Attitudes of the public towards policies to address obesity

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Attitudes of the Irish Public Towards Policies to Address Obesity

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1 Executive Summary

Introduction

- Obesity and the related health burden is a growing problem in Ireland.

- Understanding public attitudes to policy interventions is important, as it provides a key indicator of the potential effectiveness of interventions and the readiness of the general public for policy implementation.

- The present research aimed to determine public acceptance of a range of policies to address obesity in Ireland. To this end, a survey of attitudes towards obesity-oriented policies among a nationally representative sample of the population of Irish adults was conducted.

Methods

- A stratified random sample of 501 adults living in Ireland was recruited over a two-week period in June and July 2013.

- Each respondent participated in a face-to-face computer-assisted interview in their home.

- Thirty obesity-related policy items were included in the survey.

- The data were weighted to represent the Irish population in terms of age and gender within region, employment status, educational attainment, nationality and health insurance coverage.

Results

- Majority support was evident for all of the policy options with the exception of two policies: 1) an additional health charge for those presenting with obesity and 2) health insurance reductions for those of normal weight.

- The highest level of support was evident for child-focused interventions, informational policies, government and food industry co-operation and subsidies for healthy foods. Comparatively, lower levels of support were evident for policies that may be viewed as restricting personal choice (e.g restricting portion sizes in food outlets).

- Older respondents (aged 55 or above) were significantly more likely than younger respondents to support 11 of the 30 policy measures. In contrast, males and those with lower educational attainment were less likely to support some interventions.

- For the majority of comparable policies, levels of support were somewhat higher in the present study than in the 2011 Eatwell survey in the UK and Italy.

Discussion and Conclusions

- Strikingly high levels of public support were evident for a wide range of obesity-oriented interventions.

- The findings support prior research on behaviour change in key policy areas such as diet and smoking which demonstrates that support for interventions tends to decrease as the intrusiveness of interventions increases.

- Consistent with previous research, socio-demographic factors only explain a small portion (2-6%) of the variance in policy support.

- Overall, the findings indicate substantial public readiness for addressing obesity in Ireland, particularly through child-focused policies, informational measures, subsidies for healthy foods and co-operation between government and the food industry.

Introduction

Obesity and the related health burden remains a major public health problem in Ireland and worldwide. While the personal and social costs of the current epidemic of overweight and obesity in Ireland cannot be fully quantified, the annual economic costs are high, estimated at approximately €1.13 billion (Safefood, 2012). The National Adult Nutrition survey showed that among 18-64 year olds in Ireland, 37% are overweight and 24% are obese, with the prevalence of overweight and obesity increasing with age. In comparison to earlier surveys conducted in Ireland using similar methods, the prevalence of obesity has increased significantly between 1990 and 2011, from 8% to 26% in men, and from 13% to 21% in women, with the greatest increase observed in men aged 51-64 years (Irish Universities Nutrition Alliance, 2011).

In recent years, some actions have been taken by various stakeholders to curb this upward trend in obesity. Many of these actions were guided by the Report of the National Taskforce on Obesity which outlined 93 recommendations for the prevention and treatment of obesity in Ireland (The National Taskforce on Obesity, 2005). However, a recent review of its implementation found that only 18 of the 93 recommendations were fully implemented by 2009 (Department of Health and Children, 2009). In response to the findings of the review, renewed efforts are being made to support successful implementation of these recommendation driven by a Special Action Group on Obesity, set-up by the Department of Health and Children in Ireland (Oireachtas Library and Research Service, 2011). Furthermore, the emphasis on the wide-ranging effects of obesity on citizen health in the new health strategy for Ireland and the inclusion of targets to increase the numbers of children and adults with a healthy weight suggests that addressing the obesity epidemic is a key government priority (Department of Health, 2013).

Within this context, an understanding of public attitudes to policy interventions is important, as it provides a key indicator of the potential effectiveness of interventions and how the public would react to their implementation (Diepeveen et al.2013; Maryon-Davis & Jolley, 2010). Public attitudes to obesity prevention have become a focus of research interest internationally, with recent studies providing insight into the views of EU and US citizens (Mazzocchi et al.2011; Oliver & Lee, 2005). Studies in the US and Germany suggest a growing public awareness that obesity is a significant health problem (Brownell, 2005; Hilbert et al., 2007). Additionally, international studies have shown that the public are supportive of childhood obesity prevention policies and informational policies (Hilbert et

al., 2007; Sikorski et al., 2011). However, there are still relatively low levels of support for regulatory policies aimed at reducing adult obesity, particularly policies to tax high sugar or high fat foods (Beeken & Wardle, 2013; Oliver & Lee, 2005).

The present research aimed to determine public support for a range of fiscal (taxes and subsidies) and non-fiscal policies to address obesity in Ireland. To this end, a survey of attitudes towards obesity-related policies among a nationally representative sample of the population of Irish adults was undertaken.

Methods

Design

A stratified random sample of 501 adults living in Ireland was recruited over a 2 week period in June and July 2013. Ethical approval for this research was obtained from the University College Dublin Human Research Ethics Committee. Ipsos MRBI, a market research agency specialising in social surveys, was contracted to administer the survey. The sample was recruited from 64 sampling points (clusters of residential addresses) throughout Ireland, which were randomly selected using a sampling frame stratified according to geographic region. Within each household, 'the next birthday rule' was utilised to ensure random selection. Namely, the person who next celebrated their birthday was identified by the interviewer and this was the only person who could be recruited in the household. A study response rate of 56.2% was obtained. Participants were interviewed on a face-to-face basis in their homes. The use of stratified random sampling and face-to-face interviewing is considered best practice for obtaining a nationally representative assessment of public opinion in Ireland (Association of Irish Market Research Organisations, 2005).

Measures

Policy Interventions

A total of 30 obesity-related policy items were included in the survey. Twenty of the items were drawn from the Eatwell Project which examined acceptance of obesity-related policy interventions in five EU countries (Mazzocchi, et al., 2011). The remaining ten items were developed from an extensive review of existing literature and the recommendations of the Irish National Taskforce on Obesity report (The

National Taskforce on Obesity, 2005). To prevent bias arising as a result of respondent fatigue, the starting point of the questions was rotated so that certain items did not always appear at the end of a list. The full wording of the policy items can be found in Tables 2-5.

Socio-demographics:

Standard demographic questions were included to assess age, gender, relationship status, nationality, presence of children in household, employment status, educational attainment, health insurance coverage and smoking status. BMI (kg/m^2) was calculated based on self-reported height and weight.

Statistical Analysis

The data were weighted to represent the Irish population in terms of age and gender within region, employment status, educational attainment, nationality and health insurance coverage. All analyses were conducted on weighted data using the statistical software package IBM SPSS Statistics (Version 20). Multiple linear regression models were used to examine the relationship between demographic factors and attitudes to the policy measures. This approach allowed us to determine the effect of each demographic factor on policy support, whilst accounting for the other demographic factors in the model. The policy items were scored on a continuous scale from 1 to 5 for use as outcome measures in the regression models. Three predictor variables were included in each regression model: gender (male, female); age (below 55, 55+); educational attainment (no bachelor degree, has bachelor degree). *P* values < 0.05 were considered statistically significant.

Results

Survey Demographics

The mean age of the respondents was 45 years (range: 18-90). Almost half were in paid employment (49%) and 27% were educated to degree level or above. Over half (52%) were married or cohabiting and 45% were overweight or obese (see Table 1 for the full demographic profile).

Table 1. Sample demographic profile (n =501)

Variable	Categories	n (%)
Age	18-29	112 (22.4)
	30-44	159 (31.7)
	45-64	152 (30.3)
	65+	78 (15.6)
Gender	Female	256 (51.0)
	Male	245 (49.0)
Relationship status	Married/cohabiting	263 (52.4)
	Not married/cohabiting	238 (47.5)
	Unknown	1 (0.1)
Nationality	Irish	435 (86.8)
	Foreign national	66 (13.2)
Children in household	Yes	206 (41.2)
	No	295 (58.8)
Employment status	Paid employment	244 (48.8)
	House person	81 (16.2)
	Unemployed	49 (9.7)
	Full-time student	50 (10.0)
	Retired	71 (14.2)
	Other	5 (1.1)
Educational attainment	Below second level	140 (28.0)
	Second level	104 (20.8)
	Certificate/Diploma/Vocational	118 (23.6)

	Degree/Postgraduate	136 (27.1)
	Unknown	3 (0.5)
Health insurance status	Insured	225 (45.0)
	Uninsured	276 (55.0)
Current smoker	Yes	103 (20.5)
	No	389 (77.6)
BMI status	Underweight	10 (2.0)
	Normal weight	262 (52.4)
	Overweight	143 (28.5)
	Obese	83 (16.5)
	Unknown	3 (0.7)

2 Attitudes to Policy Interventions

For presentational purposes, the 30 obesity-oriented policies were divided into four distinct groups:

1) Child-focused policies: This group gathers together all child-related related measures including banning vending machines in schools and regulation of the nutritional content of school meals.

2) Informational interventions: All informational and promotional measures aimed at the general population (i.e. not child-focused) are brought together in this group, including information campaigns, education/training measures and food labelling policies.

3) Fiscal measures: This group brings together taxes on unhealthy foods, VAT measures and subsidies for healthy foods.

4) Industry-regulation measures: This group gathers together regulatory measures relating to businesses, such as restrictions on portion size in restaurants, health insurance price reductions for normal weight individuals and banning special offers on high sugar and high fat foods.

The level of agreement with the policies in each group is displayed in Tables 2-5[1]. An inspection of these tables shows majority support for all of the policy options with the exception of two policies:

1) An additional health charge for those presenting with obesity; and,

2) Health insurance price reductions for those of normal weight. Across the 30 interventions, the highest level of support was evident for child-focused interventions. There was also a high level of support for informational policies, subsidies for healthy foods and co-operation between government and the food industry. Comparatively lower levels of support were evident for policies which may be seen as restricting personal choice (e.g., restricting portion sizes in food outlets).

Of the child-focused policies shown in Table 2, the highest level of support (strongly agree/agree) was evident for promotion of healthy eating in schools (92.6%), followed by improvements in exercise and playground facilities (91.3%). The child policy with the lowest level of support was promotion of

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[1] In each of these tables (2-5) statements are rank ordered by 'strongly agree'

breastfeeding at 68.6%. Across all of the child-related policies, the public was most likely to endorse the 'strongly agree' category.

Table 2. Openness to child-focused policies.

Policies	% Strongly agree	% Agree	% Neutral	% Disagree	% Strongly disagree	% Don't know /refused
Children should have to participate in a minimum of 30 minutes exercise a day while at school.	64.5	25.6	5.3	3.0	0.9	0.7
The government should provide resources to improve exercise and playground facilities.	59.3	32.0	5.3	1.5	0.9	1.0
Education to promote healthy eating should be provided in all schools.	59.0	33.6	5.2	1.0	0.4	0.8
Vending machines should be banned from our schools.	53.0	29.1	7.2	7.4	1.3	2.1
The government should regulate the nutritional content of school meals.	50.3	36.0	7.8	2.8	1.5	1.6
There should be planning regulations to restrict the development of fast food outlets in areas nearby to schools.	46.1	30.9	10.5	6.2	4.2	2.2

The government should ban advertising for junk food and fast food that is aimed at children.	45.1	37.6	10.3	4.2	1.3	1.5
The government should provide resources to encourage women to breastfeed.	36.7	31.9	17.6	4.4	2.5	6.9

Informational and promotional measures were popular with the public, with majority support for all interventions shown in Table 3. The informational policies with the highest approval ratings were food labelling at 92.0% and awarding companies for healthy food innovations at 85.2%. The informational measure with the lowest level of support was free TV air-time for healthy eating campaigns (75.9%). For most of the informational policies (five out of seven), the respondents were most likely to choose the 'agree' option.

Table 3. Openness to informational interventions.

Policies	% Strongly agree	% Agree	% Neutral	% Disagree	% Strongly disagree	% Don't know /refused
All foods should be required to carry labels with calorie and nutrient information.	54.1	37.9	5.0	1.3	0.3	1.5
All restaurants should be required to provide calorie and nutrient information in menus.	45.8	39.1	8.4	2.7	2.5	1.5

The government should award companies for healthy food innovations.	40.6	44.6	10.6	1.9	0.7	1.6
The government should spend money on campaigns informing people about the risks of unhealthy eating.	39.8	43.0	9.7	5.5	0.9	1.1
The government should subsidise firms which provide programmes to train their employees in healthy eating.	37.4	42.4	13.2	3.8	1.7	1.4
TV-stations should give free air-time to governmental campaigns that promote healthier eating.	34.1	41.8	10.8	8.0	2.6	2.6

Majority support was evident for all of the fiscal measures (displayed in Table 4), with the exception of an additional health charge for those presenting with obesity. Indeed, the majority of the population (50.1%) did not support implementation of an additional health charge for obese individuals. The fiscal measure with the highest level of support was subsidies for fruit and vegetables at 86.2%, followed by VAT measures at 78.9%. For two-thirds of the fiscal measures, the 'agree' option was most frequently selected.

Table 4. Openness to fiscal measures.

Policies	% Strongly agree	% Agree	% Neutral	% Disagree	% Strongly disagree	% Don't know /refused
VAT rates should be lower for healthy foods and higher for unhealthy foods.	40.7	38.2	11.0	5.3	2.6	2.1
The government should subsidise fruit and vegetables to promote healthier eating.	39.7	46.5	8.6	2.7	0.5	2.0
There should be a tax incentive to encourage sports participation, with a tax break for the purchase of sports equipment.	35.2	40.4	11.1	7.3	3.6	2.5
The government should provide vouchers to low-income families to buy healthy foods at reduced prices.	32.8	39.7	13.8	9.1	2.8	1.8
The government should impose taxes on unhealthy food and use the proceeds to promote healthier eating.	30.8	38.4	9.7	10.3	8.3	2.5
There should be an additional health charge for those presenting with obesity.	13.0	16.1	17.4	23.4	26.7	3.4

For the industry-regulation measures, shown in Table 5, majority support was evident for all policies, with the exception of health insurance price reductions for those of normal weight. In fact, 36.9% of the population disagreed with this policy. The most popular policy in this group was government-industry co-operation to improve the nutritional properties of processed foods (87.2%), following by regulation of the nutritional content of processed foods (81.4%). For two-thirds of the industry-regulation policies, the public were most likely to select the 'agree' option.

Table 5. Openness to industry-regulation measures.

Policies	% Strongly agree	% Agree	% Neutral	% Disagree	% Strongly disagree	% Don't know /refused
The government should work with the food companies to improve the nutritional content of processed foods (e.g. less salt or fats).	46.6	40.6	7.9	2.9	1.0	1.0
The government should impose on food companies limits on certain ingredients (e.g., salt or fats) to improve the nutritional content of processed foods.	41.5	39.9	9.7	5.0	0.8	3.1
There should be public measures like free home delivery to support easier access to healthy foods for the elderly and those with lower incomes.	33.0	43.4	11.1	6.2	3.7	2.7

There should be a ban on sales promotion and special offers on high sugar and high fat foods.	32.5	35.6	13.0	11.7	4.7	2.5
The government should regulate the nutritional content of workplace meals.	31.7	30.3	15.9	14.4	5.6	2.1
There should be planning regulations to restrict the development of certain food outlets (selling foods high in saturated fats) in towns and cities.	30.4	36.4	17.5	10.1	2.8	2.9
The government should ban advertising for junk food and fast food that is aimed at adults.	26.6	37.4	19.2	11.4	3.9	1.4
Portion sizes in food outlets should be restricted.	23.1	30.3	14.4	18.8	10.4	3.0
There should be health insurance price reductions for those of normal weight.	15.3	23.3	19.5	22.3	14.6	5.0

Demographics and Policy Support

Multiple linear regression models were used to examine the effect of demographic characteristics (age, gender and educational attainment) on attitudes to policy measures. Older respondents (aged 55 or above) were significantly more likely than younger respondents to support 11 of the 30 policy

measures. The greatest age differences in policy support were observed for regulating the nutritional content of workplace meals (B = 0.45, $p < .001$), followed by banning junk food advertising for adults (B = 0.41, $p < .001$) and then banning vending machines from schools (B = 0.39, $p < .001$). Older adults also had significantly more favourable attitudes than younger adults to banning special offers for junk food (B = 0.38, $p = .001$) and health insurance price reductions for those of normal weight (B = 0.35, $p = .008$).

Males had a significantly less favourable attitude than females to five of the interventions. Gender differences were most pronounced for restricting portions sizes in food outlets (B = -0.42, $p < .001$) and banning fast food advertising for adults (B = -0.32, $p = .001$). Participants with a lower educational level were significantly less likely to support 23 of the policies. The strongest effects of educational attainment on policy support were evident for bans on special offers for junk foods (B = -0.45, p < .001) and taxation of unhealthy foods (B = -0.39, $p = .002$). Those with lower educational attainment were also significantly less likely to agree with planning restrictions on fast food outlets in towns and cities (B = -0.38, $p < .001$), followed by portion size restriction in food outlets (B = -0.38, $p = .005$). The overall regression models for 21 of the policy interventions were statistically significant, but none of these models had high explanatory power, with R^2 values ranging between 0.02 and 0.06.

International Comparison

Policy support was then compared between the present study and the Eatwell telephone survey in the UK and Italy[2]. The 20 policies which were examined in both surveys are displayed in Table 6. For the majority of interventions, greater support was evident in the present study than in the Eatwell survey.

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[2] The Eatwell Project team also examined support for these policies in five countries in the EU using computer-aided web interviewing (CAWI). However, we chose to compare our results with the two-country version of the Eatwell survey which utilised computer-aided telephone interviewing (CATI). This decision was taken as the CAPI methods (in the present study) and CATI methods (in the two-country Eatwell survey) were considered more suitable for comparison due to the presence of an interviewer in both methods and the absence of self-selection biases applicable to web-based sampling strategies, due to variations in internet usage across sectors of the population.

Table 6. Support for obesity-oriented policies in Ireland compared to Italy and UK[3],

Policies (abbreviated wording)	Ireland (CAPI)	UK and Italy (CATI)	% Discrepancy in support
Calorie and nutrient information in restaurant menus.	84.9	56.3	28.6
Vending machines should be banned from schools.	82.1	58.4	23.7
Subsidise firms to provide healthy eating programmes for staff.	79.9	59.9	20.0
Government subsidies for fruit and vegetables.	86.2	76.3	9.9
The government should impose taxes on unhealthy food and use the proceeds to promote healthier eating.	69.2	61.3	7.9
Regulation of nutritional content of workplace meals.	62.0	54.3	7.7
Award companies for healthy food innovations.	85.2	78.1	7.1
The government should work with food companies to improve the nutritional content of processed foods.	87.2	80.7	6.5
VAT rates lower for healthy foods and higher for unhealthy foods.	78.9	72.9	6.0
Ban advertising for junk food aimed at adults.	64.0	58.6	5.4
Ban advertising for junk food aimed at children.	82.7	78.1	4.6
The food industry should cooperate in financing governmental campaigns that promote healthy eating.	86.5	82.6	3.9
Impose on food companies limits on certain ingredients to improve the nutritional content of processed foods.	81.4	78.2	3.2
Finance campaigns informing people about the risks of unhealthy eating.	82.8	81.0	1.8

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[3] Rank ordered by discrepancy in support between surveys

All foods should be required to carry labels with calorie and nutrient information.	92.0	92.5	-0.5
TV-stations should give free air-time to governmental campaigns that promote healthier eating.	75.9	76.9	-1.0
Regulate the nutritional content of school meals.	86.3	87.9	-1.6
Education to promote healthy eating should be provided in all schools.	92.6	96.0	-3.4
Public measures to support easier access to healthy foods for the elderly and those with lower incomes.	72.5	77.2	-4.7
Provision of vouchers to low-income families to buy healthy foods at reduced prices.	76.3	81.1	-4.8
Note. CAPI = Computer-aided personal interviewing; CATI = Computer-aided telephone interviewing. The 20 policy items used in both the present research and the Eatwell CATI survey (in the UK and Italy) are presented.			

In particular, there were substantially higher levels of support in Ireland for calorie and nutrient information on restaurant menus, banning vending machines in schools and subsidising firms to provide healthy eating programmes to staff. In contrast, there were slightly lower levels of support in Ireland than in the UK and Italy for measures to promote access to, and reduce the costs of, healthy foods for low-income or elderly citizens.

3 Discussion and Conclusions

The present study examined support for obesity-prevention policies in a nationally-representative sample of the Irish population. Strikingly high levels of support were evident for these policies, with majority support evident for all but two policies. In addition, older adults were more supportive of policy interventions, whilst males and those with lower educational attainment were less supportive. Furthermore, public acceptance of comparable interventions in the Eatwell survey in the UK and Italy was generally lower than in Ireland.

Although, high levels of support were evident for most interventions, the degree of support varied by intervention type in the expected ways. For example, greater acceptance of child-focused interventions (e.g., exercise in schools) in comparison with adult-focused interventions is compatible with the findings of previous research in other countries (Chambers & Traill, 2011; Hilbert et al., 2007; Sikorski et al., 2011). The higher approval ratings for informational policies or subsidies than more intensive regulatory policies (e.g., portion size restriction) are also consistent with the relevant literature (Bransonet al. 2012; Hilbert et al., 2007; Sikorski et al., 2011). Our findings also support prior research on behaviour change in other key policy areas such as smoking and saving for retirement, whereby support for interventions tends to decrease as the 'force' of the intervention increases (Branson et al., 2012; Diepeveen et al., 2013).

Some interventions garnered higher levels of support in Ireland than in other countries. For example, there is much higher support for taxing unhealthy foods in Ireland (69%) than in other industrialized countries such as the UK (32%), Germany (27%) and the US (28%) (Barryet al., 2009; Beeken & Wardle, 2013; Hilbert et al., 2007). However, the percentage supportive of taxing unhealthy foods in the Eatwell survey in the UK and Italy (61%) is much closer to the present finding (Mazzocchi et al., 2011). As the Eatwell survey and our research used the same policy wording which emphasised that the taxes collected will be used to

promote healthy eating, this suggests that providing an explanation about how the money generated would be used increases acceptance of the intervention.

There was also greater support in Ireland for a policy requiring calorie information to be provided on restaurant menus. We found that 85% of the Irish population supported this policy in comparison with 66% in the UK (Beeken & Wardle, 2013) and 56% in the Eatwell survey in the UK and Italy (Mazzocchi et al., 2011). The greater acceptability of this policy in Ireland relative to other countries may be a result of the Minister for Health's (Dr James Reilly) well-publicised announcement in July 2012 of a nationwide voluntary scheme to introduce calorie information on restaurant menus, which if not implemented, would be followed by a compulsory scheme. Consequently, this policy may be more acceptable in Ireland as research shows that individuals are generally more likely to support an intervention which has already been implemented, possibly due to seeing its benefits materialise and/or the operation of the status quo bias, a preference for the current state of affairs (Branson et al., 2012; Diepeveen et al., 2013; Kahneman et al., 1991).

Of the top five policies which the Irish public strongly agreed with, four of these policies were child-related. Indeed, substantially higher support for banning unhealthy foods in schools was observed in the present research than in surveys in Germany, the UK /Italy, and the US (Barry et al., 2009; Hilbert et al., 2007; Mazzocchi et al., 2011). Banning vending machines in schools may have higher approval ratings in Ireland than other countries because this policy has already been partially implemented in Ireland. Namely, the Food and Drinks Industry Ireland (FDII) have an existing policy of not operating vending machines in primary schools (Department of Health and Children, 2009). Taken together, these findings suggest that the Irish public is strongly in favour of childhood obesity prevention policies.

The observation that older adults are generally more supportive of obesity-oriented measures, particularly more intensive measures, is consistent with many previous studies conducted outside of Ireland (Diepeveen et al., 2013; Hilbert et al., 2007; Mazzocchi et al., 2011). The finding that males tended to be less supportive of policy measures is also compatible with prior research (Hilbert et al., 2007; Mazzocchi et al., 2011). Additionally, we

observed that respondents with lower educational attainment are generally less supportive of policy interventions - however the results of others studies on this topic have been mixed (Mazzocchi et al., 2011; Oliver & Lee, 2005; Vereecken et al., 2009). It is also important to note that socio-demographics only explained a small portion (2-6%) of the variance in policy support, which is consistent with the relevant literature (Hilbert et al., 2007; Mazzocchi et al., 2011). Overall, this suggests that socio-demographics do not play a large role in public attitudes to obesity-oriented policies.

In conclusion, this research observed majority support for all but two of a wide range of interventions. This suggests that the general public are unlikely to have a strong negative reaction to the introduction of most of these interventions. Our findings also support the continued implementation of the recommendations of the Taskforce on Obesity, including daily physical activity in schools, food labelling measures and co-operation between government and the food industry (The National Taskforce on Obesity, 2005). In the present research, high levels of support were even shown for more intrusive policies such as advertising bans and taxation of unhealthy foods. These findings may be encouraging for policymakers, as more radical interventions are often more effective (Vos et al., 2010). However, acceptability is not static and can be affected by public recognition of an issue, understanding of the potential benefits of change, belief in the effectiveness of the proposed intervention, public debate and the outcomes of introducing a policy. Therefore, in addition to acceptability, it is important to consider the potential cultural and economic impacts of introducing an intervention and how 'prepared' the public are for change (Branson et al., 2012).

4 Acknowledgements

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