	0.081606	0.180742	0.034788	-0.011899	-0.079502
	0.462462	0.125957	0.771731	0.933275	0.508606
QUOTE2	73.000000	73.000000	72.000000	52.000000	71.000000
	-0.004194	0.072929	0.125877	-0.103548	0.023099
	0.917170	0.542111	0.289616	0.460606	0.847275
QUOTE_3	75.000000	72.000000	73.000000	53.000000	72.000000
	1.000000	0.056930	0.107731	-0.161136	-0.085313
	0.000000	0.632363	0.360916	0.249048	0.472979
LABEL	73.000000	73.000000	74.000000	53.000000	73.000000
	0.056930	1.000000	0.018287	-0.134234	0.013096
	0.632363	0.000000	0.678819	0.342749	0.913680
FAMILYDI	73.000000	71.000000	72.000000	52.000000	71.000000
	0.107731	0.018287	1.000000	0.201030	0.065545
	0.360916	0.878819	0.000000	0.152962	0.584306
BMI	74.000000	72.000000	72.000000	52.000000	72.000000
	-0.161136	-0.134234	0.201030	1.000000	-0.185865
	0.249048	0.342749	0.152962	0.000000	0.182696
YEARS	53.000000	52.000000	52.000000	53.000000	53.000000
	-0.085313	0.013096	0.065545	-0.185865	1.000000
	0.472979	0.913680	0.584306	0.182696	0.000000
	73.000000	71.000000	72.000000	53.000000	53.000000