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Title: The relationships between eating habits, smoking and alcohol consumption, and body mass index among baby boomers.

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ABSTRACT

Background: The purpose of this study was to examine the eating habits of baby boomers and to investigate the relationship of these and other lifestyle habits on their reported body mass indices (BMI).

Methods: A questionnaire was administered by mail to a random sample of people aged 40 years and above, drawn from the Electoral Rolls in Victoria, Australia. Part of the questionnaire contained questions about the respondents' eating habits, their smoking status and alcohol use, as well as self reported heights and weights and demographic characteristics.

Results: Eight hundred and forty four people (out of 1470) returned usable questionnaires.. Statistically significant differences were found between the eating habits of men and women. Generally, more women snacked on high energy dense foods (e.g., confectionery). More men took larger mouthfuls than women. The eating habits of women appeared to be more formal than men's. Four constructs named: *Unconstrained eating, Traditional eating style, Gulping,* and *Chocolate and junk food* were derived from the eating behaviour literature. Structural equation modelling showed that eating behaviour was associated with BMI along with current smoking, ex-smoking status, alcohol consumption, and demographics.

Conclusions: Eating habits and other lifestyle behaviours appear to be associated with BMI though in different pathways for men and women.

Key words: eating habits, smoking, alcohol, body mass index, baby boomers, survey, Australia

INTRODUCTION

It is well recognised that in many countries people born between 1946 and 1964 ("babyboomers") are entering retirement in large numbers (Byles & Flicker, 2002). This has major economic implications as well as potential to change demand for food and health services (Hamilton & Hamilton, 2006). It is clear that this group suffer from or are at high risk of, several chronic diseases such as type 2 diabetes, cardiovascular disease and various cancers (AIHW, 2007; Byles & Flicker, 2002). For example, one fifth of Australians between 50 and 60 years either have type 2 diabetes or are pre-diabetic (Barr, Magliano, Zimmet, Polkinghorne, Atkins, Dunstan, Murray, & Shaw, 2006). Concern has been expressed about the impact of rising health care costs on government finances in the coming decades (Productivity commission, 2004). Prevention is now clearly on the health policy agenda (Australian Government Preventative Health Taskforce, 2009), though examples of successful national prevention strategies are rare.

The biomedical risk factors for chronic diseases are well established (Folsom, Wu, Rosamond, Sharrett, & Chambless, 1997). One major risk factor, common to several disease states, which has risen in prevalence is overweight and obesity, defined by the World Health Organization (2000) as BMI of 25-30 (overweight) and over 30 (obese). This factor reaches a high point among the older baby boomers (AIHW, 2004; Rőssner, 2001). Many prevention strategies have been proposed incorporating increases in energy expenditure and/or decreases in energy intakes. However, there have been few examples of successful long term obesity reduction and prevention (Katan, 2009).

Several behavioural lifestyle factors appear to be associated with BMI including smoking status, alcohol use and the use of weight reduction diets.

Smoking There is consistent evidence that smoking cessation is associated with increases in body weight (e.g., Hudmon, Gritz, Clayton, & Nisenbaum, 1999; Klesges, Meyers, Klesges, & LaVasque, 1989; Levine, Perkins, & Marcus) and there is strong evidence that BMI and smoking are inversely related (Bovet, Ross, Gervasoni, Mkamba, Mtasiwa, Lengeler, Whiting, & Paccaud, 2002; Klesges, et al.,

1989; Molarius, Seidell, Kuulasmaa, Dobson, & Sans, 1997). However, this relationship may be impacted upon by demographic factors such as educational attainment and sex, for example in North European populations smoking appears to be inversely related to BMI at lower levels of educational attainment but positively related at higher levels (Laaksonen, Rahkonen, & Prättälä, 1998; Molarius, et al., 1997), and in China the inverse relationship has been found only in men (Hou, Jia, Bao, Lu, Jiang, Zuo, Gu, & Xiang, 2008).

Alcohol consumption Few studies have examined the relationships between alcohol consumption and BMI. However, despite alcohol's high energy density, alcohol drinkers do not appear to gain weight relative to non drinkers (Jéquier, 1999). Light to moderate drinking may be associated with lower body weight but alcohol abstinence or heavy alcohol consumption seem to be associated with overweight (Colditz, Giovannucci, Rimm, Stampfer, Rosner, Speizer, Gordis, & Willett, 1991; Lukasiewicz, Mennen, Bertrais, Arnault, Preziosi, Galan, & Hercberg, 2005). These relationships appear to be more pronounced among women than men (Breslow & Smothers, 2005; Colditz, et al., 1991; Liu, Serdula, Williamson, Mokdad, & Byers, 1994; Rohrer, Rohland, Denison, & Way, 2005; Williamson, Forman, Binkin, Gentry, Remington, & Trowbridge, 1987). However, Arif and Rohrer's analyses of the Third NHANES suggest that current drinkers had lower odds of obesity than non drinkers. The odds of obesity were lower among those drinking one or two drinks per week and these who drank frequently but who consumed less than five times a week (Arif & Rohrer, 2005).

In relation to food consumption, several observers have suggested that in western countries during the 50 years there has been a shift to fewer forms of social control over eating which has been marked by the rise of eating out of the home (Warde & Martens, 2000) and less formal, more impulsive eating patterns within the home and during the day (e.g., Campbell, Crawford, Jackson, Cashel, Worsley, Gibbons, & Birch, 2002; Strategy Unit, 2008). Such relaxation of social norms combined with aggressive marketing of energy dense nutrient poor foods may be partly responsible for the increasing prevalence of overweight and obesity.

Much debate has focussed on possible reductions in the supply of high energy foods and beverages, and much of this has centred on the provision of food label information to consumers (e.g., Grunert & Wills, 2007). The assumption seems to be that over consumption of energy may be reduced through more prudent selection of food products. However, at the behavioural level there is some evidence that eating habits or styles may be more or less obesogenic; timing and speed of eating and dietary restraint and portion size may be important factors.

Several studies, mainly in children, have suggested that size of breakfast may be associated with BMI (Nicklas, Myers, Reger, Beech, & Berenson, 1998; Ortega, Redondo, Lopez-Sobaler, Quintas, Zamora, Andres, & Encinas-Sotillos, 1996; Rampersaud, Pereira, Girard, Adams, & Metzl, 2005; Redondo, Ortega, López-Sobaler, Quintas, & Andrés, 1996; Schlundt, Hill, Sbrocco, Pope-Cordle, & Sharp, 1992). For example a recent study showed that among men (but not women) reported size of breakfast was positively associated with BMI in three separate studies of the same population ten years apart (Kent & Worsley, 2009). Regular breakfast consumption is one of the strategies used by successful long-term weight loss maintainers (Wing & Phelan, 2005). Rushed eating and meal skipping have also been shown to be negatively associated with BMI (Kent & Worsley, 2009). Moreover, dietary restraint and small portion sizes have been shown to be associated with lower BMI (Lejeune, van Aggel-Leijssen, van Baak, & Westerterp-Plantenga; Westerterp-Plantenga, Wijckmans-Duijsens, Verboeket-van de Venne, de Graaf, van het Hof, & Weststrate, 1998).

Most of the evidence to date relates to small scale studies. However, two groups have examined eating styles in larger population groups. In several studies in England and Germany, Booth (1999) showed that cultural eating practices which encouraged the consumption of low energy drinks between meals and reduced-fat foods were associated with lower BMI. In an American population representative panel study, Kruger, Michels Blanck, and Gillespie (2008) showed that successful weight loss maintainers were less likely to eat at fast food restaurants but more likely to consume five or more servings fruit and vegetable servings per day and perform more than 150 minutes of physical activity each week.

In summary there is evidence that a number of eating behaviours such as meal skipping, rushing and portion size, as well as food and beverage content and smoking status, may predispose people to overweight and obesity. Clearly, if specific behavioural patterns can be identified then there may be opportunities for behavioural interventions. The second survey of a series of three surveys of baby boomers enabled the relationships between eating styles and body mass indices to be examined at the population level.

METHODS

Sample and survey administration

Data for the following analyses came from the second baby boomer survey. This was based on a random sample of 844 Victorians over 40 years of age, drawn from the Electoral Rolls (on which registration is compulsory), Victoria, Australia. The survey was administered by mail to 1470 adults; an introductory letter was sent followed by the questionnaire and cover letter a week later. A reminder letter (or letter of thanks) was sent two weeks later followed by a replacement questionnaire to non respondents two weeks after. The formatting and administrative procedures were based on Dillman's recommendations (Dillman, 2009). Ethics permission was granted by the Deakin University Human Ethics Committee.

The questionnaire was constructed in several sections dealing with shopping and food preparation habits, expectations of frequency of healthy food consumption, frequency of food consumption, personal values, smoking, alcohol and weight control habits, demographic characteristics and eating habits. This last set of items (detailed in Table 1) is reported here. The question asked *About how often do you do the following things?* Then followed a list of 31novel items, derived in part from our previous qualitative work (Hunter, Wang, & Worsley, 2007) as well as from other sources which provided examples of daily eating patterns, particularly relating to examples of energy dense, nutrient poor foods and "informal" eating habits (e.g., the Health Styles Survey (Kruger, et al., 2008); breakfast and meal skipping (Kent & Worsley, 2009); adherence to rules about eating (Campbell, et al., 2002); temporally unrestrained eating (Strategy Unit, 2008). Each item had a five point response scale (from *Never* 0 to *Always* 4).

Respondents were also asked to provide details of their height and weight. This information was converted into metric units (cm and kg) from which the body mass index of each respondent was calculated. Several studies have shown that self-reported weights and heights are valid indices in population studies (e.g., Bolton-Smith, Woodward, Tunstall-Pedoe, & Morrison, 2000; Spencer, Appleby, Davey, & Key, 2002; Venn, Thomson, Schmidt, Cleland, Curry, Gennat, & Dwyer, 2007).

Data Analysis

SPSS 17 (SPSS, 2008) and Mplus 5.2 (Muthén & Muthén, 2007) were used for the data analyses. The raw data were inspected via logical checks, and where necessary, edited. Descriptive statistics including percentages and chi-square tests were conducted to summarise the men and women's responses and to compare the eating behaviours between gender groups. For the chi-square tests, the response scales were aggregated so that 0 and 1 became 1 (*never* or *rarely*), 2 remained as 2 (*sometimes*) and 3 and 4 became 3 (*always*). Comparisons of the items between the sexes and the values of Cronbach's alpha for each constructs are shown in Table 2.

Multiple group structural equation modelling (SEM) was employed to test the hypotheses. The robust Maximum likelihood (MLR) estimation was used in the current analyses, which is robust to non-normality of the data. Model evaluations were examined by chi-square statistics and accompanying significance tests. Goodness-of-fit indices reported are the Standardized Root Mean Square Residual (SRMR), Root Mean Square Error of Approximation (RMSEA), Tucker-Lewis index (TLI), and Comparative fit index (CFI) (Marsh, Kit-Tai, & Zhonglin, 2004). When the models were considered to fit the data well, the following criteria were met: χ^2 probability $p > .05$, SRMR< .05, RMESA< .05, TLI> .95, and CFI> .95.

Scale scores were derived by parcelling the items measuring the same sub-construct. Once composite variables have been computed through the item parcelling method (Kishton & Widaman, 1994; Nasser & Takahashi, 2003), it is possible to fix both the regression coefficients, which reflect the regression of each composite variable on its latent variable, and the measurement error variances associated with each composite variable via the formulae provided by Munck (Munck, 1979). Using Munck's

formula, regression coefficients can be derived from SD $\sqrt{\alpha}$ and error variances from SD^2 (1 – α). Both fixed values can be used for single indicator construct in the structural equation model.

The predictor variables included in these analyses were the demographic variables: age, education, marital status, family income, current and ex-smoke status, and the number of glass of alcohol consumed in a week. The composite variables were the single indicator latent variables of eating behaviours: unconstrained eating, traditional eating style, gulping, and chocolate and junk food. The outcome variable was BMI derived from self-reported body weight and height. This structural model was estimated simultaneously between male and female participants.

RESULTS

The sample appears to be quite representative of older Australians. However, there were more women in the sample than the general population (Australian Bureau of Statistics, 2006) and tertiary educated were over represented (25% in the general population versus 34% in the sample). Marital status and household income were similar to the general population (Victorian median household income ranged between approximately $41.600 to $55,600 depending on region (Department of Planning and Community Development, 2007)) and approximately 74% of adults are in married or de facto relationships (Australian Bureau of Statistics, 2006). The prevalence of current smoking was similar to the over 50 year population of Victoria (11.9%) (Germain, Wakefield, & Durkin, 2008), the proportion of ex-smokers was high, 34% compared to 26% of the general population (Australian Institute of Health and Welfare, 2005) as was the proportion of non drinkers (31% nominate themselves as non drinkers compare to 16% of the general population) (Australian Institute of Health and Welfare, 2005) but this might be expected in this older group which is at greater risk of chronic disease than the younger population (Barr, et al., 2006).

The items in Table 2 are presented according to the eating behaviour constructs derived from the exploratory factor analyses. Inspections of the percentages suggest that the most frequently reported activities were: sitting with other family members

for the evening meal; sitting down for breakfast; eating at the table; eating what everyone else eats; and sitting down for lunch (for 20-30 minutes).

The least frequently reported activities were: eating whilst driving the car; eat chips and crisps; skip meals; eating food in public areas; having different meals/foods from the rest of the household; eating ice cream; and eating lots of chocolate.

There were six statistically significant differences between men and women ($p < .05$ or 0.01; Table 2). More men reported they often ate food with their fingers and took big mouthfuls. In contrast, more women reported they often ate by themselves; ate at the table; made tea with tea-leaves; and ate confectionery.

The fit statistics derived from the multiple group SEM analysis suggested that the proposed model fit well for both male and female populations, as indicated by non significant chi-square statistics, $\chi 2\ (29) = 33.22$, $p = .27$. The other fit indices were all in the desired range: CFI = .99, TLI = .98, RMSEA = .02 (.00, .04), and SRMR = .02. Therefore, it can be concluded that personal demographics, eating behaviours, and BMI were associated across gender.

Figure 1 illustrates the structural equation model with the standardized parameter estimates for male and female participants. The predictor variables accounted for higher amounts of variance of BMI among men (20.6%) than women (16.5%). However, quite different path ways were found between the predictors and BMI in each sex.

Among men, unconstrained eating was positively associated with levels of education but negatively related to age and traditional eating style. Traditional eating style was positively linked to age, education, and marriage while consumption of chocolate and junk food was inversely related to age but positively associated with marriage. Gulping was positively related to unconstrained eating, income, and consumption of chocolate and junk food but negatively associated with education and smoking. Being ex-smoker and gulping were positively associated with BMI.

Among women, unconstrained eating was inversely related to age and traditional eating style but positively associated with consumption of chocolate and junk food. Traditional eating style was positively linked to age, marriage, and the number of glasses of alcohol consumed weekly but negatively related to smoking and ex-smoking. Gulping was inversely related to traditional eating style and smoking but positively associated with marriage. Consumption of chocolate and junk food was negatively related to age and the number of glasses of alcohol consumed per week. BMI was positively associated with unconstrained eating, age, and consumption of chocolate and junk food but inversely related to current smoking.

DISCUSSION

Inspection of the most frequent and least frequent behaviours (Table 2) suggests that most respondents sat with other family members for the evening meal; sat down for breakfast; ate at the table; ate what everyone else ate; and sat down for lunch (for 20-30 minutes). This "restrained", socially desirable picture, has been observed before in relation to reported food consumption (Hebert, et al., 2008). Nevertheless, the findings suggest that this sample did admit to a range of less than desirable behaviours. For example, whilst 84.2% reported they rarely or sometimes ate meals on their knee not at the table, 15.8% indicated they often did, whilst 26% reported they often didn't watch the TV during main meals, 74% indicated they did often.

Smoking and drinking The prevalence of current smoking (11%) was lower than that of the general Australian population (19%) (Australian Institute of Health and Welfare, 2005), which is consistent with the older mean age of this sample and the greater prevalence of smoking among young adults. The substantial percentage of ex-smokers (34%) is also consistent with the greater health interests (Villablanca, McDonald, & Rutledge, 2000) of older people and with their successful attempts to quit smoking (Germain, et al., 2008). Similarly the finding that the sample was composed of more non (current) alcohol drinkers than the general population is also consistent with the greater age of the sample.

The observed difference between the sexes' eating behaviours (Table 2) confirms previous reports that more men appeared to take larger portions (Rangan, Schindeler, Hector, & Gill, 2009). However, some differences (e.g., ice cream, chips and crisps, and eating what everyone else eats) (Povey, Conner, Sparks, James, & Shepherd,

1998) were not significant between men and women in the present study. And the other eating behaviours were not compared in the previous literature (e.g., ate food with fingers, ate at the table, and ate by themselves).

The four eating constructs comprised by the responses to the 31 items (*unconstrained eating, traditional eating style, gulping, chocolate and junk food)* reflected our original intention to index common daily behaviours in a general population which were likely to be related to overweight and obesity. Conceptually, *unconstrained eating* appears similar to Messick and Stunkards' (1985) "disinhibition", *traditional eating style* emphases some aspects of eating etiquette (Warde & Martens, 2000) and dietary restraint, *gulping* - rushed eating of large mouthfuls which again may be related to disinhibition or the absence of restraint, and *chocolate and junk food* represents a set of energy dense, nutrient poor foods. We believe the present findings merely hint at the complexity of eating in natural settings – the current taxonomy is tentative and requires much more development if the general population's eating styles are to be fully described.

Whilst these constructs appear to have certain levels of predictive validity in the SEM they should be treated cautiously as further validation is required. Nevertheless, they do appear to representative some common behaviours to be found in non clinical populations.

The relationships between demographics, eating behaviours, and BMI

This study extends the evidence linking between demographics, eating behaviours and BMI to a broader set of associations. Because of the use of a continuous index of body weight rather than the categorical body weight assessment used by Kruger et al (2008) it was possible to provide more precise estimates of the behavioural associations of BMI. These clearly show than different behavioural habits impinge on BMI in men and women; our findings suggest that BMI may have a different behavioural basis among men and women. The amounts of variance in BMI accounted for by the behaviours (20.6% for men and 16.5% for women) may appear to be modest but behaviours are likely to have only limited influence on BMI. Other factors such as socioeconomic status, emotional state, and genetic disposition are

recognised, strong influences (Bouchard & Pérusse, 1993; Ganley, 1989; Sobal & Stunkard, 1989).

Behaviours, however, may be more amenable to change than these other factors; the problem to date has been the identification of likely behavioural antecedents. These findings suggest several behavioural habits which might be modified (and tested) in future intervention studies.

Among men, one key predictor of BMI in our study was being an ex-smoker. Ex-smokers were more likely to be overweight than never smokers or current smokers. This implies that smoking has some lasting effect beyond the immediate pharmacological effects of tobacco. One possibility is that smoking is associated with particular dietary habits (and smoking was negatively related to gulping for both genders and to traditional eating style and BMI for women). So although men may give up smoking, they may retain their associated (high energy) dietary habits. Other possibilities which have been raised include the view that smoking permanently alters receptors on neurones which modulate appetite (Himmi, Brahiti, Perrin, & Orsini, 1993). Clearly, further confirmation of our finding is required, ideally in the form of a cohort or similar powerful research design.

A secondary predictor among men was gulping which was inversely associated with their levels of education. This may relate to lack of dietary restraint (Westerterp-Plantenga, et al., 1998) and to less postponement of gratification and investment in the future which has been claimed to be a benefit of education (Davies, 2000; Ippolito, 2003).

For women, a broader mix of eating habits influenced BMI status. The positive influence of unconstrained eating, being on a weight control diet (which has been shown to be obesogenic (Malik & Hu, 2007)), eating chocolate and junk food is consistent with the view that higher energy intakes and sedentary lifestyles dispose towards overweight and obesity (Swinburn & Egger, 2002).

The results showed that for both genders age affected the types of behaviours associated with BMI. Generally the eating styles of the respondents became more

formal as they aged. This may be because older people were more exposed to social norms which emphasised "manners" during their childhood and youth (Warde & Martens, 2000) and also because of the conflicting time demands which the younger age people experience, many of whom belong to dual career families with young children and sometimes with care responsibilities for their parents (Pocock, 2005). The informalization of eating behaviours has been observed in earlier studies, for example in the UK, meal eating spread from three or four meal times in 1961 to fairly constant "grazing" through the day in 2001 (UK Cabinet Office, 2008). Snacking on chocolate and junk food may reflect how younger baby boomers cope with the competing demands of busy lives such as full time work, primary care of children and for some, the care of ageing parents too. (Pocock, 2005). However, these are post hoc suppositions which require confirmation and further examination.

There was a negative association of frequency of alcohol drinking and consumption of chocolate and junk food among women. Since alcohol and chocolate/junk food are all energy dense it might be expected that the more frequent the consumption of alcohol, the less consumption of chocolate/junk food. Again, this finding requires further examination.

BMI in both sexes appears to have been associated more strongly with behavioural variables than with demographic variables. Further studies are needed to examine the likely causal role of all these predictors; it may be that BMI is less related to demographics, than to cultural factors and belief systems which appear to influence food consumption (Wang, Worsley, & Cunningham, 2008; Worsley & Skrzypiec, 1998).

CONCLUSION

Eating styles vary among baby boomer men and women. Together with smoking, ex-smoking status and frequency of alcohol drinking they are significantly associated with reported BMI. Further investigation is required particularly the effects of manipulation of eating behaviours on weight status.

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Table 1
Socio-demographic characteristics across gender groups

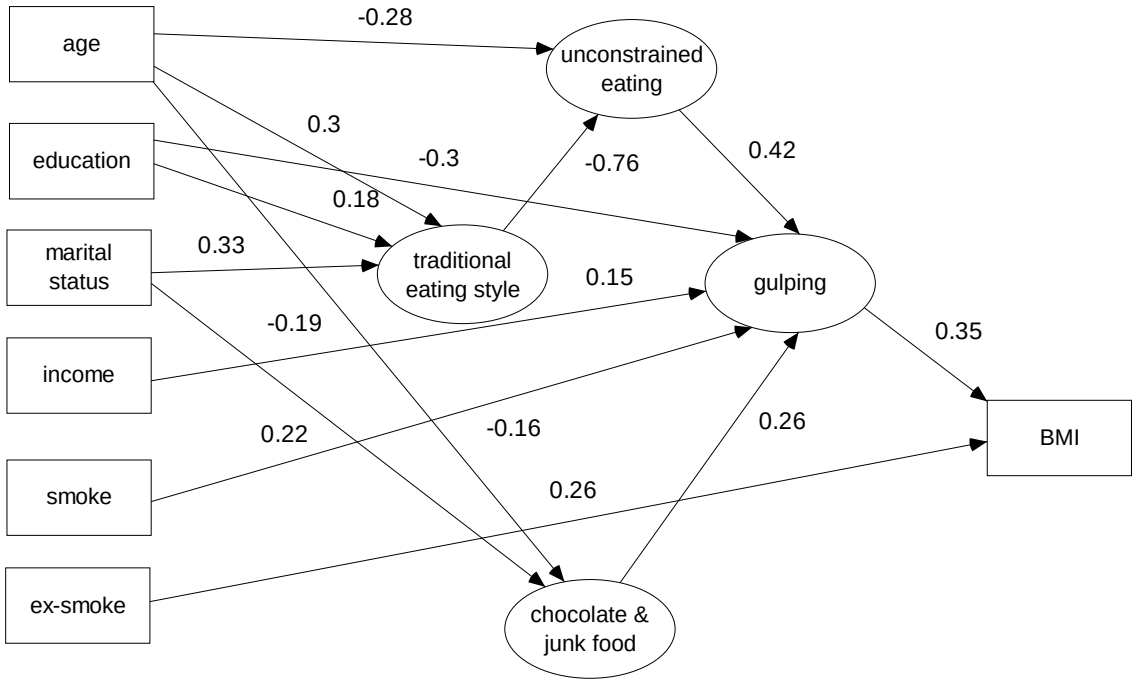
Demographics		Male (n = 314)	Female (n = 528)	Total (n = 842)
Age	Mean	57.29	57.08	57.16
	(SD)	(7.18)	(7.28)	(7.24)
Education (%)	Primary school or less	2.2	2.8	2.6
	Secondary school	36.0	36.0	35.8
	TAFE or college diploma	19.4	18.8	19.0
	Bachelors degree	15.6	14.3	14.7
	Tertiary education	9.9	14.1	12.5
	Masters degree or higher	8.0	5.5	6.4
Marital status (%)	Single/separated/divorced/ widowed	16.2	27.3	23.1
	Married/defacto	83.4	72.5	76.2
Family income (%)	< $10K	3.2	4.5	4.1
	$10K - $20K	7.6	8.5	8.2
	$20K - $35K	12.7	15.8	14.6
	$35K - $50K	15.6	17.5	16.8
	$50K - $100K	33.4	30.1	31.2
	> $100K	25.5	18.5	21.1
Smoke (%)	Yes	12.4	10.0	10.8
Ex-smoke (%)	Yes	41.1	29.8	33.8
Alcohol (%)	Yes	76.4	64.6	68.7
Number of glasses of alcohol a week	Mean	9.06	3.94	5.86
	(SD)	(11.02)	(4.97)	(8.20)

Note: SD=Standard deviation

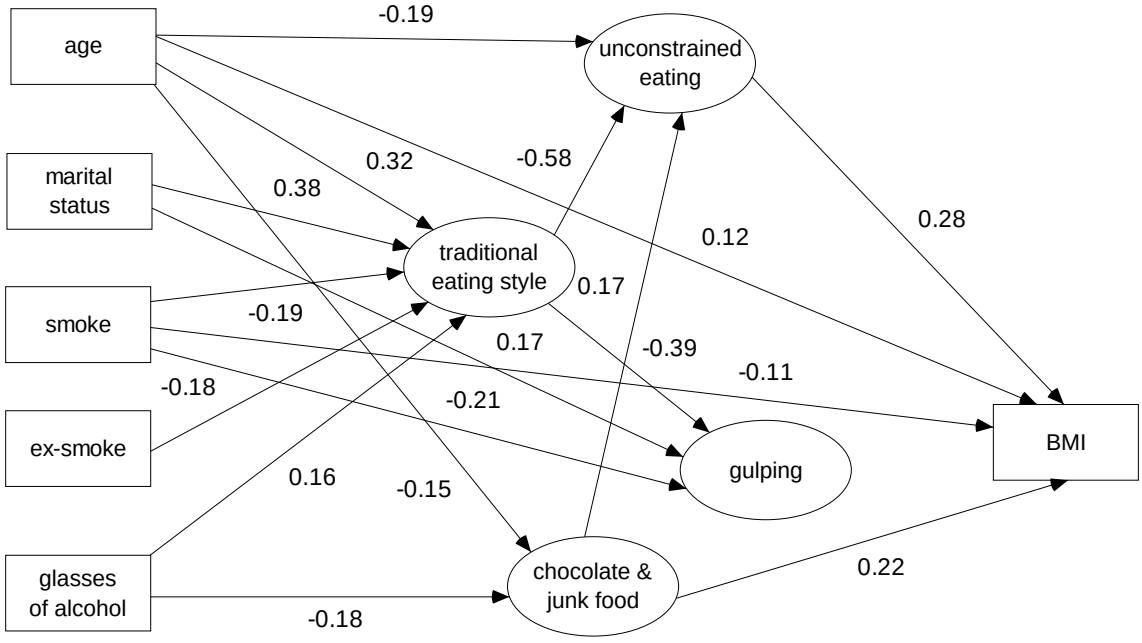
Table 2 Eating habit item under each construct and their percentages of frequency

	Always (%)			χ^2
	Men (n = 224)	Women (n = 398)	Total (n = 642)	*(n=642 , df =2)*
1. Unconstrained eating (α = 0.53)				
a. Skip meals	4.8	7.0	6.2	1.75
d. Eat food in public areas	7.1	6.0	6.4	2.26
i. Eat food with your fingers	13.1	9.1	10.6	11.57**
v. Eat by yourself	16.8	24.0	21.3	6.22*
w. Have different meals/food from rest of your household	7.8	9.3	8.8	.63
aa. Eat whenever you feel hungry	20.5	22.9	22.0	4.26
af. Drive the car whilst eating	1.9	2.5	2.3	.28
2. Traditional eating style (α = 0.55)				
k. Eat at the table	55.5	61.2	59.1	12.57**
l. Make tea with tea-leaves	18.0	20.0	19.2	6.37**
y. Don't you watch the TV during main meals	26.8	25.5	26.0	.24
z. Eat meals on your knee not at the table[a]	17.5	14.8	15.8	1.09
ac. Sit down for 20-30 minutes for lunch	46.6	42.3	43.9	1.93
ad. Sit with other family members for evening meals	77.6	80.4	79.3	2.38
ae. Sit down for breakfast	69.1	73.1	71.6	3.50
3. Gulping (α = 0.76)				
b. Take big mouthfuls	20.5	12.1	15.2	14.71**
c. Don't you chew your food properly	14.3	13.2	13.6	.23
h. Chew your food carefully[a]	53.8	52.4	52.9	2.64
4. Chocolate & junk food (α = 0.55)				
p. Eat confectionery	10.0	13.7	12.4	8.60*
r. Eat lots of chocolate	9.0	9.8	9.5	2.57
s. Eat ice cream	10.0	9.0	9.4	2.33
t. Eat chips and crisps	6.8	5.0	5.6	1.17
u. Eat what everyone else eats	47.5	45.8	46.5	.28

Note: 5-point Likert scale (*never – always*). % Always = aggregate of Frequent and Always. [a.] Items reverse scored. *p<.05; **p<.001.



Pane a Males (n = 314)



Panel b Females (n = 531)

Figure 1. Standardized parameter estimates for male and female participants