

The Relationship between Experiential Avoidance & Body Mass Index in a nationwide survey of mid-age New Zealand women

Clara Madden MSc, Sookling Leong MSc, Andrew Gray MSc,
Caroline Horwath PhD
Dept of Human Nutrition, University of Otago
New Zealand

Overeating

- Occurs in response to reinforcing properties of food
- May be triggered by
 - External cues (availability, food-related stimuli, people, places)
 - Internal cues (stress, negative effect)

(Gifford & Lillis, 2010)

Obesity & BMI

- Associated with emotional eating & external eating
(Blair et al 1990; Braet & van Strien, 1997; Delahanty et al 2002; Hays et al 2002; Wardle 1987)
- Emotional & external eating predict weight regain following weight loss (McGuire et al, 1999)
- Decreases in emotional eating from baseline to 1-year follow-up have been associated with successful weight control (Blair et al 1990)

Randomised weight loss interventions

- Mindfulness-based ACT intervention – in those who reported applying the principles at 6 mo, significantly greater reductions in BMI relative to controls (2.32 kg)
 - Mediated primarily by reductions in binge eating
- Mindfulness & acceptance-based 1-day workshop
 - At 3 mo follow-up % losing ≥ 5lbs: ACT: 35%, waitlist control: 11%

(Tapper et al., 2009)
(Lillis et al., 2009)

Objective

- To examine, in a representative nationwide sample of 40-50 year old women, the relationship between experiential avoidance[†] (EA) and Body Mass Index (BMI)

[†] unwillingness to experience difficult thoughts and feelings


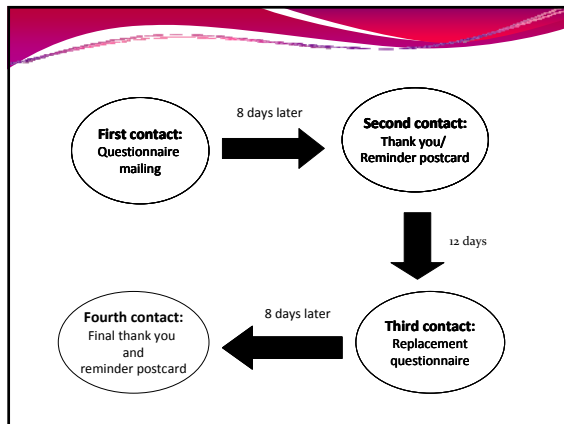
Hypotheses

```

    graph TD
      EA[Experiential Avoidance.] --> EB[Eating behaviours]
      EB --> BMI[Body Mass Index (BMI)]
      EA --> BMI
    
```


Method

- Nationwide mail survey of 2500 New Zealand women aged 40-50 years.
- Random selection from the New Zealand electoral rolls including Maori rolls.
- Careful pre-testing of questionnaire & pilot study of 100 women.

Method

- 66 % response rate
- N = 1601
- Self-report data on:
 - Experiential avoidance (AAQ II, Bond 2007)
 - Height & weight
 - Eating patterns
 - Physical activity
 - Mindfulness (MAA, Brown 2003)
 - Demographic & health variables



Respondent characteristics:

- N = 1601
- 45.5 years
- BMI = 25.8 (SD 1.2); 21% obese, 29% overweight
- 80.3 % European vs. 73.4% (2006 Census)
- Maori 11.4% vs. 12.1%
- Pacific 3.0% vs. 4.6%
- Asian 5.3% vs. 9.9%
- 76% pre-menopausal
- 18.7% current smokers

Experiential avoidance:

- AAQ-II scores: mean 52.0 (SD 10.3)
 - 25% ≤ 45
 - 32% ≤ 48 (Cronbach's alpha 0.88)
- Lower experiential avoidance (ie greater psychological flexibility) significantly associated with lower BMI
- 1.7 % for every 10-unit decrease in experiential avoidance ; 95% CI: -.27%, -0.07%; p=0.001 = 1.2 kg

(AAQ II potential range 10 – 70)

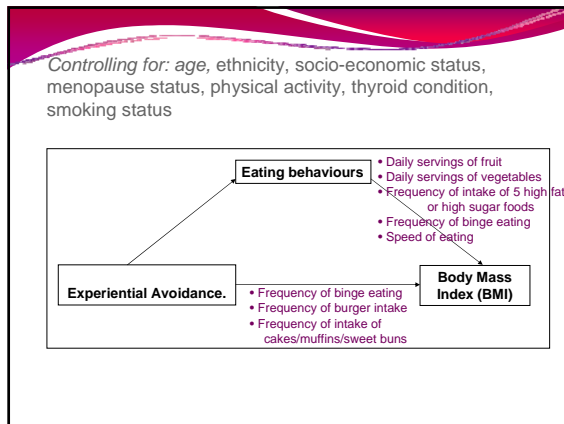


Table 7.4.2: Relationship between AAQ-II and BMI controlling for potential mediators (eating behaviours) (n=1443)

Eating behaviour	% increase or decrease in BMI (95%CI)*	p-value
AAQ-II	-0.02 (-0.12, 0.07)	0.621
Binge eating	7.51 (6.09, 8.95)	<0.001
Cakes, scones, muffins, sweet buns	-1.29 (-2.01, -0.56)	0.001
Burgers	2.61 (1.45, 3.79)	<0.001

* adjusted for age, smoking status, menopause status, thyroid condition, ethnicity, physical activity and socio-economic status

Conclusions:

- Experiential avoidance is significantly associated with higher BMI among mid-age women, and the association is primarily mediated by frequency of binge-eating.

Limitations

- Cross-sectional study design.
- Self-report data – height, weight.
- Limited assessment of eating habits.

Strengths

- Nationwide representative sampling frame.
- Response rate (66%) & sample size (1601).
- Representative proportion of Maori women.
- Careful questionnaire pre-testing.
- Pilot study to refine survey method.

Thank you...

- Dr. Debra Waters
- Dr. Tamlin Conner
- Dept Human Nutrition PBRF funding
- All the women who participated in the study

Questions?
Suggestions for
2-year follow-up?

