

The relationship between food security and psychological distress in New Zealand

Kristie Carter
Tony Blakely

Health Inequalities Research Programme,
Department of Public Health,
School of Medicine & Health Sciences,
University of Otago, Wellington

Background

- Food security is assured access to food that is of nutritional value and quality
- Food insecurity is strongly associated with economic factors
- Also a strong association with poor physical and mental health
- Associations with socio-cultural factors

Aims of analysis

- Investigate the demographic and socioeconomic determinants of Food Security in NZ
- What is the association of food security with psychological distress, after adjustment for confounders?

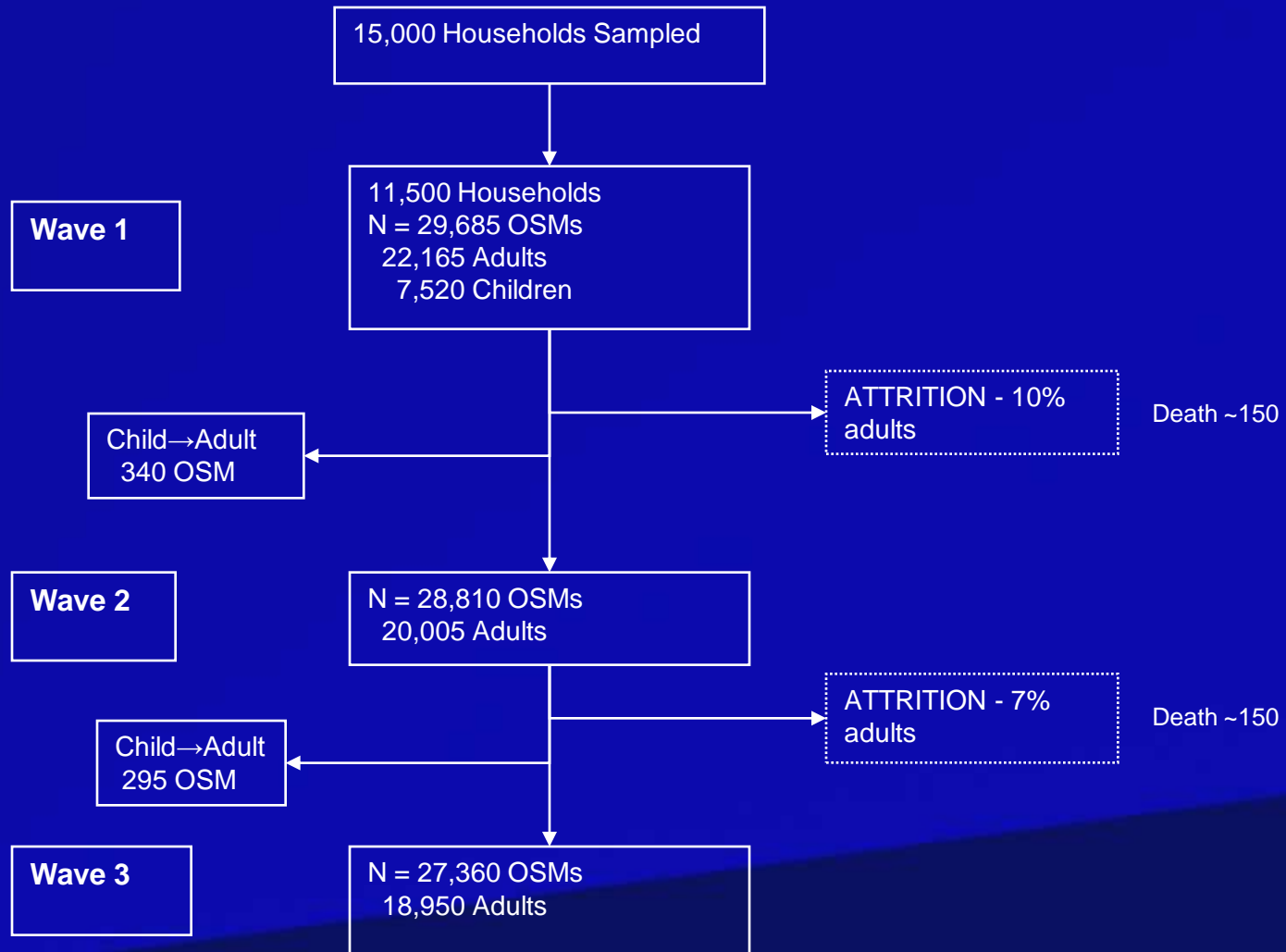
Survey of Family, Income and Employment - “SoFIE”

- Statistics New Zealand
- 8-year longitudinal
- First wave, 1 October 2002
- Collects annual information on demographics, income, labour force participation, education, household and family structure.
- Assets and liabilities - waves 2, 4, 6, and 8.
- Health - waves 3, 5, and 7.

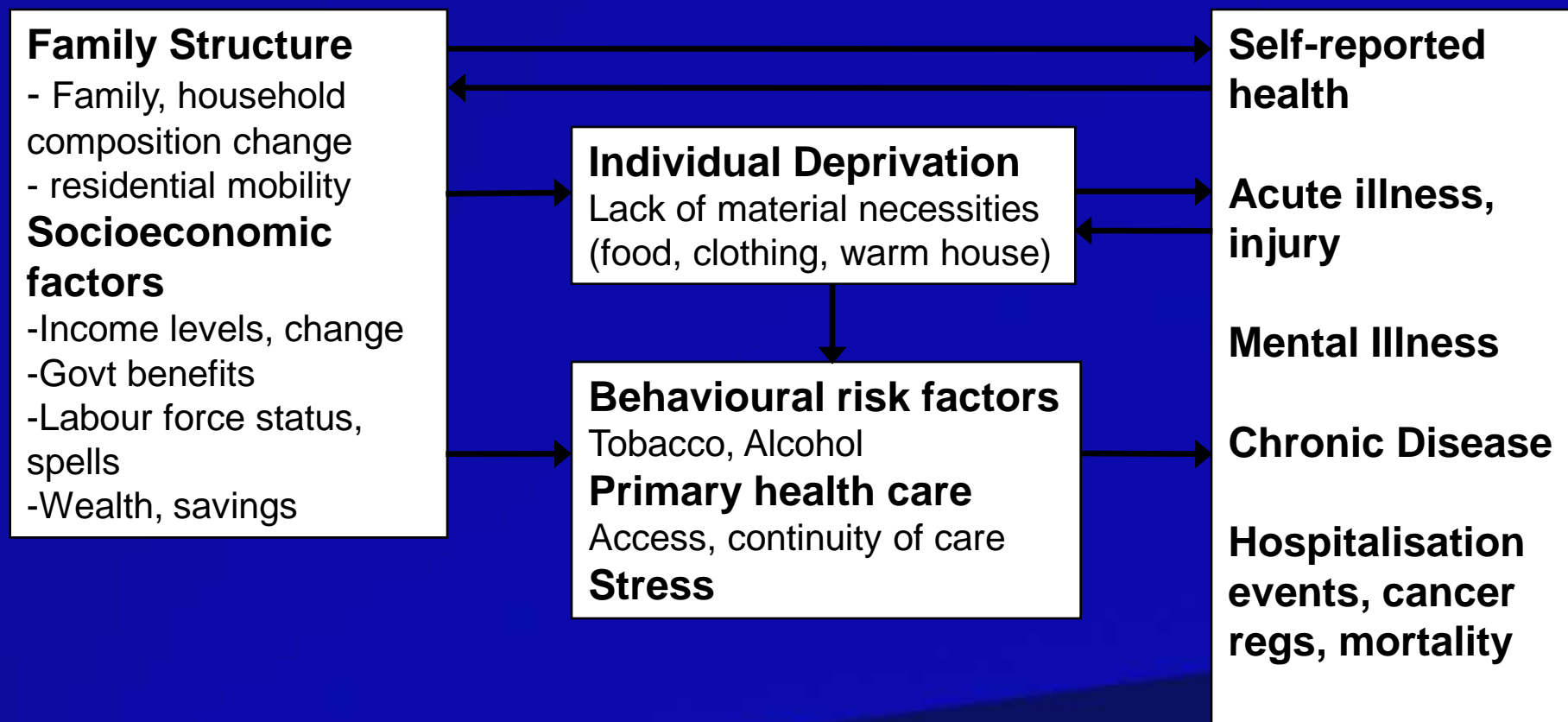
SoFIE

- Target Population
 - usually resident population of New Zealand living in permanent, private dwellings
- Sampling
 - 11,500 households (77%)
 - >22,000 individuals aged 15+ years
- Attrition
- Computer Assisted Interviewing to collect and store information

SoFIE Sample Flow Chart



Domains of SoFIE-Health



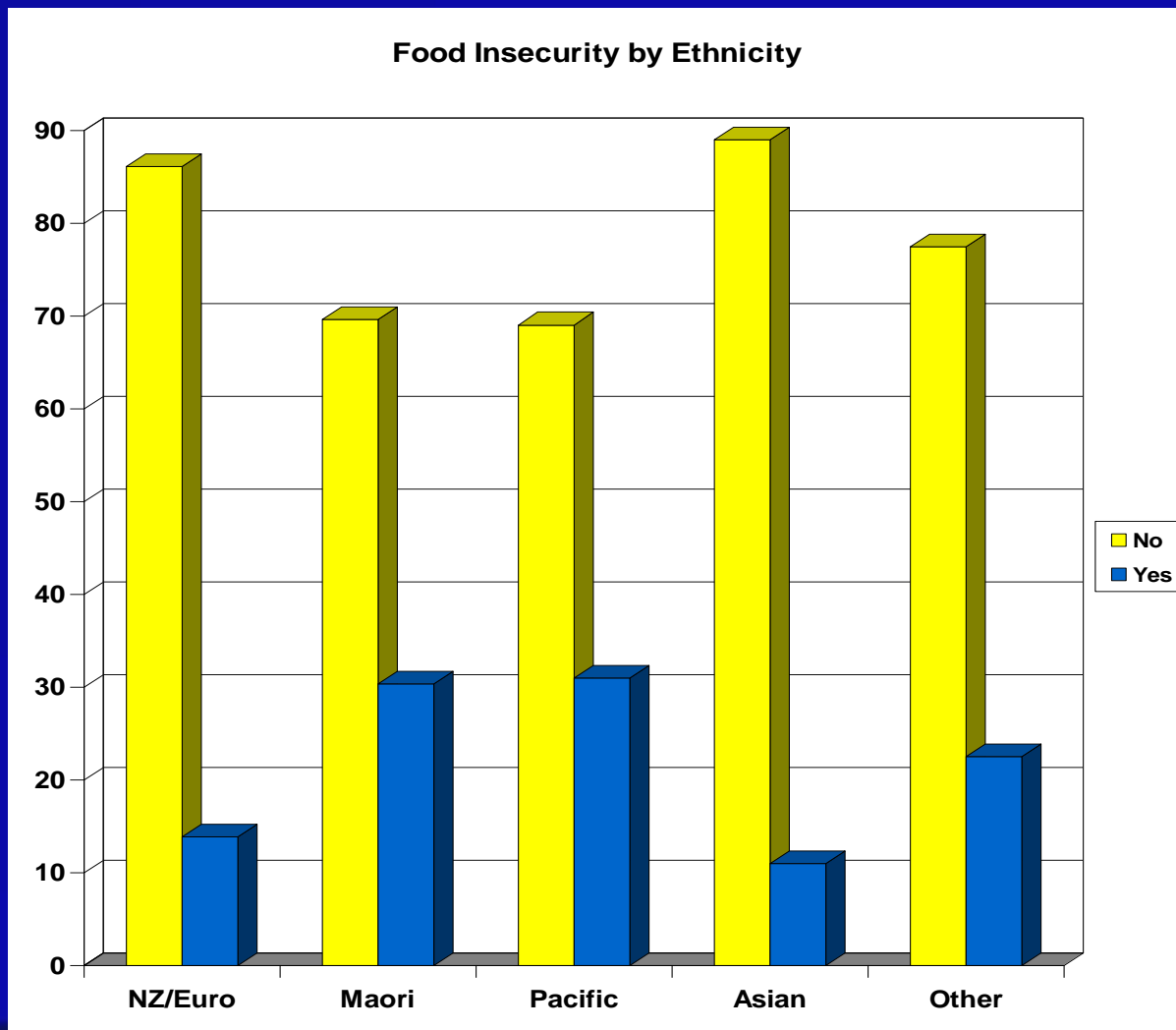
Study population

- SoFIE respondents
 - OSMs eligible in Wave 3
 - Aged 15+ years
 - $N > 18,000$

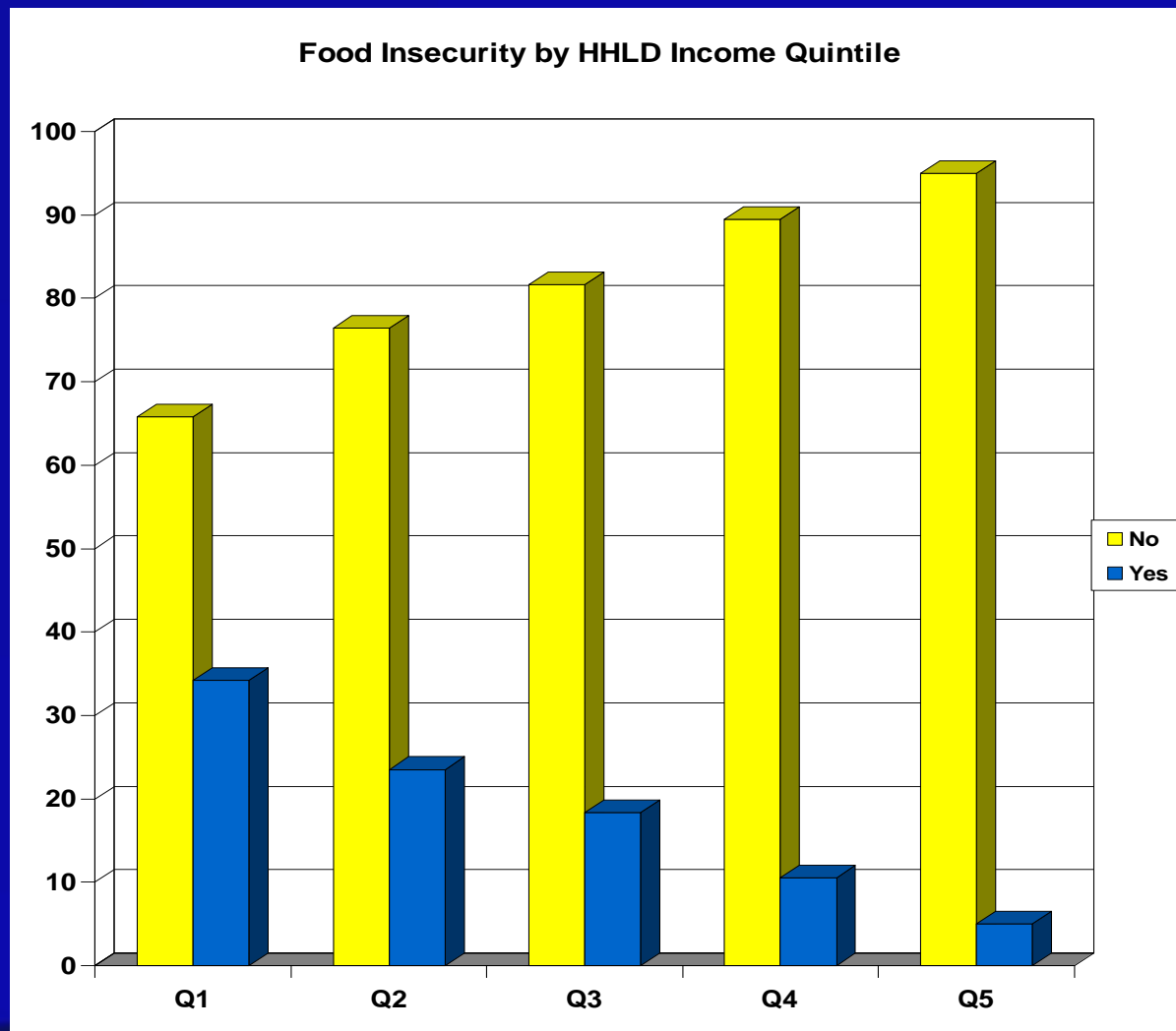
Food Security

- In the last 12 months had you?
 - used special food grants or food banks,
 - been forced to buy cheaper food to pay for other things, or
 - had to go without fresh fruit and vegetables often.
- Food insecurity = Yes, if answered yes to any of these (N=3,000 16%)

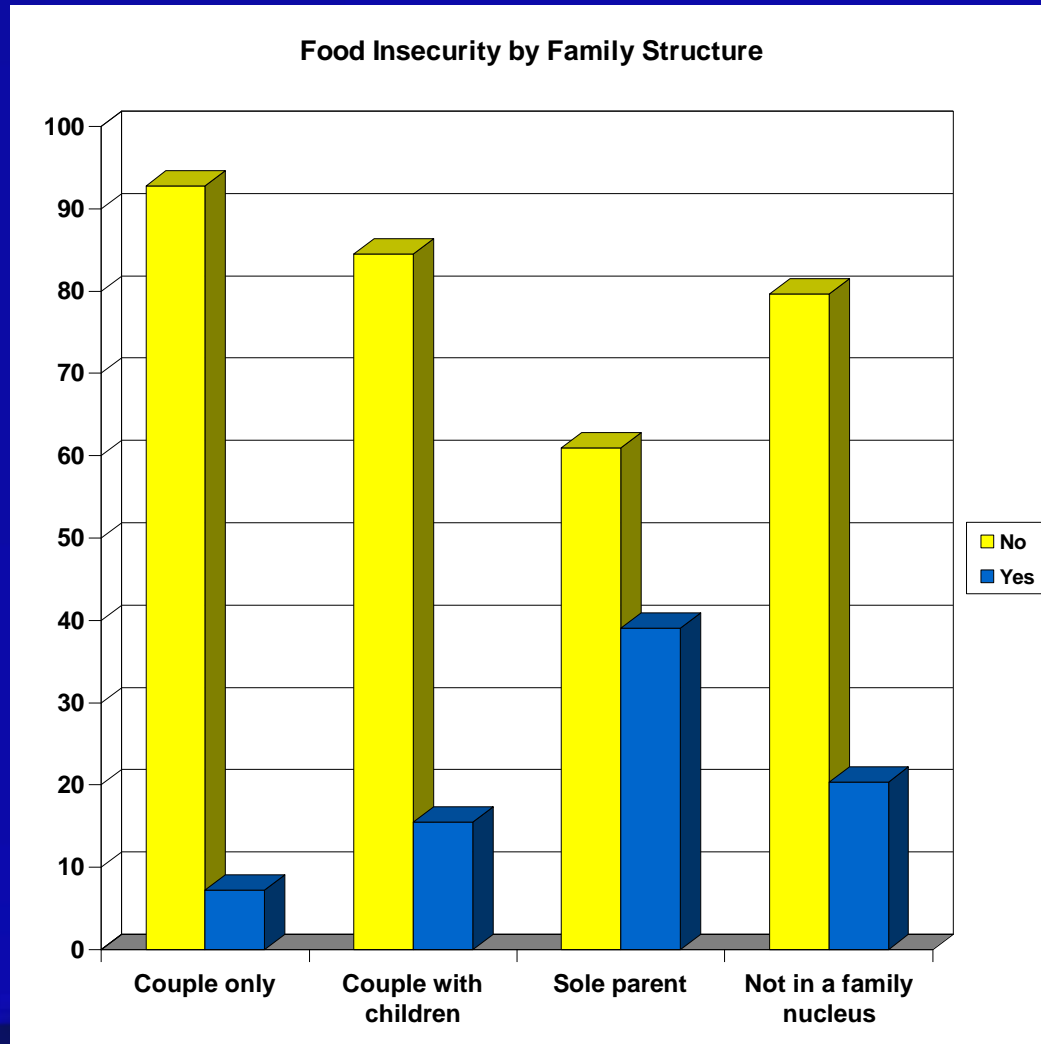
Food Insecurity * Ethnicity



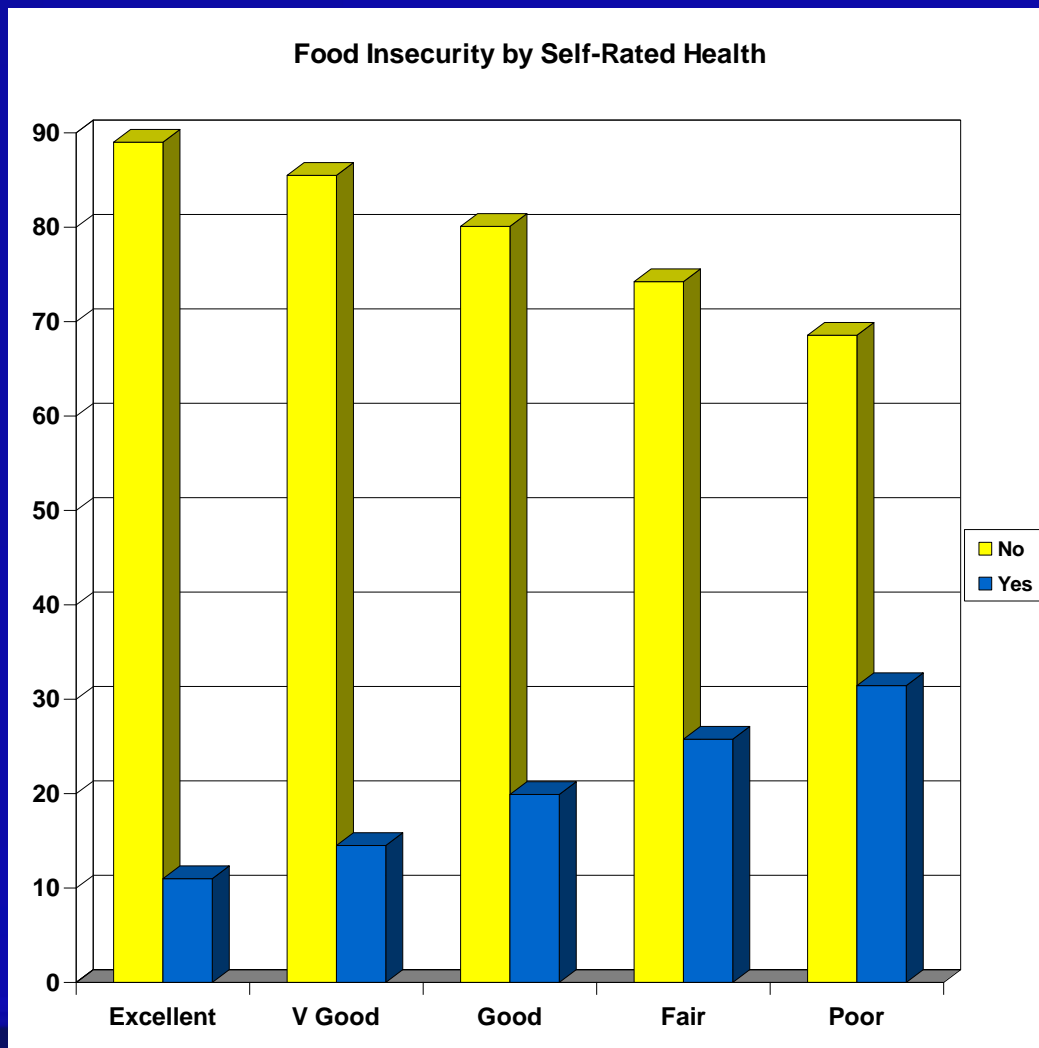
Food Insecurity * HHL D Income



Food Insecurity * Family Structure



Food Insecurity * self-rated health

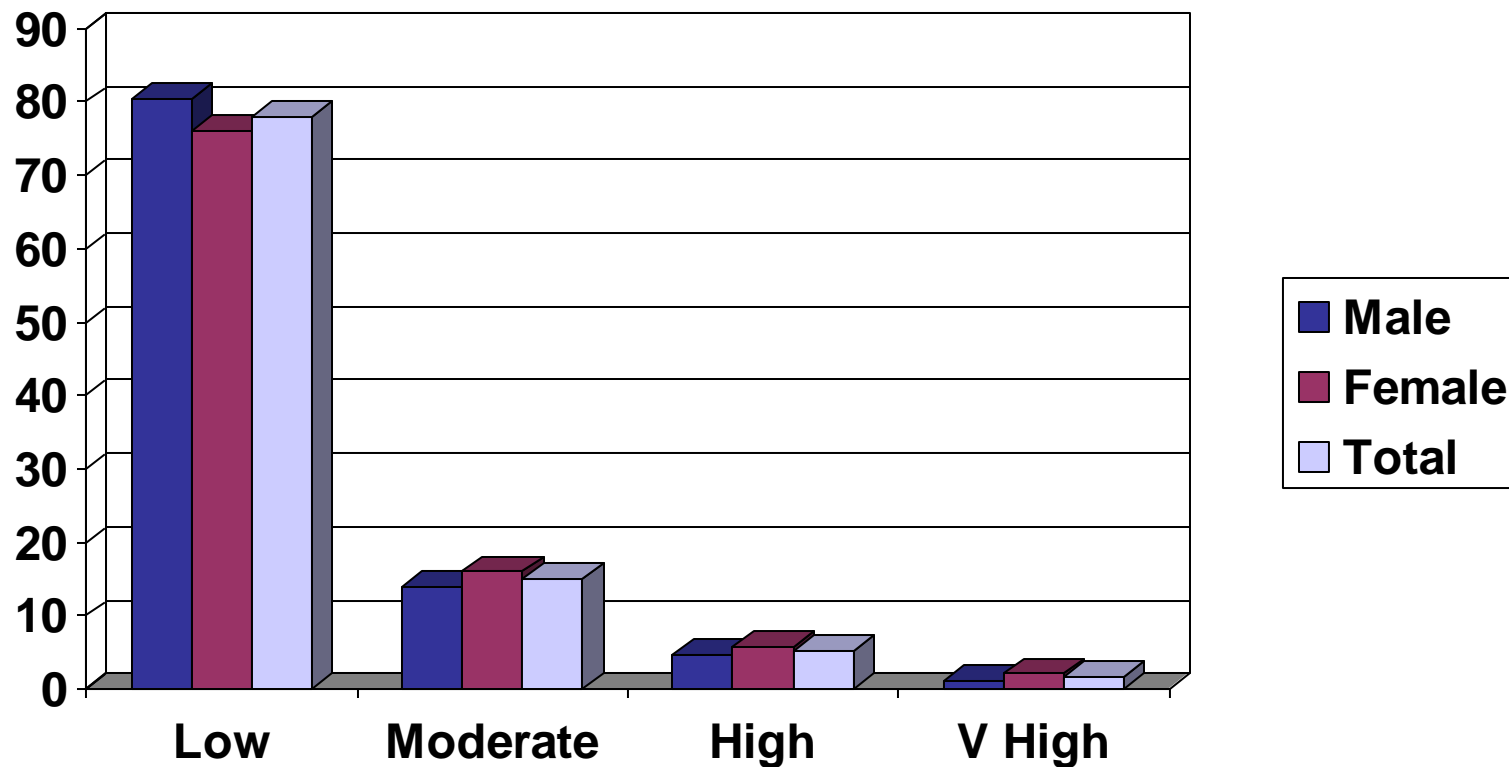


Kessler 10 – last 4 weeks

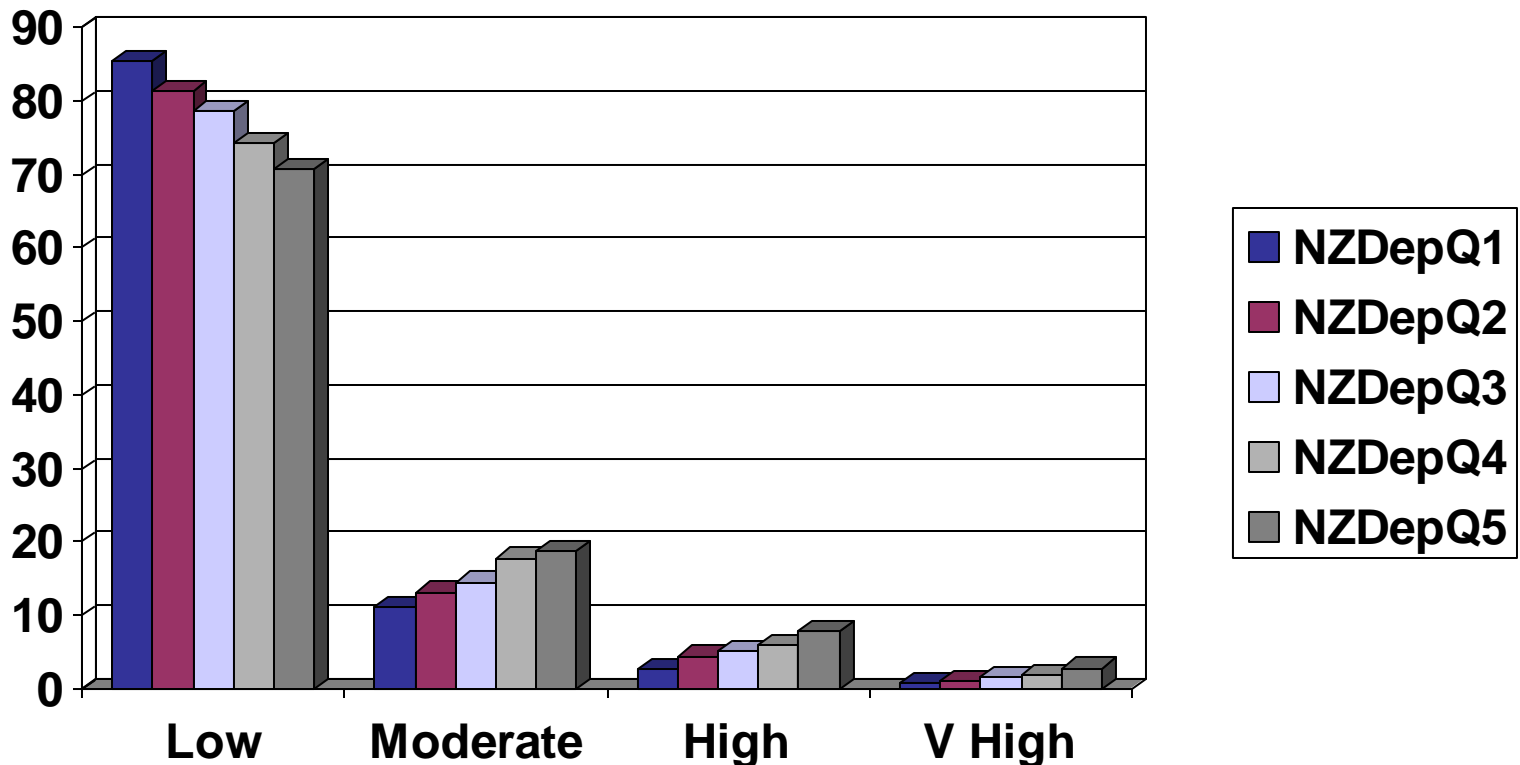
- 10 questions
- Non-specific psychological distress
- Scored 10-50
- Has been mapped to clinical depression and anxiety

	SoFIE	
	N	%
Low (10-15)	14120	78%
Moderate (16-21)	2720	15%
High (22-29)	945	5%
Very High (30+)	300	2%

Psychological distress * Sex



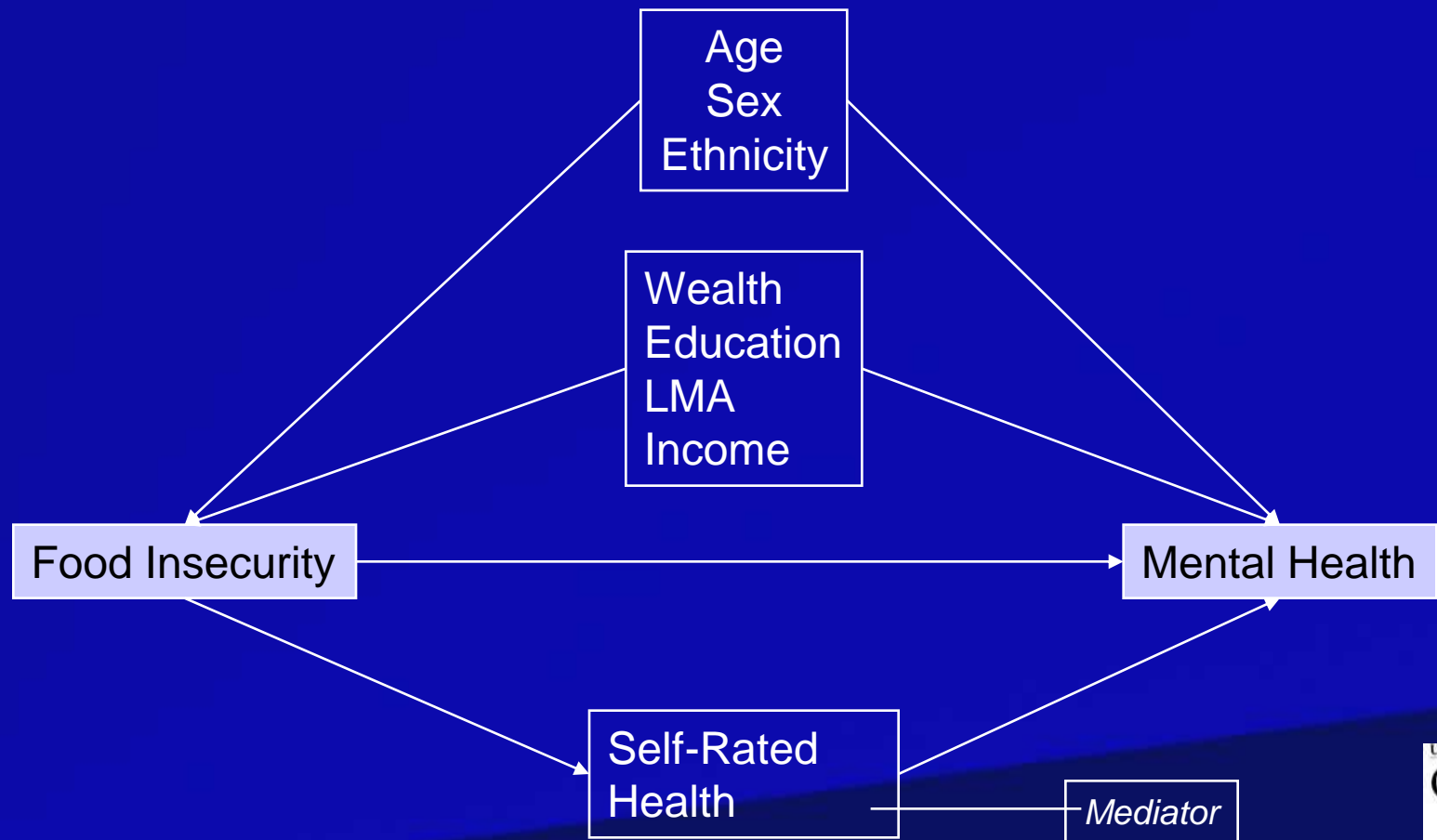
Psychological distress * NZ Dep



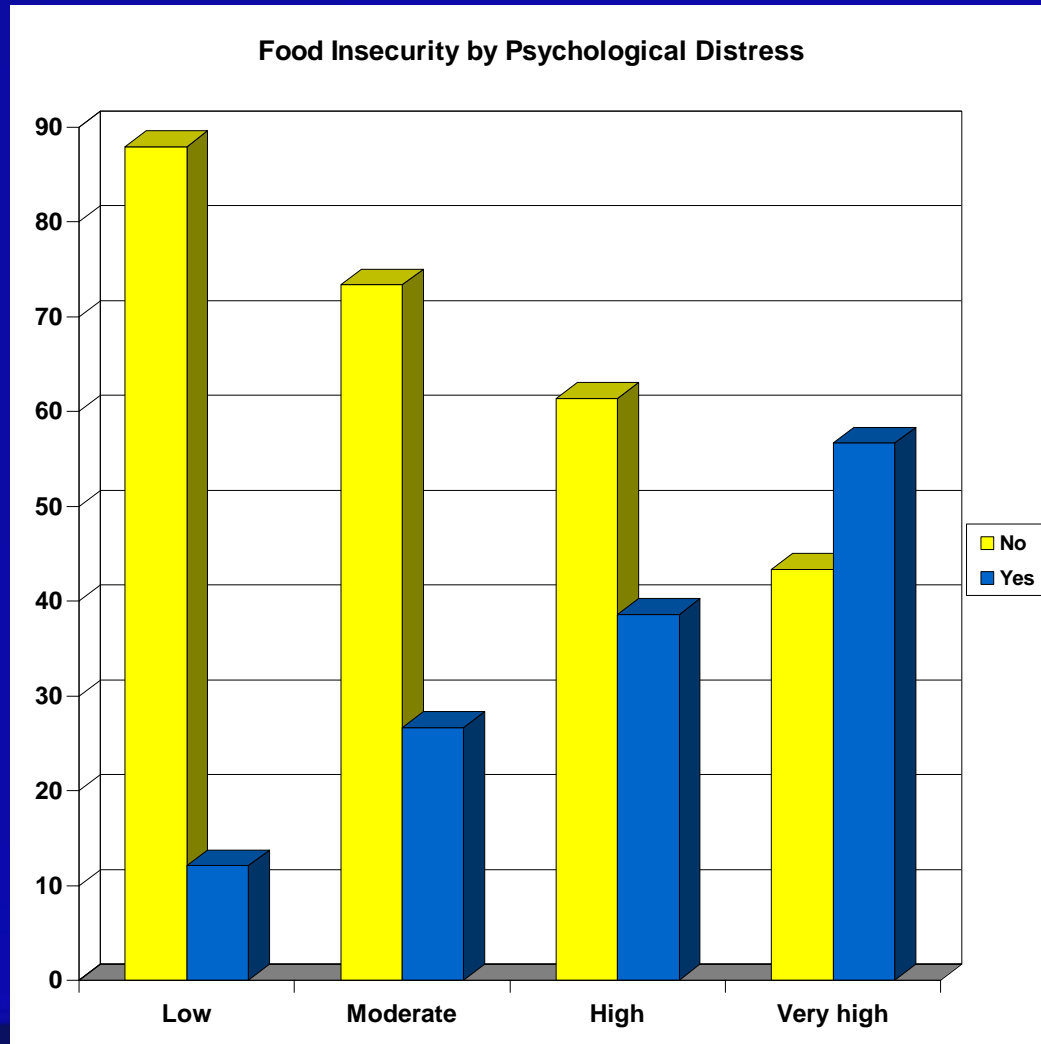
Other Variables

- Explanatory variables
 - Household income quintiles
 - Highest education qualification
 - Labour market activity
 - NZ Deprivation index
 - NZiDep – Worn out shoes, Put up with cold
 - Health – Self-rated health, smoking, chronic conditions
- Confounders – age, sex, ethnicity, marital status, family composition

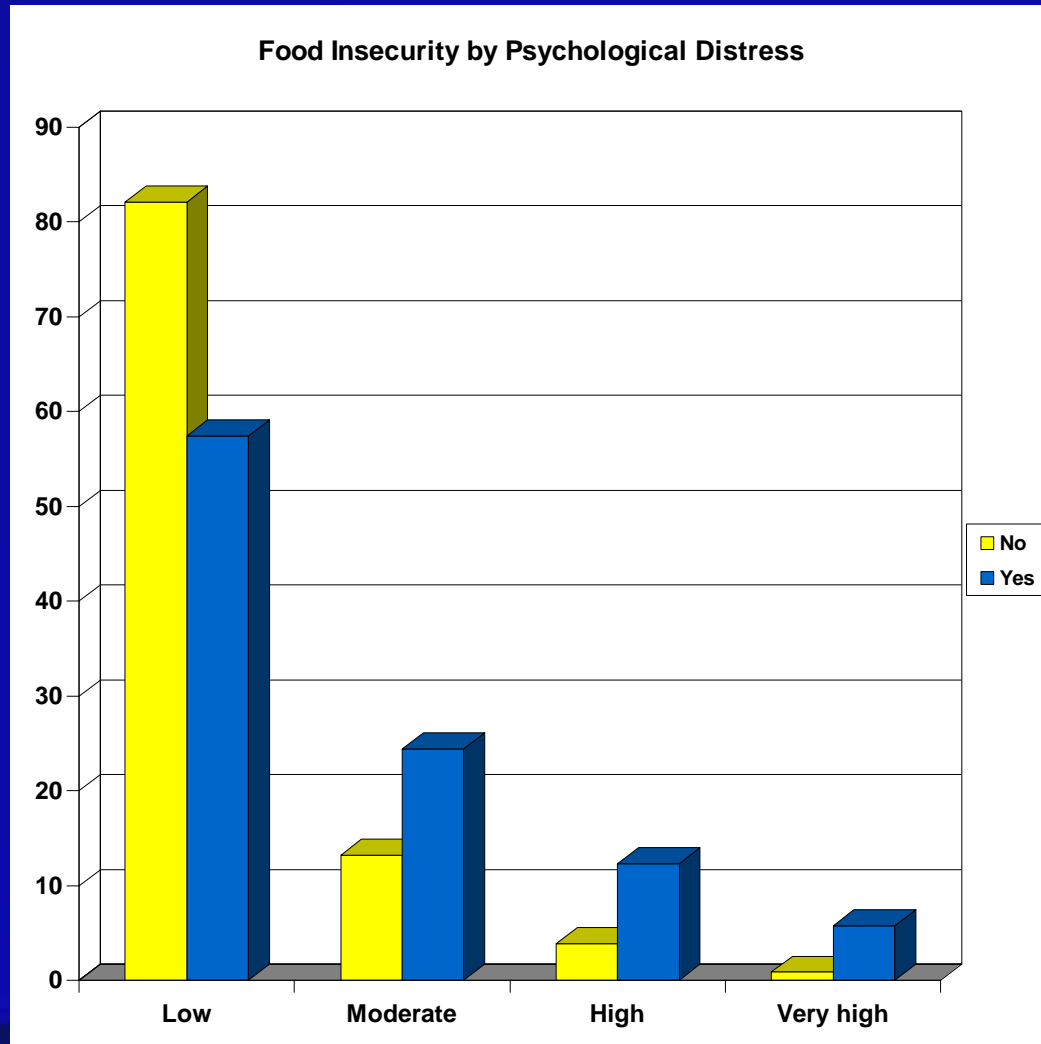
Food Security -> Psychological Distress Directed Acyclic Graph



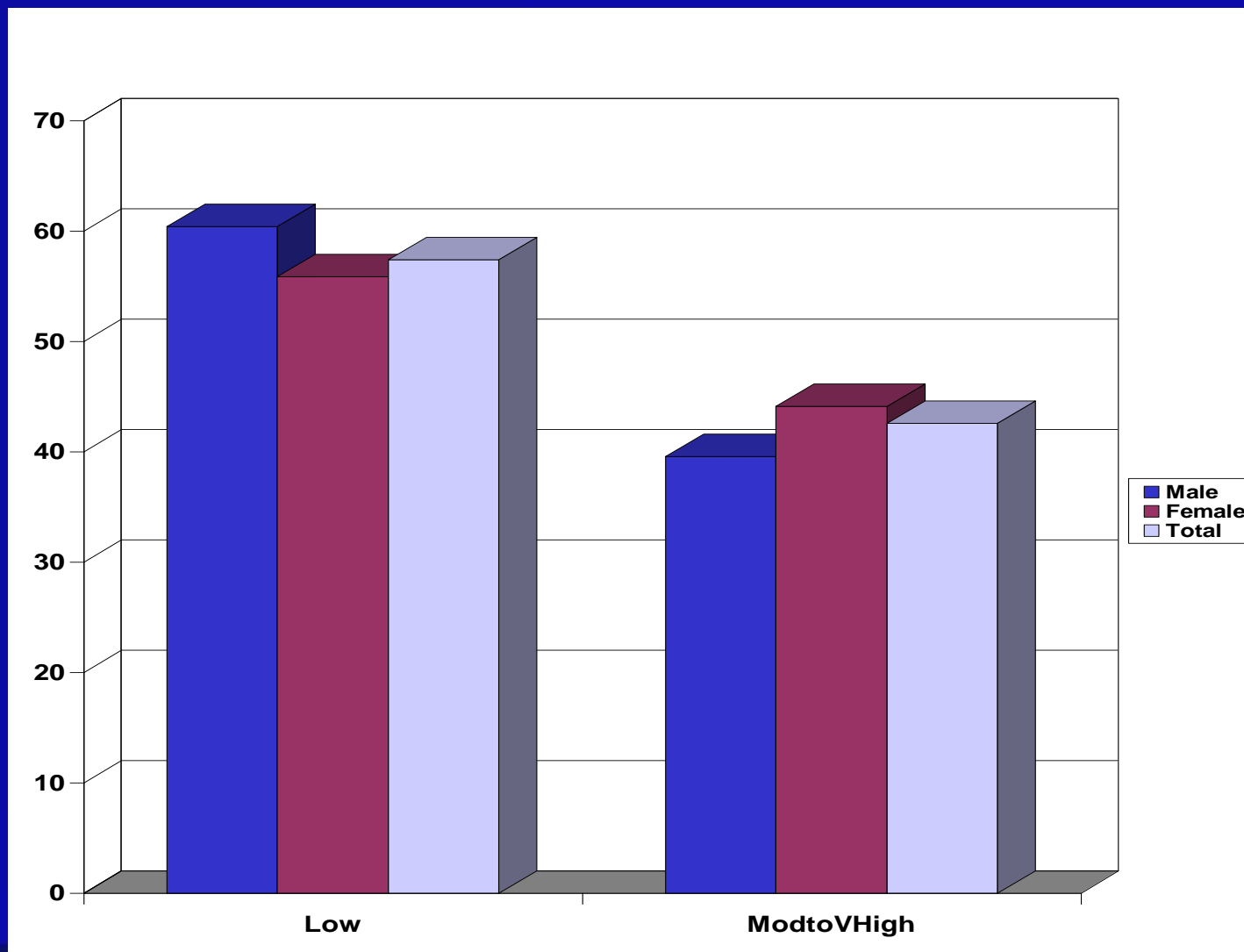
Food Insecurity * Psychological Distress



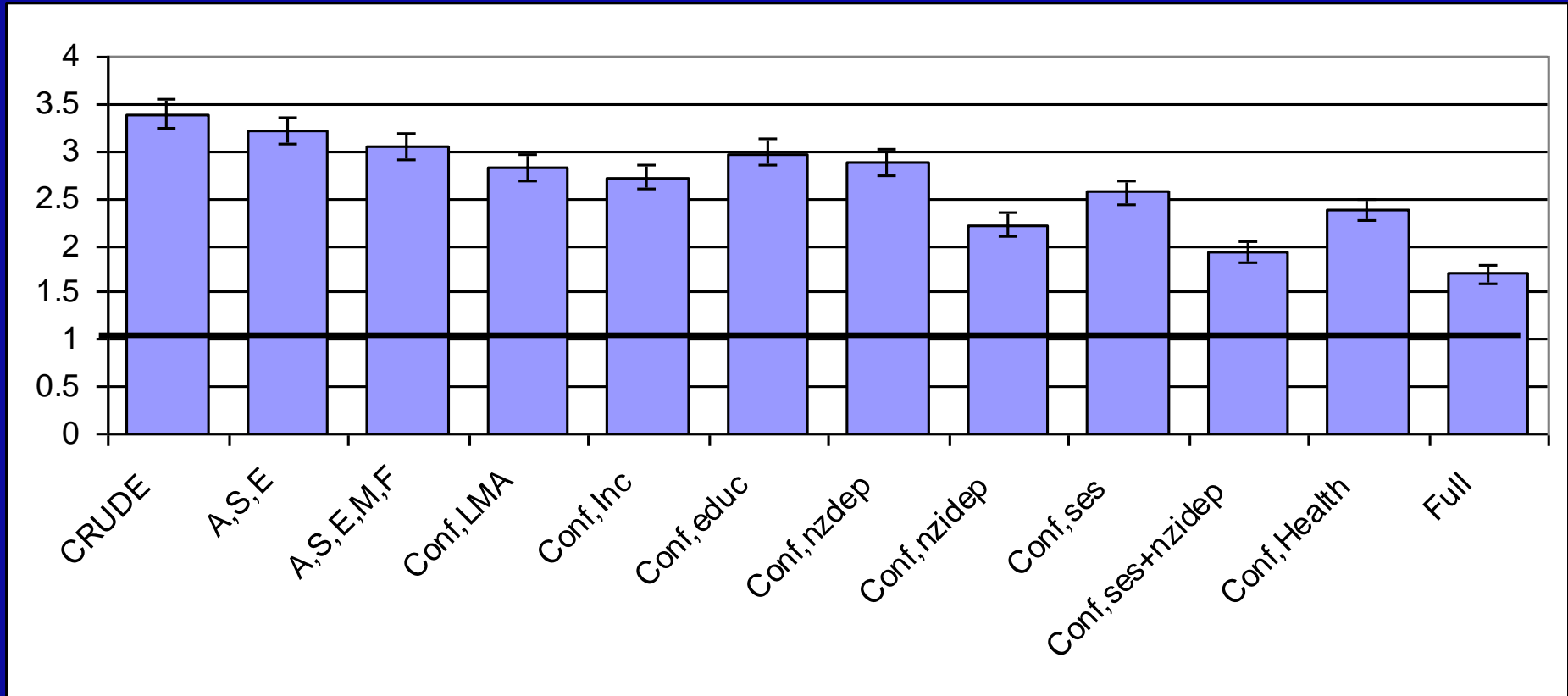
Food Insecurity * Psychological Distress



Food Insecurity * Psychological Distress By sex

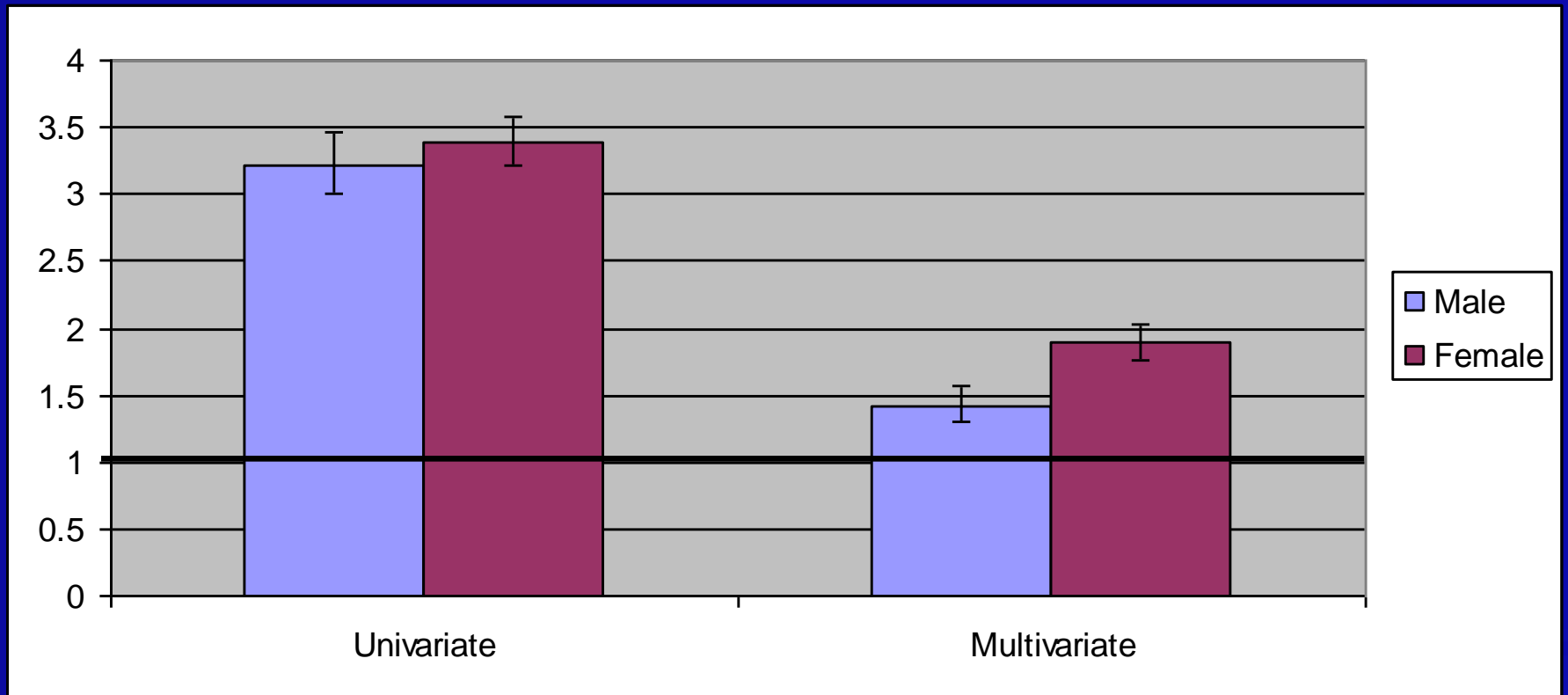


Logistic Regression



A-Age, S-Sex, E-Ethnicity, M-Marital Status, F-Family status
LMA-Labour Market Activity, Inc-Income, Educ-Education, H-Health

Logistic Regression by sex



Multivariate = Age, Sex, Ethnicity, Marital Status, Family Status, Labour Market Activity, Income, Education, NZDep, NZiDep, Health

Conclusions

- Linear relationship between \uparrow food insecurity at lower levels of SES
- Strong association of food insecurity on poor health and psychological distress
- This remained after adjusting for multiple confounders and economic factors
- Implications for current policy initiatives targeting welfare, saving and retirement, food costs, transport and access to food

Acknowledgements

- Co-authors - Tolotea Lanumata, Kerri Kruse
- Statistics NZ
Access to the data used in this study was provided by Statistics New Zealand in a secure environment designed to give effect to the confidentiality provisions of the Statistics Act, 1975. The results in this study and any errors contained therein are those of the author, not Statistics New Zealand.
- Funding
 - Health Research Council of NZ
 - Ministry of Health
- All of the SoFIE participants
- ENHANCE Research Team: Dr Cliona Ni Mhurchu, Delvina Gorton, Dr Louise Signal, Mat Walton, Dr Jamie Pearce, Dr Ralph Maddison, Dr Kristie Carter

kristie.carter@otago.ac.nz

