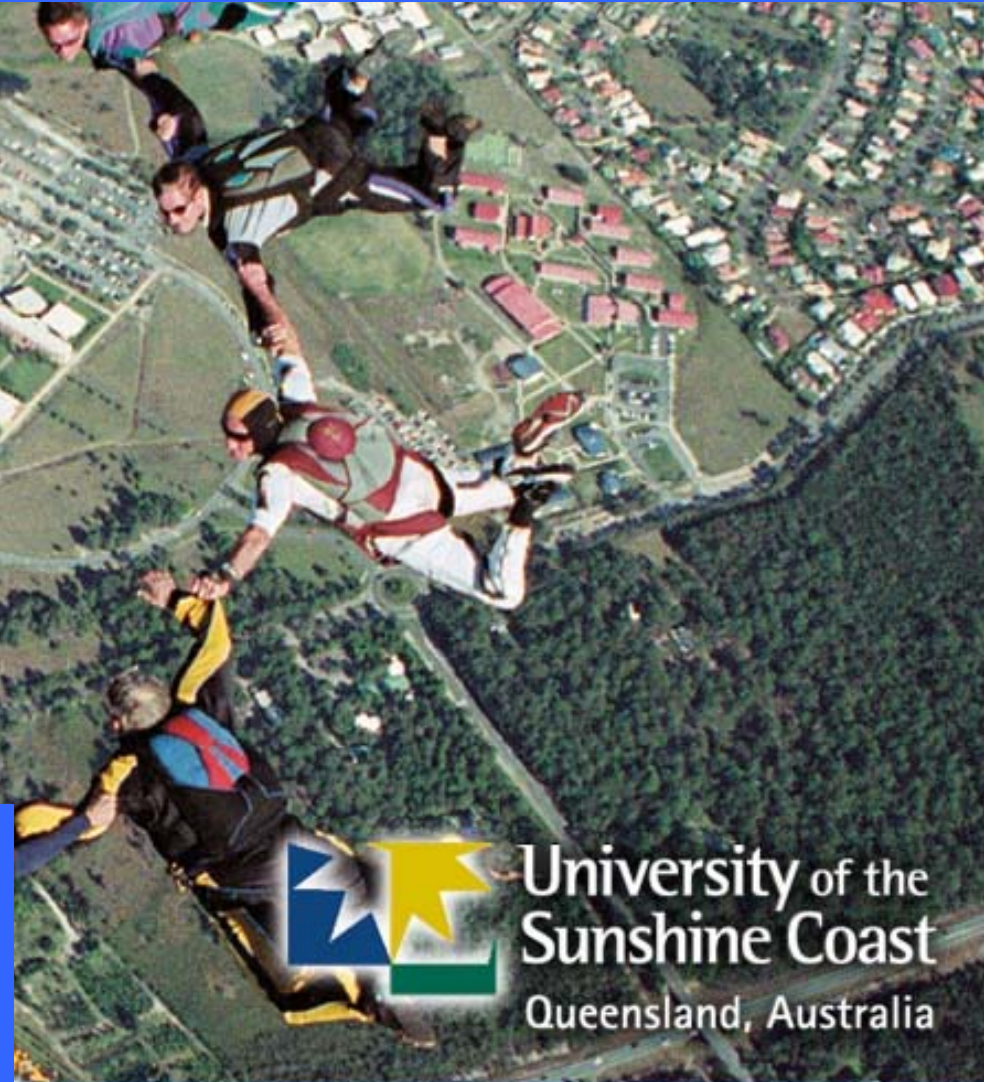


Leaving Home and the Influence on the Food Choice Behaviour of Young German Adults



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Background – Germany

- Among the European Union countries, Germany has most overweight people.
- Nearly 6 in 10 (58.9%) German women overweight, nearly three-quarters (75.4%) German men overweight.
- UK women 2nd, 58.5% overweight. Czech Republic men came 2nd. Thinnest Europeans of both sexes live in Italy and France (International Association for the Study of Obesity report, cited in Deutsche Welle 2007).
- Proportion of German people with a Body Mass Index (BMI) between 25 and 30 has not changed for 20 years, BUT proportion of **obese** individuals (BMI \geq 30) has increased considerably.
- Currently around 70% of men and 50% of women in Germany are overweight or obese (Mensink, Lampert, Bergmann 2005).
- 31.1% of males, and 16.3% of females, aged 18-40 are overweight; 7.4% of males and 6.2% of females obese (Statistisches Bundesamt 2007).
- Unhealthy food choice pattern develops during young adulthood; likely to continue for rest of their lives (Betts *et al.* 1997; Haberman and Luffey 1998; Wardle 1995).



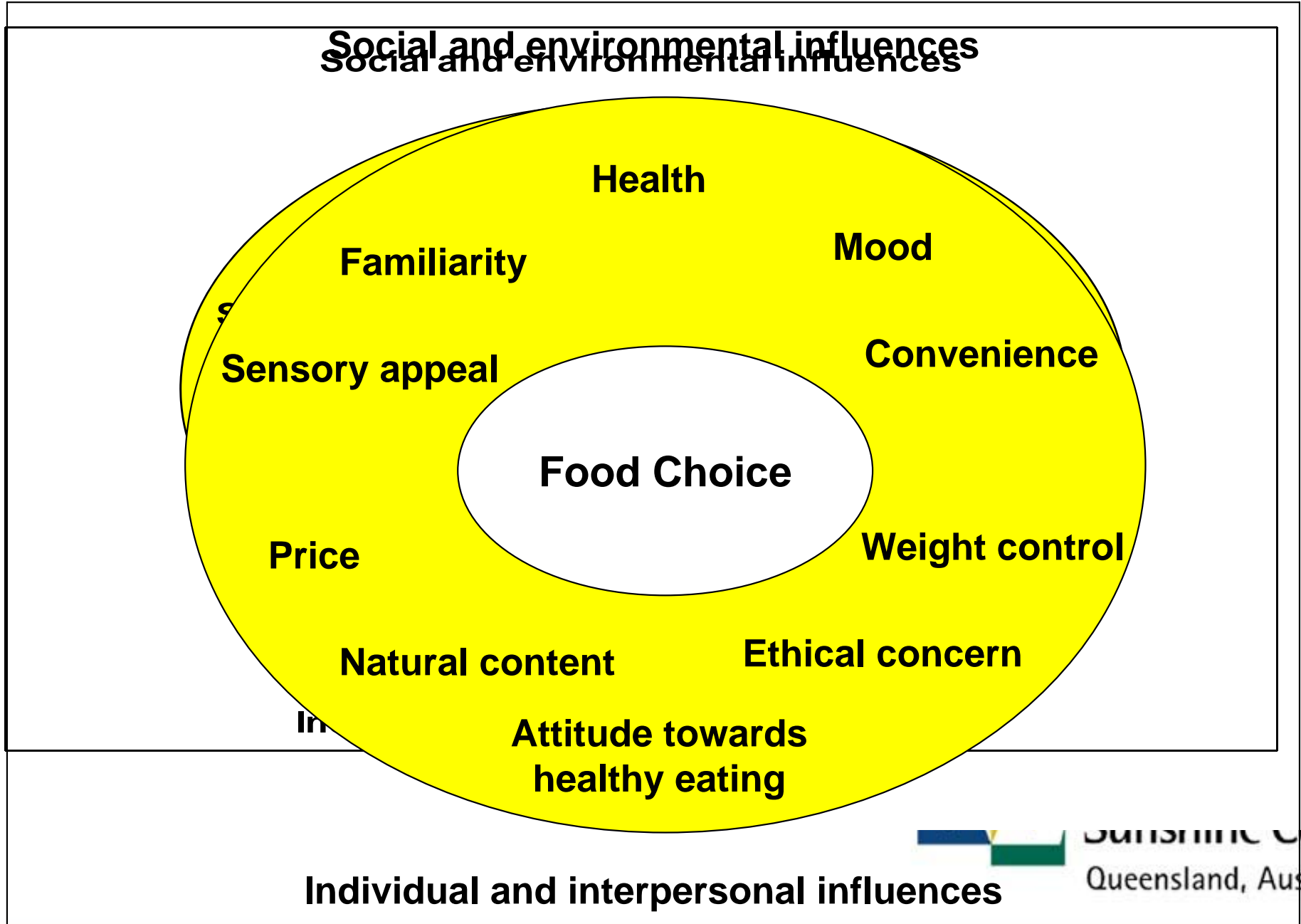
Leaving home ...

- Suspected that transition from dependent living in family home to living independently during young adulthood influences food choice behaviour.
- Only 8% of college students consumed minimum recommended intake for each of the food groups (Tavelli *et al.* 1998).
- More than 80% of college students consume inadequate quantities of grains, dairy products and fruit and vegetables (Haberman and Luffey 1998).
- 69% of college students not consuming recommended amount of fruit and vegetables (Huang *et al.* (2003).
- 'Freshman 15': USA term (Gores 2008) refers to weight gained by university students in first year of study; gain 15 pounds by end of first year of tertiary study.
- Framework for how young adults choose food builds on work of Steptoe *et al.* (1995), Bagozzi and Warshaw (1990), Maheswaran and Meyers-Levy (1990), and Marquis (2004).



Food Choice Model

Figure 1: Food Choice Model



Research Questions

1. Is there a difference in food motives and the serves of food by the type of residence (dependent or independent living)?
2. Is there a difference in food motives and the serves of food by the age of German University students?
3. Is there a relationship between food motives and attitudes towards healthy eating and the amount of serves consumed?



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Study Method

- Literature review
- Descriptive research design in cross-sectional setting
- Self-administered questionnaire with 305 university students aged 18-24 yrs in Germany. Pre-tested on expert panel and pilot study.
- Drop-off, pick-up technique.
- Quota sampling applied due to unavailability of appropriate sampling frame and ensured control of particular characteristics of target population (Moser 1952; Moser and Stuart 1953).
- Selection bias: data collected on different days, at various times and at assortment of locations around campus (Sudman 1980; Sudman and Kalton 1986).



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Differences in Food Motives and Serving of Food by Type of Residence

Food Motives and Serving of Foods	Dependent Residents Mean (N) (SD)	Independent Residents Mean (N) (SD)	t-value
Food motives			
Health	3.55 (82) (0.55)	3.45 (216) (0.54)	1.51
Sensory appeal	3.56 (82) (0.59)	3.46 (216) (0.61)	1.25
Ethical concern	2.68 (82) (0.86)	2.56 (216) (0.75)	1.21
Familiarity	2.84 (82) (0.64)	2.75 (216) (0.66)	1.05
Natural content	3.40 (82) (0.67)	3.35 (216) (0.71)	0.54
Attitudes towards healthy eating	3.73 (79) (0.64)	3.69 (211) (0.63)	0.39
Weight concern	3.14 (82) (1.02)	3.21 (216) (0.96)	-0.50
Mood	3.15 (82) (0.65)	3.20 (216) (0.61)	-0.58
Convenience	3.29 (82) (0.80)	3.42 (216) (0.82)	-1.25
Price	3.58 (82) (0.67)	3.71 (216) (0.65)	-1.51
Serving of food			
Vegetables	2.13 (82) (1.12)	2.14 (214) 1.28)	-0.04
Fruit	1.67 (82) (0.65)	1.54 (216) (0.65)	1.54
Bread	2.63 (82) (0.95)	2.36 (216) (0.97)	2.18*
Serves of milk, yoghurt or cheese	1.61 (82) (0.58)	1.53 (216) (0.63)	0.96
Serves of meat, fish, poultry, eggs, nuts, legumes	0.84 (82) (0.37)	0.69 (216) (0.46)	2.59*
Total number of serves	8.89 (82) (2.19)	8.27 (214) (2.22)	2.15*

- No difference between dependent and independent German residents in food Motives.
- In serving of food, students living in family home consume significantly higher serves of bread, meat, fish, poultry, eggs, nuts or legumes, and total number of serves, than students living independently.



Differences in Food Motives and Serving of Food, by Age

Food Motives and Serving of Foods	Up to 21 yrs old Mean (N) (SD)	Above 21 yrs old Mean (N) (SD)	t-value
Food motives			
Attitudes towards healthy eating	3.87 (119) (0.59)	3.61 (176) (0.64)	3.53***
Mood	3.08 (122) (0.61)	3.27 (181) (0.69)	-2.58*
Weight concern	3.31 (122) (0.84)	3.09 (181) (1.06)	1.87†
Sensory appeal	3.43 (122) (0.63)	3.54 (181) (0.59)	-1.49
Convenience	3.44 (122) (0.84)	3.32 (181) (0.84)	1.28
Ethical concern	2.53 (122) (0.76)	2.61 (181) (0.80)	-0.85
Price	3.72 (122) (0.68)	3.65 (181) (0.67)	0.78
Natural content	3.32 (122) (0.66)	3.38 (181) (0.74)	-0.72
Health	3.48 (122) (0.47)	3.45 (181) (0.61)	0.51
Familiarity	2.78 (122) (0.64)	2.75 (181) (0.68)	0.42
Serving of food			
Vegetables	2.17 (121) (1.18)	2.12 (179) (1.27)	0.38
Fruit	1.68 (122) (0.58)	1.51 (181) (0.68)	2.29*
Bread	2.60 (122) (0.91)	2.33 (181) (1.03)	2.37*
Serves of milk, yoghurt or cheese	1.60 (122) (0.60)	1.52 (181) (0.63)	1.09
Serves of meat, fish, poultry, eggs, nuts or legumes	0.78 (122) (0.42)	0.71 (181) (0.46)	1.39†
Total number of serves	8.83 (121) (1.95)	8.17 (179) (2.38)	2.51*

- Students under 21 have more positive attitude towards healthy eating than over 21s.
- Under 21s eat significantly higher serving of fruit; bread; meat, fish, poultry and legumes than over 21s – also consume significantly higher number of total serves than over 21s.
- Separate analysis carried out for independent and dependent students indicates that these findings are particularly true for dependent students.



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Relationship between food motives and serving of foods

Food motives	Serving of fruit	Serving of vegetables	Serving of bread	Serving of milk, yoghurt or cheese	Serving of meat, fish, poultry, eggs, nuts or legumes	Total number of serves
Health	0.123*			0.191**		0.223***
Mood						
Convenience						
Sensory appeals						
Natural content		0.235***				
Price						
Weight concern	0.183**	0.206***	-0.181**		0.218***	
Familiarity						
Ethical concern						
Attitude towards healthy eating	0.242***	0.145*	0.174**			0.251***
Multiple R	0.397	0.408	0.230	0.191	0.218	0.383
R ²	0.157	0.167	0.053	0.036	0.047	0.147
SE	0.600	1.134	0.958	0.598	0.430	2.057
F	17.94***	18.99***	8.09***	10.98***	14.46***	24.58***

- Health consciousness, weight concern and attitude towards healthy eating: predictors of fruit consumption (R²=15.7%).
- Natural content, weight concern and attitude towards healthy eating: predictors of vegetables consumption (R²=16.7%).
- Weight concern and attitude towards healthy eating: predictors of bread consumption (R²=5.3%).
- Health consciousness: predictor of milk, yoghurt or cheese consumption (R²=3.6%).
- Weight concern: predictor of meat, fish, poultry, eggs, nuts or legumes consumption (R²=4.7%).
- Health consciousness and attitude towards healthy eating: predictors of total consumption of food items (R²=14.7%).



Conclusions

- Dependent students eat a more varied diet, and generally have more serves of food, than do independent students.
- Younger students are different to older students. U21s have a more positive attitude towards healthy eating, eat significantly higher serves of fruit, bread, meat, fish, poultry and legumes, and generally eat more than their older counterparts.
- German students who make their food choices based on weight concern eat more fruit, vegetables, meat and fish, and less bread than people driven by other motivators.
- Food choice drivers for students living at home were *health, sensory appeal* and *price*, whilst, for independent students, *price* was overwhelmingly the most important characteristic.
- Social Marketing Campaigns:
 - Improving attitude toward healthy eating among young German adults that live in the family home.
 - Educate young adults about food-related activities, such as budgeting, preparation and cooking, to assist in the transition to independent living.





QUESTIONS?