Adolescents' Perspectives on Personal and Societal Responsibility for Childhood Obesity — The Study of Beliefs through ‘Serious' Game (PlayDecide)

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The dominant approaches to public health policy on childhood obesity are based on the neoliberal emphasis of personal choice and individual responsibility. We study adolescents’ (N = 81) beliefs about responsibility for childhood obesity as a public health issue, through an innovative participatory method, PlayDecide, organised in two countries: the UK and Spain. There is no evidence of a blanket rejection of individual responsibility, rather, a call for renegotiation of the values that inform adolescents’ food choices. The findings suggest the need to broaden the framing of obesity-related policy to go beyond the nutritional paradigm and include other values that signal health. © 2018 The Authors. Children & Society published by National Children’s Bureau and John Wiley & Sons Ltd.

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Childhood obesity policy

The past two decades have witnessed increasing concerns about the ‘epidemic of childhood obesity’ (EU Action Plan on Childhood Obesity 2014-2020), based on the epidemiological evidence that worldwide, overweight and obesity in children rose by 47.1 per cent (WHO, 2016). The risk factors are based on the correlational evidence that obesity and overweight — measured in terms of body mass index (BMI) — before puberty is likely to result in overweight in early adulthood (EU Action Plan on Childhood Obesity 2014-2020; WHO, 2012). The responsibility for this is explicitly located within a nexus of institutions, organisations and food consumption practices (WHO, 2015). Increasingly interventionist policies are being proposed, such as monitoring children’s weight, screening nutrition provision in schools or implementing projects to promote healthy diets among children, pregnant women and parents (EU Action Plan on Childhood Obesity 2014-2020; WHO, 2008).

Simultaneously, a large body of critical literature has emerged highlighting the potential of the current obesity policy discourse to give rise to moral panic, discriminatory language...
and invasive policy interventions. Social scientists and medical researchers alike have critiqued the dominant reliance on BMI as a metric for obesity measurement, highlighted uncertainties in the scientific data that link adiposity and health outcomes, and challenged the scientific rationale for the current ‘normal’ and ‘overweight’ cut-off points (Campos, 2004, 2011; Flegal and others, 2005; Gard and Wright, 2005). A body of critical literature has also emerged questioning childhood obesity as a public health priority, and cataloguing the detrimental effects of such policies on young people’s subjectivities (Aphramor, 2005; Evans and others, 2008; Gard and Wright, 2005; Monaghan and others, 2013; Rich and others, 2011b; Wright, 2009). The constructions of obesity as a disease category and childhood obesity as a precursor to the ‘health time-bomb’ (Evans and Colls, 2011) have been critiqued for their treatment of children — not through a concern for the children’s well-being but as an attempt to secure the future health of society (Ruddick, 2006). Children are seen as ‘adults in the making’, the sites for precautionary policies which focus on risk-based discourses that do not indicate current problems. It is argued that implicit within these ‘bio-pedagogies’ (Wright and Harwood, 2009) is the mantra of ‘duty to care for one’s own body’, usually expressed in nutritional terms of ‘energy in — energy out’. Despite the ‘whole society’ rhetoric, current policies ultimately hold the individual responsible for their own body as well as the collective future health.

In relation to children, however, this preference for individual responsibility is eclipsed by concerns that children have limited capacity to make responsible, ‘healthy’ food choices (Colls and Evans, 2008). In neoliberal societies, whilst childhood is largely associated with lack of power, control and therefore responsibility, children also hold considerable cultural power as the harbourers of the future, through which risks to the collective future is to be managed (Katz, 2011; Sonu and Benson, 2016). Childhood is treated as a period of increasing responsibility that marks the transition into adulthood, and the body as a significant site for passing on cultural norms, and exercising power and control over future societal health (Sabatello, 2009). Childhood obesity is at the heart of these discourses about responsibility FOR children’s bodies and healthy eating (Colls and Evans, 2008; Evans and Colls, 2011; Such and Walker, 2004; Wright and Harwood, 2009), negotiated as a matter of control by (more) responsible actors, such as parents. However, in relation to obesity policy discourses, the parental role as responsible agents has been challenged, and doubts cast about whether parents should be construed as suitable proxies for their children, expressed through increasingly interventionist policies. For instance, the National Child Measurement Programme (Department of Health, 2006) aims to record the BMI of children at the beginning and end of primary school. Through this ‘body data’, which are used to signal risk, society is explicitly intervening in parental practices traditionally considered the domain of an individual (Rich, 2010; Rich and others, 2011a).

Such surveillance approaches and interventionist policies offer a limited arena in which children are trusted to take responsibility for their body, based on weight and nutritionally defined concepts of health. However, literature suggests that children perceive their agency in different terms to adults and policy actors, based on their perceived capacity to enact social roles, identities and relationships (Lightfoot and Sloper, 2003; Sabatello, 2009; Such and Walker, 2004). If responsibility is construed as an active process of negotiation and reconstitution of social life, the way in which their agency and responsibility is construed in a biomedical sphere, such as obesity, is less than apparent.

Responsibility and childhood obesity

There is a gap in the literature addressing children’s and adolescents’ beliefs about personal and societal responsibility for childhood obesity. Most research is focused on how young
people evaluate and stigmatise others based on weight (Barlösius and Philipps, 2015; Puhl and Latner, 2007). A limited number of articles report on how young people’s beliefs about the causes of obesity (e.g. as controllable or non-controllable) affect their attitudes towards overweight and obese children (e.g. Babooram and others, 2011; Fitzgerald and others, 2013; Rees and others, 2014). Some studies have examined the experiences of overweight and obese young people who are living with overweight and discriminatory practices (Eriksen and Manke, 2011; Li and Rukavina, 2009; Wills and others, 2006). However, there are a few studies that have explicitly examined children’s discourses of responsibility for childhood obesity construed as a public health issue—in terms of both causal and prospective responsibility for the future health of the collective — often discussed as a societal responsibility to achieve better health (Feiring, 2008). Literature suggests that young people attribute blame and responsibility for overweight and obesity to sufferers themselves (Rail, 2009; Taylor, 2011), whilst simultaneously claiming limited control over their own food choices (Taylor, 2011) and dissatisfaction with their own bodies (Rees and others, 2009). These apparently contradictory beliefs warrant exploration. Public health policy is premised on ethical deliberation about social and individual responsibility to promote and protect population health and whether this moral imperative should be upheld in the face of imprudent lifestyle choices. The current paper will explore in depth how young people conceptualise personal responsibility vis-à-vis childhood obesity, in relation to their own bodies and in terms of societal and collective health. It will also examine the extent to which they understand childhood obesity in terms of societal, as opposed to individual, responsibility.

Method

The study is part of a pan-European project funded through FP7 (INFPROFOOD), which set out to explore processes of engagement in food and health science and innovation (for more information please see Gemen and others, 2015 and the Appendix S1). PlayDecide was one of the public engagement formats specifically adapted to seek young people’s views on food and health.

PlayDecide (‘a serious game’, http://www.playdecide.eu/) is a method of engaging individuals through an interactive board game. The aim is to discuss and develop common solutions and strategies that can inform the policy-making process (Gemen and others, 2015). Whilst comprising elements of focus groups, the game uses carefully constructed stimulus material aimed at identifying policy options and is facilitated with a minimum input. Following a brief introduction by the facilitator, outlining the topic (in this case, childhood obesity) and the rules of the game, the participants were introduced to four sets of cards: Information, Issue, Story and Challenge Cards. They were asked to choose 1–2 cards from each set and to explain their choices. Selecting these cards empowered the participants by giving them ‘permission to talk’ and enabling them to contribute to topics regardless of their prior knowledge.

Each of the 20 Information Cards featured an easy-to-understand set of statements describing a particular issue, such as childhood obesity trends, future health risks, food marketing, nudging and community interventions. The 19 Issue Cards offered questions for debate, including: ‘Is it important to monitor how children are developing by weighing them regularly?’, ‘Who should be responsible for the current trends in childhood obesity?’, and ‘Would you agree that eating healthy foods is more expensive?’ The Story Cards included personalised accounts of 10 fictional individuals, including: a 10 year old boy who lives in a dangerous neighbourhood and is not allowed to play outside, a dietician, a mother who works full time, and a policy-maker. Finally, the 16 Challenge Cards presented tasks such as: ‘Pick a Story Card character that is distant from your own viewpoint. As that character,
briefly tell the group your opinion on what you are discussing’. Or ‘Express any feelings on the subject that you have not yet expressed to the group’. At the end of the game, the participants were invited to vote — individually and as a collective — on their preferred policy options to tackle childhood obesity (the total of 20). This paper does not report on the outcomes of the voting. For more information about the procedures of the game, the stimulus material, or possible other applications of this methodology, please contact the authors, or visit www.playdecide.eu.

**Recruitment and data collection**

A series of PlayDecide engagement exercises on childhood obesity were organised and facilitated by science museums, with adolescents (age 13–18) recruited through schools in two European countries: the UK (four groups) and Spain (six groups). The convenience sample consisted of the UK participants recruited from a state school in Bristol, and the Spanish participants who were recruited in A Coruña (the main language was Spanish/Castellano). The sample was socio-demographically heterogeneous (Appendix S2). In total \( N = 81 \) young people participated. Groups were homogenous, organised in age brackets: there were three groups of children age 13–14, three groups age 15–16 and four groups age 17–18 (17 males and 64 females). Between 8 and 10 people participated in each group. The debates lasted approximately 1.5–2 h. The study obtained ethical approval from the University of Surrey’s ethics committee. Full information was provided outlining the study and what was required of the participants. Informed consent forms were collected from participants who were over 16 years of age. Parental opt-in forms were collected for the younger participants.

**Method of analysis**

Recordings of 10 groups from two countries (UK and Spain) were transcribed verbatim. These were analysed in the original languages using Thematic Analysis (Braun and Clarke, 2006). The analysis used an inductive approach, as it was not guided by a pre-determined theoretical framework and the themes identified were closely linked to the data. The initial coding was done by three independent researchers in local languages (one researcher coded the Spanish transcripts and two researchers coded the UK transcripts). Following the initial coding and codes structure development, the higher order themes and subthemes were agreed upon by all three researchers.

**Findings**

Much of the discussion around childhood obesity spontaneously triggered debates about responsibility. Three core themes were identified: (1) Obesity has consequences for health; (2) Choice autonomy and causal responsibility for obesity; (3) Responsibility and agency (change). The second theme contained two sub-themes: (2a) The role of ‘choice editors’ and (2b) Choice driven by considerations other than health. The themes identified from the transcripts in the two countries were largely overlapping, thus we are reporting on the common findings across them.

*Obesity has consequences for health*

Childhood obesity was typically discussed in terms of lifestyle, and references to both physical exercise and healthy eating as factors contributing to obesity were frequently made. There was widespread awareness of what constitutes ‘healthy eating’. For instance, the majority of the young people, across both countries, used the term ‘junk food’ to denote unhealthy food. Many recognised that obesity was linked to life-long physical conditions,
such as diabetes and chronic disease. However, they were also able to articulate that the binary focus on 'healthy' and 'unhealthy' body weight could lead to undesirable consequences.

It is very well-known, everybody knows that lately people, especially girls, some guys too but especially adolescent girls, those with low self-esteem… for them eating is not a need, it is a sacrifice, this can cause eating disorders, anorexia, which is common in adolescents and how we can achieve a balance between not eating and… eating well. That is, healthy eating and doing sports can become a health problem.

(Spain, Group 1)

The quote above echoes the widely discussed neoliberal governmentality of the body paradox, in which the weight-focused narratives about food and health demand self-regulation as an internalised disciplinary strategy. Guthman and DuPuis (2006) have argued that such strategies trigger a heightened focus upon one's own body and self-regulation, which in turn leads to profound negative consequences for those considered overweight and obese — and society at large.

Indeed, to some extent, consequences of obesity were recognised to go beyond individual health. Some participants responded to the Information Cards that provided evidence of the broader ‘societal’ cost of obesity, primarily defined in terms of healthcare costs.

P And then with the issue cards I thought that the health economics one was good because it was on about how an obese person’s healthcare was estimated to cost approximately 30 per cent more than normal weight, so people were saying they should pay more health insurance and stuff than people of normal weight. Which doesn’t have any relevance to the story.

F That’s OK. Does that interest you that one?

P Yeah. I don’t see why people should pay more health insurance.

(UK, Group 1)

The participants commented on childhood obesity as a potential time bomb and as an economic issue. However, they stopped short of blaming obese individuals and their families for rising costs and were wary of discussing childhood obesity as an issue for the whole population and the future health of the nation. They rejected the neoliberal tendency to see the body as a site of market forces through the dysfunctional exercise of individual choice that leads to fatness, the argument that explicitly assumes individual responsibility for ‘inadequate’ lifestyle choices leading to overweight and obesity.

Choice autonomy and the causal responsibility for obesity

The second theme addresses young people’s understanding of autonomy of choice; it also addresses the extent to which health is considered a motivational factor for food choice.

The role of ‘choice editors’

The main dilemma that emerged from the discussions was the extent to which young people are truly free to choose healthy lifestyles. The majority of the participants expressed the libertarian values of choice autonomy, individual judgement and entitlement to un-coerced decision-making. The value of choice was discussed from multiple perspectives — substantive, since autonomy of choice was seen to link in a material way to the financial and cognitive capacity to exercise a choice; and symbolic, since the removal of choice (e.g. in school canteens) signalled an implied lack of competence to make an informed decision.
Choice autonomy was explicitly linked to the concept of causal responsibility for obesity. When asked where the responsibility for obesity lies, participants often responded:

It’s the individual, it is what you eat. What you choose to eat. (UK, Group 4)

However, much of the discussion revolved around the realities of choice autonomy in everyday life. The participants echoed the rationales offered by the political economics theories (‘toxic environment’) and the biological explanations of food intake (e.g. the preference for sweet and salty food as normative for children). For instance, the participants highlighted the role of ‘choice editors’ — the network of people and institutions who condition choice for them. They talked at length about the importance of appropriate social and environmental conditions that ultimately enable exercise of choice. Families as well as schools were seen as the context in which the capacity to make ‘the right’ choice was being shaped.

I think that, if they are little kids, you should start within the family. You can do sports at home, through games, because what kids want is to play all the time. Food depends on the parents, and if kids don’t like it, then it’s up to the parents to look for a way so kids will eat it anyway. (Spain, Group 6)

But everyone talks about being healthy and stuff but then you get food from college and schools that is kind of junk food, to be fair. If you go to the canteen

In the canteen there isn’t one green thing in there. There isn’t one green thing.

One really sad banana.

Yeah, but if you’re going to have no choices, then obviously you’re going to have to eat what’s there. (UK, Group 2)

There was also a broad recognition of the social gradient of childhood obesity. The young people generally perceived healthy food as more expensive and less filling. They argued that when health campaigns promote nutritionally approved products, this obfuscates the lived reality of poorer people, whose choices are by necessity between satiety and nutritional value.

If someone has little money and has, say, four kids, he’s not going to care? If he has 10 euro and beans are worth 5 and something else is cheaper and it will be enough for everybody, then he’ll buy that because it’ll be more important that they all eat, unhealthy as it is. I think social class matters, because you don’t ever see royals eating hamburgers. . . (Spain, Group 1)

We can also discern references to the limits of choice autonomy in relation to the biological determinants of food choice, often discussed vis-à-vis fast food and its olfactory properties.

In the junk food there’s lot more sugar and salt. Kids are going to prefer that. (UK, Group 4)

In short, the discourses of the young people delimited the concept of choice autonomy, reflected interchangeably, in political economics and human biology as explanations for obesity. The corollary of both explanations is that the subjectivity and autonomy of individuals is mooted. If causal responsibility is linked to choice autonomy, such explanations offered by the young would see limited personal responsibility for childhood obesity.
However, the claims of subjectivity are clearly articulated, as will be discussed in the section that follows.

Choice driven by considerations other than health

Whilst healthy lifestyle choice is a value and a right, further analysis suggests that it is one of many values expressed vis-à-vis eating and exercising. Concerns about healthy food choice are often juxtaposed against discourses about embedded social practices that have compelling inevitability. This is expressed in the context of social group belonging and social identity. Food in this context ceases to be the vehicle to health and assumes a new role as a social lubricant. The young people in this study talked frankly about choosing unhealthy food, implicitly allocating a secondary role to the value of health.

P1 It boils down to - you are what your friend eats - which is true because when I go to McDonalds, [laughs] Louise is in the car…

P2 What!

P1 …………and she ends up being peer pressured and eating McDonalds. [laughs]

P2 What! That is you! You’re the one that drives. I only….

P1 I know but Louise you don’t have to buy it.

P2 It’s like, because you’re actually on your way to eat salad and you get distracted. [laughs] She’s the one that drives and she’s trying to blame me. [laughs]

(UK, Group 1)

In these candid discussions, the young people were able to recognise that food choices they make contradict the requirements for ‘healthiness’. As the above extract reveals, they sometimes expressed feelings of guilt or embarrassment, as an internalised neoliberal governmentality of the body that demands self-regulation, and thus conflates beliefs, practices and social relationships with the economic imperatives, incentives, and fines (Sonu and Benson, 2016). Nevertheless, the discussions illuminate the performative dimension of (unhealthy) food choice as an expression of group belonging and social practices. Food choice appears to be partly driven by values of belonging and being accepted. Rather than appearing irrational or uninformed, unhealthy eating is debated as part of an alternative value structure. Such food practices and beliefs about the role of health in food choice indicate that the dominant childhood obesity policy narrative, based on the nutritional concepts of health, does not resonate with young people’s subjectivities.

Agency and change: who is responsible for future health?

In the light of the impending ‘danger’ of obesity, who should be delivering change to promote health? Is it individuals, or different social actors? The participants engaged in lengthy discussion about interventions aimed at individuals and the personal responsibility to avert the future obesity epidemic. There was a widespread recognition of the challenges associated with weight-based interventions targeting individuals:

I chose [the issue card] because he [the person represented in the issue card] is a dietician and he’s supposed to be helping people with their health problems and stuff like that, but if he’s finding it difficult that other….. Like if he finds it difficult to help like obese people then like how are obese people going to help themselves if the dietician can’t help them?…

(UK, Group 3)
Many of the participants argued that, even if a person desires to ‘take control of their weight’ and either starts dieting or incorporating healthy lifestyle recommendations into their life, this is likely to be ineffective, since practices, habits, contexts and social norms are influential in everyday decisions. Whilst individual autonomy to make decisions about whether or not to engage in behaviour change is valued, doubts are cast over the individual’s capacity to exercise control, and the value of policies that focus on self-regulation. The beliefs about limited individual agency to achieve control in this domain (e.g. to lose weight or to eat healthily), indicate that public health appeals to ‘take responsibility’ for health may have limits.

We could promote [healthy habits] more, but we all know what healthy habits are, and even if we had more campaigns, people would still not follow them. When you go to the doctor and he tells you, you are overweight, he gives you some recommendations and most people don’t follow them, so what good is it to spend money on a campaign? They’ll tell us stuff we already know and it’ll be no good in the end.

(Spain, Group 4)

Lack of agency is linked to the concept of responsibility: some participants went as far as saying that ‘unhealthy food choice’ is normative for children, and that other influences — environmental and social, are an important vehicle for re-directing this ‘natural’ orientation towards unhealthy eating practices. Here, we hear echoes of the concept that childhood is a period of ignorance and decisional ambivalence, only to be shaped by parents and the school (Katz, 2011).

It is normal that a child goes for rubbish, you know? Junk food, so I see that as normal, a child likes that, and she/he won’t choose an apple.

(Spain, Group 4)

When you’re younger your parents influence what you eat. So it’s not the child having control over this, it’s their parents.

(UK, Group 4)

Some of the young people reflected on whether society should ‘blame’ parents for the lifestyle practices of their children. They rejected the simplified blame culture nested in the utilitarian ideal of rational cost–benefit decision-making, by recognising the complex contingencies of parenting. This included temporal and structural constraints, and the role of alternative cultural scripts for parental nurturance. They acknowledged that parenting is a deeply emotional, dynamic and situated process.

And like, but then parents might find it difficult because if their kids don’t like [healthy meals] they don’t want to see their kids not eat. So if the kids are more likely to eat fatty food they’ll give it to them because they don’t want them to starve.

(UK, Group 1)

The responsibility for change was linked to schools and their practices. The participants primarily discussed schools’ roles in choice-editing through the institutional practices of food provision, and through instilling nutritional knowledge and skills to enable healthy food choices. A child is sometimes seen as the conduit between the school and parents, a vehicle for bio-pedagogies (in a sense espoused by Wright, 2009 — as a series of institutional practices to increase young people’s knowledge around ‘obesity-related risks’, healthy eating and physical activity). These are intended to coalesce the responsible agents around key messages about what constitutes healthy eating.
The parents should have the initiative to say that kids are eating badly, but it’s truly the school’s fault for allowing those kind of meals

(Spain, Group 5)

...if a child learns how to cook healthy meals at school, they can be like ‘oh mum and dad, look what I learnt how to make’

(UK, Group 3)

Whilst they argued that the responsibility to deliver food education is with schools and their leaders, the majority of the young people argued that government is responsible for a range of policies deemed to be necessary in order to reverse the childhood obesity trend. This is a clear and explicit endorsement of the broader societal responsibility for providing opportunities to exercise choice, which is rooted in the recognition of the social conditioning and multiple values informing food choice.

Discussion and conclusions

In the spirit of the neoliberal and Western philosophical emphasis upon individual autonomy — understood as informed, deliberate and voluntary decision-making — the policy solutions for obesity grapple with the twin need to preserve the sanctity of personal free choice and simultaneously impose paternalism in order to promote long-term health. The former often prevails — in public health policy discourses, ‘individual responsibility’ is linked to health outcomes associated with the binary concepts of ‘risky’ or ‘not risky’ health behaviours. Obesity has become an embodiment of ‘risky’ behaviours, and fat bodies a signal of ‘unhealthiness’. Through the moralising discourse about fat bodies, individuals are treated as ultimately responsible for their own health AND the future health of the nation (e.g. Aphramor, 2005; Monaghan and others, 2013). The young in this study value choice autonomy, echoing the received wisdom of neoliberal governmentality that revolves around the autonomous decision-maker and the fetish of the unbridled market (Guthman and DuPuis, 2006). However, the internal inconsistencies of such a received wisdom are also dismantled in their discourses as they debate the role of political economy (‘toxic environment’), biology (the taste preferences) and socio-cultural forces (the stigmatising effects of ‘healthyism’). They question the simplistic unidirectional linking of fat and health and suggest that risky lifestyle choices, rather than signalling unhealthiness, offer other significant values in their everyday life. These include group belonging, need for identity and hedonic pleasures. Through this discourse, the adolescents are re-asserting agency: rather than signalling lack of control, ‘unhealthy lifestyle choices’ are re-negotiated as supporting young people’s lives in other ways, despite the risks. As demonstrated in our study, instead of being represented as a means to health, food can acquire social and symbolic meanings that respond to emotional needs, which may lead the young to knowingly make unhealthy choices (see also Barnhill and others, 2014; Neely and others, 2014). This may not mean that adolescents have relinquished personal responsibility, but rather, that they perceive health, fat and individual responsibility for lifestyle choices through a different lens. Our analysis indicates that adolescents’ knowledge about ‘good’ and ‘bad’ lifestyles (e.g. diet) and their links to health do not reflect their sense of individual responsibility. We would argue that the real question is not whether they perceive themselves as responsible or not for causing and averting obesity, but rather, whether their understandings of what constitutes a valuable food choice and personal welfare diverges from those of policy-makers. Choice autonomy is upheld, but not through the neoliberal emphasis on the capacity of the young to estimate risks that may lead to broader threats to the neoliberal
economic agenda. Rather, choice autonomy is valued through the ability to negotiate life
free from the implicit mantra of responsibilisation for health (Sonu and Benson, 2016).

If the nutritional value of food does not drive food choices, and if food holds multiple
meanings for young people, imposing policies based on nutritional choice and weight control
as the indicator of personal causal responsibility can be a route to authoritarian health gov-
ernance. Daniels (2011) has argued that health is a normative concept and a considerable
debate is emerging about whether lifestyle-related health should be treated as a moral com-
pass for adjudging individual responsibility (Barnhill and others, 2014; Nielsen and Ander-
society’ approach to tackling the issue of childhood obesity and rightly identify the need to
develop life-course approaches that speak to the everyday experiences of the young. The cur-
rent findings suggest, in line with the recent critical public health literature, the need to
broaden the framing of obesity-related policy to go beyond the energy intake (nutrition) and
expenditure (physical activity) paradigm and include other values of food and conceptualisa-
tions of welfare that signal health. A way forward is to explicitly adopt the principles of
Responsible Research and Innovation (Von Schomberg, 2011) that demand adaptive, antici-
patory and shared decision-making about the future of social and technological innovations,
via greater openness and transparency of the scientific and policy frameworks used to inform
problems and their solutions. Aligning policy approaches with the principles of social justice —
whereby the solutions are shaped and co-constructed by those whose subjectivities and
agency are called into question, would enable sustainable solutions that go beyond standard
explanations of childhood obesity.

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Supporting Information

Additional Supporting Information may be found in the online version of this article:

Appendix S1 INPROFOOD Project Objectives and Design.

Appendix S2 The Study Sample Characteristics.

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