Roy Morgan Research

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Consumers and Nutrition Content Claims. A study of responses to vitamin, mineral and other claims.

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1. EXECUTIVE SUMMARY

- Food Standards Australia New Zealand (FSANZ) commissioned Roy Morgan Research to undertake a study of the impact of nutrition content claims on products of lower nutritional quality. The study addresses the key research question: are consumer's nutrition evaluations and intention to purchase influenced by nutrition content claims on products of lower nutritional quality?

- The study used a between-groups experimental design where participants were asked to evaluate product stimuli that closely approximated real-world products. Participants were randomly allocated to either a treatment group or a control group. Treatment and control groups differed in that those in the former were exposed to product stimuli **with** nutrition content claims and those in the latter were exposed to product stimuli **without** nutrition content claims.

- The study used nutrition content claims regarding vitamins, minerals and biologically active substances on four food products: ice cream, frozen lasagne, fruit drink, and potato chips. The four food products were of lower nutritional quality and their nutritional profile did not meet the Nutrient Profiling Scoring Criteria (NPSC).

- The study was implemented using an on-line survey which enabled respondents to view images of product stimuli. The product stimuli approximated real world products and were relative to each other in size. A sample of adult main grocery buyers was drawn. A total of 1,127 respondents completed the survey, 814 from Australia and 313 from New Zealand, proportionally drawn from country, age group, and gender.

- Four evaluation measures were used to determine if the presence nutrition content claim had a significant effect:
    - Intention to purchase the product
    - Nutrition attitude towards the product
    - Number of types of people perceived to benefit from consuming the product
    - Number of types of health benefits perceived from consuming the product

- The study found that nutrition content claims had no significant effect on the purchase intention, nutrition attitude, perceptions of types of people who would benefit, or perceptions of the types of health benefits, both overall and across products. The only exception was that claim presence significantly predicted the perceptions of the number of types of people who would benefit from drinking fruit drink; however, the

strength of the influence was relatively low and accounted for less than 1% of the variance.

- While nutrition content claims had no impact, several socio-demographic, cognitive, and behavioural factors were found to significantly influence the prediction of respondent's purchase intentions, nutrition attitude, perceptions of the number of types of people who would benefit, and perceptions of the number of types of health benefits.

- Country of residence was a significant factor in all four evaluation measures for all four products both individually and also overall. Australians consistently scored higher across the evaluation measures than New Zealand based respondents.

- While not significant in all circumstances household income, nutrition knowledge, and knowledge of micronutrient functions were important factors for most evaluations. Lower household income, lower nutrition knowledge, and a higher reported knowledge of micronutrient functions were consistently associated with higher product evaluations.

- To a smaller degree age, gender, dependents in the household, education level, health concerns, and motivation to read nutrition labels also yielded an effect on evaluations.

- In summary, exposure to nutrition content claims about vitamins, minerals and biologically active substances on the ice cream, frozen lasagne, fruit drink, and potato chip packaging presented in product images via an online survey did not enhance consumer's product evaluations or purchase intentions. Only in the instance of the fruit drink did the presence of a claim significantly affect their evaluation of the number of types of people who would benefit from the consuming the product.

- Consistent with the findings of the previous commissioned nutrient content claim research, there were several socio-demographic, cognitive, and behavioural factors which influenced consumer's purchase intentions and product evaluations. However, the strength of influence was relatively weak, accounting for no more than 17% of the total variance. This indicates that there are other factors which are influencing consumers purchase intentions and product evaluations, at least for foods which are of low nutrition quality, which have not been captured by this research.

2. INTRODUCTION

2.1 Background

Food Standards Australian New Zealand (FSANZ) is a statutory authority operating under the *Food Standards Australia New Zealand Act 1991*. FSANZ's primary function is to protect the health and safety of people in Australia and New Zealand through the development of effective food standards. FSANZ does this collaboratively with all Australian governments and the government of New Zealand and with industry, consumer and public health stakeholders.

FSANZ is responsible for developing, varying and reviewing food standards that regulate the labeling and composition of food sold in Australia and New Zealand. In Australia, FSANZ also develops food standards for food safety, maximum residue limits and primary production and processing standards.

FSANZ issued a Draft Assessment Report (DAR) in November 2005 setting out a proposed approach to the regulation of nutrition, health and related claims together with the proposed new Standard 1.2.7 – Nutrition, Health and Related Claims. The proposed draft Standard sets out the criteria and conditions for making nutrition content claims[1]. In the DAR, FSANZ proposed that generic disqualifying criteria (now called Nutrient Profiling Scoring Criterion (NPSC)) would not be applied to nutrition content claims. However, specific disqualifying criteria in relation to certain nutrients could be applied where considered necessary. Subsequently, a Preliminary Final Assessment report (PFAR) was released for comment in April 2007[2]. Comments received from submitters in response to the Draft and Preliminary Final Assessment Reports highlighted concerns about consumers' use and comprehension of nutrition content claims. One area of concern is the influence of nutrition content claims when they are on products of lower nutritional quality.

The Final Assessment Report was presented to the Australian and New Zealand Food Regulation Ministerial Council (Ministerial Council) in April 2008. Following the meeting of the Ministerial Council in May 2008, FSANZ was notified of a First Review Request. The lack of the application of the NPSC to products of lower nutritional quality with nutrition content claims about vitamins, minerals and biologically active substances was

[1] FSANZ 2005, *Draft Assessment Report Proposal P293 Nutrition, Health and Related Claims 7 December 2005*, FSANZ, Canberra. (Available at: Food Standards Australia New Zealand: Proposal P293 – Nutrition, Health and Related Claims).

[2] FSANZ 2007, *Preliminary Final Assessment Report Proposal P293 Nutrition, Health and Related Claims 4 April 2007*, FSANZ, Canberra. (Available at: Food Standards Australia New Zealand: Proposal P293 – Nutrition, Health and Related Claims).

one of the issues raised in the First Review Request. In response to the concerns, FSANZ subsequently commissioned the research reported here.

Previous research on the use of nutrition labels has reported high levels of label use by consumers. For example, research commissioned by FSANZ has suggested that approximately two-thirds of respondents use some form of nutrition label information, even if only occasionally[3]. However studies of consumers in real-world shopping environments suggest the use of nutrition label information may be much lower[4]. Research commissioned by FSANZ has also shown some degree of difficulty among some consumers in accurately interpreting nutrition content claims[5]. Until recently, there has been little experimental research in Australia and New Zealand exploring the effect of such claims on the purchase intention and product evaluations of consumers, using stimuli that closely approximate real-world products.

Therefore, in 2007, FSANZ commissioned two studies exploring the influence of nutrition content claims on consumers' evaluations and purchase decisions. The products which were chosen to be the focus for the two studies were chosen due to their lower nutritional quality, their prominence of these products in the market place, and the presence of nutrition content claims on these products, as revealed in the most recent Food Label Monitoring Survey[6]. The first study explored consumer use of nutrition content claims in shopping environments, and focused on the use of nutrition content claims by consumers in real-world shopping environments to better understand if such claims were being used, how they were being used and how important they were in purchase decisions of consumers.

The second study, which was commissioned to Roy Morgan Research, utilised an experimental design to measure the impact of macronutrient content claims related to fat, sugar and fibre on consumers' evaluations and purchase intentions. This study focused on the use of nutrition content claims[7] on 3-dimensional stimuli that closely approximated

[3] NFO Donovan Research 2003, *Food labelling issues: Quantitative research with consumers. Report to Food Standards Australia New Zealand. (Evaluation Report Series No 4)*, FSANZ, Canberra. (Available at: Food Standards Australia New Zealand: Quantitative research with consumers. (June, 2003)).

[4] European Hear Network 2003. *A systematic review of the research on consumer understanding of nutrition labelling*, EHN, Brussels.

[5] NFO Donovan Research 2003, *A qualitative consumer study related to nutrition content claims on food labels. Report to Food Standards Australia New Zealand*, FSANZ, Canberra. (Available at: Food Standards Australia New Zealand: Consumer study related to nutrition content claims (July 2003)).

[6] AgriQuality Australia Pty Ltd 2007, *Report on the Assessment of 2005 Labels for Nutrition, Health and Related Claims: Ongoing Food Label Monitoring Survey in Australia and New Zealand. Report to Food Standards Australia New Zealand. (Evaluation Report Series No 16)*, FSANZ, Canberra. (Available at: Food Standards Australia New Zealand: Report on the Assessment of 2005 Labels for Nutrition, Health and Related Claims (April 2007)).

[7] The claims for this research were on products that do not meet the Nutrient Profiling Scoring Criterion.

real-world products to better understand their impact on consumer purchase decisions. The second study was completed and reported upon in January 2008[8]. In this study 1,060 respondents from Australia and New Zealand were mailed out stimuli of breakfast cereal and sweet biscuit packaging that closely approximated real-world products. Respondents randomly received one of five versions of both the breakfast cereal and the sweet biscuit packaging. Four of the versions of the packaging each had one nutrition content claim (treatment groups) and one version had no nutrition content claim (control group). This enabled comparison of responses from those who received packaging with nutrition content claims with those who received packaging without nutrition content claims. A telephone survey was used to obtain responses to the packaging and collect other information.

The overall results from this study showed that the presence or absence of a nutrition content claim on the packaging did not significantly influence overall purchase intention, nutrition attitudes towards the products, perception of the number of types of people who would benefit from consuming the products, or perception of the number of types of health benefits from consuming the products. An analysis of the results for the breakfast cereal and the sweet biscuit products separately showed that respondents who were not exposed to a nutrition content claim had a greater purchase intention for the breakfast cereal product. Also, the type of nutrition content claim (e.g. 97% fat free, low in saturated fat, etc) had no impact on respondents purchase intention and product evaluations.

Furthermore, the presence or absence of a nutrition content claim did not contribute significantly to the prediction of purchase intention or product evaluations. In fact, other socio-demographic, cognitive and behavioural factors were found to play a more significant role in influencing respondents purchase intention, nutrition attitude, and perceptions of the number of types of people who would benefit and number of types of health benefits. Such factors included age group, gender, ethnicity, income level, education level, dependents in household, level of trust in nutritional label information, level of attention paid to healthy diet, nutrition knowledge, and daily fruit and vegetable intake.

During stakeholder consultations for the concerns over the limitations of the study were raised. These included:

- Limiting the nutrition content claims to macronutrients (ie fat, sugar and fibre)
- Limiting the product types tested (i.e breakfast cereals and sweet biscuits)

[8] Roy Morgan Research, *An investigation into the impact of Nutrition Content claims on packaging in relation to consumer purchase intention, nutrition attitude and health benefits*. Report to Food Standards Australia New Zealand, FSANZ, Canberra. (Available at: http://www.foodstandards.gov.au/_srcfiles/P293_Attach_10_2_RMR.pdf#search=%22roy%20morgan%22 (January, 2008)).

- Design features of the stimuli, in particular the prominence of nutrition content claims.

Subsequently a third study on nutrition content claims was commissioned to Roy Morgan Research. This study addresses the key research question: are consumer's nutrition evaluations and intention to purchase influenced by nutrition content claims when they are on products of lower nutrition quality?

The research builds upon the previous study and extends that work through testing nutrition content claims about vitamins, minerals and biologically-active substances across a broader range of products, namely ice cream; frozen lasagne; fruit drink and potato chips. Greater emphasis was also given to the location and prominence of the nutrition content claims on the stimuli used in the study.

2.2 Research Objectives

The research objectives of this study were to investigate:

- The impact of presence of a nutrition content claim on consumer product evaluations (i.e. on purchase intention, nutritional attitude, perceived number of types of people benefiting from consuming the product, and perceived number of types of health benefits from product consumption). This impact was assessed across four products which did not meet the NPSC: ice cream, frozen lasagne, fruit drink, and potato chips; and

- The impact of socio-demographic, cognitive, and behavioural factors in predicting consumer's product evaluations (i.e. purchase intention, nutritional attitude, perceived number of types of people benefiting from consuming the product, and perceived number of types of health benefits from product consumption).

FSANZ took the opportunity of the study to collect data on other aspects however these are not reported in this report which focuses on the main research objective above.

3. METHODOLOGY

3.1 Study design

The study used a between-groups experimental design where participants were asked to evaluate product stimuli that closely approximated real-world products. Participants were randomly allocated to either a treatment group or a control group. Treatment and control groups differed in that those in the former were exposed to product stimuli **with** nutrition content claims and those in the latter were exposed to product stimuli **without** nutrition content claims. This enabled comparison of nutrition evaluations and purchase intention from those who were exposed to nutrition content claims with those who were not exposed to nutrition content claims to isolate the effect of the nutrition content claims.

Packaging was designed for four stimuli products: ice cream, fruit drink, frozen lasagne, and potato chips. For each product there were two treatment groups and one control group, with the exception of frozen lasagne which was divided into four treatment groups and two control groups[9] (see Table 1). All respondents were exposed to all four stimuli products. Respondents were randomly allocated to either to a treatment group or a control group. Respondents who were randomly assigned to the control group received only control stimuli across all products. This was to avoid any possible learning effects of exposure to a claim on one stimuli package that could influence evaluations and perceptions on non-claim packages. To avoid the possibility of order effects to the exposure to products, the order in which products were presented to respondents was randomly generated.

The design of the study was essentially the same as that used in the previous study on macronutrient nutrition content claims (Roy Morgan Research, 2008). The findings from both the previous experimental study as well as the in-shop observational study (Colmar Brunton Social Research, 2007) have been considered in refining the approach for the current study.

Data collection for the current study was through an online survey and the product stimuli were presented to participants as electronic images. Time and financial constraints did not permit the use of 3-dimensional packaging as stimuli or the collection of data through computer-assisted telephone interviews as was used in the 2008 study. A stratified random sample of adult main grocery buyers (over 18 years) from Australia and New Zealand were invited to take part in the study. The sample was provided by Research Now, an online research panel provider.

[9] The additional treatment and control groups for the frozen lasagne product were included to measure the impact of manipulating the NIP. This part of the study is not reported here and will be the subject of future analysis.

3.2 Stage 1: Development of Stimuli

Roy Morgan Research's internal graphic design team designed electronic 3-dimensional packages for: a) ice cream, b) frozen lasagne, c) fruit drink, and d) potato chips. The size, design, colours, and label information of the packages were created to approximate as close as possible actual real life products. The claims were selected to be relevant to the products and to provide a diversity of vitamin, mineral and biologically active substance claims.

For the ice cream, the nutrition content claims were:

- Source of calcium
- Source of phosphorus

For the frozen lasagne, the nutrition content claims were:

- Source of iron
- Source of selenium

For the fruit drink, the nutrition content claims were:

- Contains antioxidants-flavonoids
- Contains beta-cryptoxanthins

For the potato chips, the nutrition content claims were:

- Good Source of niacin
- Good Source of vitamin C

Using three-dimensional stimuli that closely approximated real-world products ensured respondents reacted to the stimuli as they would to any other actual ice cream, frozen lasagne, fruit drink, or potato chip products they may purchase. There are several aspects of the display of the nutrition content claim which can influence the impact of the claim. These include but are not limited to: the size of the packaging and the claim itself, the colour and designs incorporated font size, and text direction. The experimental design holds these factors constant for each product to allow the effect of the presence of the nutrition content claim to be measured.

The stimuli packaging contained the mandated and commercially provided information that would be included on packaged food products of the four types. This includes branding, pictures, size, serving suggestions, manufacturer address and contact details storage instructions, best before/use-by dates, ingredient list, and the nutrition information panel (NIP). These aspects were held constant across treatment and control stimuli products.

For all nutrients and energy declared in the NIP, food composition data-bases were consulted to ensure that realistic values were used for each product. Based on the values declared in the NIP for energy, saturated fat, sugars, sodium, and protein, the products would not meet the NPSC as proposed in the Final Assessment Report. The values for the vitamins and minerals declared in the NIP met the criteria proposed in the Final Assessment Report for nutrition content claims about these micronutrients. As no specific criteria for nutrition content claims about biologically active substances have been proposed, the values declared in the NIP for flavonoids and beta-cryptoxanthins were obtained from USDA databases to ensure realistic values for the fruit drink were used.

In using products that do not meet the NPSC, they are the types of products that when featuring nutrition content claims represent those where greatest concern has been expressed, that is those of lower nutritional quality. However, in designing the study in this manner, the findings are not directly transferable to products that are considered to be of higher nutritional quality.

The NIP values were identical for ice cream, fruit drink, and potato chips for both treatment and control stimuli. This meant that the NIP had values for the claimed nutrients or BAS used for both experimental groups (e.g. values for both calcium and phosphorus were present in the NIPs for ice cream independently carrying the calcium or phosphorus claim) although this would not occur in practice. In addition the values for the claimed nutrients or BAS were also in the NIPs for the control group products. Both the ice cream and fruit drink were moderately high in sugar while the potato chips were moderately high in fat. For the frozen lasagne there were different NIP values for the two-subgroups within the two experimental and one control condition: one product was moderately high in fat while the other product was lower in fat (see Table 1).

Table 1: Products and claims

	Exp Group 1		**Exp Group 2**		**Control group**	
	Sub group 1a	**Subgroup 1b**	**Subgroup 2a**	**Subgroup 2b**	**Subgroup 3a**	**Subgroup 3b**
Frozen lasagne	Iron + moderately high fat	Iron + low-moderate fat	Selenium + moderately high fat	Selenium + low-moderate fat	No claim + moderately high fat	No claim + low-moderate high fat
Fruit drink	Antioxidants-flavonoids + moderately high sugar		Beta-cryptoxanthins + moderately high sugar		No claim + moderately high sugar	
Ice cream	Calcium + moderately high sugar		Phosphorus + moderately high sugar		No claim + moderately high sugar	
Potato chips	Niacin + moderately high fat		Vitamin C + moderately high fat		No claim + moderately high fat	

Respondents were able to view the packages as images. They were able to view the front and back image of each product up to three times. To provide all respondents the opportunity to clearly read information on the contents of each package there was an option to make the size of the image larger or smaller. The order of exposure to the four products was randomly generated for each respondent.

Examples of the stimuli used are provided in Appendix E.

3.3 Stage 2: Questionnaire Development

A draft questionnaire was developed by FSANZ and provided to Roy Morgan Research. It was based on the questionnaire that was administered in the previous study into macronutrient nutrition content claims. The questions were designed to measure the level of impact that nutrition content claims about vitamins, minerals and biologically active substances have on purchase intention and product evaluations. FSANZ and Roy Morgan Research worked collaboratively to ensure that the questionnaire translated to an online format.

Purchase intention and product evaluations were the key dependent measures upon which the impacts of nutrition content claims were gauged. The four measures were:

- Purchase intention
- Nutrition attitude;
- Number of types of people who would benefit from eating the product; and
- Number of types of nutrition and health benefits from eating the product.

The survey also contained the following items:

- Information used to determine purchase intention e.g. NIP, general knowledge
- Consumer nutrition knowledge;
- Willingness to try new foods (food neophobia);
- Purchase frequency of product types;
- Consumption frequency of product types;
- Knowledge of vitamin, mineral and biologically active substance functions;
- Familiarity of vitamin, mineral and biologically active substances;
- Interest in nutritional information on food packages;
- Degree of care in reading nutrition labels
- Amount of attention paid to keeping a healthy diet;
- Number of health concerns; and

- Socio-demographic and behavioural variables: age, sex, country of origin, ethnicity, dependents in the household, food/grocery buyer status, education level, annual household income, daily consumption of vegetables, and daily consumption of fruit.

Measures were taken from international studies with high validity and reliability among tested target populations[10] [11] [12] [13] [14] and from previous FSANZ studies.

The structure of the questionnaire ensured that the impact of prompting or learning from questions on subsequent questions was limited as much as possible. In particular the questions about intent to purchase were asked prior to any questions about the nutritional quality of the product. In this way respondents were not prompted to specifically think about nutritional issues in answering the intent to purchase question. Thus nutritional quality would only be incorporated into the decision-making if the respondent normally considered this aspect, and the answer more accurately reflects the response if taken in a shopping environment. Subsequent questions about nutritional quality may prompt respondents to explore aspects of the pack that they normally may not do, for example the NIP. Importantly instructions to the respondents did not direct them to any particular label elements when responding, thus respondents would use the label elements they felt most relevant in making nutritional evaluations.

The final survey can be viewed in Appendix F.

[10] Keller, S. B., Landry, M., Olson, J., Velliquette, A. M., Burton, S., & Andrews, J. C. 1997. 'The effects of nutrition package claims, nutrition facts panels, and motivation to read nutrition information on consumer product evaluations', *Journal of Public Policy & Marketing*, vol. 16, no. 2, pp. 256-269.

[11] Roe, B., Levy, A. S., & Derby, B.M. 1999, 'The impact of health claims on consumer search and product evaluation outcomes: Results from FDA experimental data', *Journal of Public Policy & Marketing*, vol. 18, no. 1, pp. 89-105.

[12] Steptoe, A., Pollard, T. M., & Wardle, J. 2005, 'Development of a measure of the motives underlying the selection of food: the Food Choice Questionnaire', *Appetite*, vol. 25, pp. 267-284.

[13] Garretson, J. A. & Burton, S. 2000, 'Effects of nutrition facts panel values, nutrition claims, and health claims on consumer attitudes, perceptions of disease-related risks, and trust.', *Journal of Public Policy & Marketing*, vol. 19, no. 2, pp. 213-227.

[14] Moorman, C. 1996, 'A quasi experiment to assess the consumer and informational determinants of nutrition information processing activities: The case of the nutrition labelling and education act', *Journal of Public Policy & Marketing*, vol. 15, no. 1, pp. 28-44.

3.4 Stage 3: Online Survey

3.4.1 Sampling and stratification

Respondents meeting the selection criteria (≥18 years of age, from Australia or New Zealand, and main grocery buyers[15]) were targeted to complete the survey online. A sampling plan specifying quotas by experimental condition, product type, gender and country was developed and is shown in Appendix A of this report. This plan was based on the information available in Roy Morgan Research Single Source on the age and gender profile of main grocery buyers i.e. those who usually buy groceries comprise of 33% males and 67% females. The sample was provided by Research Now, an on-line research panel provider.

A sample size of 1,100 was considered to be appropriate to determine the impact that nutrition content claims have on product evaluation and purchase intention, yet modest enough to protect against small differences in results reaching statistical significance.

3.4.2 Response Rate

The response rate was calculated by dividing the total number of completed surveys by the number of in-scope individuals invited. In Australia, of the 5,096 individuals invited and deemed to be in-scope, 817 surveys were successfully completed from the 995 in-scope individuals who entered the survey. In New Zealand, of the 2,758 individuals invited and deemed to be in-scope, 315 surveys were successfully completed from the 425 in-scope individuals who entered the survey. Thus, a large number of individuals who were sent the invitation did not enter the survey, as is usually the case with online surveys.

The overall response rate was 14.3% overall, 16.0% for Australia and 11.3% for New Zealand. Table 2 shows the breakdown of the final response categories for in-scope individuals contacted.

[15] Main grocery buyers were persons who do half or more of the food and grocery shopping for their household.

Table 2: Response Rates for the Survey

Final Response Category	Australia	New Zealand	TOTAL
Total Invited	**5340**	**3000**	**8340**
Total entered survey	1239	667	1906
Screened out: main grocery shopping criteria	35	35	70
Screened out: age criteria	2	2	4
Screened out: quota for age/sex	207	205	412
Total entered survey - out of scope	244	242	486
Total entered survey – in scope	995	425	1420
Total invited - in scope	**5096**	**2758**	**7854**
Left survey after reading introduction	71	41	112
Interviews – incompletes	110	71	181
Interviews completed	**814**	**313**	**1127**
Response rate (completes/total in scope)	**16.0%**	**11.3%**	**14.3%**

3.5 Sample Profile

Of the 1,127 respondents who completed the survey, 814 are Australian residents and 313 are New Zealand residents. Overall 31% (n = 349) of the sample were male and 69% (n = 778) were female. By age group 24% (n = 276) were aged 18-34, 41% (n = 461) aged 35-54, and 35% (n = 390) aged 55 and over.

A detailed description of achieved sample sizes by treatment condition, product type, gender, and country are presented in the tables in Appendix B.

A brief analysis of the profile of respondents was conducted, to investigate if there were any pre-existing differences between the control and treatment groups, in terms of socio-demographic information. As shown in Table 3, there were no differences recorded in terms of age group, gender, country, household income, ethnicity, dependents in household, or education level.

Table 3: Socio-demographic differences between those exposed to nutrition content claims and those not exposed

	Category	Claim Present	Claim Absent	Statistic
Age-group	Younger (18-34)	184 (16.3%)	92 (8.2%)	$\chi^2(2)=0.64$, p=.969, n.s.
	Middle (35-54)	304 (27%)	157 (13.9%)	
	Older (55+)	260 (23.1%)	130 (11.5%)	
Sex	Male	232 (20.6%)	117 (10.4%)	$\chi^2(1)=0.002$, p=.960, n.s.
	Female	516 (45.8%)	262 (23.2%)	
Income*	1st quartile (lowest)	144 (15.2%)	75 (7.9%)	$\chi^2(3)=0.825$, p=.843, n.s.
	2nd quartile	121 (12.8%)	72 (7.6%)	
	3rd quartile	229 (24.2%)	116 (12.3%)	
	4th quartile (highest)	121 (12.8%)	67 (7.1%)	
Country	Australia	537 (47.6%)	277 (24.6%)	$\chi^2(1)=0.211$, p=.646, n.s.
	New Zealand	211 (18.7%)	102 (9.1%)	
Ethnicity**	Non-Indigenous	708 (63.3%)	364 (32.5%)	$\chi^2(1)=0.799$, p=.371, n.s.
	Indigenous	34 (3%)	13 (1.2%)	
Dependents in Household	No	498 (44.2%)	245 (21.7%)	$\chi^2(1)=0.419$, p=.518, n.s.
	Yes	250 (22.2%)	134 (11.9%)	
Education Level	Up to high school	391 (34.7%)	212 (18.8%)	$\chi^2(1)=1.357$, p=.244, n.s.
	Higher education	357 (31.7%)	167 (14.8%)	

*182 respondents chose not to answer this question

**8 respondents chose not to answer this question

3.6 Variables of interest and reclassification

The dependent variables of interest in the survey were purchase intention, nutrition attitude, perceptions of the number of types of people who would benefit from consuming the product, and perceptions of the number of health benefits accruing from product consumption. The independent variables of interest were treatment group, socio-demographic, cognitive and behavioural information (Table 4). Tables 5, 6, and 7 outline the generation of variables from questionnaire responses to facilitate analysis. Only the data used in analyses have been highlighted in this report.

Table 4. Dependent and Independent Variables

DEPENDENT VARIABLES[16]	**INDEPENDENT VARIABLES**			
Product evaluations	**Socio-demographic**	**Cognitive**	**Behavioural**	**Treatment groups**
Purchase Intention	Age group	Nutrition knowledge	Frequency of consuming products	Claim/No Claim (Treatment/Control)
Nutrition Attitude	Gender	Knowledge of vitamin, mineral and BAS functions	Frequency of buying products	
Perceived number of types of people who would benefit	Country	Familiarity of vitamin, mineral and BAS functions	Attention to a healthy diet	
Perceived number of health benefits	Ethnicity	Motivation to read nutrition information	Food neophobia	
	Household income	Interest in NIP	Health concerns	
	Education level	Information used in evaluations	Fruit and vegetable intake	
	Number of dependents in household			

[16] All dependent variables were calculated for each food product and overall across products.

Table 5: Dependent variables manipulated for use in analyses and reporting

Dependent Variable	Description	Manipulations for analyses by FOOD PRODUCT	Manipulations for analyses OVERALL	Outcome categories
Purchase intention	7 point scale (2 questions)	Mean of 2 questions for each food product	Mean of all food product purchase intention means	Mean score (1-7)
Nutrition attitude	7 point scale (2 questions)	Mean of 2 questions for each food product	Mean of all food product nutrition attitudes	Mean score (1-7)
Perceived number of types of people who would benefit	7 categories (1 question) + 4 'other' categories	'Count' for each food product	Mean of all food vehicle sums/counts	Sum of the number of types of people who would benefit (0 – 11)
Perceived number of health benefits	14 categories (1 question) + 4 'other' categories	'Count' for each food product	Mean of all food vehicle sums/counts	Sum of the number of types of health benefits (0 – 18)

Table 6: Independent variables manipulated for use in analyses and reporting

Variable	Description	Manipulations	Outcome categories
Age group	3 categories	Nil	Younger (18-34 years) Middle (35-54 years) Older (55+ years)
Gender	2 categories	Nil	Male Female
Income	14 categories	Divide into quartiles	1st quartile (lowest) 2nd quartile 3rd quartile 4th quartile (highest)
Dependants in Household	Numbered response to 3 group categories	Re-code into 2 categories: 18 yrs and over Sum (15-17 yrs + less than 15 yrs)	Dependants No dependants
Ethnicity	4 categories	Re-code into 2 categories	Indigenous Non-indigenous
Country	2 categories	Nil	Australia New Zealand
Education	AUST: 6 categories NZ: 7 categories	Collapse into 2 categories	High school education Higher than high school education
Nutrition knowledge (quartiles)	14 questions (correct/incorrect)	Sum of 14 questions to give score as percentage correct. Divide into quartiles.	1st quartile (lowest) 2nd quartile 3rd quartile 4th quartile (highest)
Nutrition knowledge (dichotomy)	14 questions (correct/incorrect)	Sum of 14 questions to give score as percentage correct. Divide into categories.	Low (score < 50) High (score 50 +)
Attention to a healthy diet	6 ordinal responses	Re-coded into 3 categories.	None (6) Low (4-5) Med/High (1-3)

Table 6: Independent variables manipulated for use in analyses and reporting (continued)

Variable	Description	Manipulations	Outcome categories
Familiarity of micronutrient functions (category)	7 point scale (8 questions)	Sum and mean of 8 questions. Divide into categories.	Low Moderate High
Knowledge of micronutrient functions (mean)	7 point scale (8 questions)	Sum and mean of 8 questions	Mean
Knowledge of micronutrients (category)	7 point scale (8 questions)	Sum and mean of 8 questions. Divide into categories.	Low Moderate High
Motivation to read nutrition information	7 point scale (2 questions)	Sum and mean of 2 questions. Divide into categories	Low (1-2) Moderate (3-5) High (6-7)
Interest in NIP	7 point scale (1 question)	Divide into categories.	Low (1-2) Moderate (3-5) High (6-7)
Food neophobia	7 point scale (6 questions)	Reverse score question 1 and 6. Sum and mean of 6 questions.	Low (1-3) Moderate (3-5) High (5-7)
Frequency of eating foods (by product)	6 point scale (1 question)	Divide into 2 categories.	Regularly (less than weekly) (1-3) Regularly (weekly or more) (4-6)
Information used in evaluations	1 multiple response question (12 categories)	Sum responses across products by category. Across each category code the sum into 2 categories.	Yes (1 or more) No (0)
Back of pack looked at	As indicated by timer	Divide into categories	Yes No

Table 7: Manipulation variables for use in analyses and reporting

Treatment groups	Description	Manipulation	Coding
Claim presence	2 categories	Combine all participants exposed to a claim (Claim 1 + Claim 2). Combine those in control group not exposed to a claim.	Claim No claim

3.7 Analyses

As noted in Section 2.2 the objective of this study was to measure the impact of the presence of a nutrition content claim on consumer product evaluations across a range of food products of lower nutritional quality and the contribution socio-demographic, cognitive, and behavioural factors in predicting these evaluations. As with the previous study regression techniques were most appropriate to independently determine the contribution of various factors, including the presence of nutrition content claims, to consumer's evaluations. Additionally descriptive statistics are provided for the key variables in Tables 7 and 8. Chi-square analyses have been to compare the socio-demographic profile of treatment and control samples (Table 3).

Hierarchical Multiple Linear Regressions

Regression is used to determine the 'best fit' of a series of variables in predicting the dependent variables. Hierarchical Multiple Linear Regression was chosen to explore the impact of a set of socio-demographic, cognitive, and behavioural independent variables on the dependent variables. The addition of the claim presence into the second part of the regression allows its added influence to be explored independently. The independent variables used in the HMLR analyses are outlined in section 4.3.

4. MAIN FINDINGS

4.1 Overall product evaluations

Initial analyses of the four dependent variables were carried out to ensure any assumptions required for the use of regression were not violated. That is the data is normally distributed and the levels of skewness and kurtosis are not problematic.

Purchase intention and nutrition attitude (overall and across the four products) were normally distributed, and skewness and kurtosis were not an issue of concern with scores relatively symmetrical.

However, the perceived number of people who benefited and the perceived number of types of health benefits (overall and across the four products) were not normally distributed. In particular, respondent's perception of the number of types of people benefiting from eating potato chips displayed positive skewness and positive kurtosis. This indicated that the majority of respondents viewed that potato chips benefited few, if any, types of people. Perceived number of types of health benefits, overall and for ice cream, frozen lasagne and chips were both positively skewed and positively kurtosed. This was particularly the case for perceived number of types of health benefits from consuming potato chips. Again, this reflects that the majority of the sample viewed these products as having few if any health benefits. However, regression analyses are generally robust to violations of normality. Therefore these variables were not transformed, nor were any outliers excluded. A full review of the assumptions of analyses and procedures used to test assumptions is provided in Appendix D (Technical Appendix).

Tables 7 and 8 provide the mean responses and standard deviations for each dependent variable by a range of independent variables for respondents exposed and not exposed to a claim. Purchase intention and nutrition attitude were rated on a scale from 1 to 7 where 1 = low and 7 = high. Perceived number of types of people benefiting was summed from 0 to 11 and perceived number of types of health benefits from 0 to 18.

A comparison of the mean responses for overall purchase intention shows little difference between respondents exposed to claims (M = 3.84, SD = 1.49) and respondents not exposed to claims (M = 3.96, SD = 1.53). Results are similar for overall nutrition attitude (Claim, M = 3.87, SD = 1.37; No claim, M = 3.88, SD = 1.45), overall perceived number of people who benefit from consuming the products (Claim, M = 2.30, SD = 1.83; No Claim, M = 2.15, SD = 1.84), and overall perceived number of types of health benefits from consuming the products (Claim, M = 2.48, SD = 2.86; No Claim, M = 2.54, SD = 3.15). In general, regardless of the presence or absence of a claim, respondent's purchase intentions

are moderate, nutrition attitude towards the products are low, and perceptions of the types of people and health benefits from consuming the products are very low.

Several differences exist between socio-demographic groups and between respondents exposed and not exposed to a claim. Consistently, respondents purchase intention, nutrition attitudes, perceptions of the number of types of people who would benefit, and perceptions of number of types of health benefits gained from product consumption were higher amongst males, Australians, respondents with lower education levels, and respondents with lower income levels. Differences can also be seen in various cognitive and behavioural characteristics. Generally, respondents purchase intentions, nutrition attitudes, perceptions of number of types of people who would benefit, and perceptions of number of types of health benefits gained from product consumption were higher amongst respondents with low nutrition knowledge, moderate motivation to read nutrition information, low tolerance for trying new foods, low or no attention to a healthy diet, have no health concerns, report to have a high knowledge of micronutrient functions, moderate interest in micronutrient content, and regularly (weekly or more) consume all four products.

Table 8: Mean overall product evaluations for respondents exposed to claims

	Product evaluation	Overall Purchase Intention			Overall Nutrition Attitude			Perceived number of people who benefit			Perceived number of health benefits		
		n	Mean	SD	n	Mean	SD	n	Mean	SD	n	Mean	SD
Total		747	3.84	1.49	735	3.87	1.37	748	2.30	1.83	748	2.48	2.86
Gender	Male	232	3.90	1.44	230	4.01	1.40	232	2.49	1.80	232	2.88	3.13
	Female	515	3.82	1.51	505	3.80	1.36	516	2.22	1.84	516	2.30	2.71
Age group	18-34 yrs	183	3.97	1.38	179	3.77	1.24	184	2.35	1.81	184	2.77	3.12
	35-54 yrs	304	3.77	1.51	298	3.74	1.38	304	2.15	1.81	304	2.27	2.69
	55+ yrs	260	3.84	1.53	258	4.08	1.43	260	2.45	1.86	260	2.52	2.84
Country	Australia	536	4.02	1.48	530	4.03	1.37	537	2.47	1.87	537	2.74	3.07
	New Zealand	211	3.40	1.41	205	3.45	1.30	211	1.88	1.64	211	1.82	2.08
Dependents in Household	No	497	3.77	1.48	492	3.87	1.37	498	2.34	1.84	498	2.54	2.89
	Yes	250	3.99	1.50	243	3.87	1.38	250	2.23	1.81	250	2.36	2.79
Education Level	Up to High School Education	357	3.97	1.59	346	4.02	1.41	357	2.41	1.84	357	2.57	3.09
	Higher Education	390	3.73	1.38	389	3.73	1.32	391	2.20	1.84	391	2.40	2.70
Household Income	1st quartile (lowest)	144	4.19	1.57	144	4.39	1.43	144	2.93	1.76	144	3.09	3.10
	2nd quartile	121	3.90	1.42	117	4.06	1.31	121	2.35	1.81	121	2.42	2.95
	3rd quartile	229	3.81	1.45	226	3.74	1.26	229	2.21	1.80	229	2.51	2.85
	4th quartile (highest)	120	3.60	1.49	119	3.55	1.35	121	1.99	1.85	121	2.30	2.97
Ethnicity	Non-Indigenous	707	3.84	1.48	696	3.88	1.35	708	2.31	1.82	708	2.48	2.85
	Indigenous	34	3.85	1.71	33	3.64	1.77	34	2.35	2.01	34	2.73	3.19

Purchase intention and nutrition attitude, (1-7), where 1 = low and 7 = high; Perceived number of people who benefit (0-11); Perceived number of health benefits (0-18)

Table 8: Mean overall product evaluations for respondents exposed to claims (continued)

	Product evaluation	Overall Purchase Intention			Overall Nutrition Attitude			Perceived number of people who benefit			Perceived number of health benefits		
		n	Mean	SD	n	Mean	SD	n	Mean	SD	n	Mean	SD
Nutrition Knowledge	Low	29	4.66	1.66	27	4.36	1.66	29	2.69	2.01	29	3.73	4.04
	High	706	3.81	1.47	697	3.84	1.36	707	2.30	1.80	707	2.43	2.73
Motivation to Read Nutrition information	Low	65	3.63	1.24	63	3.76	1.21	65	2.14	1.57	65	2.04	2.41
	Moderate	207	3.99	1.38	202	3.97	1.21	208	2.27	1.81	208	2.43	2.97
	High	471	3.80	1.55	467	3.83	1.46	471	2.35	1.87	471	2.57	2.87
Food Neophobia	Low	208	4.08	1.42	205	3.88	1.38	208	2.21	1.78	208	2.52	2.87
	Moderate	456	3.76	1.48	449	3.83	1.36	457	2.36	1.85	457	2.48	2.82
	High	75	3.65	1.59	74	4.02	1.42	75	2.36	1.71	75	2.32	2.82
Attention to Healthy Diet	None	6	3.22	1.38	5	2.50	1.91	6	2.08	2.18	6	0.96	2.35
	Low	41	4.38	1.44	40	4.47	1.12	41	2.37	1.85	41	2.07	2.43
	Med/High	697	3.82	1.48	687	3.84	1.37	698	2.30	1.82	698	2.52	2.88
Frequency of Eating Ice Cream	Rarely (less than weekly)	434	3.65	1.47	424	3.65	1.31	434	1.95	1.67	434	2.00	2.50
	Regularly (weekly or more)	313	4.11	1.47	311	4.17	1.40	314	2.79	1.92	314	3.14	3.18
Frequency of Eating Frozen Meal (e.g. Lasagne)	Rarely (less than weekly)	631	3.68	1.44	619	3.71	1.32	631	2.10	1.71	631	2.14	2.50
	Regularly (weekly or more)	116	4.75	1.44	116	4.73	1.32	117	3.43	2.04	117	4.34	3.82

Purchase intention and nutrition attitude, (1-7), where 1 = low and 7 = high; Perceived number of people who benefit (0-11); Perceived number of health benefits (0-18)

Table 8: Mean overall product evaluations for respondents exposed to claims (continued)

	Product evaluation	Overall Purchase Intention			Overall Nutrition Attitude			Perceived number of people who benefit			Perceived number of health benefits		
		n	Mean	SD	n	Mean	SD	n	Mean	SD	n	Mean	SD
Frequency of Drinking Fruit Drink	Rarely (less than weekly)	350	3.35	1.40	343	3.40	1.26	351	1.72	1.60	351	1.76	2.37
	Regularly (weekly or more)	397	4.28	1.42	392	4.28	1.34	397	2.81	1.86	397	3.12	3.09
Frequency of Eating Potato Chips	Rarely (less than weekly)	496	3.57	1.45	488	3.61	1.32	497	2.08	1.71	497	2.17	2.54
	Regularly (weekly or more)	251	4.38	1.40	247	4.37	1.33	251	2.75	1.97	251	3.10	3.31
Familiarity of Micronutrient Functions	Low	203	3.74	1.46	200	3,73	1.29	203	2.16	1.71	203	2.16	2.88
	Moderate	357	3.88	1.43	351	3.89	1.35	357	2.36	1.86	357	2.54	2.91
	High	113	3.80	1.59	113	3.85	1.52	113	2.54	2.02	113	2.99	2.86
Knowledge of Micronutrient Functions	Low	228	3.67	1.43	223	3.68	1.29	228	2.04	1.65	228	1.90	2.67
	Moderate	399	3.90	1.43	396	3.93	1.35	399	2.42	1.83	399	2.68	2.83
	High	99	4.04	1.75	98	4.10	1.62	99	2.67	2.14	99	3.28	3.24
Health Concerns	None	94	4.15	1.44	92	4.17	1.34	95	2.71	1.99	95	3.62	3.82
	Specific and General	501	3.87	1.50	493	3.89	1.36	501	2.33	1.80	501	2.35	2.61
	General Only	152	3.58	1.44	150	3.61	1.39	152	1.95	1.76	152	2.21	2.79
Interest in NIP	Low	37	3.40	1.23	36	3.79	1.41	37	2.08	1.57	37	1.83	2.00
	Moderate	241	3.97	1.36	235	3.93	1.20	242	2.27	1.81	242	2.43	3.03
	High	465	3.80	1.55	461	3.84	1.45	465	2.35	1.86	465	2.57	2.82

Purchase intention and nutrition attitude, (1-7), where 1 = low and 7 = high; Perceived number of people who benefit (0-11); Perceived number of health benefits (0-18)

*Table 9: Mean overall product evaluations for respondents **not exposed** to claims*

	Product evaluation	Overall Purchase Intention			Overall Nutrition Attitude			Perceived number of people who benefit			Perceived number of health benefits		
		n	Mean	SD	n	Mean	SD	n	Mean	SD	n	Mean	SD
Total		377	3.96	1.53	372	3.88	1.45	379	2.15	1.84	379	2.54	3.15
Gender	Male	117	4.43	1.41	116	4.42	1.39	117	2.46	2.04	117	3.47	3.82
	Female	260	3.75	1.54	256	3.63	1.41	262	2.01	1.73	262	2.12	2.71
Age group	18-34 yrs	90	4.09	1.43	89	3.87	1.46	92	2.40	2.04	92	3.17	3.67
	35-54 yrs	157	3.92	1.46	154	3.78	1.34	157	2.00	1.77	157	2.38	3.10
	55+ yrs	130	3.91	1.69	129	4.00	1.56	130	2.15	1.76	130	2.28	2.77
Country	Australia	275	4.10	1.54	273	3.99	1.46	277	2.35	1.93	277	2.77	3.24
	New Zealand	102	3.58	1.46	99	3.57	1.37	102	1.61	1.45	102	1.92	2.81
Dependents in Household	No	244	3.80	1.62	241	3.83	1.50	245	2.14	1.81	245	2.59	3.20
	Yes	133	4.25	1.32	131	3.97	1.35	134	2.17	1.90	134	2.45	3.08
Education Level	Up to High School Education	166	4.14	1.52	162	4.13	1.43	167	2.32	1.83	167	2.42	2.84
	Higher Education	211	3.82	1.54	210	3.69	1.43	212	2.01	1.84	212	2.63	3.38
Household Income	1st quartile (lowest)	75	4.08	1.52	72	4.12	1.47	75	2.64	1.89	75	2.94	3.10
	2nd quartile	71	4.29	1.54	70	4.25	1.49	72	2.30	2.00	72	3.08	3.84
	3rd quartile	115	3.79	1.53	114	3.68	1.39	116	1.89	1.63	116	1.95	2.53
	4th quartile (highest)	67	3.81	1.57	67	3.63	1.46	67	2.01	1.88	67	2.91	3.49
Ethnicity	Non-Indigenous	362	3.97	1.53	357	3.90	1.45	364	2.18	1.83	364	2.55	3.14
	Indigenous	13	3.88	1.58	13	3.51	1.39	13	1.44	1.93	13	2.52	3.83

Purchase intention and nutrition attitude, (1-7), where 1 = low and 7 = high; Perceived number of people who benefit (0-11); Perceived number of health benefits (0-18)

*Table 9: Mean overall product evaluations for respondents **not exposed** to claims (continued)*

	Product evaluation	Overall Purchase Intention			Overall Nutrition Attitude			Perceived number of people who benefit			Perceived number of health benefits		
		n	Mean	SD	n	Mean	SD	n	Mean	SD	n	Mean	SD
Nutrition Knowledge	Low	15	4.81	0.94	13	4.77	0.91	15	2.07	1.29	15	3.02	3.85
	High	357	3.92	1.54	355	3.82	1.44	357	2.19	1.86	357	2.55	3.14
Motivation to Read Nutrition Information	Low	33	3.94	1.50	31	4.03	1.44	33	1.33	1.38	33	1.09	1.56
	Moderate	95	4.21	1.39	92	4.21	1.22	95	2.47	1.82	95	2.94	3.24
	High	247	3.86	1.59	247	3.73	1.51	247	2.17	1.87	247	2.62	3.24
Food Neophobia	Low	112	4.19	1.53	112	4.00	1.45	112	2.31	1.92	112	2.52	3.09
	Moderate	224	3.93	1.50	220	3.89	1.42	224	2.13	1.84	224	2.66	3.29
	High	41	3.46	1.62	40	3.46	1.54	41	1.90	1.62	41	2.02	2.54
Attention to a Healthy Diet	None	2	5.63	0.53	2	5.69	0.27	2	1.38	1.24	2	0.75	0.00
	Low	28	4.60	1.37	27	4.45	1.49	28	1.83	2.02	28	2.50	3.60
	Med/High	347	3.90	1.53	343	3.82	1.43	348	2.18	1.83	348	2.56	3.13
Frequency of Eating Ice Cream	Rarely (less than weekly)	230	3.68	1.48	227	3.61	1.38	232	1.89	1.72	232	2.13	2.79
	Regularly (weekly or more)	147	4.39	1.52	145	4.30	1.46	147	2.55	1.96	147	3.18	3.57
Frequency of Eating Frozen Meal (e.g. Lasagne)	Rarely (less than weekly)	312	3.78	1.45	309	3.71	1.37	314	1.94	1.68	314	2.11	2.64
	Regularly (weekly or more)	65	4.82	1.63	63	4.70	1.56	65	3.14	2.24	65	4.62	4.41

Purchase intention and nutrition attitude, (1-7), where 1 = low and 7 = high; Perceived number of people who benefit (0-11); Perceived number of health benefits (0-18)

*Table 9: Mean overall product evaluations for respondents **not exposed** to claims (continued)*

	Product evaluation	Overall Purchase Intention			Overall Nutrition Attitude			Perceived number of people who benefit			Perceived number of health benefits		
		n	Mean	SD	n	Mean	SD	n	Mean	SD	n	Mean	SD
Frequency of Drinking Fruit Drink	Rarely (less than weekly)	187	3.42	1.49	185	3.41	1.37	189	1.68	1.62	189	1.63	2.33
	Regularly (weekly or more)	190	4.49	1.38	187	4.34	1.37	190	2.61	1.93	190	3.44	3.58
Frequency of Eating Potato Chips	Rarely (less than weekly)	253	3.62	1.51	250	3.60	1.39	254	1.86	1.64	254	2.05	2.55
	Regularly (weekly or more)	124	4.64	1.34	122	4.44	1.41	125	2.74	2.08	125	3.54	3.94
Familiarity of Micronutrient Functions	Low	104	3.86	1.41	102	3.88	1.25	104	1.86	1,53	104	1.89	2.34
	Moderate	161	3.84	1.47	160	3.73	1.41	161	2.14	1.82	161	2.55	3.02
	High	68	3.96	1.85	68	3.95	1.75	68	2.61	2.06	68	3.34	3.51
Knowledge of Micronutrient Functions	Low	113	3.74	1.44	111	3.71	1.33	113	1.73	1.50	113	1.82	2.28
	Moderate	186	3.95	1.49	184	3.87	1.42	186	2.32	1.86	186	2.74	3.19
	High	63	4.28	1.83	63	4.06	1.71	63	2.60	2.21	63	3.28	3.77
Health Concerns	None	51	4.13	1.55	50	4.21	1.39	52	2.17	1.92	52	2.71	3.37
	Specific and General	258	3.99	1.54	254	3.92	1.45	259	2.29	1.86	259	2.74	3.29
	General Only	68	3.71	1.49	68	3.49	1.41	68	1.61	1.60	68	1.65	2.22
Interest in NIP	Low	19	4.04	1.59	18	4.09	1.65	19	1.34	1.45	19	0.74	1.05
	Moderate	119	4.24	1.37	115	4.26	1.24	119	2.39	1.77	119	2.96	3.28
	High	236	3.80	1.60	236	3.66	1.49	236	2.14	1.88	236	2.52	3.17

Purchase intention and nutrition attitude, (1-7), where 1 = low and 7 = high; Perceived number of people who benefit (0-11); Perceived number of health benefits (0-18)

4.2 Cognitive and behavioural measures

This section explores the variables of interest in terms of cognitive and behavioural measures that may affect the dependent variables. Descriptives of several variables, which are not included in further analyses but are of interest, are provided in this section. Means and standard deviations are provided in Table 10.

In general, respondents had a moderately high interest in NIPs, ($t(1116)=4.46$, $p < .001$). New Zealand respondents paid slightly higher attention to a healthy diet than Australians ($t(1113)=-1.99$, $p = .047$). Overall attention to a healthy diet across both counties was moderately high. The food neophobia scores were lower than average indicating that respondents are somewhat willing to try new foods. In both countries the average daily consumption of fruit was similar to the recommended levels (2 serves per day), whereas the average daily intake of vegetables was below recommended levels (5 serves per day in Australia and 3 serves per day in New Zealand).

The distribution of the sample by cognitive and behavioural measures is outlined in Table 11. 85.4% of respondents were responsible for all or most of the household shopping, while 14.6% were responsible for about half of the shopping. Overall, nearly two-thirds of respondents were highly motivated to read nutrition information (63.7%) while 70% of respondents had a medium-high interest in the NIP. Almost all respondents (94.4%) gave correct responses to 50% or more of the nutrition knowledge questions. Approximately two-thirds of respondents reported moderate-high levels of both micronutrient knowledge (66.3%) and familiarity (69.5). With regards to health, 67.4% of respondents reported having a general and a specific health concern (e.g. food allergy) and 92.8% reported paying medium/high attention to a healthy diet.

Table 10: Mean scores for cognitive and behavioural measures

Variable	Mean (SD)
Interest in NIP[17]	5.70 (1.54)
Australia	**5.83 (1.42)*** **
New Zealand	**5.38 (1.76)**
Attention to a healthy diet (1-5)[18]	2.44 (0.82)
Australia	**2.41 (0.81)**
New Zealand	**2.52 (0.82)***
Food neophobia (1-7)[19]	3.74 (1.11)
Australia	3.74 (1.12)
New Zealand	3.76 (1.07)
Daily consumption of fruit (1-6)[20]	2.07 (1.05)
Australia	2.04 (1.01)
New Zealand	2.14 (1.16)
Daily consumption of vegetables (1-6)[21]	2.68 (1.25)
Australia	2.68 (1.23)
New Zealand	2.68 (1.30)

Bold indicates significant differences
* $p < .05$
*** $p < .001$

[17] Interest in NIP (1-7), where 1 = Not at all interested, 7 = Very interested.
[18] Attention to a healthy diet (1-6), where 1 = Very high amount of attention, 5 = Very low amount of attention.
[19] Food neophobia (1-7), where 1 = strongly disagree (lower), 7 = stronger agree (higher)
[20] Daily consumption of fruit (1-6), where 1 = 1 serve or less, 6 = 6 serves or more
[21] Daily consumption of vegetables (1-6), where 1 = 1 serve or less, 6 = 6 serves or more

Table 11: Distribution of sample by cognitive and behavioural measures

Variable	Categories	% response
Interest in NIP	Low	28.4
	Medium	60.4
	High	10.3
Attention to healthy diet	None	0.7
	Low	6.1
	Med/High	92.8
Health Concerns[22]	None	13.0
	Specific and general health concerns	67.4
	General health concerns only	19.5
Motivation to read nutrition information	Low	8.7
	Moderate	26.9
	High	63.7
Knowledge of micronutrient functions	Low	30.3
	Moderate	51.9
	High	14.4
Familiarity of micronutrient functions	Low	30.5
	Moderate	51.5
	High	18.0
Nutrition knowledge	Low	3.9
	High	94.4
Main grocery shopper	About half of the food and grocery shopping	14.6
	All or most of the food and grocery shopping	85.4

[22] Health Concerns -

Specific: 1 - Food allergy

2 – Other health concerns such as asthma, diabetes, migraine

3 – Digestive concerns such as celiac disease, irritable bowel syndrome

4 – Health concerns such as heart disease, high blood pressure or cholesterol

General: 5 – On a specific diet

6 – Watching my weight or others' weight generally

7 – Watching my health or other's health generally

8 – Pregnancy or breast feeding

9 – Religious or ethical beliefs that influence dietary choices

10 – Vegetarian or vegan diet

4.3 Does the presence of claim affect consumers' product evaluations?

To investigate if claim presence affected consumers' product evaluations Hierarchical Multiple Linear Regression (HMLR) analyses were performed. Multiple Linear Regression is a statistical treatment that is used to estimate the coefficients of the linear equation, involving one or more independent variables that best predict the value of the dependent variable. The HMLR allows independent variables to be entered at each step to report the change in the strength of the relationship between the set of independent variables and the dependent variables.

In the 2007 nutrition content claims survey stepwise regressions revealed several socio-demographic, cognitive, and behavioural factors to be significant predictors of purchase intention, nutrition attitude, and perceptions of the numbers of, types of people who would benefit as well as the types of health benefits from consuming the products. However, claim presence was not found to be a statistically significant predictor. Therefore, a hierarchical approach was used because of the learning from these prior research findings. The variables which were found in the previous study to be statistically significant in predicting the four dependent variables were entered into the model first. Claim presence, which was found previously to have no influence on the dependent variables, was then entered in the second step of the model to determine whether it significantly contributed towards consumer's product evaluations.

The justification of the order of entry of the independent variables is supported by Tabachnick and Fidell (2001, p.138)[23] who state that if there are independent variables which have greater theoretical importance they should be entered earlier into the hierarchical regression model. Additional information about HMLR and its assumptions are included in the Appendix F (Technical Appendix).

The regression models were run against each dependent variable, both overall as well as by individual food products. For inclusion in the regression models some independent variables required manipulation to meet the assumptions of this form of analysis. The independent variables which were entered into the regression at step 1 of the model were:

- Age group (younger, middle, older)
- Gender (female, male)
- Country (Australia, New Zealand)
- Dependents (non, one or more)

[23] Tabachnick, B. G., & Fidell, L. S. 2001. *Using Multivariate Statistics. 4th Ed*. Allyn and Bacon, Boston.

- Ethnicity (Indigenous, Non-Indigenous)
- Household Income Level (quartiles)
- Education Level (high school, higher than high school)
- Health concerns (none, general only, specific and general)
- Nutrition knowledge (quartiles)
- Motivation to read nutrition information (mean)
- Knowledge of micronutrient functions (mean)

Claim presence (present, absent) was then entered in step 2 of the regression models.

4.3.1 Does the presence of a claim effect consumers' purchase intention?

Overall Purchase Intention

In step 1 of the model, the multiple correlation coefficient (R = .365) was significantly different to zero ($F(11, 890) = 12.469$, $p < .001$), and 13.4% of the variance in overall purchase intention was explained by the set of independent variables entered (R^2 = .134, adjusted R^2 = .123).

In step 2, with claim presence entered into the model, the multiple correlation coefficient was only marginally higher (R = .366), indicating that it is not a significant predictor of overall purchase intention ($F(1,889) = .484$, $p = .487$).

The independent variables which significantly predicted overall purchase intention in step 1 remained significant in step 2 when claim presence was entered into the model (see Table 12). Country, dependents in household, household income, education level, nutrition knowledge, and knowledge of micronutrient functions were found to significantly and uniquely contribute to the prediction of overall purchase intention.

Higher purchase intentions were found amongst the Australian sample, individuals with dependents in the household, households with lower incomes, lower levels of education, lower nutrition knowledge, and higher self-reported knowledge of micronutrient functions.

Table 12: Impact of variables on Overall Purchase Intention (step 2)

Predictor/independent variables	B	S.E. (B)	β	t	P	sr^2
Age group#	-.074	.072	-.037	-1.034	.301	-.032
Gender#	-.183	.105	-.056	-1.740	.082	-.054
Country#	-.716	.111	-.214	-6.460	**.000*** **	-.202
Dependents in the household#	.390	.107	.122	3.655	**.000*** **	.114
Ethnicity#	.259	.239	.035	1.082	.280	.034
Household income†	-.162	.049	-.114	-3.281	**.001** **	-.102
Education level#	.248	.102	.082	2.431	**.015***	.076
Health concerns#	-.152	.089	-.054	-1.699	.090	-.053
Nutrition knowledge†	-.237	.048	-.159	-4.907	**.000*** **	-.153
Motivation to read nutrition information‡	-.065	.035	-.065	-1.845	.065	-.058
Knowledge of micronutrient functions‡	.177	.041	.149	4.367	**.000*** **	.136
Claim Presence#	.069	.100	.022	.696	.487	.022

Categorical variables, † Variable in Quartiles, ‡ Variable Mean

Bold indicates significant differences
* p < .05
** p < .01
*** p < .001

Ice Cream Purchase Intention

In line with overall purchase intention, in step 1 of the model for ice cream purchase intention the multiple correlation coefficient (R = .295) was significantly different to zero ($F(11, 878) = 7.623$, $p < .001$). 8.7% of the variance was explained by the set of independent variables entered (R^2 = .087, adjusted R^2 = .076).

In step 2, with claim presence entered into the model, the multiple correlation coefficient was only marginally higher (R = .296) indicating that the presence or absence of a claim (calcium or phosphorus) was not a significant predictor of ice cream purchase intention ($F(1,877) = .633$, $p = .426$). 8.8% of the variance was now accounted for (R^2 = .088, adjusted R^2 = .075).

The independent variables which significantly predicted ice cream purchase intention in step 1 remained significant in step 2 when claim presence was entered into the model (see Table 13). Country, dependents in the household, nutrition knowledge, motivation to read nutrition information, and knowledge of micronutrient functions were found to significantly and uniquely contribute to the prediction of ice cream purchase intention.

Higher ice cream purchase intentions were found amongst the Australia sample, individuals with dependents in the household, lower nutrition knowledge, moderate motivation to read nutrition information, and individuals with higher self-reported knowledge of micronutrient functions.

Table 13: Impact of variables on Ice Cream Purchase Intention (step 2)

Predictor/independent variables	B	S.E. (B)	β	t	p	sr^2
Age group#	.027	.093	.011	.289	.773	.009
Gender#	.126	.137	.031	.926	.355	.030
Country#	-.684	.144	-.163	-4.755	**.000*** **	-.153
Dependents in the household#	.456	.138	.114	3.302	**.001** **	.106
Ethnicity#	.261	.313	.028	.836	.403	.027
Household income†	-.095	.064	-.053	-1.485	.138	-.048
Education level#	.128	.133	.034	.966	.334	.031
Health concerns#	-.215	.116	-.061	-1.854	.064	-.060
Nutrition knowledge†	-.237	.062	-.127	-3.793	**.000*** **	-.122
Motivation to read nutrition information‡	-.092	.046	-.073	-2.016	**.044***	-.065
Knowledge of micronutrient functions‡	.258	.053	.172	4.860	**.000*** **	.157
Claim Presence#	.103	.129	.026	.796	.426	.026

Categorical variables, † Variable in Quartiles, ‡ Variable Mean

Bold indicates significant differences
* p < .05
** p < .01
*** p < .001

Frozen Lasagne Purchase Intention

In Step 1 of the model for frozen lasagne purchase intention, the multiple correlation coefficient (R = .318) was significantly different to zero ($F(11, 885) = 9.071$, $p < .001$). 10.1% of the variance was explained by the set of independent variables entered (R^2 = .101, adjusted R^2 = .090). In step 2, with claim presence entered into the model, the multiple correlation coefficient remained the same (R = .318) indicating that the presence or absent of a claim (iron or selenium) was not a significant predictor of frozen lasagne purchase intention ($F(1,884) = .017$, $p = .897$; $R^2 = .101$, adjusted $R^2 = .089$).

The independent variables which significantly predicted overall purchase intention in step 1 remained significant in step 2 when claim presence was entered into the model (see Table 14). Gender, country, household income, education level, nutrition knowledge, and knowledge of micronutrient functions were found to significantly and uniquely contribute to the prediction of frozen lasagne purchase intention.

Higher frozen lasagne purchase intentions were found amongst males, the Australian sample, households with lower incomes, lower levels of education, and lower nutrition knowledge.

Table 14: Impact of variables on Frozen Lasagne Purchase Intention (step 2)

Predictor/independent variables	B	S.E. (B)	β	t	p	sr^2
Age group#	-.051	.100	-.019	-.514	.608	-.016
Gender#	-.493	.147	-.110	-3.344	**.001****	-.107
Country#	-.681	.155	-.149	-4.389	**.000*****	-.140
Dependents in the household#	.246	.149	.056	1.649	.099	.053
Ethnicity#	.241	.338	.024	.713	.476	.023
Household income†	-.213	.069	-.109	-3.087	**.002****	-.098
Education level#	.552	.143	.133	3.861	**.000*****	.123
Health concerns#	-.160	.125	-.042	-1.277	.202	-.041
Nutrition knowledge†	-.206	.068	-.101	-3.049	**.002****	-.097
Motivation to read nutrition information‡	-.080	.049	-.058	-1.624	.105	-.052
Knowledge of micronutrient functions‡	.223	.057	.136	3.906	**.000*****	.125
Claim Presence#	.018	.139	.004	.130	.897	.004

Categorical variables, † Variable in Quartiles, ‡ Variable Mean

Bold indicates significant differences

* p < .05
** p < .01
*** p < .001

Fruit Drink Purchase Intention

In Step 1 of the model for fruit drink purchase intention the multiple correlation coefficient (R = .310) was significantly different to zero ($F(11, 888) = 8.565$, $p < .001$). 9.6% of the variance was explained by the set of independent variables entered (R^2 = .096, adjusted R^2 = .085).

In step 2, with claim presence entered into the model, the multiple correlation coefficient remained the same (R = .310) indicating that the presence or absent of a claim (antioxidants-flavonoids or beta-cryptoxanthins) was not a significant predictor of fruit drink purchase intention ($F(1,887) = .282$, $p = .595$; R^2 = .096, adjusted R^2 = .084).

The independent variables which significantly predicted fruit drink purchase intention in step 1 remained significant in step 2 when claim presence was entered into the model (Table 15). Gender, country, dependents in household, household income, education level, nutrition knowledge, and knowledge of micronutrient functions were found to significantly and uniquely contribute to the prediction of fruit drink purchase intention.

Higher fruit drink purchase intentions were found amongst males, the Australian sample, individuals with dependents in the household, households with lower incomes, lower levels of education, lower nutrition knowledge, and individuals with higher self-reported knowledge of micronutrient functions.

Table 15: Impact of variables on Fruit Drink Purchase Intention (step 2)

Predictor/independent variables	B	S.E. (B)	β	t	p	sr^2
Age group#	-.154	.099	-.057	-1.565	.118	-.050
Gender#	-.492	.145	-.112	-3.389	**.001****	-.108
Country#	-.688	.153	-.153	-4.506	**.000*****	-.144
Dependents in the household#	.444	.147	.103	3.016	**.003****	.096
Ethnicity#	.138	.329	.014	.419	.676	.013
Household income†	-.170	.068	-.089	-2.496	**.013***	-.080
Education level#	.302	.141	.074	2.147	**.032***	.069
Health concerns#	-.143	.123	-.038	-1.164	.245	-.037
Nutrition knowledge†	-.305	.067	-.152	-4.582	**.000*****	-.146
Motivation to read nutrition information‡	.008	.049	.006	.169	.866	.005
Knowledge of micronutrient functions‡	.165	.056	.103	2.949	**.003****	.094
Claim Presence#	.073	.137	.017	.531	.595	.017

Categorical variables, † Variable in Quartiles, ‡ Variable Mean

Bold indicates significant differences

* p < .05
** p < .01
*** p < .001

Potato Chip Purchase Intention

In Step 1 of the model for potato chip purchase intention the multiple correlation coefficient (R = .262) was significantly different to zero ($F(11, 880) = 5.897$, $p < .001$). 6.9% of the variance was explained by the set of independent variables entered (R^2 = .069, adjusted R^2 = .057). In step 2, with claim presence entered into the model, the multiple correlation coefficient remained the same (R = .262) indicating that the presence or absence of a claim (niacin or vitamin C) was not a significant predictor of potato chip purchase intention ($F(1,879) = .143$, $p = .705$; R^2 = .069, adjusted R^2 = .056).

The independent variables which significantly predicted overall purchase intention in step 1 remained significant in step 2 when claim presence was entered into the model (see Table 16). Country, dependents in household, household income, and nutrition knowledge were found to significantly and uniquely contribute to the prediction of potato chip purchase intention.

Higher potato chip purchase intentions were found amongst the Australian sample, individuals with dependents in the household, households with lower incomes, and lower nutrition knowledge.

Table 16: Impact of variables on Potato Chip Purchase Intention (step 2)

Predictor/independent variables	B	S.E. (B)	β	t	p	sr^2
Age group#	-.135	.096	-.052	-1.405	.160	-.046
Gender#	.118	.142	.028	.831	.406	.027
Country#	-.762	.149	-.177	-5.108	**.000*** **	-.166
Dependents in the household#	.410	.144	.100	2.853	**.004** **	.093
Ethnicity#	.269	.320	.029	.840	.401	.027
Household income†	-.167	.067	-.091	-2.507	**.012***	-.082
Education level#	.041	.138	.011	.301	.763	.010
Health concerns#	-.141	.120	-.039	-1.178	.239	-.038
Nutrition knowledge†	-.207	.065	-.108	-3.182	**.002** **	-.104
Motivation to read nutrition information‡	-.090	.048	-.069	-1.876	.061	-.061
Knowledge of micronutrient functions‡	.073	.055	.047	1.327	.185	.043
Claim Presence#	.051	.134	.012	.379	.705	.012

Categorical variables, † Variable in Quartiles, ‡ Variable Mean

Bold indicates significant differences

* p < .05
** p < .01
*** p < .001

4.3.2 Does the presence of a claim affect consumers' nutrition attitude?

Overall Nutrition Attitude

In step 1 of the model, the multiple correlation coefficient (R = .412) was significantly different to zero ($F(11, 881) = 16.367$, $p < .001$), and 17% of the variance in overall nutrition attitude was explained by the set of independent variables entered (R^2 = 0.170, adjusted R^2 = 0.159). In step 2, with claim presence entered into the model, the multiple correlation coefficient remained the same (R = .412) indicating that it was not a significant predictor of overall nutrition attitude ($F(1,880) = .467$, p = .494.

The independent variables which significantly predicted overall nutrition attitude in step 1 remained significant in step 2 when claim presence was entered into the model (see Table 17). Gender, country, dependents in the household, household income, education level, health concerns, nutrition knowledge, motivation to read nutrition information, and knowledge of micronutrient functions were found to significantly and uniquely contribute to the prediction of overall nutrition attitude.

Overall nutrition attitudes were found to be higher amongst males, the Australian sample, individuals with dependents in the household, households with lower incomes, lower levels of education, no health concerns, lower nutrition knowledge, moderate motivation to read nutrition information, and higher self-reported knowledge of micronutrient functions.

Table 17: Impact of variables on Overall Nutrition Attitude (step 2)

Predictor/independent variables	B	S.E. (B)	β	t	p	sr^2
Age group#	.089	.065	.048	1.368	.172	.042
Gender#	-.304	.095	-.101	-3.188	**.001****	-.098
Country#	-.603	.101	-.194	-5.962	**.000*****	-.183
Dependents in the household#	.252	.097	.085	2.587	**.010***	.079
Ethnicity#	-.033	.217	-.005	-.150	.881	-.005
Household income†	-.205	.045	-.156	-4.566	**.000*****	-.140
Education level#	.227	.093	.081	2.447	**.015***	.075
Health concerns#	-.207	.081	-.080	-2.551	**.011***	-.078
Nutrition knowledge†	-.256	.044	-.186	-5.836	**.000*****	-.179
Motivation to read nutrition information‡	-.072	.032	-.077	-2.234	**.026***	-.069
Knowledge of micronutrient functions‡	.169	.037	.154	4.574	**.000*****	.140
Claim Presence#	-.062	.091	-.021	-.684	.494	-.021

Categorical variables, † Variable in Quartiles, ‡ Variable Mean

Bold indicates significant differences

* p < .05
** p < .01
*** p < .001

Ice Cream Nutrition Attitude

In Step 1 of the model for ice cream nutrition attitude the multiple correlation coefficient (R = .350) was significantly different to zero (F(11, 836) = 10.576, p < .001). 12.2% of the variance was explained by the set of independent variables entered (R^2 = .122, adjusted R^2 = .111). In step 2, with claim presence entered into the model, the multiple correlation coefficient remained the same (R = .350) indicating that the presence or absence of a claim (calcium or phosphorus) was not a significant predictor of ice cream nutrition attitude (F(1,835) = .153, p = .695).

The independent variables which significantly predicted ice cream nutrition attitude in step 1 remained significant in step 2 when claim presence was entered into the model (see Table 18). Age group, country, household income, health concerns, nutrition knowledge, and knowledge of micronutrient functions were found to significantly and uniquely contribute to the prediction of ice cream nutrition attitude.

Nutrition attitudes towards ice cream were found to be higher amongst older individuals, the Australian sample, households with lower incomes, no health concerns, lower nutrition knowledge, and higher self-reported knowledge of micronutrient functions.

Table 18: Impact of variables on Ice Cream Nutrition Attitude (step 2)

Predictor/independent variables	B	S.E. (B)	β	t	p	sr^2
Age group#	.250	.084	.111	2.974	**.003****	.096
Gender#	-.053	.123	-.014	-.429	.668	-.014
Country#	-.545	.132	-.141	-4.118	**.000*****	-.134
Dependents in the household#	.213	.125	.059	1.703	.089	.055
Ethnicity#	-.160	.302	-.018	-.531	.595	-.017
Household income†	-.132	.057	-.083	-2.305	**.021***	-.075
Education level#	.173	.120	.051	1.444	.149	.047
Health concerns#	-.329	.103	-.106	-3.203	**.001****	-.104
Nutrition knowledge†	-.260	.056	-.156	-4.619	**.000*****	-.150
Motivation to read nutrition information‡	-.071	.043	-.060	-1.675	.094	-.054
Knowledge of micronutrient functions‡	.233	.047	.173	4.914	**.000*****	.159
Claim Presence#	-.046	.117	-.013	-.392	.695	-.013

Categorical variables, † Variable in Quartiles, ‡ Variable Mean

Bold indicates significant differences

* p < .05
** p < .01
*** p < .001

Frozen Lasagne Nutrition Attitude

In Step 1 of the model for frozen lasagne nutrition attitude, the multiple correlation coefficient (R = .344) was significantly different to zero (F(11, 851) = 10.415, p < .001). 11.9% of the variance was explained by the set of independent variables entered (R^2 = .119, adjusted R^2 = .107). In step 2, with claim presence entered into the model, the multiple correlation coefficient was only marginally higher (R = .347) indicating that the presence or absence of a claim (iron or selenium) was not a significant predictor of Frozen Meal (Lasagne) Nutrition Attitude (F(1,850) = 1.956, p = .162;). 12.1% of the variance is now accounted for (R^2 = .121, adjusted R^2 = .108).

The independent variables which significantly predicted frozen lasagne nutrition attitude in step 1 remained significant in step 2 when claim presence was entered into the model (see Table 19). Gender, country, household income, education level, nutrition knowledge, and knowledge of micronutrient functions were found to significantly and uniquely contribute to the prediction of frozen lasagne nutrition attitude.

Nutrition attitudes towards frozen lasagne were found to be higher amongst males, the Australian sample, households with lower incomes, lower levels of education, lower nutrition knowledge, and higher self-reported knowledge of micronutrient functions.

Table 19: Impact of variables on Frozen Lasagne Nutrition Attitude (step 2)

Predictor/independent variables	B	S.E. (B)	β	t	p	sr^2
Age group#	.137	.085	.060	1.613	.107	.052
Gender#	-.380	.125	-.101	-3.036	**.002****	-.098
Country#	-.603	.134	-.154	-4.502	**.000*****	-.145
Dependents in the household#	.232	.128	.063	1.815	.070	.058
Ethnicity#	-.098	.287	-.012	-.340	.734	-.011
Household income†	-.182	.059	-.111	-3.099	**.002****	-.100
Education level#	.547	.122	.156	4.504	**.000*****	.145
Health concerns#	-.037	.106	-.011	-.347	.729	-.011
Nutrition knowledge†	-.172	.057	-.100	-2.997	**.003****	-.096
Motivation to read nutrition information‡	-.061	.043	-.050	-1.406	.160	-.045
Knowledge of micronutrient functions‡	.212	.049	.152	4.329	**.000*****	.139
Claim Presence#	-.166	.118	-.045	-1.399	.162	-.045

Categorical variables, † Variable in Quartiles, ‡ Variable Mean

Bold indicates significant differences
* p < .05
** p < .01
*** p < .001

Fruit Drink Nutrition Attitude

In Step 1 of the model for fruit drink nutrition attitude the multiple correlation coefficient (R = .330) was significantly different to zero ($F(11, 856) = 9.49$, $p < .001$). 10.9% of the variance was explained by the set of independent variables entered (R^2 = .109, adjusted R^2 = .097). In step 2, with claim presence entered into the model, the multiple correlation coefficient was only marginally higher (R = .332) indicating that the presence or absence of a claim (antioxidants-flavonoids or beta-cryptoxanthins) was not a significant predictor of Fruit Drink Nutrition Attitude ($F(1,855) = 1.68$, p = .195). 11% of the variance was now accounted for (R^2 = .11, adjusted R^2 = .098).

The independent variables which significantly predicted fruit drink nutrition attitude in step 1 remained significant in step 2 when claim presence was entered into the model (see Table 20). Gender, country, dependents in the household, household income, health concerns, and nutrition knowledge were found to significantly and uniquely contribute to the prediction of fruit drink nutrition attitude.

Nutrition attitudes towards fruit drink were found to be higher amongst males, the Australian sample, households with lower incomes, lower levels of education, lower nutrition knowledge, and higher self-reported knowledge of micronutrient functions.

Table 20: Impact of variables on Fruit Drink Nutrition Attitude (step 2)

Predictor/independent variables	B	S.E. (B)	β	t	p	sr^2
Age group#	-.070	.086	-.030	-.810	.418	-.026
Gender#	-.438	.126	-.116	-3.476	**.001****	-.112
Country#	-.592	.135	-.150	-4.400	**.000*****	-.142
Dependents in the household#	.315	.129	.085	2.441	**.015***	.079
Ethnicity#	-.079	.293	-.009	-.269	.788	-.009
Household income†	-.237	.059	-.144	-4.010	**.000*****	-.129
Education level#	.155	.123	.044	1.261	.208	.041
Health concerns#	-.293	.107	-.091	-2.747	**.006****	-.089
Nutrition knowledge†	-.260	.058	-.151	-4.502	**.000*****	-.145
Motivation to read nutrition information‡	-.018	.044	-.015	-.423	.673	-.014
Knowledge of micronutrient functions‡	.090	.049	.065	1.848	.065	.060
Claim Presence#	-.155	.120	-.042	-1.296	.195	-.042

Categorical variables, † Variable in Quartiles, ‡ Variable Mean
Bold indicates significant differences
* p < .05
** p < .01
*** p < .001

Potato Chip Nutrition Attitude

In Step 1 of the model for potato chip nutrition attitude the multiple correlation coefficient (R = .331) was significantly different to zero ($F(11, 857) = 9.574$, $p < .001$). 10.9% of the variance was explained by the set of independent variables entered (R^2 = .109, adjusted R^2 = .098). In step 2, with claim presence entered into the model, the multiple correlation coefficient remained the same (R = .331) indicating that the presence or absence of a claim (niacin or vitamin C) was not a significant predictor of potato chip nutrition attitude ($F(1,856) = .072$, $p = .789$).

The independent variables which significantly predicted potato chip nutrition attitude in step 1 remained significant in step 2 when claim presence was entered into the model (see Table 21). Country, household income, nutrition knowledge, motivation to read nutrition information, and knowledge of micronutrient functions were found to significantly and uniquely contribute to the prediction of potato chip nutrition attitude.

Nutrition attitudes towards potato chips were found to be higher amongst the Australian sample, households with lower incomes, lower nutrition knowledge, moderate motivation to read nutrition information, and higher self-reported knowledge of micronutrient functions.

Table 21: Impact of variables on Potato Chips Nutrition Attitude (step 2)

Predictor/independent variables	B	S.E. (B)	β	t	p	sr^2
Age group#	.005	.089	.002	.055	.956	.002
Gender#	-.232	.133	-.059	-1.753	.080	-.057
Country#	-.604	.140	-.148	-4.314	**.000*** **	-.139
Dependents in the household#	.147	.134	.038	1.098	.272	.035
Ethnicity#	.230	.299	.026	.770	.442	.025
Household income†	-.251	.062	-.145	-4.050	**.000*** **	-.131
Education level#	.011	.128	.003	.084	.933	.003
Health concerns#	-.193	.112	-.057	-1.725	.085	-.056
Nutrition knowledge†	-.333	.060	-.185	-5.507	**.000*** **	-.178
Motivation to read nutrition information‡	-.116	.045	-.093	-2.565	**.010***	-.083
Knowledge of micronutrient functions‡	.152	.051	.104	2.955	**.003****	.095
Claim Presence#	.034	.125	.009	.268	.789	.009

Categorical variables, † Variable in Quartiles, ‡ Variable Mean

Bold indicates significant differences

* p < .05

** p < .01

*** p < .001

4.3.3 Does the presence of claim affect consumers' perceptions of the number of types of people benefiting from eating the product?

Overall Perceived Number of Types of People Benefiting

In step 1 of the model, the multiple correlation coefficient (R = .329) was significantly different to zero ($F(11, 890) = 9.831$, $p < .001$). 10.8% of the variance in overall perceived number of types of people benefiting was explained by the set of independent variables entered (R^2 = .108, adjusted R^2 = .097).

In step 2, with claim presence entered into the model, the multiple correlation coefficient was only marginally higher (R = .333), indicating that claim presence did not significantly influence overall perceptions of the number of types of people who would benefit ($F(1,889) = 2.539$, p = .111). 11.1% of the variance was now accounted for (R^2 = .111, adjusted R^2 = .099).

The independent variables which significantly predicted the respondent's perceptions of number of types of people who would benefit in step 1, remained significant in step 2 when claim presence was entered into the model (see Table 22). Country, household income, education level, nutrition knowledge, and knowledge of micronutrient functions were found to significantly and uniquely contribute to the prediction of overall perceived types of people benefiting. In Step 2, health concerns were also a significant predictor (change of p = .058 to p = .048).

Overall perceptions of the number of types of people benefiting from consuming the products were found to be higher amongst the Australian sample, households with lower incomes, lower levels of education, lower nutrition knowledge, higher self-reported knowledge of micronutrient functions, and no health concerns.

Table 22: Impact of variables on Overall Perceived Number of Types of People Benefiting (step 2)

Predictor/independent variables	B	S.E. (B)	β	t	p	sr^2
Age group#	-.153	.087	-.063	-1.752	.080	-.055
Gender#	-.236	.128	-.060	-1.839	.066	-.058
Country#	-.642	.135	-.159	-4.746	**.000*** **	-.150
Dependents in the household#	.141	.130	.037	1.083	.279	.034
Ethnicity#	.148	.292	.017	.506	.613	.016
Household income†	-.266	.060	-.155	-4.398	**.000*** **	-.139
Education level#	.313	.125	.085	2.506	**.012***	.079
Health concerns#	-.215	.109	-.064	-1.979	**.048***	-.063
Nutrition knowledge†	-.205	.059	-.114	-3.479	**.001****	-.110
Motivation to read nutrition information‡	.010	.043	.008	.228	.820	.007
Knowledge of micronutrient functions‡	.230	.050	.161	4.646	**.000*** **	.147
Claim Presence	-.194	.122	-.051	-1.593	.111	-.050

Categorical variables, † Variable in Quartiles, ‡ Variable Mean

Bold indicates significant differences
* p < .05
** p < .01
*** p < .001

Ice Cream - Perceived Number of Types of People Benefiting

In Step 1 of the model for the perceived number of types of people benefiting from ice cream the multiple correlation coefficient (R = .262) was significantly different to zero ($F(11, 890) = 5.975$, $p < .001$). 6.9% of the variance was explained by the set of independent variables entered (R^2 = .069, adjusted R^2 = .057).

In step 2, with claim presence entered into the model, the multiple correlation coefficient was marginally higher (R = .269) and the change approaching statistical significance, indicating that the presence or absence of a claim (calcium or phosphorus) was trending towards being a weak predictor of respondent's perceptions of the number of types of people who would benefit from eating ice cream ($F(1,889) = 3.618$, $p = .057$). 7.3% of the variance was now accounted for (R^2 = .073, adjusted R^2 = .060).

The independent variables which were significant predictors in step 1 remained significant in step 2 when claim presence was entered into the model (see Table 23). Country, household income, nutrition knowledge, and knowledge of micronutrient functions were found to significantly and uniquely contribute to the prediction model of the number of types of people who would benefit from consuming ice cream.

Perceptions of the number of types of people benefiting from consuming ice cream were found to be higher amongst the Australian sample, households with lower incomes, lower nutrition knowledge, and higher self-reported knowledge of micronutrient functions.

Table 23: Impact of variables on Ice Cream – who would benefit (step 2)

Predictor/independent variables	B	S.E. (B)	β	t	p	sr^2
Age group#	.043	.127	.013	.342	.733	.011
Gender#	.162	.187	.029	.866	.387	.028
Country#	-.837	.197	-.146	-4.254	**.000*** **	-.137
Dependents in the household#	.187	.190	.034	.984	.325	.032
Ethnicity#	.368	.425	.029	.865	.388	.028
Household income†	-.208	.088	-.085	-2.361	**.018***	-.076
Education level#	.324	.182	.062	1.787	.074	.058
Health concerns#	-.140	.158	-.029	-.884	.377	-.029
Nutrition knowledge†	-.240	.086	-.094	-2.791	**.005****	-.090
Motivation to read nutrition information‡	.054	.063	.031	.860	.390	.028
Knowledge of micronutrient functions‡	.289	.072	.142	4.013	**.000*****	.130
Claim Presence#	-.337	.177	-.062	-1.902	.057	-.061

Categorical variables, † Variable in Quartiles, ‡ Variable Mean

Bold indicates significant differences

* p < .05

** p < .01

*** p < .001

Frozen Lasagne - Perceived Number of Types of People Benefiting

In Step 1 of the model for frozen lasagne perceived number of types of people benefiting the multiple correlation coefficient (R = .231) was significantly different to zero (F(11, 890) = 4.549, p < .001). 5.3% of the variance was explained by the set of independent variables entered (R^2 = .053, adjusted R^2 = .042).

In step 2, with claim presence entered into the model, the multiple correlation coefficient was only marginally higher (R = .232) indicating that the presence or absence of a claim (Iron or Selenium) was not a significant predictor of the perceived number of types of people who would benefit from eating frozen lasagne (F(1,889) = .477, p = .49). 5.4% of the variance was now accounted for (R^2 = .054, adjusted R^2 = .041).

The independent variables, which significantly predicted perceptions of the number of types of people who would benefit from eating frozen lasagne, in Step 1 remained significant in Step 2 when claim presence was entered into the model (see Table 24). Country, household income, education level, and knowledge of micronutrient functions were found to significantly and uniquely contribute to the prediction model.

Perceptions of the number of types of people benefiting from consuming frozen lasagne were found to be higher amongst the Australian sample, households with lower incomes, lower levels of education, and higher self-reported knowledge of micronutrient functions.

Table 24: Impact of variables on Frozen Lasagne – Who would benefit (step 2)

Predictor/independent variables	B	S.E. (B)	β	t	p	sr^2
Age group#	-.060	.129	-.017	-.466	.642	-.015
Gender#	-.337	.189	-.060	-1.781	.075	-.058
Country#	-.425	.199	-.074	-2.135	**.033***	-.070
Dependents in the household#	.281	.192	.051	1.463	.144	.048
Ethnicity#	.002	.430	.000	.006	.996	.000
Household income†	-.179	.089	-.073	-2.011	**.045***	-.066
Education level#	.660	.184	.126	3.596	**.000*****	.117
Health concerns#	-.183	.160	-.038	-1.144	.253	-.037
Nutrition knowledge†	-.086	.087	-.033	-.986	.324	-.032
Motivation to read nutrition information‡	-.003	.064	-.002	-.043	.966	-.001
Knowledge of micronutrient functions‡	.272	.073	.133	3.732	**.000*****	.122
Claim Presence#	-.124	.179	-.023	-.691	.490	-.023

[#] Categorical variables, [†] Variable in Quartiles, [‡] Variable Mean

Bold indicates significant differences
* p < .05
** p < .01
*** p < .001

Fruit Drink - Perceived Number of Types of People Benefiting

In Step 1 of the model for the perceived number of types of people benefiting from consuming the fruit drink the multiple correlation coefficient (R = .277) was significantly different to zero ($F(11, 890) = 6.734$, $p < .001$). 7.7% of the variance was explained by the set of independent variables entered (R^2 = .077, adjusted R^2 = .065).

In step 2, with claim presence entered into the model, the multiple correlation coefficient was higher (R = .284) and indicated that the presence or absence of a claim (antioxidants-flavonoids or beta-cryptoxanthins) was also a significant predictor of respondents perceptions types of people who would benefit from drinking fruit drink ($F(1,889) = 3.863$, p = .50). 8.1% of the variance was now accounted for (R^2 = .081, adjusted R^2 = .068). The direction of the effect was in the direction that respondents exposed to a claim indicated that a higher number of types of people would benefit from consuming fruit drink, compared to respondents not exposed to a claim.

The independent variables which significantly predicted the dependent variable in step 1 remained significant in step 2 when claim presence was entered into the model (see Table 25). Age group, gender, country, household income, health concerns, nutrition knowledge, and claim presence were found to significantly and uniquely contribute to the prediction of the dependent variable.

Perceptions of the number of types of people benefiting from consuming fruit drink were found to be higher amongst younger respondents, males, the Australian sample, households with lower incomes, no health concerns, and lower nutrition knowledge.

Table 25: Impact of variables on Fruit Drink – Who would benefit (step 2)

Predictor/independent variables	B	S.E. (B)	β	t	p	sr^2
Age group#	-.355	.144	-.091	-2.466	**.014***	-.079
Gender#	-.441	.212	-.069	-2.085	**.037***	-.067
Country#	-.793	.223	-.122	-3.561	**.000*****	-.115
Dependents in the household#	.219	.214	.035	1.019	.308	.033
Ethnicity#	-.139	.481	-.010	-.290	.772	-.009
Household income†	-.507	.099	-.182	-5.099	**.000*****	-.164
Education level#	.178	.205	.030	.868	.386	.028
Health concerns#	-.424	.179	-.078	-2.367	**.018***	-.076
Nutrition knowledge†	-.268	.097	-.092	-2.763	**.006****	-.089
Motivation to read nutrition information‡	-.015	.071	-.008	-.217	.828	-.007
Knowledge of micronutrient functions‡	.116	.082	.050	1.428	.154	.046
Claim Presence#	-.394	.200	-.063	-1.966	**.050***	-.063

Categorical variables, † Variable in Quartiles, ‡ Variable Mean

Bold indicates significant differences

* p < .05

** p < .01

*** p < .001

Potato Chips - Perceived Number of Types of People Benefiting

In Step 1 of the model for the perceived number of types of people benefiting from consuming potato chips, the multiple correlation coefficient (R = .289) was significantly different to zero ($F(11, 890) = 7.377$, $p < .001$). 8.4% of the variance was explained by the set of independent variables entered (R^2 = .084, adjusted R^2 = .072).

In step 2, with claim presence entered into the model, the multiple correlation coefficient was marginally higher (R = .290), but not significantly, indicating that the presence or absence of a claim (niacin or vitamin C) was not a significant predictor of the perception of types of people who would benefit from eating potato chips ($F(1,889) = .397$, $p = .529$).

The independent variables which significantly predicted the dependent variable in step 1 remained significant in step 2 when claim presence was entered into the model (see Table 26). Age group, gender, country, household income, nutrition knowledge, and knowledge of micronutrient functions were found to significantly and uniquely contribute to the prediction of respondent's perceptions of the number of types of people who would benefit from consuming potato chips.

Perceptions of the number of types of people benefiting from consuming potato chips were found to be higher amongst younger respondents, males, the Australian sample, households with lower incomes, lower nutrition knowledge, and higher self-reported knowledge of micronutrient functions.

Table 26: Impact of variables on Potato Chips – Who would benefit (step 2)

Predictor/independent variables	B	S.E. (B)	β	t	p	sr^2
Age group#	-.241	.090	-.098	-2.676	**.008****	-.086
Gender#	-.329	.132	-.083	-2.487	**.013***	-.080
Country#	-.512	.139	-.125	-3.672	**.000*****	-.118
Dependents in the household#	-.121	.134	-.031	-.903	.367	-.029
Ethnicity#	.361	.301	.040	1.200	.231	.039
Household income†	-.169	.062	-.097	-2.717	**.007****	-.087
Education level#	.087	.128	.023	.679	.498	.022
Health concerns#	-.114	.112	-.033	-1.017	.309	-.033
Nutrition knowledge†	-.227	.061	-.125	-3.740	**.000*****	-.120
Motivation to read nutrition information‡	.003	.045	.003	.077	.938	.002
Knowledge of micronutrient functions‡	.242	.051	.167	4.752	**.000*****	.153
Claim Presence#	.079	.125	.020	.630	.529	.020

Categorical variables, † Variable in Quartiles, ‡ Variable Mean

Bold indicates significant differences

* p < .05

** p < .01

*** p < .001

4.3.4 Does the presence of a claim affect consumers' perceptions of the number of types of health benefits from eating the product?

Overall Perceived Number of Types of Health Benefits

In step 1 of the model, the multiple correlation coefficient (R = .328) was significantly different to zero ($F(11, 890) = 9.746$, $p < .001$). 10.8% of the variance in overall perceived number of types of health benefits from consuming the products was explained by the set of independent variables entered (R^2 = .108, adjusted R^2 = .096).

In Step 2, with claim presence entered into the model, the multiple correlation coefficient remained the same (R = .328), indicating that it was not a significant predictor of the overall perceptions of the number of types of health benefits arising from consuming the products ($F(1,889) = .011$, $p = .918$.

The independent variables which significantly predicted to the dependent variable in step 1 remained significant in step 2 when claim presence was entered into the model (see Table 27). Age group, gender, country, household income, health concerns, nutrition knowledge, and knowledge of micronutrient functions were found to significantly and uniquely contribute to the prediction of overall perceived types of health benefits.

Overall perceptions of the number of types of health benefits from consuming the products were found to be higher amongst younger respondents, males, the Australian sample, households with lower incomes, respondents with no health concerns, lower nutrition knowledge, and higher self-reported knowledge of micronutrient functions.

Table 27: Impact of variables on Overall Types of Health Benefits (step 2)

Predictor/independent variables	B	S.E. (B)	β	t	p	sr^2
Age group#	-.500	.144	-.126	-3.477	**.001****	-.110
Gender#	-.756	.211	-.117	-3.574	**.000*****	-.113
Country#	-.880	.223	-.133	-3.956	**.000*****	-.025
Dependents in the household#	-.080	.214	-.013	-.371	.711	-.012
Ethnicity#	.528	.481	.036	1.098	.273	.035
Household income†	-.259	.099	-.092	-2.610	**.009****	-.083
Education level#	.291	.205	.048	1.419	.156	.045
Health concerns#	-.383	.179	-.069	-2.140	**.033***	-.068
Nutrition knowledge†	-.254	.097	-.086	-2.621	**.009****	-.083
Motivation to read nutrition information‡	.050	.071	.025	.702	.483	.022
Knowledge of micronutrient functions‡	.473	.082	.202	5.804	**.000*****	.184
Claim Presence#	-.021	.200	-.003	-.103	.918	-.003

Categorical variables, † Variable in Quartiles, ‡ Variable Mean

Bold indicates significant differences
* p < .05
** p < .01
*** p < .001

Ice Cream - Perceived Number of Types of Health Benefits

In Step 1 of the model, for ice cream perceived number of types of health benefits, the multiple correlation coefficient (R = .265) was significantly different to zero ($F(11, 890)$ = 6.095, $p < .001$). 7% of the variance was explained by the set of independent variables entered (R^2 = .070, adjusted R^2 = .059). In Step 2, with claim presence entered into the model, the multiple correlation coefficient remained the same (R = .265) indicating that the presence or absence of a claim (calcium or phosphorus) was not a significant predictor of respondents perception of the number of types of health benefits associated with ice cream ($F(1,889)$ = .015, p = .902).

The independent variables which significantly predicted the dependent variable in step 1 remained significant in Step 2 when claim presence was entered into the model (see Table 28). Country, nutrition knowledge, and knowledge of micronutrient functions were found to significantly and uniquely contribute to the prediction of perceived number of types of health benefits of consuming ice cream.

Perceptions of the number of types of health benefits of consuming ice cream were found to be higher amongst the Australian sample, lower nutrition knowledge, and higher self-reported knowledge of micronutrient functions.

Table 28: Impact of variables on Ice Cream - Types of Health Benefits (step 2)

Predictor/independent variables	B	S.E. (B)	β	t	p	sr^2
Age group#	-.232	.166	-.052	-1.398	.162	-.045
Gender#	-.132	.244	-.018	-.543	.587	-.018
Country#	-.770	.256	-.103	-3.005	**.003****	-.097
Dependents in the household#	-.229	.247	-.032	-.928	.354	-.030
Ethnicity#	.171	.554	.010	.309	.758	.010
Household income†	-.090	.114	-.028	-.788	.431	-.025
Education level#	.252	.236	.037	1.067	.286	.035
Health concerns#	-.203	.206	-.033	-.986	.324	-.032
Nutrition knowledge†	-.335	.112	-.101	-2.995	**.003****	-.097
Motivation to read nutrition information‡	.044	.082	.020	.541	.589	.017
Knowledge of micronutrient functions‡	.543	.094	.205	5.780	**.000*****	.187
Claim Presence#	.028	.230	.004	.123	.902	.004

Categorical variables, † Variable in Quartiles, ‡ Variable Mean

Bold indicates significant differences
* p < .05
** p < .01
*** p < .001

Frozen Lasagne - Perceived Number of Types of Health Benefits

In Step 1 of the model for frozen lasagne perceived number of types of health benefits the multiple correlation coefficient (R = .263) was significantly different to zero ($F(11, 890)$ = 6.021, $p < .001$). 6.9% of the variance was explained by the set of independent variables entered (R^2 = .069, adjusted R^2 = .058). In Step 2, with claim presence entered into the model, the multiple correlation coefficient remained the same (R = .263) indicating that the presence or absence of a claim (iron or selenium) was not a significant predictor of respondent's perceptions of the number of types of health benefits from consuming frozen lasagne ($F(1,889)$ = .077, p = .782).

The independent variables which significantly predicted the dependent variable in step 1 remained significant in step 2 when claim presence was entered into the model (see Table 29). Age group, gender, country, education level, nutrition knowledge, and knowledge of micronutrient functions were found to significantly and uniquely contribute to the prediction of the perceived number of types of health benefits of frozen lasagne.

Perceptions of the number of types of health benefits of consuming frozen lasagne were found to be higher amongst younger respondents, males, the Australian sample, lower levels of education, lower nutrition knowledge, and higher self-reported knowledge of micronutrient functions.

Table 29: Impact of variables on Frozen Lasagne - Types of Health Benefits (step 2)

Predictor/independent variables	B	S.E. (B)	β	t	p	sr^2
Age group#	-.454	.191	-.088	-2.381	**.017***	-.077
Gender#	-1.159	.280	-.138	-4.133	**.000*****	-.134
Country#	-.601	.295	-.070	-2.035	**.042***	-.066
Dependents in the household#	.102	.284	.012	.357	.721	.012
Ethnicity#	.891	.638	.047	1.398	.162	.045
Household income†	-.190	.132	-.052	-1.442	.150	-.047
Education level#	.630	.272	.081	2.314	**.021***	.075
Health concerns#	-.369	.238	-.052	-1.555	.120	-.050
Nutrition knowledge†	-.258	.129	-.067	-2.004	**.045***	-.065
Motivation to read nutrition information‡	.127	.094	.049	1.343	.179	.043
Knowledge of micronutrient functions‡	.447	.108	.147	4.134	**.000*****	.134
Claim Presence#	.074	.265	.009	.277	.782	.009

Categorical variables, † Variable in Quartiles, ‡ Variable Mean

Bold indicates significant differences
* p < .05
** p < .01
*** p < .001

Fruit Drink - Perceived Number of Types of Health Benefits

In Step 1 of the model for fruit drink perceived number of types of health benefits the multiple correlation coefficient (R = .299) was significantly different to zero ($F(11, 890)$ = 7.933, $p < .001$). 8.9% of the variance was explained by the set of independent variables entered (R^2 = .089, adjusted R^2 = .078). In step 2, with claim presence entered into the model, the multiple correlation coefficient remained the same (R = .299) indicating that the presence or absence of a claim (antioxidants-flavonoids or beta-cryptoxanthins) was not a significant predictor of the perceptions of the number of types of health benefits from consuming the fruit drink ($F(1,889)$ = .282, p = .595).

The independent variables which significantly predicted the dependent variable in step 1 remained significant in step 2 when claim presence was entered into the model (see Table 30). Age group, gender, country, household income, health concerns, and knowledge of micronutrient functions were found to significantly and uniquely contribute to the prediction model.

Perceptions of the number of types of health benefits of consuming fruit drink were found to be higher amongst younger respondents, males, the Australian sample, households with lower incomes, respondents with no health concerns, and higher self-reported knowledge of micronutrient functions.

Table 30: Impact of variables on Fruit Drink - Types of Health Benefits (step 2)

Predictor/independent variables	B	S.E. (B)	β	t	p	sr^2
Age group#	-.918	.235	-.143	-3.903	**.000*** **	-.125
Gender#	-1.115	.346	-.107	-3.226	**.001** **	-.103
Country#	-1.637	.364	-.153	-4.498	**.000*** **	-.144
Dependents in the household#	.031	.350	.003	.088	.930	.003
Ethnicity#	.797	.786	.034	1.014	.311	.032
Household income†	-.608	.163	-.133	-3.742	**.000*** **	-.120
Education level#	.204	.336	.021	.607	.544	.019
Health concerns#	-.724	.293	-.081	-2.471	**.014***	-.079
Nutrition knowledge†	-.135	.159	-.028	-.849	.396	-.027
Motivation to read nutrition information‡	.012	.116	.004	.100	.921	.003
Knowledge of micronutrient functions‡	.505	.133	.133	3.787	**.000*** **	.121
Claim Presence#	-.174	.327	-.017	-.531	.595	-.017

Categorical variables, † Variable in Quartiles, ‡ Variable Mean

Bold indicates significant differences

* p < .05

** p < .01

*** p < .001

Potato Chips - Perceived Number of Types of Health Benefits

In Step 1 of the model, for potato chip perceived number of types of health benefits, the multiple correlation coefficient (R = .275) was significantly different to zero (F(11, 890) = 6.627, p < .001). 7.6% of the variance was explained by the set of independent variables entered (R^2 = .076, adjusted R^2 = .064). In step 2, with claim presence entered into the model, the multiple correlation coefficient remained the same (R = .275) indicating that the presence or absence of a claim (niacin or vitamin C) was not a significant predictor of the perception of the number of types of health benefits from consuming potato chips (F(1,889) = .003, p = .957).

The independent variables which significantly predicted the dependent variable in step 1 remained significant in step 2 when claim presence was entered into the model (see Table 31). Age group, gender, country, nutrition knowledge, and knowledge of micronutrient functions were found to significantly and uniquely contribute to the prediction of perceived potato chip health benefits.

Perceptions of the number of types of health benefits of consuming potato chips were found to be higher amongst younger respondents, males, the Australian sample, lower nutrition knowledge, and higher self-reported knowledge of micronutrient functions.

Table 31: Impact of variables on Potato Chips - Types of Health Benefits (step 2)

Predictor/independent variables	B	S.E. (B)	β	t	p	sr^2
Age group#	-.397	.137	-.107	-2.890	**.004****	-.093
Gender#	-.616	.202	-.102	-3.052	**.002****	-.098
Country#	-.513	.212	-.083	-2.417	**.016***	-.078
Dependents in the household#	-.222	.205	-.037	-1.083	.279	-.035
Ethnicity#	.251	.459	.018	.547	.584	.018
Household income†	-.149	.095	-.056	-1.573	.116	-.051
Education level#	.079	.196	.014	.402	.688	.013
Health concerns#	-.237	.171	-.046	-1.384	.167	-.045
Nutrition knowledge†	-.290	.093	-.105	-3.126	**.002****	-.101
Motivation to read nutrition information‡	.017	.068	.009	.250	.803	.008
Knowledge of micronutrient functions‡	.398	.078	.181	5.115	**.000*****	.165
Claim Presence#	-.010	.191	-.002	-.054	.957	-.002

Categorical variables, † Variable in Quartiles, ‡ Variable Mean

Bold indicates significant differences

* p < .05

** p < .01

*** p < .001

5. SUMMARY OF THE KEY FINDINGS

This research study was the third study in a series commissioned by FSANZ to investigate the impact that nutrition content claims on product packaging has on consumers. The study was initiated out of concerns that nutrition content claims on foods of lower nutritional quality may mislead consumers. The research objectives of this study were to investigate:

- The impact of presence of a nutrition content claim on consumer product evaluations (i.e. on purchase intention, nutritional attitude, perceived number of types of people benefiting from consuming the product, and perceived number of types of health benefits from product consumption). This impact was assessed across four products which did not meet the NPSC: ice cream, frozen lasagne, fruit drink, and potato chips; and

- The impact of socio-demographic, cognitive, and behavioural factors in predicting consumer's product evaluations (i.e. purchase intention, nutritional attitude, perceived number of types of people benefiting from consuming the product, and perceived number of types of health benefits from product consumption).

The key finding was that nutrition content claims did not significantly enhance respondent evaluations of the four product types tested. Only in one case did the presence of a nutrition content claim have significant impact. Respondents exposed to an antioxidant content claim on a fruit juice drink reported significantly higher numbers of types of people who would benefit from consuming the fruit drink than those exposed to the product without the claim. However the claim presence only accounted for 0.4% of the variance. This general finding is consistent with both the experimental and supermarket studies previously undertaken.

Purchase intention across the four products and overall were moderate both for respondents exposed to a claim and not exposed to a claim. Similarly, overall scores for nutrition attitude towards the four products were relatively low and consistent across the two treatment groups (claim/no claim). Overall and across all four products respondents perceived that the consumption of the products as being beneficial to very few, if any, types of people and having few to no types of health benefits. These perceptions were consistent across treatment group (claim/no claim) and were the strongest in relation to the consumption of potato chips.

While the presence of a nutrition content claim did not significantly impact consumer's evaluations, a number of socio-demographic, cognitive and behavioural factors did contribute significantly to the evaluations.

Country of residence was a significant factor in all four evaluation measures for all four products both individually and also overall. Australians consistently scored higher purchase intentions, nutrition attitudes, perceptions of the number of types of people who would benefit from consuming and the number of types of health benefits from consuming the products than New Zealand based respondents.

While not significant in all circumstances household income, nutrition knowledge, and knowledge of micronutrient functions were important factors for most evaluations. Lower household income, lower nutrition knowledge, and a higher reported knowledge of micronutrient functions were consistently associated with higher scores for purchase intention, nutrition attitude, the number of types of people who would benefit and the number of types of health benefits from consuming the products.

To a smaller degree age, gender, dependents in the household, education level, health concerns, and motivation to read nutrition labels also yielded an effect on evaluations. Respondents with no health concerns scored higher on nutrition attitude to ice cream and for the four products overall, perceived number of the types of people benefiting from consuming fruit drink and the products overall, and perceived number of types of health benefits from consuming fruit drink the four products overall.

Lower education level was predictive of higher scores on purchase intentions for fruit drink and overall for the four products, nutrition attitude to frozen lasagne, fruit drink, and overall for the four products, and perceived number of the types of health benefits from consumption of the frozen lasagne and all four products.

Males scored higher on purchase intentions for frozen lasagne and fruit drink, higher on nutrition attitude to frozen lasagne, fruit drink and overall for the four products, higher perceptions of the number of types of people benefiting from consuming fruit drink and potato chips, and higher perceptions of the number of types of health benefits from consuming all four products individually and overall.

Age had a slight effect on product evaluations. Younger respondents scored higher on their perceptions of the number of types of people benefiting from consuming fruit drink and potato chips, as well as the number of types of health benefits from consuming the products individually and overall, with the exception of the consumption of ice cream.

Older respondents scored higher on their nutrition attitudes towards ice cream than the younger respondents.

The presence of health concerns factored in slightly in the evaluations with respondents with health concerns having higher scores than those with general or specific health concerns for: purchase intention towards fruit drink and overall for all four products, nutrition attitude towards frozen lasagne, fruit drink, and overall for all products, and perceptions of the number of types of health benefits from consuming fruit drink and overall for all the products. In line with these results, respondents who paid little attention to a healthy diet and had a low willingness to try novel foods scored higher across all four evaluation measures and all four products both individually and overall.

The presence of dependents in the household resulted in higher scores compared to those with no dependents in the household on: nutrition attitude overall for the four products, and purchase intentions towards ice cream, potato chips, and overall for the four products.

Finally, moderate motivation to read the nutrition information on the products, as opposed to low or high, was associated with higher purchase intentions towards ice cream, and higher nutrition attitudes towards potato chips and overall for all four products.

To summarise, exposure to nutrition content claims about vitamins, minerals and biologically active substances on the ice cream, frozen lasagne, fruit drink, and potato chip packaging presented in product images via an online survey did not enhance consumer's product evaluations or purchase intentions. Only in the instance of the fruit drink did the presence of a claim significantly affect their evaluation of the number of types of people who would benefit from the consuming the product.

Consistent with the findings of the previous macronutrient content claims survey there were several socio-demographic, cognitive, and behavioural factors which influenced consumer's purchase intentions and product evaluations. However, the strength of influence was relatively weak, accounting for overall no more than 17% of the variance. This indicates that there are other factors which are influencing consumers purchase intentions and product evaluations, at least for foods which are of low nutrition quality, which have not been captured by this research.

The findings of this study may, to some extent, be limited by the online methodology in which the exposure to the products is not the same as the real-life shopping environment. A possible limitation of the implementation of the survey online could include the potential differences in the appearance (e.g. picture quality, size, visibility) of the products based upon different respondents' computer screens, however as each respondent would view all

pictures on the same screen, this limitation is only likely to increase the variability of responses rather than contribute to bias. Irrespective of the specific methodology used, it is possible that respondents may have focused more intently on the packaging and labelling than they would normally do, simply as a result of being part of the survey. As the sample was drawn from an online research panel, it may include some respondents who, as they regularly participate in research, may feel in some way 'obligated' to prepare for future surveys by paying more attention to in-store product packaging. At the same time, it may also include other respondents who, as they regularly participate in research, may feel less inclined to take a close interest in the project at hand. Overall, there seems no reason to believe that the methodology has had any consistent influence on the results in any particular direction.

The strength of this study's methodology include the absence of interviewer influence on participations, the random assignment of participations across experimental conditions, and controlling the sample stratification by age, gender, and country so it reflects the overall population.

Based upon the findings of this study it is recommended that future research focuses on uncovering the other factors which are influencing consumers' purchase intention and product evaluations in relation to nutrition value, people who would benefit, and the health benefits associated with products of lower nutritional value. A combination of qualitative methodology, such as focus groups with main grocery buyers, and follow-up quantitative research based upon the information generation may be of benefit.

APPENDIX A: SAMPLE PLAN

Table 32: Sample Plan for Ice Cream

	AUSTRALIA		NEW ZEALAND		TOTAL
	Female	Male	Female	Male	
Ice Cream Experimental Group 1 (Source of Calcium)					
18-34	44	24	15	6	89
35-54	72	32	32	12	148
55+	62	32	27	8	129
Total	178	88	74	26	**366**
Ice Cream Experimental Group 2 (Source of Phosphorus)					
18-34	44	25	15	6	90
35-54	72	32	32	11	147
55+	62	32	27	9	130
Total	178	89	74	26	**367**
Ice Cream Control Group (Absence of claim)					
18-34	44	25	15	5	89
35-54	72	32	33	11	148
55+	62	32	27	9	130
Total	178	89	75	25	**367**

Table 33: Sample Plan for Frozen Lasagne

	AUSTRALIA		NEW ZEALAND		TOTAL
	Female	Male	Female	Male	
Frozen Meal Experimental Group 1a (Source of Iron + moderate-high fat NIP)					
18-34	22	12	8	3	45
35-54	36	16	16	5	73
55+	31	16	14	4	65
Total	89	44	38	12	**183**
Frozen Meal Experimental Group 1b (Source of Iron + lower-moderate fat NIP)					
18-34	22	12	8	3	45
35-54	36	16	16	5	73
55+	31	16	14	4	65
Total	89	44	38	12	**183**
Frozen Meal Experimental Group 2a (Source of Selenium + moderate-high fat NIP)					
18-34	23	12	8	3	46
35-54	36	16	16	5	73
55+	31	16	14	4	65
Total	90	44	38	12	**184**
Frozen Meal Experimental Group 2b (Source of Selenium + lower-moderate fat NIP)					
18-34	22	12	8	3	45
35-54	36	16	16	5	73
55+	31	16	14	4	65
Total	89	44	38	12	**183**
Frozen Meal Control Group (Absence of Claim)					
18-34	44	25	15	5	89
35-54	72	32	33	12	149
55+	62	32	27	8	129
Total	178	89	75	25	367

Table 34: Sample Plan for Fruit Drink

	AUSTRALIA		NEW ZEALAND		TOTAL
	Female	**Male**	**Female**	**Male**	
Fruit Drink Experimental Group 1 (Contains Anti-oxidants-flavonoids)					
18-34	44	24	15	6	89
35-54	72	32	32	12	148
55+	62	32	27	8	129
Total	178	88	74	26	**366**
Fruit Drink Experimental Group 2 (Contains Beta-cryptoxanthins)					
18-34	44	25	15	6	90
35-54	72	32	32	11	147
55+	62	32	27	9	130
Total	178	89	74	26	**367**
Fruit Drink Control Group (Absence of claim)					
18-34	44	25	15	5	89
35-54	72	32	33	11	148
55+	62	32	27	9	130
Total	178	89	75	25	**367**

Table 35: Sample Plan for Potato Chips

	AUSTRALIA		NEW ZEALAND		TOTAL
	Female	**Male**	**Female**	**Male**	
Potato Chip Experimental Group 1 (Source of Niacin)					
18-34	44	24	15	6	89
35-54	72	32	32	12	148
55+	62	32	27	8	129
Total	178	88	74	26	**366**
Potato Chip Experimental Group 2 (Source of Vitamin C)					
18-34	44	25	15	6	90
35-54	72	32	32	11	147
55+	62	32	27	9	130
Total	178	89	74	26	**367**
Potato Chip Control Group (Absence of claim)					
18-34	44	25	15	5	89
35-54	72	32	33	11	148
55+	62	32	27	9	130
Total	178	89	75	25	**367**

APPENDIX B: ACHIEVED SAMPLE

Table 36: Actual cell sizes achieved for Ice Cream

	AUSTRALIA		NEW ZEALAND		TOTAL
	Female	Male	Female	Male	
Ice Cream Experimental Group 1 (Source of Calcium)					
18-34	43	24	16	7	90
35-54	75	32	33	13	153
55+	63	32	27	8	130
Total	181	88	76	28	**373**
Ice Cream Experimental Group 2 (Source of Phosphorus)					
18-34	45	25	18	6	94
35-54	74	32	33	12	151
55+	62	30	27	11	130
Total	181	87	78	29	**375**
Ice Cream Control Group (Absence of claim)					
18-34	45	26	16	5	92
35-54	79	32	34	12	157
55+	62	33	26	9	130
Total	186	91	76	26	**379**

Table 37: Actual cell sizes achieved for Frozen Lasagne

	AUSTRALIA		NEW ZEALAND		TOTAL
	Female	Male	Female	Male	
Frozen Meal Experimental Group 1a (Source of Iron + moderate-high fat NIP)					
18-34	24	7	4	4	39
35-54	29	20	15	6	70
55+	35	18	18	1	72
Total	88	45	37	11	**181**
Frozen Meal Experimental Group 1b (Source of Iron + lower-moderate fat NIP)					
18-34	19	17	12	3	51
35-54	46	12	18	7	83
55+	28	14	9	7	58
Total	93	43	39	17	**192**
Frozen Meal Experimental Group 2a (Source of Selenium + moderate-high fat NIP)					
18-34	23	11	10	1	45
35-54	32	18	14	7	71
55+	27	17	13	4	61
Total	82	46	37	12	**177**
Frozen Meal Experimental Group 2b (Source of Selenium + lower-moderate fat NIP)					
18-34	22	14	8	5	49
35-54	42	14	19	5	80
55+	35	13	14	7	69
Total	99	41	41	17	**198**
Frozen Meal Control Group (Absence of Claim)					
18-34	45	26	16	5	92
35-54	79	32	34	12	157
55+	62	33	26	9	130
Total	186	91	76	26	**379**

Table 38: Actual cell sizes achieved for Fruit Drink

	AUSTRALIA		NEW ZEALAND		TOTAL
	Female	Male	Female	Male	
Fruit Drink Experimental Group 1 (Contains Anti-oxidants-flavonoids)					
18-34	43	24	16	7	90
35-54	75	32	33	13	153
55+	63	32	27	8	130
Total	181	88	76	28	**373**
Fruit Drink Experimental Group 2 (Contains Beta-cryptoxanthins)					
18-34	45	25	18	6	94
35-54	74	32	33	12	151
55+	62	30	27	11	130
Total	181	87	78	29	**375**
Fruit Drink Control Group (Absence of claim)					
18-34	45	26	16	5	92
35-54	79	32	34	12	157
55+	62	33	26	9	130
Total	186	91	76	26	**379**

Table 39: Actual cell sizes achieved for Potato Chips

	AUSTRALIA		NEW ZEALAND		TOTAL
	Female	**Male**	**Female**	**Male**	
Potato Chip Experimental Group 1 (Source of Niacin)					
18-34	43	24	16	7	90
35-54	75	32	33	13	153
55+	63	32	27	8	130
Total	181	88	76	28	**373**
Potato Chip Experimental Group 2 (Source of Vitamin C)					
18-34	45	25	18	6	94
35-54	74	32	33	12	151
55+	62	30	27	11	130
Total	181	87	78	29	**375**
Potato Chip Control Group (Absence of claim)					
18-34	45	26	16	5	92
35-54	79	32	34	12	157
55+	62	33	26	9	130
Total	186	91	76	26	**379**

APPENDIX C: ADDITONAL TABLES

Table 40: Normality, skewness, and kurtosis of Purchase Intention (overall and by product)

Dependent Variable: Purchase Intention	Kolmogorov-Smirnov			Skewness	Kurtosis
	Statistic	df	Sign.		
Overall	.037	1124	<.001	.009	-.693
Ice Cream	.120	1104	<.001	-.252	-.988
Frozen Lasagne	.150	1114	<.001	.120	-1.362
Fruit Drink	.129	1117	<.001	-.004	-1.279
Potato Chips	.128	1105	<.001	-.201	-1.143

Table 41: Normality, skewness, and kurtosis of Nutrition Attitude (overall and by product)

Dependent Variable: Nutrition Attitude	Kolmogorov-Smirnov			Skewness	Kurtosis
	Statistic	df	Sign.		
Overall	.053	1107	<.001	.182	-.498
Ice Cream	.097	1040	<.001	.022	-.823
Frozen Lasagne	.101	1060	<.001	-.029	-.903
Fruit Drink	.125	1064	<.001	-.197	-.919
Potato Chips	.118	1065	<.001	.352	-.926

Table 42: Normality, skewness, and kurtosis of Types of People who would Benefit (overall and by product)

Dependent Variable: Who would benefit	Kolmogorov-Smirnov			Skewness	Kurtosis
	Statistic	df	Sign.		
Overall	.110	1127	<.001	.663	-.195
Ice Cream	.293	1127	<.001	.716	-.936
Frozen Lasagne	.258	1127	<.001	.693	-.922
Fruit Drink	.209	1127	<.001	-.128	-1.620
Potato Chips	.436	1127	<.001	2.257	4.099

Table 43: Normality, skewness, and kurtosis of Types of Health Benefits (overall and by product)

Dependent Variable: Types of Health Benefits	Kolmogorov-Smirnov			Skewness	Kurtosis
	Statistic	df	Sign.		
Overall	.199	1127	<.001	1.911	3.928
Ice Cream	.274	1127	<.001	2.346	4.993
Frozen Lasagne	.299	1127	<.001	2.047	3.279
Fruit Drink	.169	1127	<.001	.744	-.811
Potato Chips	.369	1127	<.001	3.512	12.122

APPENDIX D: TECHNICAL APPENDIX

Assumptions of Analyses

Multiple Linear Regression

Major assumptions of Multiple Linear Regression are:

1. Linearity of the relationship between dependent and independent variables
2. Independence of the errors
3. Homoscedasticity (constant variance) of the errors
4. Normality of the error distribution

To look at the regression assumptions, plots for each regression equation of *residuals versus predicted values* and normal Q-Q plots of to test he normality of the distribution were constructed, and examined.

In summary:

DV1 (Purchase intention):

Linearity – graph shows linear (i.e. not curvilinear)
Homoscedasticity – no evidence of violation from graphs
Normality – mostly normal as data points centred around zero
(normality is not essential for regression)
Independence – no issues with collinearity or singularity

DV2 (Nutrition Attitude):

Linearity – graph shows linear (i.e. not curvilinear)
Homoscedasticity – no evidence of violation from graphs
Normality – mostly normal as data points centred around zero
(normality is not essential for regression)
Independence – no issues with collinearity or singularity

DV3 (Perceived Number of Types of People Benefiting):

Linearity – graph shows linear (i.e. not curvilinear)
Homoscedasticity – no evidence of violation from graphs
Normality – mostly normal as data points centred around zero
(normality is not essential for regression)
Independence – no issues with collinearity or singularity

DV4 (Perceived Number of Types of Health Benefits):

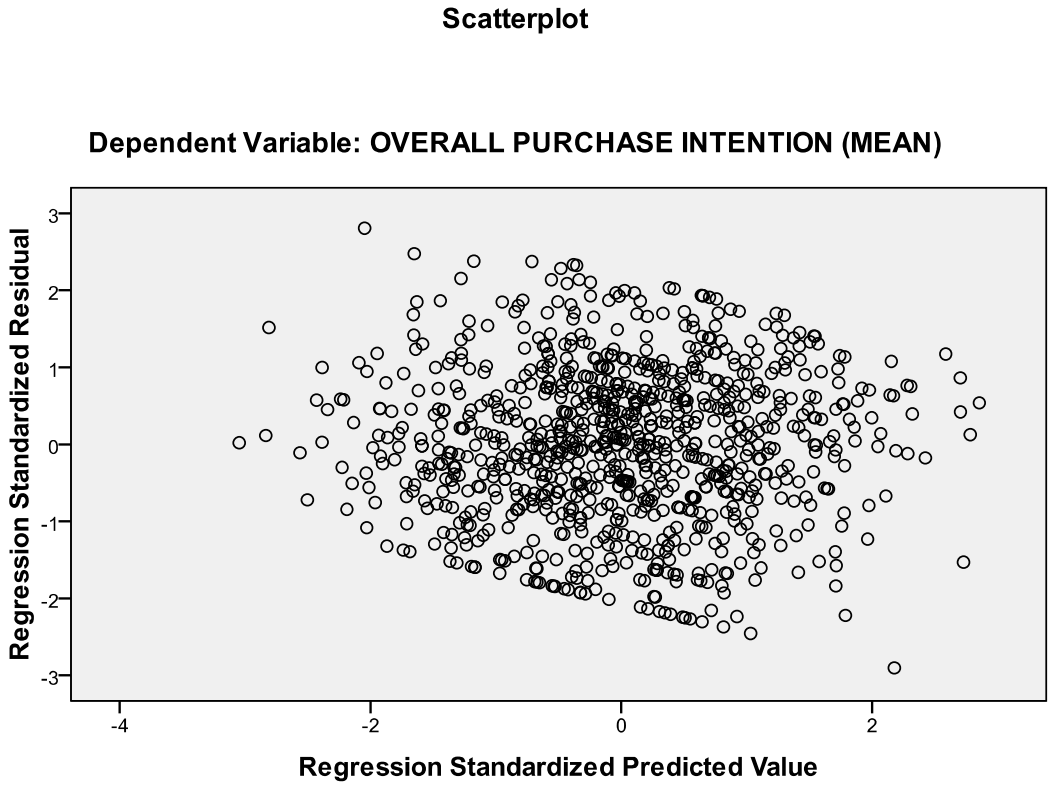
Linearity – graph shows slight curvlinearity
Homoscedasticity – no evidence of violation from graphs
Normality – mostly normal as data points centred around zero
(normality is not essential for regression)
Independence – no issues with collinearity or singularity

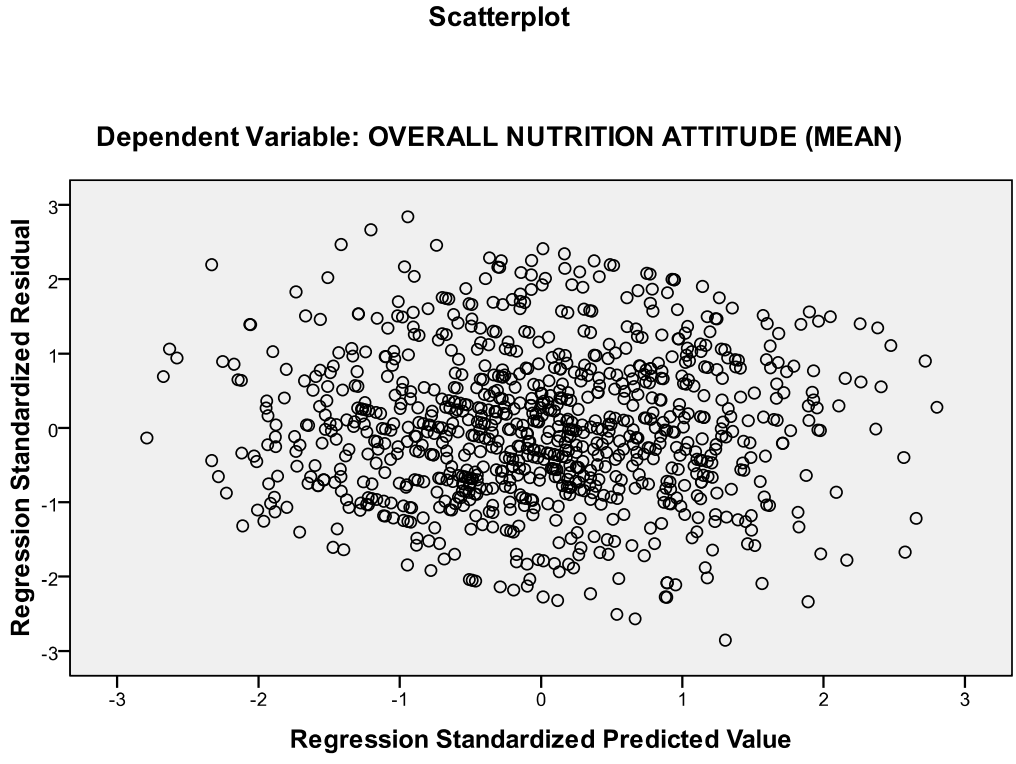
Therefore, for the four dependent variables overall there appears to be no major violations of the essential assumptions of regression.

Rationale for the Hierarchical Multiple Linear Regressions

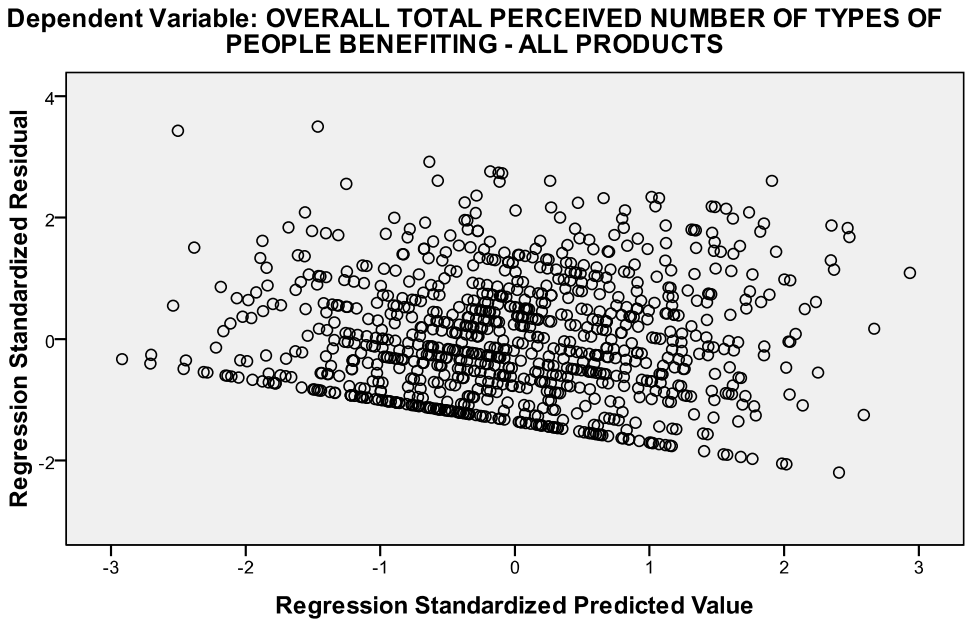
To conduct the Multiple Linear Regression analyses, variable manipulations were required, as an assumption of Multiple Linear Regression is that all independent variables be either interval or ratio scales; however, dichotomous variables (2-3 levels) are also permitted. The variables included in all Multiple Regression Analyses are outlined in section 4.3, as in the manipulation required to allow inclusion in the analyses. Please note, that the regression indicated that the independent variables were correlated but to a small degree. Multicollinearity was not as issue as indicated by standardised beta coefficients less than 1, high tolerance values, low condition index, and all eigenvalues above 0. Thus, the independent variables were sufficiently distinct to be included in each analysis.

Plots of residuals vs predicted values of the DVs

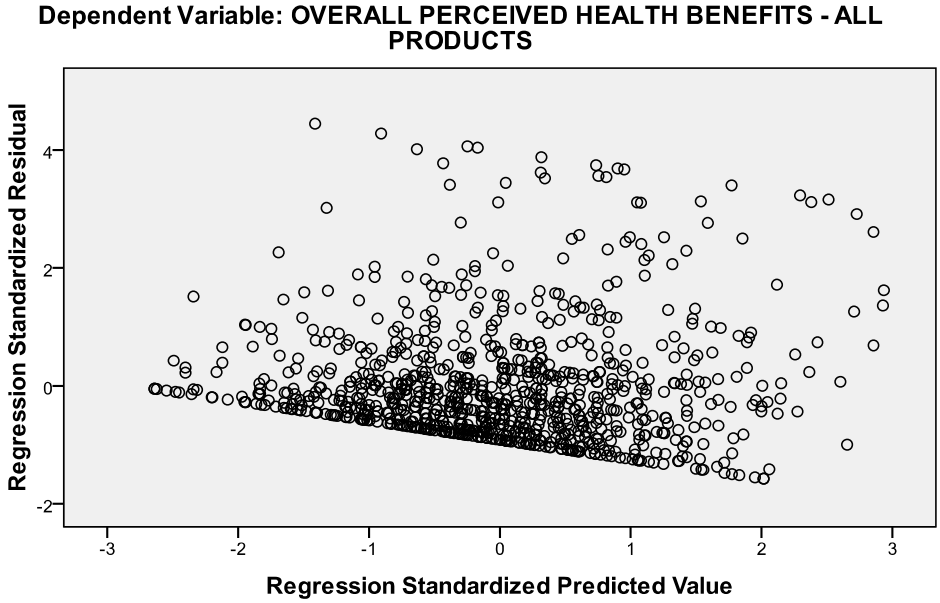




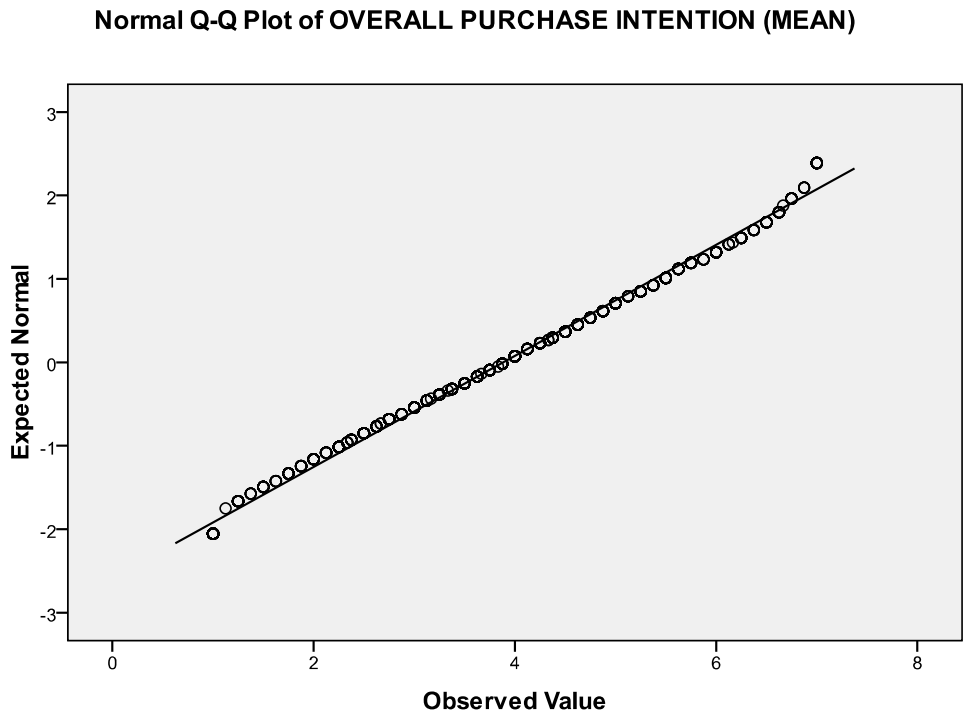
Scatterplot

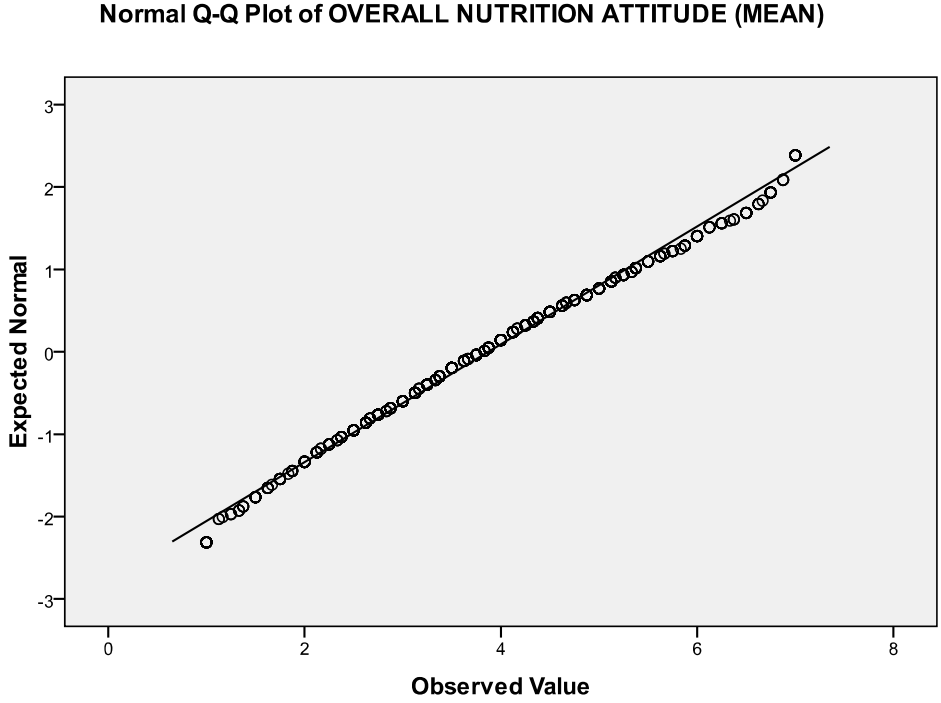


Scatterplot

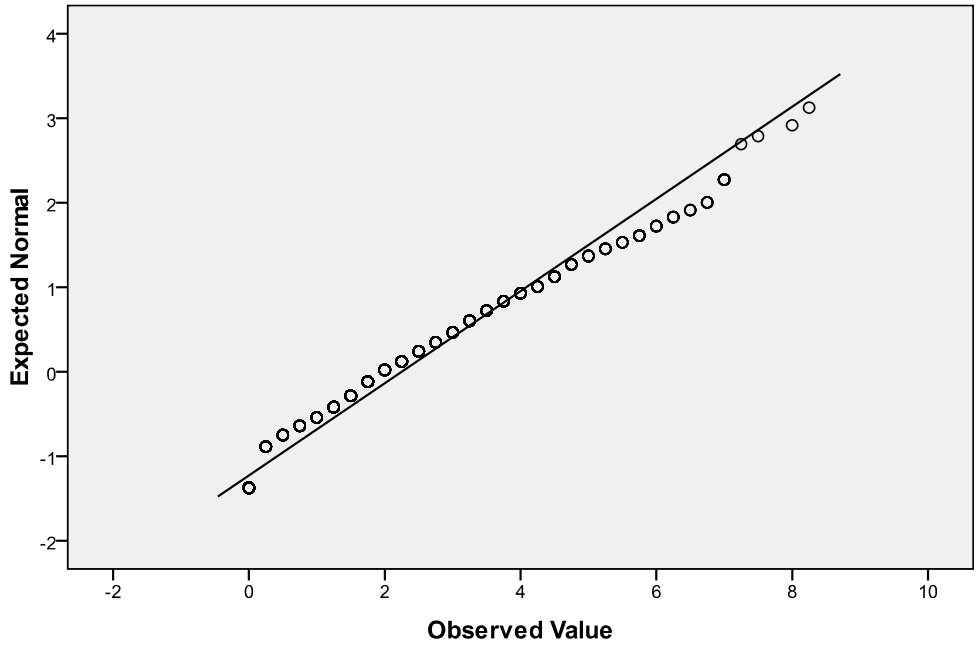


Normal Q-Q Plots – Normality of Distribution

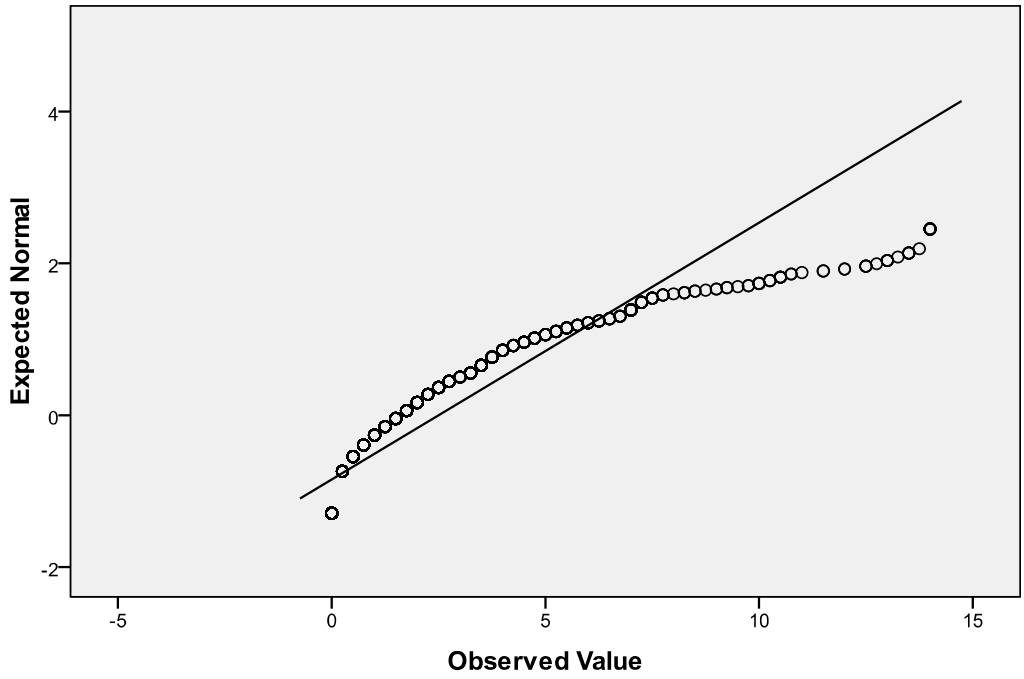




Normal Q-Q Plot of OVERALL TOTAL PERCEIVED NUMBER OF TYPES OF PEOPLE BENEFITING - ALL PRODUCTS



Normal Q-Q Plot of OVERALL PERCEIVED HEALTH BENEFITS - ALL PRODUCTS



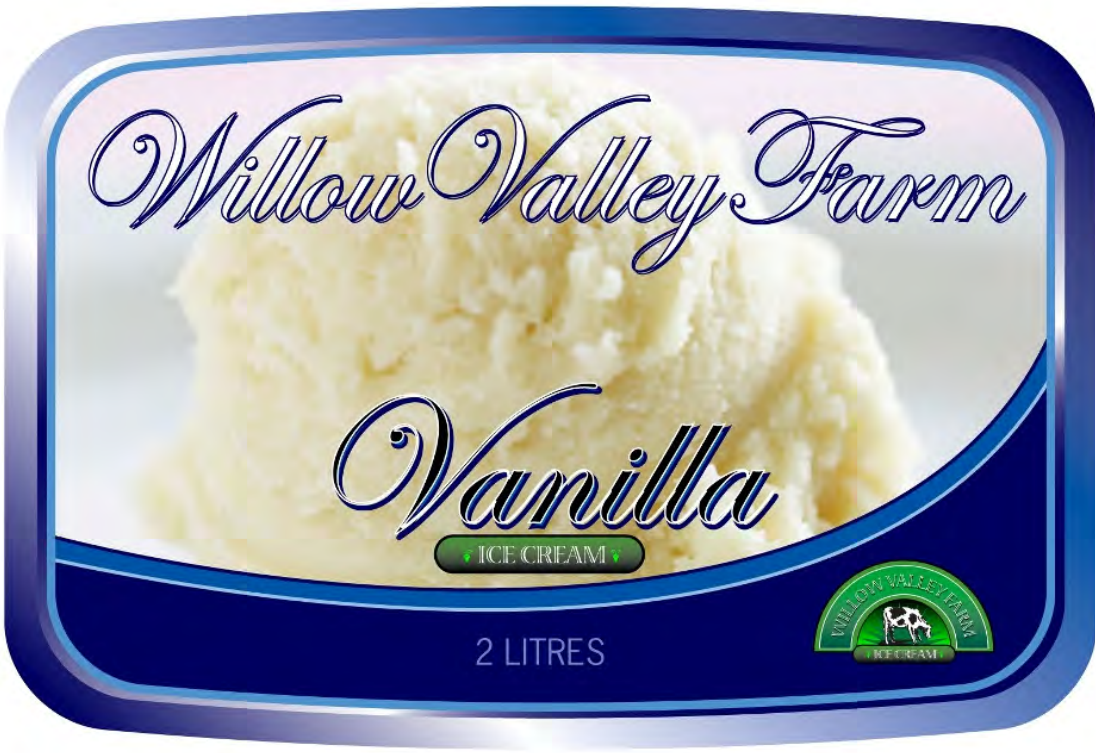
APPENDIX E: PICTURES OF STIMULI

Ice Cream

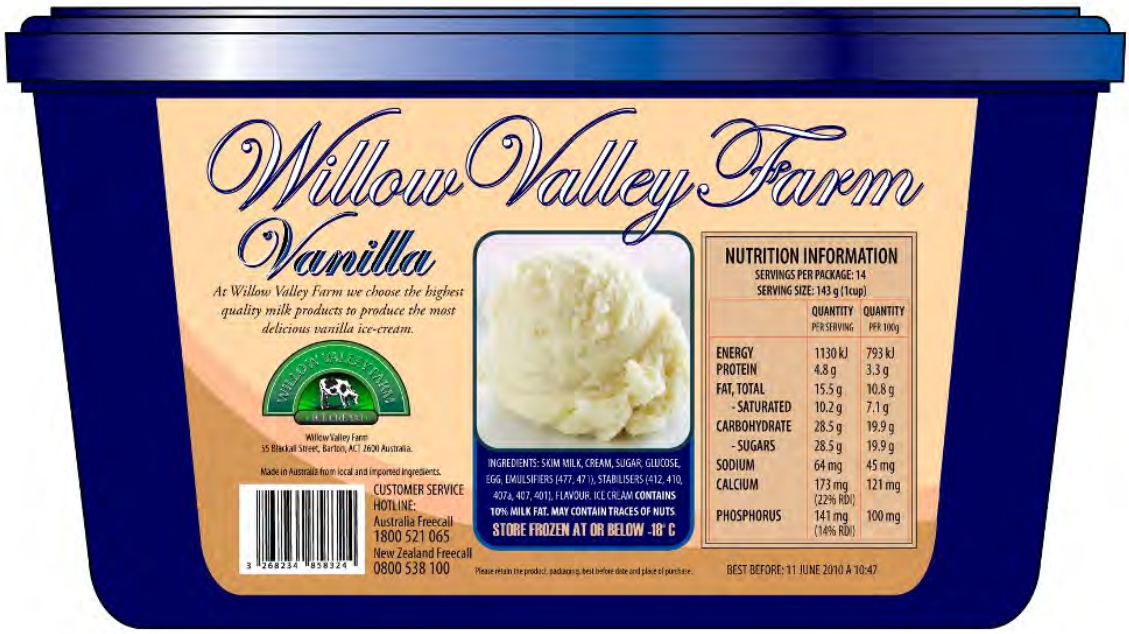
Experimental Group 1 (Source of Calcium) – Front of Container

Experimental Group 2 (Source of Phosphorus) – Front of Container

Control Group (No claim) – Front of Container



All Groups – Back of Packet (moderately high sugar NIP)



Frozen Lasagne

Experimental Group 1a and 1b (Source of Iron) – Front of Packet

Experimental Group 2a and 2b (Source of selenium) – Front of Packet

Control Group (No claim) – Front of Packet

Experimental Group 1a, 2a, and control 3a – Back Packet (moderately-high fat NIP)

Experimental Group 1b, 2b, and control 3b – Back Packet (lower-moderate fat NIP)

Fruit Drink

Experimental Group 1 (Contains antioxidants-flavonoids) – Front of Container

Experimental Group 2 (Contains beta-cryptoxanthins) – Front of Container

Control Group (No claim) – Front of Container

All Conditions – Back of Container (moderately-high sugar NIP)

Potato Chips

Experimental Condition 1 (Source of Niacin) – Front of Packet

Experimental Group 2 (Source of Vitamin C) – Front of Packet

Control Conditions (No claim) – Front of Packet

All Groups – Back of Packet (moderately high fat NIP)

APPENDIX F: QUESTIONNAIRE

Thank you for agreeing to take part in this survey. Today we're conducting a survey about food choices on behalf of Food Standards Australia New Zealand. The survey will take approximately 30 minutes to complete and will be used only for research purposes. Participating in this survey will allow you to provide your opinions and have your say.

Tips for completing the survey.

To navigate through the survey, please use the buttons within the survey.

Please DO NOT use the refresh, back or forward buttons on your browser.

If you wish to leave the survey and complete it later or if you are experiencing technical difficulties, press the stop button at the bottom of the survey.

If you do not click the stop button you will not be able to access the survey for up to 20 minutes.

The survey includes front and back images of food products, to be looked at as you would in a real life store situation. You may or may not wish to enlarge parts of the images. Should you wish to do so, click the 'Enlarge' button and then move the

button to the right.

If you experience technical difficulties please call 1800 337 332 to assist.

Please maximise this window before you continue.

Click NEXT to begin the survey.

QSCREEN. How much of the food and grocery shopping do you do for your household?

1. all or most of the food and grocery shopping
2. about half of the food and grocery shopping
3. less than half of the food and grocery shopping
4. none of the food and grocery shopping

IF NOT RESPONSIBLE FOR ANY OF THE FOOD OR GROCERY SHOPPING (Code 3 or 4 on QSCREEN) TERMINATE: Thank you but for this survey need people who are responsible for half or more of the food or grocery shopping.

ENDIF

QSCREENAGE. Age?

1. Under 18
2. 18-34
3. 35-54
4. 55+
5. Can't Say

IF UNDER 18 OR CAN'T SAY (Code 1 or Code 5 on QSREENAGE) TERMINATE: Thank you for your time, but for this survey we need to interview people of a certain age.

IF QUOTA FILLED TERMINATE: Thank you for your time, but you do not qualify for this survey at this time.

ENDIF

QSCREENSEX. Are You?

1. Male
2. Female

IF QUOTA FILLED TERMINATE: Thank you for your time, you do not qualify for this survey at this time.

ENDIF

You are about to see an image of an ice cream that you might buy at your local supermarket. Please look at this image in the same manner, and for as long as you would normally look at a similar product in a store situation.

INSERT SCREEN THAT CONTAINS FOOD IMAGE OF AN ICE CREAM PACK (RANDOMISE THE ORDER OF ALL FOUR FOOD PRODUCTS). THIS SCREEN WILL CONTAIN AN OPTIONAL LINK TO EITHER ANOTHER SCREEN THAT DISPLAYS THE BACK OF THE PRODUCT. THE RESPONDENT WILL BE ABLE TO TOGGLE BETWEEN THE 2 SCREENS. MULTIPLE TIMERS WILL BE ATTACHED TO THE 'BACK VIEW' SO THAT THE TOTAL TIME THE RESPONDENT SPENDS VIEWING THE BACK OF THE IMAGE CAN BE RECORDED AND AGGREGATED.

Q1. Thinking about the ice cream you have just seen:

[Single]

Q1A. How likely is it that you would purchase this ice cream?

1 Not at all likely	2	3	4	5	6	7 Very likely	99 Don't know

[Single]

Q1B. Assuming this ice cream has a cost that is similar to others on the market, how likely is it that you would purchase this ice cream?

1 Not at all likely	2	3	4	5	6	7 Very likely	99 Don't know

[Single]

Q1C. How would you rate the nutritiousness of this ice cream?

1 Poor	2	3	4	5	6	7 Good	99 Don't know

[Single]

Q1D. What is your overall attitude towards the nutrition content of this ice cream?

1 Unfavourable	2	3	4	5	6	7 Favourable	99 Don't know

[Multiple]

Q1E. Below is a list of some types of people. For each one, do you think they would or would not benefit from eating this ice cream as a regular part of the diet?

RANDOMISE

	Yes, Would Definitely Benefit	Yes, Would Somewhat Benefit	No, Would Probably Not Benefit	No, Would Definitely Not Benefit	Don't Know
Women	1	2	3	4	99
Men	1	2	3	4	99
Children	1	2	3	4	99
Pregnant women	1	2	3	4	99
Older people	1	2	3	4	99
People trying to lose weight	1	2	3	4	99
People with particular health problems	1	2	3	4	99

[Multiple]

Are there any other types of people who would benefit from eating this ice cream as a regular part of their diet? If yes, please specify in boxes below (one per box):

Other types of people 1

(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of people 2

(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of people 3

(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of people 4

(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

[Single]

For each of these other types of people, to what extend would they benefit from eating this ice cream as a regular part of the diet?

	Yes, Would Definitely Benefit	Yes, Would Somewhat Benefit	Don't know
Other types of people 1	1	2	3

Other types of people 2	1	2	3
Other types of people 3	1	2	3
Other types of people 4	1	2	3

[Multiple]

Q1F. Below is a list of some nutrition and health benefits.

Do you think the following types of health benefits would result from eating this ice cream as a regular part of the diet?

RANDOMISE

	Yes, a Definite Benefit	Yes, Somewhat of a Benefit	No, not Really a Benefit	No, Definitely not a Benefit	Don't Know
Healthy bones and teeth	1	2	3	4	99
More energy from food	1	2	3	4	99
Healthy blood cells	1	2	3	4	99
Preventing cold or flu	1	2	3	4	99
Protection of body's cells from some types of damage	1	2	3	4	99
Good eyesight	1	2	3	4	99
Healthy pregnancy	1	2	3	4	99
Healthy kidney function	1	2	3	4	99
A reduced risk of cancer	1	2	3	4	99
Healthy blood pressure	1	2	3	4	99
Healthy thyroid function	1	2	3	4	99
A reduced risk of diabetes	1	2	3	4	99
Healthy immune function	1	2	3	4	99
Healthy digestion	1	2	3	4	99

[Multiple]

Are there any other types of health benefits from eating this ice cream as a regular part of the diet? If yes, please specify in boxes below (one per box):

Other types of health benefits 1

(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of health benefits 2
(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of health benefits 3
(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of health benefits 4
(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

[Single]
For each type of health benefit you listed, to what extend do you think this health benefit would result from eating this ice cream?

	Yes, Would Definitely Benefit	Yes, Would Somewhat Benefit	Don't know
Other types of benefits 1	1	2	3
Other types of benefits 2	1	2	3
Other types of benefits 3	1	2	3
Other types of benefits 4	1	2	3

[Multiple]
Q1G. Thinking about how likely or unlikely it is that you would buy this ice cream. There may have been many and varied reasons why you indicated how likely or unlikely you would be to purchase this ice cream. Of the following, which if any, influenced your decision to buy or not to buy it?

THE BELOW TABLE WILL BE PRESENTED AS A GRID WITH A SMALL PICTURE FOR EACH OPTION. (EXCEPT OPTIONS: 1-YOUR GENERAL KNOWLEDGE, 97-NONE OF THE ABOVE/DID NOT USE ANY INFO AND 99- DON'T KNOW WHICH WILL BE PRESENTED IN TEXT). EACH OPTION SHOULD HAVE A TICK BOX BELOW IT SO THE RESPONDENT CAN SELECT THAT OPTION.

RANDOMISE

How represented	*Item*	
Picture	Ingredients list	
Picture	Claims i.e "Source of Calcium", "Source of Phosphorus"	
Picture	Nutrition information panel	
Picture	Pictures of the food used on the label	
Picture	Brand name, logo, manufacturer's name	

Picture	Allergen declarations	
Picture	Country of origin (Australia)	
Picture	The best before date	
Picture	Flavour	
Picture	Descriptions of the product	
Picture	Package size	
Picture	Customer service hotline information	
Words	Your general knowledge	
Words	None of above	
Words	Don't know	

Did you use any other types of information?

97. Yes (Please Specify in box below) [open-ended]

98. No

ENDIF

You are about to see an image of a frozen meal that you might buy at your local supermarket. Please look at this image in the same manner, and for as long as you would normally look at a similar product in a store situation.

INSERT SCREEN THAT CONTAINS FOOD IMAGE OF A FROZEN LASAGNE PACK (RANDOMISED BETWEEN ALL FOUR PRODUCTS). THE SCREEN WILL CONTAIN AN OPTIONAL LINK TO EITHER ANOTHER SCREEN OR A POP UP WINDOW THAT DISPLAYS THE BACK OF THE PRODUCT. THE RESPONDENT WILL BE ABLE TO TOGGLE BETWEEN THE 2 SCREENS. MULTIPLE TIMERS WILL BE ATTACHED TO THE 'BACK VIEW' SO THAT THE TOTAL TIME THE RESPONDENT SPENDS VIEWING THE BACK OF THE LASAGNE PACK CAN BE RECORDED AND AGGREGATED.

Q2. Thinking about the frozen meal you have just seen:

[Single]

Q2A. How likely is it that you would purchase this frozen meal?

1 Not at all likely	2	3	4	5	6	7 Very likely	99 Don't know

[Single]

Q2B. Assuming this frozen meal has a cost that is similar to others on the market, how likely is it that you would purchase this frozen lasagne?

1 Not at all likely	2	3	4	5	6	7 Very likely	99 Don't know

[Single]

Q2C. How would you rate the nutritiousness of this frozen lasagne?

1 Poor	2	3	4	5	6	7 Good	99 Don't know

[Single]

Q2D. What is your overall attitude towards the nutrition content of this frozen meal?

1 Unfavourable	2	3	4	5	6	7 Favourable	99 Don't know

[Multiple]

Q2E. Below is a list of some types of people. For each one, do you think they would or would not benefit from eating this frozen meal as a regular part of the diet?

RANDOMISE

	Yes, Would Definitely Benefit	Yes, Would Somewhat Benefit	No, Would Probably Not Benefit	No, Would Definitely Not Benefit	Don't Know
Women	1	2	3	4	99
Men	1	2	3	4	99
Children	1	2	3	4	99
Pregnant women	1	2	3	4	99
Older people	1	2	3	4	99
People trying to lose weight	1	2	3	4	99

People with particular health problems	1	2	3	4	99

[Multiple]

Are there any other types of people who would benefit from eating this frozen meal as a regular part of their diet? If yes, please specify in boxes below (one per box):

Other types of people 1

(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of people 2

(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of people 3

(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of people 4

(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

[Single]

For each of these other types of people, to what extend would they benefit from eating this frozen meal as a regular part of the diet?

	Yes, Would Definitely Benefit	Yes, Would Somewhat Benefit	Don't know
Other types of people 1	1	2	3
Other types of people 2	1	2	3
Other types of people 3	1	2	3
Other types of people 4	1	2	3

[Multiple]

Q2F. Below is a list of some nutrition and health benefits.

Do you think the following types of health benefits would result from eating this frozen meal as a regular part of the diet?

RANDOMISE

	Yes, a Definite Benefit	Yes, Somewhat of a	No, not Really a	No, Definitely not a	Don't Know

		Benefit	Benefit	Benefit	
Healthy bones and teeth	1	2	3	4	99
More energy from food	1	2	3	4	99
Healthy blood cells	1	2	3	4	99
Preventing cold or flu	1	2	3	4	99
Protection of body's cells from some types of damage	1	2	3	4	99
Good eyesight	1	2	3	4	99
Healthy pregnancy	1	2	3	4	99
Healthy kidney function	1	2	3	4	99
A reduced risk of cancer	1	2	3	4	99
Healthy blood pressure	1	2	3	4	99
Healthy thyroid function	1	2	3	4	99
A reduced risk of diabetes	1	2	3	4	99
Healthy immune function	1	2	3	4	99
Healthy digestion	1	2	3	4	99

[Multiple]

Are there any other types of health benefits from eating this frozen meal as a regular part of the diet? If yes, please specify in boxes below (one per box):

Other types of health benefits 1

(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of health benefits 2

(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of health benefits 3

(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of health benefits 4

(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

[Single]

For each type of health benefit you listed, to what extend do you think this health benefit would result from eating this frozen meal?

	Yes, Would	Yes, Would	Don't know

	Definitely Benefit	Somewhat Benefit	
Other types of benefits 1	1	2	3
Other types of benefits 2	1	2	3
Other types of benefits 3	1	2	3
Other types of benefits 4	1	2	3

[Multiple]

Q2G. Thinking about how likely or unlikely you would be to buy this frozen meal. There may have been many and varied reasons why you indicated how likely or unlikely you would be to purchase this frozen meal. Of the following, which if any, influenced your decision to buy or not to buy it?

THE BELOW TABLE WILL BE PRESENTED AS A GRID WITH A SMALL PICTURE FOR EACH OPTION. (EXCEPT OPTIONS: 1-YOUR GENERAL KNOWLEDGE, 97-NONE OF THE ABOVE/DID NOT USE ANY INFO AND 99- DON'T KNOW WHICH WILL BE PRESENTED IN TEXT). EACH OPTION SHOULD HAVE A TICK BOX BELOW IT SO THE RESPONDENT CAN SELECT THAT OPTION.

RANDOMISE ORDER

How represented	*Item*	
Picture	Ingredients list	
Picture	Claims i.e. "Source of Iron", "Source of Selenium"	
Picture	Nutrition information panel	
Picture	Pictures of the food used on the label	
Picture	Brand name, logo, Manufacturer's name	
Picture	Allergen declarations	
Picture	Country of origin (Australia)	
Picture	The best before date	
Picture	Flavour (e.g. beef)	
Picture	Instructions how to cook	
Picture	Descriptions of the product	
Picture	Package size	
Picture	Customer service hotline information	
Picture	"Italian Style"	
Picture	"Simply the most delicious"	

Words	Your general knowledge	
Words	None of above	
Words	Don't know	

Did you use any other types of information?

97. Yes (Please Specify in box below) [open-ended]
98. No

ENDIF

You are about to see an image of a fruit drink that you might buy at your local supermarket. Please look at this image in the same manner, and for as long as you would normally look at a similar product in a store situation.

INSERT SCREEN THAT CONTAINS AN IMAGE OF A FRUIT DRINK (RANDOMISED). SCREEN WILL CONTAIN AN OPTIONAL LINK TO EITHER ANOTHER SCREEN OR A POP UP WINDOW THAT DISPLAYS THE BACK OF THE PRODUCT. THE RESPONDENT WILL BE ABLE TO TOGGLE BETWEEN THE 2 SCREENS. MULTIPLE TIMERS WILL BE ATTACHED TO THE 'BACK VIEW' SO THAT THE TOTAL TIME THE RESPONDENT SPENDS VIEWING THE BACK OF THE IMAGE CAN BE RECORDED AND AGGREGATED.

Q3. Thinking about the fruit drink you have just seen:

[Single]

Q3A. How likely is it that you would purchase this fruit drink?

1 Not at all likely	2	3	4	5	6	7 Very likely	99 Don't know

[Single]

Q3B. Assuming this fruit drink has a cost that is similar to others on the market, how likely is it that you would purchase this fruit drink?

1 Not at all likely	2	3	4	5	6	7 Very likely	99 Don't know

[Single]

Q3C. How would you rate the nutritiousness of this fruit drink?

1 Poor	2	3	4	5	6	7 Good	99 Don't know

[Single]

Q3D. What is your overall attitude towards the nutrition content of this fruit drink?

1 Unfavourable	2	3	4	5	6	7 Favourable	99 Don't know

[Multiple]

Q3E. Below is a list of some types of people. For each one, do you think they would or would not benefit from drinking this fruit drink as a regular part of the diet?

RANDOMISE

	Yes, Would Definitely Benefit	Yes, Would Somewhat Benefit	No, Would Probably Not Benefit	No, Would Definitely Not Benefit	Don't Know
Women	1	2	3	4	99
Men	1	2	3	4	99
Children	1	2	3	4	99
Pregnant women	1	2	3	4	99
Older people	1	2	3	4	99
People trying to lose weight	1	2	3	4	99
People with particular health problems	1	2	3	4	99

[Multiple]

Are there any other types of people who would benefit from drinking this fruit drink as a regular part of their diet? If yes, please specify in boxes below (one per box):

Other types of people 1
(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of people 2
(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of people 3
(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of people 4
(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

[Single]
For each of these other types of people, to what extend would they benefit from drinking this fruit drink as a regular part of the diet?

	Yes, Would Definitely Benefit	Yes, Would Somewhat Benefit	Don't know
Other types of people 1	1	2	3
Other types of people 2	1	2	3
Other types of people 3	1	2	3
Other types of people 4	1	2	3

[Multiple]
Q3F. Below is a list of some nutrition and health benefits.

Do you think the following types of health benefits would result from drinking this fruit drink as a regular part of the diet?

RANDOMISE

	Yes, a Definite Benefit	Yes, Somewhat of a Benefit	No, not Really a Benefit	No, Definitely not a Benefit	Don't Know

Healthy bones and teeth	1	2	3	4	99
More energy from food	1	2	3	4	99
Healthy blood cells	1	2	3	4	99
Preventing cold or flu	1	2	3	4	99
Protection of body's cells from some types of damage	1	2	3	4	99
Good eyesight	1	2	3	4	99
Healthy pregnancy	1	2	3	4	99
Healthy kidney function	1	2	3	4	99
A reduced risk of cancer	1	2	3	4	99
Healthy blood pressure	1	2	3	4	99
Healthy thyroid function	1	2	3	4	99
A reduced risk of diabetes	1	2	3	4	99
Healthy immune function	1	2	3	4	99
Healthy digestion	1	2	3	4	99

[Multiple]

Are there any other types of health benefits from drinking this fruit drink as a regular part of the diet? If yes, please specify in boxes below (one per box):

Other types of health benefits 1

(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of health benefits 2

(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of health benefits 3

(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of health benefits 4

(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

[Single]

For each type of health benefit you listed, to what extend do you think this health benefit would result from drinking this fruit drink?

	Yes, Would Definitely	Yes, Would Somewhat	Don't know

	Benefit	Benefit	
Other types of benefits 1	1	2	3
Other types of benefits 2	1	2	3
Other types of benefits 3	1	2	3
Other types of benefits 4	1	2	3

[Multiple]

Q3G. Thinking about how likely or unlikely you would be to buy this fruit drink. There may have been many and varied reasons why you indicated how likely or unlikely you would be to purchase this fruit drink. Of the following, which if any, influenced your decision to buy or not to buy it?

THE BELOW TABLE WILL BE PRESENTED AS A GRID WITH A SMALL PICTURE FOR EACH OPTION. (EXCEPT OPTIONS: 1-YOUR GENERAL KNOWLEDGE, 97-NONE OF THE ABOVE/DID NOT USE ANY INFO AND 99- DON'T KNOW WHICH WILL BE PRESENTED IN TEXT). EACH OPTION SHOULD HAVE A TICK BOX BELOW IT SO THE RESPONDENT CAN SELECT THAT OPTION.

RANDOMISE ORDER

How represented	*Item*	
Picture	Ingredients list	
Picture	Claims i.e. "Contains antioxidant – Flavonoids", "Contains beta-cryptoxanthins"	
Picture	Nutrition information panel	
Picture	Pictures of the food used on the label	
Picture	Brand name, logo, manufacturer's name	
Picture	Customer service hotline information	
Picture	Country of origin (Australia)	
Picture	The best before date	
Picture	Flavour	
Picture	Descriptions of the product	
Picture	Package size	
Picture	Customer service hotline information	
Words	Your general knowledge	
Words	None of above	
Words	Don't know	

Did you use any other types of information?

97. Yes (Please Specify in box below) [open-ended]
98. No

ENDIF

You are about to see an image of potato chips that you might buy at your local supermarket. Please look at this image in the same manner, and for as long as you would normally look at a similar product in a store situation.

INSERT SCREEN THAT CONTAINS AN IMAGE OF A POTATO CHIP PACK (RANDOMISED FOR ALL FOUR FOOD PRODUCTS). SCREEN WILL CONTAIN AN OPTIONAL LINK TO EITHER ANOTHER SCREEN OR A POP UP WINDOW THAT DISPLAYS THE BACK OF THE PRODUCT. THE RESPONDENT WILL BE ABLE TO TOGGLE BETWEEN THE 2 SCREENS. MULTIPLE TIMERS WILL BE ATTACHED TO THE 'BACK VIEW' SO THAT THE TOTAL TIME THE RESPONDENT SPENDS VIEWING THE BACK OF THE IMAGE CAN BE RECORDED AND AGGREGATED.

Q4. Thinking about the potato chips you have just seen:

[Single]

Q4A. How likely is it that you would purchase these potato chips?

1 Not at all likely	2	3	4	5	6	7 Very likely	99 Don't know

[Single]

Q4B. Assuming this product has a cost that is similar to others on the market, how likely is it that you would purchase these potato chips?

1 Not at all likely	2	3	4	5	6	7 Very likely	99 Don't know

[Single]

Q4C. How would you rate the nutritiousness of these potato chips?

1	2	3	4	5	6	7	99

Poor						Good	Don't know

[Single]

Q4D. What is your overall attitude towards the nutrition content of these potato chips?

1 Unfavourable	2	3	4	5	6	7 Favourable	99 Don't know

[Multiple]

Q4E. Below is a list of some types of people. For each one, do you think they would or would not benefit from eating these potato chips as a regular part of the diet?

RANDOMISE

	Yes, Would Definitely Benefit	Yes, Would Somewhat Benefit	No, Would Probably Not Benefit	No, Would Definitely Not Benefit	Don't Know
Women	1	2	3	4	99
Men	1	2	3	4	99
Children	1	2	3	4	99
Pregnant women	1	2	3	4	99
Older people	1	2	3	4	99
People trying to lose weight	1	2	3	4	99
People with particular health problems	1	2	3	4	99

[Multiple]

Are there any other types of people who would benefit from drinking these potato chips as a regular part of their diet? If yes, please specify in boxes below (one per box):

Other types of people 1

(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of people 2

(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of people 3
(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of people 4
(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

[Single]
For each of these other types of people, to what extend would they benefit from eating these potato chips as a regular part of the diet?

	Yes, Would Definitely Benefit	Yes, Would Somewhat Benefit	Don't know
Other types of people 1	1	2	3
Other types of people 2	1	2	3
Other types of people 3	1	2	3
Other types of people 4	1	2	3

[Multiple]
Q4F. Below is a list of some nutrition and health benefits.

Do you think the following types of health benefits would result from eating these potato chips as a regular part of the diet?

RANDOMISE

	Yes, a Definite Benefit	Yes, Somewhat of a Benefit	No, not Really a Benefit	No, Definitely not a Benefit	Don't Know
Healthy bones and teeth	1	2	3	4	99
More energy from food	1	2	3	4	99
Healthy blood cells	1	2	3	4	99
Preventing cold or flu	1	2	3	4	99
Protection of body's cells from some types of damage	1	2	3	4	99
Good eyesight	1	2	3	4	99
Healthy pregnancy	1	2	3	4	99
Healthy kidney function	1	2	3	4	99

A reduced risk of cancer	1	2	3	4	99
Healthy blood pressure	1	2	3	4	99
Healthy thyroid function	1	2	3	4	99
A reduced risk of diabetes	1	2	3	4	99
Healthy immune function	1	2	3	4	99
Healthy digestion	1	2	3	4	99

[Multiple]

Are there any other types of health benefits from eating these potato chips as a regular part of the diet? If yes, please specify in boxes below (one per box):

Other types of health benefits 1
(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of health benefits 2
(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of health benefits 3
(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

Other types of health benefits 4
(INSERT SPACE FOR RESPONDENT TO WRITE TEXT)

[Single]

For each type of health benefit you listed, to what extend do you think this health benefit would result from eating these potato chips?

	Yes, Would Definitely Benefit	Yes, Would Somewhat Benefit	Don't know
Other types of benefits 1	1	2	3
Other types of benefits 2	1	2	3
Other types of benefits 3	1	2	3
Other types of benefits 4	1	2	3

[Multiple]

Q4G. Thinking about how likely or unlikely you would be to buy these potato chips.

There may have been many and varied reasons why you indicated how likely or unlikely you would be to purchase these potato chips. Of the following, which if any, influenced your decision to buy or not to buy it?

THE BELOW TABLE WILL BE PRESENTED AS A GRID WITH A SMALL PICTURE FOR EACH OPTION. (EXCEPT OPTIONS: 1-YOUR GENERAL KNOWLEDGE, 97-NONE OF THE ABOVE/DID NOT USE ANY INFO AND 99- DON'T KNOW WHICH WILL BE PRESENTED IN TEXT). EACH OPTION SHOULD HAVE A TICK BOX BELOW IT SO THE RESPONDENT CAN SELECT THAT OPTION.

RANDOMISE ORDER

How represented	*Item*	
Picture	Ingredients list	
Picture	Claims i.e. "Good Source of Vitamin C", "Good Source of Niacin"	
Picture	Nutrition information panel	
Picture	Pictures of the food used on the label	
Picture	Brand name, logo, Manufacturer's name	
Picture	Allergen declarations	
Picture	Country of origin (Australia)	
Picture	The best before date	
Picture	Flavour	
Picture	Descriptions of the product to be devised by Marcus	
Picture	Package size	
Words	Your general knowledge	
Words	None of above	
Words	Don't know	

Did you use any other types of information?

98 Yes (Please Specify in box below) [open-ended]

99. No

ENDIF

The next few questions are about your knowledge and opinions about food in general.

[Multiple]

Q5. Please indicate if you think the following statements are true or false.

RANDOMISE

	True	False	Don't Know
Milk and milk products like cheese and yoghurt are the best sources of iron	1	2	3
Meat, chicken, fish and eggs should make up the largest part of our diet	1	2	3
A diet high in fruits and vegetables and low in salt may help prevent high blood pressure	1	2	3
Salt-reduced foods are healthier than similar foods containing a lot of salt	1	2	3
Dietary fibre can help prevent constipation	1	2	3
Meat, chicken and fish are the best sources of calcium	1	2	3
Fruit and vegetables are a good source of fibre	1	2	3
Orange and other citrus fruits are a good source of vitamin C	1	2	3
Meat, kidney and liver are good sources of iron	1	2	3
Protein is used for tissue building and repair	1	2	3
Dark green vegetables such as spinach are a good source of vitamin A	1	2	3
Iron is used for making red blood cells	1	2	3
Saturated fats are found in butter	1	2	3
A diet high in saturated fat can help prevent heart disease	1	2	3

[Multiple]

Q6. Please indicate your agreement with the following statements where 1 is strongly disagree and 7 is strongly agree.

RANDOMISE

	1 Strongly disagree	2	3	4	5	6	7 Strongly agree	99 Don't know
I am constantly sampling new and different foods	1	2	3	4	5	6	7	99

I don't trust new foods	1	2	3	4	5	6	7	99
If I don't know what is in a food, I won't try it	1	2	3	4	5	6	7	99
I am afraid to eat things I have never had before	1	2	3	4	5	6	7	99
I am very particular about the foods I will eat	1	2	3	4	5	6	7	99
I will eat almost anything	1	2	3	4	5	6	7	99
I am more interested in the fat, salt and sugar content of foods than the vitamin and mineral content	1	2	3	4	5	6	7	99

[Multiple]

Q8. Do any of the following apply to you or any members of your household?

RANDOMISE

Food allergy	1
Other health concerns such as asthma, diabetes, migraine	2
Digestive concerns such as coeliac disease, irritable bowel syndrome	3
Health concerns such as heart disease, high blood pressure or cholesterol	4
On a specific diet	5
Watching my weight or others' weight generally	6
Watching my health or others' health generally	7
Pregnancy or breast feeding	8
Religious or ethical beliefs that influence dietary choices,	9
Vegetarian or vegan diet	10
Any others? IF YES, PLEASE SPECIFY: (INSERT SPACE FOR RESPONDENT TO INPUT TEXT)	96
None	97
Prefer not to answer	98

[Multiple]

Q9. How frequently do you eat the following foods?

RANDOMISE

	Never	Less than once a month	Once a month	Once a week	Once a day	More than once a day
Potato chips	1	2	3	4	5	6
Frozen meals, e.g. lasagne	1	2	3	4	5	6
Ice cream	1	2	3	4	5	6
Fruit drinks	1	2	3	4	5	6

[Multiple]

Q9A. How frequently do you buy the following foods?

RANDOMISE

	Never	Less than once a month	Once a month	Once a week	Once a day	More than once a day
Potato chips	1	2	3	4	5	6
Frozen meals, e.g. lasagne	1	2	3	4	5	6
Ice cream	1	2	3	4	5	6
Fruit drinks	1	2	3	4	5	6

[Single]

Q10. How would you rate your knowledge of the functions of the following micronutrients?

RANDOMISE

	1 Not at all knowledge-able	2	3	4	5	6	7 Extremely knowledge-able	99 Don't Know
Beta-cryptoxanthins	1	2	3	4	5	6	7	99
Niacin	1	2	3	4	5	6	7	99
Antioxidants (e.g. flavonoids)	1	2	3	4	5	6	7	99
Vitamin C	1	2	3	4	5	6	7	99

Calcium	1	2	3	4	5	6	7	99
Iron	1	2	3	4	5	6	7	99
Phosphorus	1	2	3	4	5	6	7	99
Selenium	1	2	3	4	5	6	7	99

[Single]

Q11. How would you rate your familiarity with the following micronutrients?

RANDOMISE

	1 Not at all familiar	2	3	4	5	6	7 Extremely familiar	99 Don't know
Beta-cryptoxanthins	1	2	3	4	5	6	7	99
Niacin	1	2	3	4	5	6	7	99
Antioxidants (e.g. flavonoids)	1	2	3	4	5	6	7	99
Vitamin C	1	2	3	4	5	6	7	99
Calcium	1	2	3	4	5	6	7	99
Iron	1	2	3	4	5	6	7	99
Phosphorus	1	2	3	4	5	6	7	99
Selenium	1	2	3	4	5	6	7	99

[Single]

Q12. Thinking now about the nutritional information on food packages, how interested are you in nutritional information on food packages?

1 Not at all interested	2	3	4	5	6	7 Very interested	99 Don't know

[Single]

Q13. Thinking about nutrition labels on products, how much do you care about reading nutrition labels?

1 Not at all	2	3	4	5	6	7 Very much	99 Don't know

[Multiple]

D1. Including yourself, how many people living in your household belong to the following age groups?

☐ 18 years and over

☐ 15-17 years

☐ Less than 15 years

[Single]

D2. How much attention do you pay to keeping a healthy diet?

1. Very high amount of attention
2. High amount of attention
3. Medium amount of attention
4. Low amount of attention
5. Very low amount of attention
6. No attention

97. Don't know

[Single]

D2A. Thinking about serves of vegetables you eat each day. One serve amounts to half a cup of cooked vegetables, or one cup of salad vegetables. How many serves do you usually eat each day?

1 serve or less	1
2 serves	2
3 serves	3
4 serves	4
5 serves	5
6 serves or more	6
Don't eat vegetables	7

[Single]

D2B. Thinking about serves of fruit you eat each day. One serve amounts to one medium piece of fresh fruit, two small pieces of fresh fruit, half a cup of canned fruit, or half a cup of fruit juice. How many serves do you usually eat each day?

1 serve or less	1
2 serves	2

3 serves	3
4 serves	4
5 serves	5
6 serves or more	6
Don't eat fruit	7

ASKIF: AUSTRALIAN SAMPLE ONLY

[Single]

D3A. Are you of Aboriginal or Torres Strait Islander origin?

1. No
2. Yes, Aboriginal
3. Yes, Torres Strait Islander
4. Both Aboriginal and Torres Strait Islander

98. Prefer not to answer

[Single]

D4A. What level of education is the highest you have attained?

1. Postgraduate Degree / Graduate Diploma / Graduate Certificate
2. Bachelor Degree
3. Advanced Diploma / Diploma / Certificate
4. Year 12 or Senior Certification/6th Form/Matriculation/Higher School Certificate (H.S.C. or V.C.E)
5. Year 11/5th Form
6. Year 10/4th Form or below

96. Other (specify)

97. None of the above

98. Prefer not to answer

ENDIF

ASKIF: NEW ZEALAND SAMPLE ONLY

[Single]

D3B. Are you descended from a New Zealand Maori or do you belong to a Pacific Islander ethnic group?

1. Yes, a New Zealand Maori descendent
2. Yes, of Pacific Islander ethnicity
3. Both Maori and Pacific Islander ethnicity
4. Neither

98. Prefer not to answer

[Single]

D4B. What level of education is the highest you have attained?

1. No Qualification / Year 10 (Fourth Form) or lower
2. Fifth Form Qualification / school certificate / NCEA Level 1
3. Sixth Form Qualification / university entrance / NCEA Level 2
4. Higher School Qualification / Bursary / NCEA Level 3
5. Vocational Qualification
6. Bachelor Degree
7. Higher Degree

96. Other (specify)

97. None of the above

98. Prefer not to answer

ENDIF

D5. What is your household's total annual income before tax?

1. Negative / Nil income
2. $1 - $5,000
3. $5,001 - $10,000
4. $10,001 - $15,000
5. $15,001 - $20,000
6. $20,001 - $25,000
7. $25,001 - $30,000
8. $30,001 - $35,000
9. $35,001 - $40,000
10. $40,001 - $45,000
11. $45,001 - $50,000
12. $50,001 - $70,000
13. $70,001 - $100,000
14. $100,001 or more

97. Don’t know

98. Prefer not to answer

Thank you for your participation.