Article

Sweet Talk: A qualitative study exploring attitudes towards sugar, sweeteners and sweet-tasting foods in the United Kingdom

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**Abstract:** Worldwide initiatives currently aim to reduce free sugar intakes, but success will depend on consumer attitudes towards sugar and the alternatives. This work aimed to explore attitudes towards sugar, sweeteners and sweet-tasting foods in the general public of the UK, including attitudes towards personal consumption and related policies. Focus groups and interviews were conducted with 34 adults (7 males, ages: 18-65 years). Thematic analysis identified six themes: ‘Value’ (e.g. pleasure, emotions), ‘Angle’ (e.g. disinterest), ‘Personal Relevance’ (to be concerned and/or change one’s own behaviour), ‘Personal Responsibility’ (one has an active relationship with these food items), ‘Understanding’ (the acquisition, comprehension and application of information surrounding these food items) and ‘It’s Not Up to Me’ (a passive approach towards these food items, because intake is subjected to other factors). Both positive and negative attitudes towards sugar, sweeteners and sweet-tasting foods were expressed in all themes, largely dependent on the individual. Potential strategies for reducing free sugar intakes were also reported, but differences in likely value were suggested by different individuals. Future work should assess associations between attitudes and intakes.For greatest population benefit, evidence of the dominant attitudes in those in greatest need of reduced free sugar intakes would be of value. *(200 words)*

**Keywords:** Sugars; Sweeteners; Sweet Taste; Sweetness; Attitudes; Focus Groups; Qualitative Research; Thematic Analysis

1. Introduction

The World Health Organisation currently recommends reducing free sugar intakes to 10% daily energy intakes, with further benefits from a reduction to 5% daily energy intakes [1]. Defined as “monosaccharides and disaccharides added to foods and beverages by the manufacturer, cook or consumer, and sugars naturally present in honey, syrups, fruit juices and fruit juice concentrates” [1], free sugar intakes have been positively associated with increased prevalence of dental caries [2], cardiovascular disease [3], Type II diabetes [4], and, via the consumption of excess energy, with overweight and obesity [5].

Population levels of sugar consumption, however, lie above these recommendations. While free sugar intakes are difficult to accurately assess [6], total sugar intake in adults is estimated to range from 13.5% (Italy) to 24.6% (USA) total energy intake. Added sugar intakes are estimated to range from 7.3% (Norway) to 16.3% (USA) total energy intake, with higher estimates reported for children and adolescents (9.0% in Iceland to 18.6% in Norway) [6]. Worldwide initiatives to reduce sugar intakes focus largely on reducing the availability of sugar within the food supply through product reformulation and reduced portion sizes, and on shifting consumer purchasing towards foods lower in sugar [7-10].

Consumer food purchasing and consumption is determined by a range of factors from individual characteristics to environmental circumstances [11]. Sugar or sugar-sweetened food and beverage consumption is also determined by similar factors, including experiences of pleasure, taste and emotions [12-16], perceptions of health benefits [12,17,18], knowledge / lack of knowledge of health implications [12,13,15,17,19], habits [13-17], health concerns [13,14,16], familial, social and cultural norms [12,14,15,17], and food availability and accessibility [13,14,16,17], particularly a reliance on convenience or processed foods [13]. There is some evidence which suggests associations between sugar intakes, knowledge of the health implications of sugar consumption and attitudes toward sugar [20], although little work is available and associations have been described as ‘weak or inconsistent’ [p. 192, 20].

Attitudes to and associations with sugar consumption are also potentially confounded by attitudes to the alternatives to sugar consumption – namely the consumption of less sweet foods, or the consumption of other sweetening agents, such as low-calorie sweeteners. Humans have an innate liking for sweet taste [21] and preferences for sweet taste remain high throughout childhood [21]. Many treat foods, even for adults, are sweet-tasting [21]. Limited work has investigated attitudes towards sweet-tasting foods independent of attitudes to sugar, and suggestions that such pleasures and treats should be forgone, may be met with negativity [13,14,22,23].

Low- or no-calorie sweeteners (LNCS) may offer this desired sweet taste without the health implications of sugar. LNCS provide the pleasure of sweet taste without the energy content of sugar [24], and the safety and use of many LNCS in humans has been approved [24-26]. Consistent with work demonstrating benefits for weight management [27,28], LNCS use continues to be predominantly associated with concerns over bodyweight [14,16,29-31]. Consumers, however, also cite concerns over safety [32], poor taste [16], their artificial or chemical nature [14,16,31] and possible health implications [14,16], and similar concerns have been expressed by dietitians [23].

Despite the lack of preferred alternatives, many individuals report concerns over sugar intake [16,31], and studies do find public support for strategies to reduce this consumption [13,15,32]. Data from the British Social Attitudes Survey on Obesity 2015 suggests support for bans on advertising and for the implementation of a tax on sugary drinks [32]. Forde & Solomon-Moore [13] found support for an information-based sugar reduction campaign among low-income consumers and Palmedo & Johnson [15] found support for a ‘sugar-sweetened beverage free zone’ in a community Health Centre. Any strategy however, will have limited effect if positive attitudes towards sugar and negative attitudes towards the alternatives prevail. Attitudes may furthermore depend on the policies implemented, and the attitudes of individuals towards those policies.

Given the limited existing research in this area and the current push to reduce free sugar intakes, further work exploring attitudes towards sugar, sweeteners and sweet foods is required. Considering the importance of differing policies toward sugar reduction for those attitudes, it is important furthermore, that this work is conducted in the context (time, location) of the intended policies. This research aimed to explore current attitudes towards sugar, sweeteners and sweet-tasting foods in the general public of the UK, including attitudes towards personal consumption and related policies.

2. Materials and Methods

This was a qualitative study using focus groups and interviews in a sample of consumers living in the UK.

*2.1 Participants*

Healthy adults, aged 18-65 years old and able to provide informed consent, were recruited from the south coast of England, through University contacts, community groups and flyers distributed in coffee shops and other public places. Ethical approval for the study was granted by the Research Ethics Committee of Bournemouth University (ID: 29215) prior to commencement. All participants provided informed consent before participation and were compensated for their time.

*2.2 Focus groups and Interviews*

The study used a combination of focus groups, dyadic interviews and solo interviews to generate a wide range of perspectives and understandings. Topics for discussion were considered by researchers to be non-sensitive, hence suitable for discussion in focus groups and dyadic interviews. Data collection was undertaken from Jan. 2018 to March 2020. During this time (April 2018), a nationwide tax on soft drinks that contain at least five grams of sugar per 100 millilitres, the ‘Soft Drinks Industry Levy’ (SDIL) was implemented across the UK [33]. Some focus groups were conducted prior to the implementation of the SDIL, while others were conducted following different time periods after this implementation, allowing collection of a wide range of attitudes.

*2.3 Question Guide*

Questions focused on participants’ beliefs about sugar and sweeteners, their preferences and rationales for consumption or avoidance, their attitudes towards different sweetener terms or categories, attitudes towards sugar intake versus sweet-tasting food intake, and their opinions on current and potential strategies to reduce free sugar intakes. The open-ended question guide was piloted prior to use in six interviews, and refined to ensure the clarity, relevance and value of each question. Visual materials were presented at various time-points during each session, with the purpose of generating more discussion. These included: pictures of the sugar content of several commercial beverages in sugar cubes, in relation to current Public Health England recommendations [8,9]; examples of different categories of sweeteners [24-26]; examples of packaging using graphic imaging similar to that that has been used for cigarettes under The Standardised Packaging of Tobacco Products Regulations 2015 [34]; and a BBC news article on the SDIL illustrated as a newspaper clipping. All visual materials are provided in the Supplementary Materials.

*2.4 Procedure*

Focus groups and interviews were conducted using established methods [35-37]. All sessions were conducted in a semi-structured manner to encourage both personal and collective opinions. All sessions were audio-recorded for transcription and analysis. Each session lasted not more than an hour. All sessions began with an introduction and explanation on the study procedure, audio recording, confidentiality and anonymity. Three trained researchers moderated the various focus group sessions, using the piloted question guide, but the sequence and use of each question depended on the flow of each session. Towards the end of each session, moderators asked if participants had any more thoughts on the topic that were not yet discussed. The session then continued until there was no further input from participants. By the last focus group, no new attitudes or reasons were generated and data collection for the study was concluded.

*2.5 Data Analysis*

Thematic analysis was selected for this exploratory work so as to not be theoretically-bound. Themes were identified using an inductive approach based on the explicit semantic content of the data [35]. Although a question guide was used during data collection, it did not serve as a coding scheme during analysis, nor was a coding scheme established; as the study was exploratory, theme formation was data-driven. Only discussions on sugar, sweeteners or sweet-tasting foods were analysed. Discussion on attitudes or policies in countries other than UK were also excluded, with the exception of explicit cross-country or cross-cultural comparisons.

Thematic analysis was performed based on Braun and Clarke’s six phases [38]. Moderators transcribed the audio recordings of all sessions that they conducted. All transcripts followed the orthographic style and notation system adapted from Braun and Clarke [38]. Transcripts were not sent back to participants for correction; a review on member checking did not find supporting evidence that this improved research quality in studies with a main purpose of theory development [39], and this would add to participant burden and reluctance to participate. All transcripts were imported into qualitative data analysis software NVivo Version 12 [40] to be coded.

To address unitization, this study adopted a strategy that focused on meaning units rather than naturally given units. Initial codes were generated from each transcript by two researchers independently, and then agreed upon. This “negotiated agreement” [p. 305, 41] after separate coding served to reconcile discrepancies in codes and unitization, to improve inter-coder reliability. The principal investigator (PI) analysed all transcripts, while four other researchers acted as the secondary coder. Codes were then grouped together by the PI to form sub-themes and themes, and discussed and agreed upon by two secondary coders. All transcripts were then reviewed by the PI again to ensure no quotes were left out and to check the validity of all themes.

*2.6 Researchers and Reflexivity*

The PI and all other researchers were female with lean body weight, and the majority were involved in other projects on dietary sweetness at the time of this study. Three researchers had backgrounds in eating behaviour, nutrition and the drivers of food choice and intake, and one researcher had a history of eating disorders; all of which may have had an impact on the identification and definition of themes or sub-themes.

3. Results

3.1 Participants

Twenty-nine participants (24F, 5M) took part in seven focus groups, four participants took part in dyadic interviews (2F, 2M) and one participant took part in a solo interview (1F). Seventeen participants were aged 18-30 years, four participants were aged 31-40 years, four participants were aged 41-50 years, four participants were aged 51-65 years, and age for five participants was not recorded. Participants were recruited from the University student population (N=11), from local workplaces, including the University (N=9), among the parents of a local school (N=5) and from the community, e.g. via coffee shops (N=9). None of the participants reported being on a diet; having been diagnosed with diabetes or insulin resistance; or reported being intolerant or allergic to sugar, LNCS, wheat, gluten, rice, cereal or fruit. Three focus groups were undertaken from Jan. – March 2018 before the implementation of the UK SDIL, one focus group was undertaken in July 2018 shortly after implementation of the UK SDIL, and three focus groups and all interviews were undertaken from Jan. - March 2020.

3.2 Attitudes towards sugar, sweeteners and sweet-tasting foods

Six themes reflecting attitudes towards sugar, sweeteners and/or sweet-tasting foods were identified. These were composed of twenty-four sub-themes, as shown in Figure 1, and described below. All six themes are described neutrally, because the same idea could often be expressed as present or absent, or positively and negatively by different participants. Themes are presented in no particular order, and while presented separately, interaction between themes was also possible. ‘FG’ refers to focus group, ‘DI’ refers to dyadic interview, ‘I’ refers to solo interview and ‘P’ refers to participant. E.g. [FG1, P1] labels a quote by the first participant in focus group one. Extended quotes and definitions of all themes can be found in a table format in the Supplementary Materials. All themes included attitudes towards all food items, that is sugar, sweeteners and sweet-tasting foods, however some sub-themes appeared more relevant to one or two of these food items.

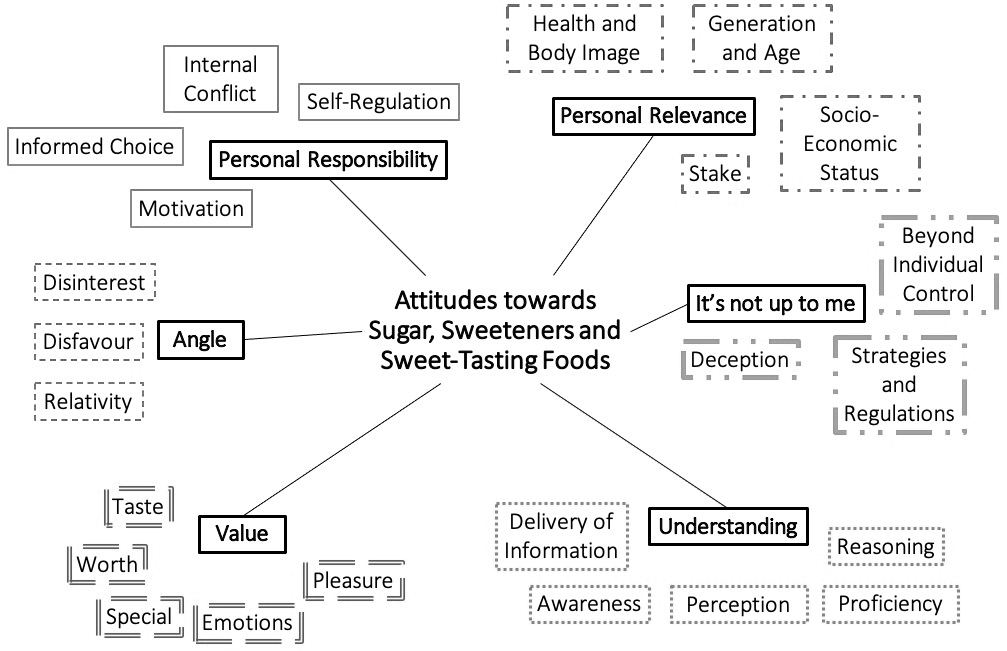


Figure 1. Attitudes Towards Sugar, Sweeteners and Sweet-Tasting Foods: Themes and Sub-Themes.

3.2.1. Value

|| What sugar, sweeteners and sweet-tasting foods can provide.

Defined as ‘what sugar, sweeteners or sweet-tasting foods can provide’, this theme focussed on the positive or negative aspects of consumption. These related to ‘taste’, ‘pleasure’, ‘special’, ‘emotions’ and ‘worth’. ‘Taste’ was considered an important factor in food choice that could not be compromised. Some participants preferred the taste of sugar while others preferred the taste of LNCS, but there was general consensus that excessive sweetness tastes unpleasant. Comments suggested preferences for high-sugar products that tasted good compared to reduced-sugar or LNCS-based versions that tasted less pleasant demonstrating the value of a pleasant taste.

“It still has to taste good, I think that’s the thing.” (DI1, P2)

‘Pleasure’ was also derived from the consumption of sugar, sweeteners and sweet-tasting foods, without reference to taste. Pleasurable experiences were suggested to prompt some participants to disregard health implications or costs; comments indicated that cravings for sugar or sweet-tasting foods should be satisfied whenever the desire came, or that the sugar content was not considered for certain foods items, such as alcoholic drinks. The appearance of LNCS packaging was also reported as unappealing, affecting acceptance and intake.

“Let’s say we’re not gonna have cake anymore because you can’t make cake without either sugars or sweeteners alright so, if we get rid of both those things there’s no more cake. (pause) To me, th-the life is too short, to do away with, good things in life.” (DI1, P2)

Elevated pleasure was associated with foods that were ‘Special’; foods/beverages that were considered as rewards or treats, and where intake was reserved for specific occasions, such as festive periods. These compared with food items that were considered as everyday food items; for example, dessert was considered special and valued, while a biscuit was considered regular.

“So I never really, (pause) m-my mom’s always been sort of health conscious so we (pause) it’s probably bad, on a Sunday night we used stop off at this local shop, and just get so much. So many sweets and (pause) and, bad things but. Yeah and just our day to, to have that and that was after we’d, been on, been round to my grandparent’s for Sunday dinner so it was, sort of like our, cheat day y’know? But (pause) yeah I don’t do that, too often.” (FG1, P1)

Related to pleasure, in the sub-theme ‘Emotions’, several statements suggested that participants valued the happiness derived from their consumption of sugar or sweet-tasting foods to the extent that if restricting intake would take away joy, they would rather experience the positive emotions. Similar positive emotions were also expressed in relation to childhood memories.

“Yeah like I don’t really mind, I would rather be a bit curvy and happy and enjoy what I eat rather than obsessively worry all the time and restrict myself of things that I want.” (FG6, P1)

Finally, the sub-theme ‘Worth’ suggested recognition of multiple but potentially conflicting benefits of sugar, sweeteners or sweet-tasting foods. Sugar was recognised to provide ‘quick energy’ and preservative properties, while LNCS allowed limited sugar consumption for weight or diabetes management. Value for money was also an important consideration, and money was potentially more important than other considerations, hence price could drive product choice. The quality of a food/beverage product and environmental cost also mattered to some participants.

3.2.2. Angle

|| Negativity surrounding sugar, sweeteners and sweet-tasting foods.

Contrary to the positive nature of the ‘Value’ theme, the theme ‘Angle’ referred to more negative perceptions of sugars, sweeteners and sweet-tasting foods. The sub-theme ‘Disinterest’ eluded to indifference. Comments suggested that some participants did not specifically include or exclude sugar, sweeteners, or sweet-tasting foods in their diets, that concerns over sugar intake can be excessive, and consuming sugar is ‘not a big deal’. Disinterest in sweeteners was related to the view that “artificial” or “synthetic” LNCS need not be deemed as worse than “natural” sweeteners.

“To me, eating sweet things, is just, quite normal! Um I-I don’t necessarily look upon it as a treat. It’s like I fancy something sweet, I’m gonna have that.” (FG3, P2)

Stronger negative feelings were grouped under the sub-theme ‘Disapproval’. Comments included concerns about the short- and long-term health implications of sugar and LNCS. Sugar was perceived as non-nutritious and unnecessary in the diet, hence avoiding it was seen as a good decision, while LCNS were viewed as artificial chemicals that came from laboratories, and were potentially carcinogenic. Under this sub-theme, several participants believed that sugar, LNCS and sweet-tasting foods are physically addictive, and that reducing their intake would lead to withdrawal symptoms, viewing consumption as synonymous with vices such as drug-taking.

“They’re consuming things, and probably getting hooked onto a taste (pause) without really realising it. Um and then it’s difficult for them to shake that off as they get older.” (FG3, P2)

The sub-theme ‘Relativity’ contained comparative considerations. Sugar and sweeteners were viewed not in isolation, but in relation to each other, or other food components such as fat or salt. Comments suggested the concept of the ‘lesser of two evils’. For example, LNCS may be unhealthy chemicals, but at least they provide sweet taste without the detrimental health effects of sugar. On the other hand, sugar may contribute to weight gain, but at least it does not cause cancer.

“The reason I don’t pick diet is because I heard about aspartame and I’ve heard people get tumours. It might be a myth thing but both options are bad and it’s better to do better the devil I know than I don’t.” (FG4, P1)

3.2.3. Personal Relevance

|| To be concerned personally and/or to change one’s own behaviour.

While the themes ‘Value’ and ‘Angle’ were generic in nature, many concepts were considered to affect different individuals differently, including the idea that some concepts were relevant to “me”, while other concepts were more relevant to other people. Many reasons were given for an individual to be personally concerned with sugar, sweeteners and sweet-tasting foods, and individuals could view these food items negatively, but did not see themselves as needing to reduce their intakes. Alternatively, some participants identified themselves as people who needed to change and thus viewed intake modifications as relevant to them. In this theme, attitudes towards sugar reduction strategies focussed on specific population groups: the young, old, children, parents, pregnant women, people of lower socio-economic status, or people with obesity or diabetes. There was general consensus that the effectiveness of strategies would largely depend on the target audience and that appropriate intakes differ across individuals; hence strategies should be personalised.

Personal relevance was described in relation to a number of specific characteristics. The ‘Health and Body Image’ sub-theme included references to how a person thought he or she looked in terms of body size and skin, and how healthy a person thought he or she was. Comments under the ‘Generation and Age’ sub-theme reflected beliefs that taste preferences change with time and age, such that as one ages one might prefer and desire sweet-tasting foods less, rendering intake reduction irrelevant to those of older ages. Personal relevance in terms of ‘Socio-Economic Status’ referred to perceptions of economic and social class in relation to others, as a combination of income, education and occupation.

More individualised involvement and interest in consuming sugar, sweeteners and sweet-tasting foods were reflected in the sub-theme ‘Stake’. Some individuals felt that they had higher tendencies than others to crave sweet or sugary foods, associated intake with socially-desirable traits, or saw sweet-tasting foods as staples, hence they had a greater investment when taking action towards consumption. Conversely, some participants expressed that sugar reduction is less of a priority when they were faced with a myriad of challenges, such as a heavy workload or family commitments.

“Although there are a notable amount of people now who are kinda you know driving the healthy lifestyle, there is still a lot of people who are, you know, probably more in line with where I am, and slightly beyond, which is like pffttt! Yeah, if you make it easy for me, maybe, but I’ve got other fish I need to fry right now and I’m not gonna get there.” (DI1, P2)

3.2.4. Personal Responsibility

|| One has an active relationship with sugar, sweeteners and sweet-tasting foods.

Related to ‘Personal Relevance’, the theme ‘Personal Responsibility’ revolved around the idea that individuals have an active relationship with sugar, sweeteners and sweet-tasting foods, and their consumption. Showing the greatest degree of responsibility, the sub-theme ‘Informed Choice’ demonstrated complete choice over food consumption as an individual. Comments suggested that individuals valued the ability to understand and make their own decisions; they do not like to merely be told what to do, but instead want to be educated on foods, on their health implications, and the rationales behind interventions. Consumption of sugar or sweeteners would depend on one’s knowledge and familiarity with each food item. Poor health was viewed as the fault of an individual for making poor decisions. Awareness and education could bring about behavioural changes, but individuals were responsible for their consumption, so there are boundaries which regulations should not cross. Some participants viewed sugar taxes as helpful in raising awareness of the high sugar content of some foods, and driving consumers to reduce intakes, suggesting even that consumers should share the cost of sugar taxes as a way of taking responsibility. However, sugar taxes were also considered unfair to consumers who keep their intakes within healthy ranges, hence any levy should be placed on overconsumption instead. Tactics or regulations similar to those for cigarettes such as packaging with graphic imaging, were also viewed as helpful to allow clearer identification of high-sugar products, with the recognition that this packaging could also be ignored. Furthermore, such tactics were seen as extreme and would require gradual introduction to the public. Some comments suggested that labels and guidelines, such as the traffic light rating system, were not helpful or clear enough and still require effort on the part of consumers.

“I think you have to be s-sort of consciously aware of the quantities and the (pause) macronutrients that’s (pause) in a product. Um (pause) when you’re readin’ reading those labels and and trying to make a sort of, an informed decision on on what you then buy I think that I think that’s one of the real issues?” (FG1, P1)

An active relationship with sugar, sweeteners and sweet-tasting foods might also include ‘Self-Regulation’, a sub-theme defined as managing one’s own intake of these food items. Comments suggested that some participants actively avoid or reduce sugar by rationing consumption, reducing frequency of consumption, removing any foods from the immediate environment and by preparing their own sweet-tasting foods to include less sugar. Taste preferences were also believed to be modifiable; changing preferences was a matter of habit and of getting used to new tastes. This sub-theme also included the concept of balancing out one’s sugar or sweet food intake with foods or behaviours that are perceived as healthier, such as the use of sweet-tasting rewards only after intense exercise.

“I’ll just go ‘oh okay, that meal is mostly red for sugar [on the traffic light rating system] so I’ll make sure the other meals are not red in other areas’ so I make sure it’s like lower, a different colour for anything else I buy, and that they don’t add up. I could be buying four […] things in the red zone and be like ‘oh yeah that’s fine cause I’ve had like seven things in the orange or green’.” (FG4, P1)

The idea of balance was also found in the sub-theme ‘Internal Conflict’, although here the focus was more on the struggle to balance different opposing motives. Comments implied that participants struggle with motives of health versus enjoyment, resulting in the use of words such as ‘devil’, ‘naughty’, ‘demon’, ‘indulgence’ and ‘guilt’ in association with sugar and sweet-tasting food consumption. Participants expressed an “all or nothing” mentality, were unable to halt intake at times and while preferences for sugar and sweet-tasting foods were considered to be acquired and not innate, habits were also considered difficult to break. Sugar reduction was related to restraint and deprivation.

“I don’t always want a bit of fruit, I don’t want that sort of sweet, I want a bit of naughty sweet.” (FG5, P3)

‘Motivation’ was also associated with personal responsibility. While some participants viewed themselves as responsible for their own intake, they lacked the willpower, self-care or time to change their behaviours. Other participants felt driven to make changes. Comments suggested that on top of education and modifying food products, strategies should target behaviours, such as focusing on empowerment and positive reinforcement to effect and maintain sugar reduction.

“Well for sure, be educating the people, but sometimes you know no matter how much knowledge you have it’s more about changing the behaviour.” (I1, P1)

3.2.5. Understanding

|| Acquiring, comprehending and applying insights on sugar, sweeteners and sweet-tasting foods.

The theme ‘Understanding’ encompassed sub-themes associated with ‘Delivery of Information’, ‘Awareness’, ‘Perceptions’, ‘Proficiency’ and ‘Reasoning’. The sub-theme ‘Delivery of Information’ focused on how information on sugar, sweeteners and sweet-tasting foods is disseminated and received. Channels included celebrities or influencers, doctors, documentaries, films, friends, social media platforms, newspapers, television programmes, the internet and hearsay, and all channels were considered both reliable and unreliable. Opposing views also suggested that education and awareness was sufficient and health guidelines and promotions were aplenty, while other comments indicated that information was not widely accessible and suggested a need for education in workplaces, schools, hospitals, or other organisations. Technology such as mobile applications and visual cues such as labelling and advertising were seen as impactful aids in sugar reduction strategies.

”How do we get our information and how much time do we spend and where do we get reliable sources about you know just, you have somebody on the internet who’s an influencer or whatever and it has in the background a bottle of something uh and you know and there’s people looking at that how do we choose our reliable sources to find out about these things so, it takes a lot of time and uh you’ll have to look at these things and spend time, really trying to understand.” (FG1, P2)

The sub-theme ‘Awareness’ summed knowledge and being conscious of issues related to sugar, sweeteners and sweet-tasting foods. While some participants were conscious of their intakes, were aware of concepts such as “hidden sugars” in food products, and attended to the health implications and guidelines related to sugar, sweeteners and sweet-tasting foods, other participants were not mindful of these, and were unclear on the reasons behind recommendations or the origins of their opinions. When prompted specifically about the UK SDIL, some participants expressed confusion or surprise, were unaware as to whether the tax had been implemented, and suggested poor awareness of the details of the scheme.

“It’s not necessarily, just about (pause) uh cutting down on sugar cane, cutting down on coke because it’s got too much sugar in it. It’s about an awareness sort of. (pause) all the other products that don’t look like sugary products.” (FG3, P2)

The sub-theme ‘Perception’ referred to the way in which one interprets or regards sugar, sweeteners and sweet-tasting foods. Perceptions included concepts of “healthy” versus “unhealthy” sugars; the suggestion that natural sugars, such as fruit sugars and honey, were healthier than artificial (chemical) sweeteners; and that brown sugar was more natural and so healthier than white sugar. Participants generally viewed fruit as a healthy source of sweet taste, but suggested confusion in relation to fruit juices, fruit drinks and concentrates. The terms ‘fresh’, ‘natural’ and ‘organic’ were interpreted positively. The term “sweeteners” was generally used to refer to LNCS, and these were treated separately from “natural” sweetening agents such as honey. Low-fat or fat-free products were considered to include a high sugar content, while low-sugar or sugar-free products were considered to be high in LNCS.

“But brown rice is better for you, so surely brown sugar is.” (FG5, P2)

‘Proficiency’ was defined as a deeper knowledge and proficiency in matters related to sugar, sweeteners and sweet-tasting foods. There were concerns that current sugar-reduction campaigns focussed on sugar cubes and carbonated beverages, and hence the public may only view these items as unhealthy. There was general consensus regarding a lack of proper understanding of LNCS, and how to replace sugar with LNCS, for example, in baking or cooking. There were suggestions consequently for education on sources of sugar, sweeteners and sweet taste, and on how to prepare sweet-tasting foods with reduced sugar at home.

“I think a lot has been done to educate people on sugar, but there seems to be no education on sweeteners and what they are.” (FG7, P4)

The sub-theme ‘Reasoning’ covered how an individual applies logic while processing information in order to form inferences. Participants reported being unable to interpret the large range of available marketing, nutrition and health information, such that they were unsure whether to consume sugar or LNCS as a source of sweet taste. Responses indicated support for LNCS use for weight loss, hyperactivity, diabetes, or other medical conditions. In addressing whether LNCS should replace sugar, some participants supported the use of LNCS as a short-term strategy to reduce dietary sugar, while others did not see the need for LNCS and supported sugar reduction alone. There were suggestions also that LNCS could include added health benefits such as vitamins, instead of simply providing fewer calories. With the knowledge that LNCS could provide sweet taste without the energy content of sugar, there were also concerns that guidelines may have detrimental side effects, such as reductions in physical activity when individuals switched from sugar to LNCS because they are consuming less calories, or that some strategies, such as graphic imaging on packaging, may be equally applicable to other food items, such as those high in fat or salt. There was general consensus that sugar reduction would require a holistic approach, involving government legislation, food product reformulation, education and motivation.

“I think my concern would be if people, mis-interpreted the message that said sweeteners are okay, and sugars are less okay. People might think, well I won’t bother exercising now and they think then if if I just turn to sweeteners.” (FG3, P1)

3.2.6. It’s Not Up to Me

|| One takes a passive approach towards sugar, sweeteners and sweet-tasting foods, because intake is subject to other factors.

Contrary to the active involvement of the individual in the above three themes, the theme ‘It’s not up to me’ detailed a passive approach to sugar, sweetener and sweet food consumption. Food intake was considered to be ‘Beyond Individual Control’, to be determined instead by ‘Strategies and Regulations’ or ‘Deception’. The sub-theme ‘Beyond Individual Control’ referred to factors that individuals felt unable to control. Food choice and intake were considered to be determined by the availability and accessibility of sugar, sweeteners and sweet-tasting foods and the social and cultural environment, including family, friends and peers. Some participants suggested that the normalization of obesity could increase sugar consumption, as high sugar intake was seen as acceptable or typical, while others suggested that society is becoming healthier and that lower sugar consumption is more acceptable. The sugar content of foods was seen as unnecessarily high, a fault of food manufacturers, and advertising and marketing strategies were considered to be aggressive. Sugar reduction strategies were also considered to compete with these influences. One reason that as given for failing to notice the SDIL, for example, was that large price fluctuations in the economy may mask small tax-related increases in prices. For some participants, sugar reduction was also beyond one’s control because the addiction to sugar was difficult to overcome and would require professional help.

“I think people need professional help! You know for sugar? Cause of the fact that I’ve I- I- y-yeah. I think she’s right. It is a drug (pause) and when I when I need, I need it.” (FG2, P6)

The sub-theme ‘Strategies and Regulations’ referred to official legislation and large-scale measures. Comments implied that healthy food consumption was the responsibility of the government. Sugar taxes and the promotion of reduced-sugar foods as default options were viewed as beneficial for driving manufacturers to lower the sugar content of foods, but there were concerns that implementation was dependent on individual manufacturers, and that the food industry could choose to reject measures such as sugar labelling or graphic imaging. Current government dietary recommendations, such as keeping below 30 grams of free sugars per day, were also seen as possibly unrealistic.

“You know, if it’s really a health issue problem, it has to be you know, peep-people can’t take responsibility most of the time, so you know that’s, that’s a lot to do with that! You know, teaching people how to take responsibilities… But, at the end of the day, you know, if that doesn’t work, is like people are children you know, [authorities have] to tell them off and the only way is punishment! Isn’t it?” (I1, P1)

Finally, the sub-theme ‘Deception’ incorporated ideas of traps and tricks used by food manufacturers and distrust of the food industry. The food industry was considered to be corrupt, to intentionally load sugar or sweeteners into foods, and to mislead consumers with unclear labels; there were suggestions that consumers were pitted against food manufacturers and the tactics of the latter would triumph. Comments also reflected distrust of current food labels and of the information produced by health professionals and scientific researchers.

“I think it’s sneaky how much they put in stuff, it can be hard to stick to your plan or keep things in moderation when companies load things with sugar and fat.” (FG6, P3)

4. Discussion

This work aimed to explore attitudes towards sugar, sweeteners and sweet-tasting foods in the general public of the UK. A combination of seven focus groups, two dyadic and one solo interview was conducted to get a wide range of attitudes. Attitudes were grouped into six main themes: ‘Value’, ‘Angle’, ‘Personal Relevance’, ‘Personal Responsibility’, ‘Understanding’ and ‘It’s Not Up to Me'. Both positive and negative attitudes towards sugar, sweeteners and sweet-tasting foods were expressed across these six themes, largely dependent on the individual.

Attitudes captured by the theme ‘Value’ demonstrated a range of advantages to using and consuming sugar, LNCS and sweet-tasting foods, from food preservation, energy provision and reduction, to pleasure and enjoyment, while less positive attitudes were grouped into the theme ‘Angle’. Comments in this theme demonstrated attitudes that were negative, uninterested, or dependent on competing alternatives. Perceived benefits are common reasons for consuming foods [42,43], and with the inherently rewarding nature of sugar and sweet taste [21], benefits such as taste and pleasure are commonly reported as reasons for consuming sweet-tasting foods [12-16,20], alongside reasons associated with emotions [44-46] and memories [46,47]. Perceptions of health benefits are also frequently reported in association with the consumption of both sugar and LNCS [12,16-19,29-31], as are negative attitudes and health concerns [13,14,16,22,31].

Compared to the straightforward nature of the themes ‘Value’ and ‘Angle’, the theme ‘Personal Relevance’ focused on more complex ideas that some people may be or may need to be more concerned with sugar, sweeteners, or sweet-tasting food consumption than others. Differences between individuals were recognised based on demographic characteristics such as gender, age and socio-economic status, on personal interests such as the importance of health or appearance to each individual, or on personal situation. The importance of personal relevance for influencing dietary behaviours has been previously detailed elsewhere [48-51]. Recognition of differing motivations for differing individuals is also paramount in this literature [48-51]. The existence of differing concerns and barriers toward healthy food consumption among differing population groups is also clear in earlier work on sugar, sweeteners and sweet foods [13-17,30,31].

The ideas of individual differences and individual motivations were also noticeable in the theme ‘Personal Responsibility’. This theme centred around the idea that one has an active relationship with sugar, sweeteners and sweet-tasting foods. Participants liked to be fully informed over the advantages and disadvantages of different food ingredients, such that they can make their own choices, and regulate their intake for themselves. This idea of personal choice and personal control is apparent elsewhere in the literature relating to sugar and LNCS use [14,17,31], and is found in the literature relating to food choice, and particularly the acceptance of novel foods, diets, and dietary guidelines [52-54]. Increased perceptions of personal choice, control and responsibility have also been linked with more healthy dietary consumption and a more healthy body weight [48,55-57]. Some participants recognised this self-regulation as resulting in inner conflict or requiring additional motivation, but the over-riding idea of personal choice and responsibility remained paramount.

Linked to ideas of personal choice, and the need for information to enable this, the theme ‘Understanding’ specifically considered the means by which consumers gain and process information. Sub-themes recognised the importance of different types of information and information channels, the value of awareness for informing and changing intakes, the importance of different perceptions and the use of different justifications to rationalise sugar, sweetener and sweet food intakes. Information is repeatedly requested in response to dietary challenges [12,14,15-20,23,30], and is often available [e.g.25,26], but inaccessibility by certain individuals or population groups, misunderstanding and confusion often still remain [13-15,17-19,23,30,31].

Contrary to the active engagement in themes ‘Personal Responsibility’ and ‘Understanding’, the theme ‘It’s not up to me’ allowed individuals to take a passive approach towards sugar, sweeteners and sweet-tasting foods, and recognised that intake is subject to other factors. The influence of external influences, such as the food supply and the social and cultural environment, in dietary intakes is well recognised [11-13,15-20]. Sub-themes within this theme also gave the responsibility for sugar and sweetener consumption to governments and the food industry, and permitted an even further reduced role for the individual through ideas of ‘deception’. Previous research has also revealed this blame towards external organisations [12,13,15,17-19,23,57], and this distrust in health professionals, government agencies, and in the food industry [13,16,23,58,59].

Clear attitudes towards policies and strategies for reduction were also expressed, and attitudes within each of the themes had clear implications for reducing sugar intakes. Clear benefits and disadvantages of sugar, sweeteners and sweet-tasting foods, plus the importance of personal relevance suggest a need for individualised and personalised strategies. The active engagement demonstrated under the themes of ‘Personal Responsibility’ and ‘Understanding’ suggests a need for greater awareness, education and the many different ideas in the theme ‘Understanding’ suggest the potential need for many different types of information or education for instigating dietary change. The media portrayal of scientific publications and policy discussions has been shown to influence consumer perceptions of sugars and sweeteners [60].

The need for personal relevance, and the possible differing attitudes based on population group, however also suggest that different types of information may be more acceptable and more effective for different individuals. Similar concerns over acceptability, use and effect have also been suggested in the literature on sugar, sweeteners and sweet foods [12-14,16,19], and work on other aspects of nutritional information also highlights the need for different types of information for different individuals [60,61]. Information alone, however, may not to be enough [12,18], and within the theme ‘Personal Responsibility’, strategies for change also focussed on empowering the consumer; providing the information to allow individuals to take responsibility for their own consumption and motivating consumers to act for themselves. Clear opposing strategies for change were also apparent within the theme ‘It’s Not Up to Me’. Here, strategies for change relied entirely on government legislation and regulation of the food industry, but possible backlash as a result of restrictions and deception were also apparent. As detailed by some participants, reduced intake of one food-type or ingredient also requires a workable alternative. Promotion of the value of alternative foods, and the benefits of these alternative foods, may add weight, particularly if these benefits are personalised to different consumer groups with different value priorities.

The need for ‘Personal Relevance’ may make it hard to make changes to intakes on a population–wide basis. An absence of evidence for the prevalence of different attitudes and different consumer groups, furthermore, makes prioritization of certain approaches or strategies difficult. Evidence of the dominant attitudes in those in greatest need of change would be of value. Arguably, those in greatest need of reduced sugar intakes are those who are consuming large amounts of sugar, and those who are likely to be differentially affected by these intakes – those already experiencing or likely to experience related health conditions, such as dental caries, cardiovascular disease, Type II diabetes, overweight and obesity [1]. Future work should investigate the dominant attitudes in specific individuals, and the relationships between specific attitudes and dietary free sugar intakes.

The study was limited by its qualitative nature, allowing inclusion of a limited number of participants, however, recruitment was undertaken across a range of venues and minimal inclusion criteria were used to gain a range of individuals with a range of attitudes. Discussions were also contextual and will reflect the prevalent attitudes and sugar-related policies in the UK at the time the study was undertaken. New legislations on advertisements and labelling of foods high in sugar may shape consumer attitudes in the future [62]. The analyses may also have been affected by the backgrounds of the researchers undertaking this work. Attitudes were elicited using a standardized question guide, and all focus groups were undertaken with the aim of eliciting as many attitudes as possible.

5. Conclusions

This study identified six themes to describe current attitudes to sugar, sweeteners and sweet-tasting foods in a sample of UK consumers: ‘Value’, ‘Angle’, ‘Personal Relevance’, ‘Personal Responsibility’, ‘Understanding’ and ‘It’s Not Up to Me'. Both positive and negative attitudes towards sugar, sweeteners and sweet-tasting foods were expressed across these six themes, largely dependent on the individual. Potential strategies for reducing free sugar intakes were reported, but differing perceptions of likely value were also suggested. For greatest population benefit, evidence of the dominant attitudes of those in greatest need of reduced free sugar intakes would be of value. Future work will investigate the associations between attitudes and free sugar intakes and the dominant attitudes in specific population groups.

**Supplementary Materials:** The following are available online at \_\_\_\_\_; Figure 1: Free sugars intake recommendation by Public Health England, and sugar contents in popular drinks, all portrayed with number of sugar cubes; Figure 2: Various sources of sweet taste; Figure 3: Examples of what plain packaging can look like on products containing sugars; Figure 4: An actual BBC News article illustrated as a newspaper clipping; Table 1: Definitions and quotes for each theme and sub-theme.

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**Supplementary Materials**

****Figure 1. Free sugars intake recommendation by Public Health England, and sugar contents in popular drinks, all portrayed with number of sugar cubes.

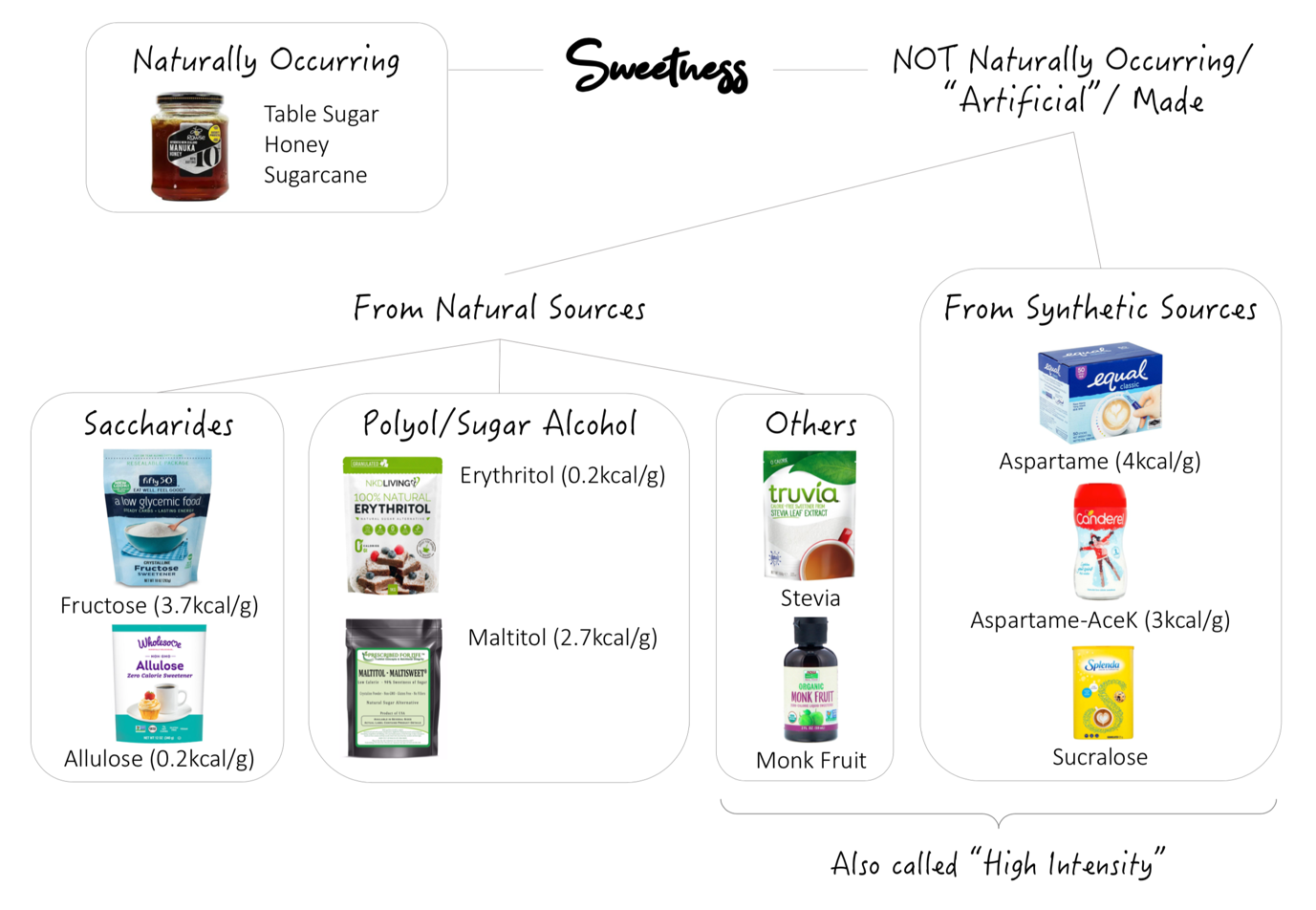
****Figure 2. Various sources of sweet taste.

Figure 3. Examples of what packaging can look like on products containing sugars, with graphic imaging similar to that that has been used for cigarettes under The Standardised Packaging of Tobacco Products Regulations 2015.

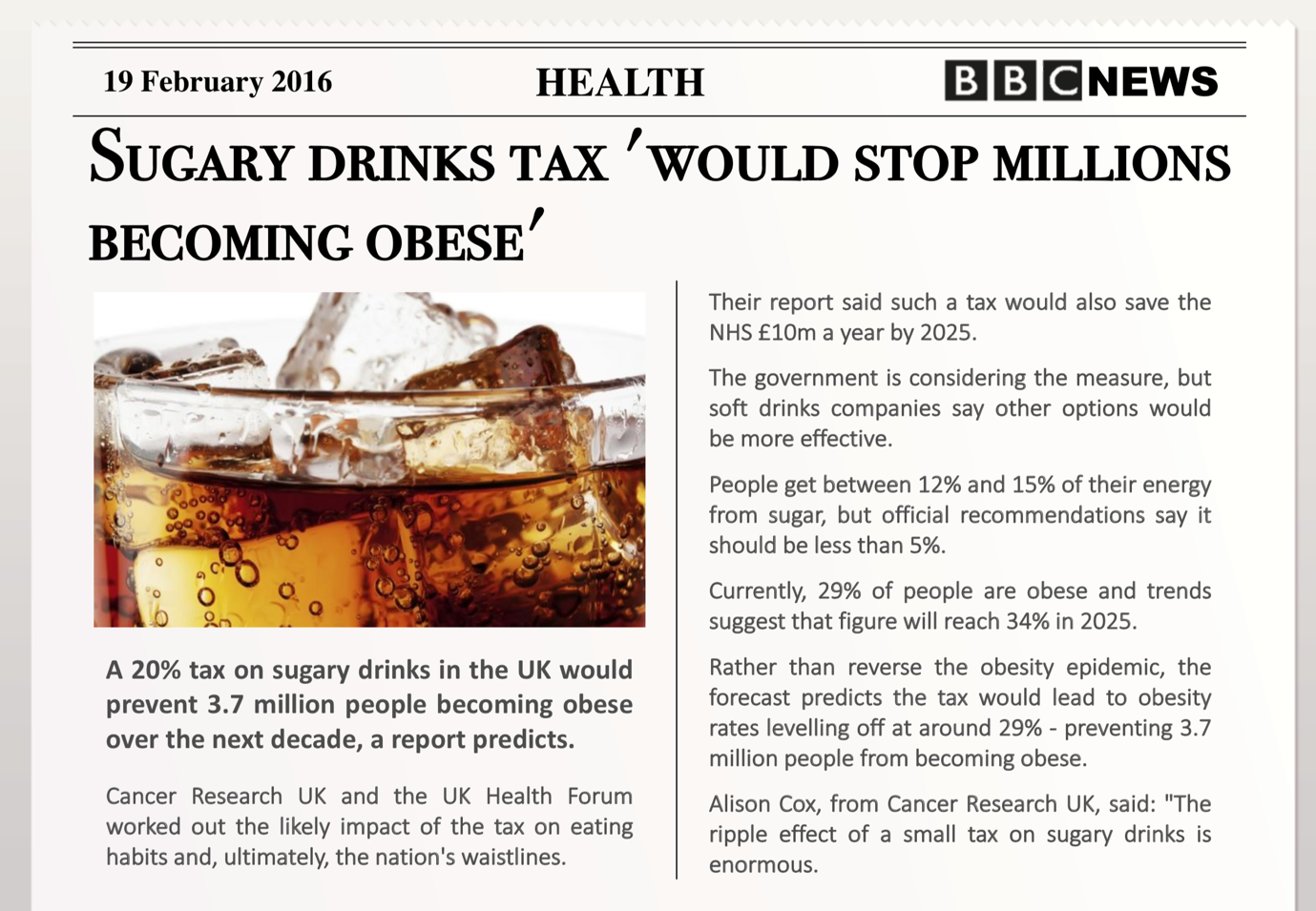
Figure 4. An actual BBC News article on the SDIL, illustrated as a newspaper clipping.

Table 1. Definitions and quotes for each theme and sub-theme.

|  |  |  |
| --- | --- | --- |
| **Value |** What sugar, sweeteners and sweet-tasting foods can provide. | | |
| Taste | The flavour of sugar, sweeteners or sweet-tasting foods | “It still has to taste good I think that’s the thing.” (DI1, P2)  “Does the natural, yes I definitely consider them? Um, it obviously comes down to taste? Um I probably want and, get it and make put it in my own recipes and see how it (pause) changes things from having sugar in them?” (FG3, P3)  “And the taste of soda is better when is with sugar and if is (pause) if there’s no sugar, then is isn’t worth drinking it.” (FG2, P3)  “The taste, sweeteners are disgusting (laughs) in my opinion they taste very different and I, I don’t like it.” (I1, P1)  “You wouldn’t think that would be drinkable! Would you. You’d think it would just be so over sweet!” (FG7, P4)  “I just don’t like sugar in my coffee but that’s about it. I do eat sugar all the time, so (laughs).” (FG2, P6) |
| Pleasure | The enjoyment and satisfaction derived from experience with sugar, sweeteners or sweet-tasting foods | “The fact that people just enjoy th- their drink, with sugar. Is just that is something that you cannot change because some people most people, to be fair, don’t even care about the (pause) Health impact.” (FG2, P6)  “They just, just lookin’ at them they come in a lil plastic box. Just don’t like the look of it I just don’t like the idea of it? Um (pause) yeah I don’t use sugars, um in my coffee anyway I and I don’t cook so, um (pause) yeah I don’t really have a sugar in my in my house. But um, if I had to, I’d go for sugar not a sweetener I just don’t like the look of them I don’t know. Just look like little pills (laughs) something puts me off.” (FG1, P4)  “Let’s say we’re not gonna have cake anymore because you can’t make cake without either sugars or sweeteners alright so, if we get rid of both those things there’s no more cake. (pause) To me, th-the life is too short, to do away with, good things in life.” (DI1, P2)  “When you love something, you can-not let go, right? (laughs) You will make excep-exceptions for the thing that you really love.” (FG2, P3)  “I always go full fat, full sugar. You know if, again is about taking responsibility. If you decide to put something in your mouths, you want to have an experience of it. It’s it’s fine, with it. Just take th-the real thing as opposed to artificial things and, just eat less of it and just appreciate what you have!” (I1, P1)  “Although I do like a Jager bomb… Yeah so if I’m going out then it’s a bit different, but all my inhibitions go out the window and I just let loose if I’m drinking.” (FG6, P2) |
| Special | Not an everyday affair with sugar or sweet-tasting foods | “That taste of Cadbury’s chocolate? Um… it it just relaxing. It feels like a treat.” (FG3, P3)  “But for me I would rather not buy diet or reduced sugar things I would make the sugary things more of a treat and have less often.” (FG7, P3)  “So I never really (pause) m-my mom’s always been sort of health, conscious so we (pause) it’s probably bad on a Sunday night we used stop off at this local shop, and just get so much. So many sweets and (pause) and, bad things but. Yeah and just our day to, to have that and that was after we’d, been on, been round to my grandparent’s for Sunday dinner so it was, sort of like our, cheat day y’know? But (pause) yeah I don’t do that, too often.” (FG1, P1)  “Yeah about it being novelty? When coke you know and all those, sugary drinks. Yeah. When they became novelty and everybody wanted, to have it type of thing and, it wasn’t so readily available before so everybody jumped on the bandwagon really.” (FG1, P4) |
| Emotion | Sentiments and feelings derived from sugar or sweet-tasting foods; influence of mood on intake | “For me I think happy uh like this sounds weird. But like happy thoughts? I’m like, pudding is a good thing.” (DI1, P2)  “I think that in the psychology aspect? Uh some people looking for sweetness when they are sad or depressed.” (FG2, P2)  “It makes me happy and that’s all I care about so (laughs)” (FG2, P6)  “Yeah like I don’t really mind, I would rather be a bit curvy and happy and enjoy what I eat rather than obsessively worry all the time and restrict myself of things that I want.” (FG6, P1)  “When I drink juice? I always feel much more healthier.” (FG2, P4)  “It depends yeah, depends on the mood.” (FG4, P4) |
| Worth | Weighing of cost and benefit, for sugar, sweeteners or sweet-tasting foods | “And they had this coffee cake or whatever (pause) on fifty percent off. So I thought I’ll have that. And uh, yeah of price. Price. And it was a pretty big slab.” (FG1, P2)  “I maybe care about the price! Rather than discriminate between sugar and sweetener.” (FG3, P1)  “it’s to understand what the health benefits if there are any or there are, and I assume there’ll be a cost impact as well? And then it’s not like we’re running out of sugar? (laughs) So, it’s not gonna help the planet. So I need to an angle to really think why why would I want to, change and if (pause) if I saw in, products that are on sale? (pause) I would look it up first and think okay, again why? And then I’ll think about it.” (FG3, P3)  “Yeah I associate it to weight loss and it’s better when I’m counting calories.” (FG6, P3)  “Let’s say you need uh, a a boost for, the energy boost you can get but you can get it in other ways but (pause) uh sort of nutritionally as far as I understand there’s not much benefit to (pause) unlike sh- salt, where people need, a little bit of salt in their diet.” (FG1, P2) |
| **Angle |** Negativity surrounding sugar, sweeteners and sweet-tasting foods. | | |
| Disinterest | Indifference towards negativity surrounding sugar, sweeteners or sweet-tasting foods | “Yeah, balanced rather than just the sugar or just the fat but you know, in order to keep ourselves healthy. We need to do this. we need to have that. we need to sleep. We- a package rather than (pause) sugar.” (FG3, P1)  “Like I don’t think it’s necessary in this case but I mean, personally, yeah I-I’d I have some biscuits, I’d chocolate here and there, and (pause) um but there are things so (pause) there are- so what I find myself, doing (pause) is, a chocolate bar is a chocolate bar and, you can get one without sugar if you want, but I don’t go around looking for that particularly. (pause) Uh so when I have one I have one.” (FG1, P2)  “I think people do have do have sugar just because they like it but if they didn’t have to have it, they wouldn’t, have sort of withdrawal symptoms and, and what not, from, from not having sugar.” (FG1, P1)  “I don’t think that it’s necessarily is uh (pause) I don’t think it’s necessarily the case that because something we can label it and call it uh because it is and we call it artificial or synthetic, it is necessa- that necessarily means, that it is (pause) less uh or, it’s not as good or it is worse than something natural.” (FG1, P2)  “To me, eating sweet things, is just, quite normal! Um I-I don’t necessarily look upon it as a treat. It’s like I fancy something sweet, I’m gonna have that.” (FG3, P2)  “N-nothing really comes, comes to my mind (pause) cause I’m not always thinking when’s my next, cake coming or something (pause) so it’s not, really I don’t really have a (pause) it doesn’t mean I don’t enjoy it sometimes when I have it but.” (FG1, P2) |
| Disfavour | Serious and strong negativity or disapproval towards negativity surrounding sugar, sweeteners or sweet-tasting foods | “Yeah I think we mainly covered the (pause) um, so for example, both the sugar, table sugar and artificial sweetener, they’re both artificial.” (FG2, P5)  “I think I think people need professional help! You know for sugar? Cause of the fact that I’ve I- I- y-yeah. I think she’s right. It is a drug (pause) and when I when I need, I need it. It’s not like (pause) uh, oh I should have a cake, oh I shouldn’t have. It’s more like, I NEED A CAKE… So yeah I feel I feel (inaudible) education, but I think people are not really aware of the fact that it is quite addictive? And it it is quite, um harmful to your body? It is important but also professional help, might, yeah. Help people.” (FG2, P6)  “Sugar’s a highly addictive substance.” (FG1, P2)  “And that’s the one that, a couple of years had a lot of bad press. Alright and it was like, y’know people were saying oh it can cause (pause) illness like serious illness something as even like people were saying like… It can cause, cancer and all those kinda stuff.” (DI1, P2)  “It’s delivered, to refineries in, in tankers with the skull and crossbones, symbol on it… Because of the chemical contents within it.” (FG3, P2)  “Yeah I think there’s chemicals in them um (pause) same what they put in diet, um things so I just stay away from it, d- yeah it puts me off.” (FG1, P4)  “You’re just basically fooling your brain into like, your body’s like having sugar but it’s not actually? So it’s actually making everything worse? (pause) So that’s what I heard.” (FG2, P6)  “Yeah because you kinda get addicted as well to the sweet taste you know? Um, I think if you are on a, low-sugar diet for a- awhile, even for a week and I’ve heard that from, from people you know once they go back, and go back to their normal diet, everything taste so much sweeter and I think it’s just, our brain kind of get ad- not addicted but used to it.” (I1, P1)  “They’re consuming things, and probably getting hooked onto a taste (pause) without really realising it. Um and then it’s difficult for them to shake that off as they get older.” (FG3, P2) |
| Relativity | Whether sugar, sweeteners or sweet-tasting foods are good or not, is relative to what you are comparing it with | “The reason I don’t pick diet is because I heard about aspartame and I’ve heard people get tumours. It might be a myth thing but both options are bad and it’s better to do better the devil I know than I don’t.” (FG4, P1)  “Um, the fact that it’s more naturally processed. So I would, go, on sugar rather than sweeteners just because it’s, it’s less processed really. (pause) So you know, the less, th-th-the less processed it is the better. I think it is, for me.” (I1, P1)  “Yeah I go for normal as well, I really hate the taste of diet stuff and I think it’s more natural even though it’s probably still not good for you.” (FG4, P4)  “Advantages? As in you’re getting the sweetness without the sugar.” (FG5, P1)  “It’s just if you’d like the sweet taste. Like my dad for example, has sweeteners in his tea and coffee, as he couldn’t have a coffee without anything in it. He chooses a sweetener over sugar as he feels it is healthier for him. (pause) Oh I guess if you have got for example younger children or even yourself who massively react to sugar and you notice a change in their personality then maybe sweeteners would be better in that situation.” (FG7, P4) |
| **Personal Relevance |** To be concerned personally and/or to change one’s own behaviour. | | |
| Health and Body Image | How a person thinks he/she looks in terms of body size and skin; how healthy a person thinks he/she is | “I am eating way too much sugar. but I’m also doing way more exercise than the average person (pause) I would say average. Um (pause) so is there actually a link? Am I actually safe to eat the amount of sugar I’m eating or is there actually a problem and I shouldn’t be? I don’t know the answer to that but because, I’m not having any problem as you were saying as well. Then you know, th-there’s nothing to spur you to change...” (FG3, P3)  “I think it depends on, on the individual! Because I do think they-they have theor (pause) advantages if, if you take someone that is (pause) morbidly obese (pause) would you be more concerned about the chemicals that you’re puttin’ in their body? Or if the sole aim for them would the most important thing factor was them to lose weight, (pause) then perhaps uh (pause) a sugar alternative might be the, the best solution in that (pause) in that case? If they were tryin’ to lose weight, because they were at risk of, some kind of serious heart disease or something?” (FG1, P1)  “There’s a lot of messages around and I think now, there’s more of an emphasis on (pause) people (pause) lookin’ at it thinking right what do I do? But th-then some people think that’ll never happen to me. Whoosh! Shall eat what I want.” (FG3, P1)  “Nowadays (pause) well I am aware of (pause) like sugar-related issues health issues. Um but I don’t think I eat so much sugar that I should (pause) cut it down? Uh I would say that nowadays, my (sigh) food, um (pause) i-if I was to change, anything, it would be (pause) related to fat rather than sugar? (pause) I think?” (FG1, P3) |
| Generation and Age | Whether a person identifies with being a child, a youth, an adult, or an elderly; belonging to an “younger” or “older” generation | “I do, for the children? (Laughs) [But, not (laughs) but not for ourselves!] Not for ourselves yeah.” (DI1, P1 and P2)  “Um, so I think also (pause) embeddin’ and implementin’ education that type of education into schools would be really, helpful cause, back then, there was nothing, nothing like that, say you don’t even think about the implication of it actually w-what you doin’, to your body? Um, but (pause) you know, as I got older, my you know, my -my taste changed and I don’t crave sweets as much.” (FG1, P4)  “I do think it’s um, (pause) needed in workplaces cause I think you’ve got a generation (pause) perhaps slightly older than us? So it may be into you- into your forties and fifties. Who, haven’t had any awareness of any of this, haven’t been really affected by kinda social media drives because they are not really a social media generation. So I think there is a, a generation above us, that is kind of like, I don’t know kinda hang on, we-we’ve missed them and actually you could capture them with some workplace intervention.” (DI1, P2)  “For elder people I don’t know like maybe, only for label, it’s good for them because they know already, at their age. Because of low sugar is better for them. (pause) But for like um (pause) young age, have to like educate more. (pause) Yeah. Give information?” (FG2, P1)  “But it isn’t that bad for you, and children’s brains are still developing but older bodies are not as affected by these chemicals but for young children to be drinking aspartame every day.” (FG5, P1) |
| Socio-Economic Status | The measure of a person’s economic and social class in relation to others; a combination of his/her income, education and occupation | “I’m sure someone somewhere has done this. (pause) But if you were to say okay who are the, leading consumers of foods and drinks that are high in sugar? I’m guessing we would find that it’s the people that there are. Have less money.” (DI1, P2)  “I don’t mean to sound judgmental but the people I see who usually consume high energy and high sugar drinks are usually people who look quite rough and poor.” (FG6, P3)  “It’s got to be a holistic approach, because we are sat here as essentially comfortable financial group, but I think you have to educate the masses and peoples dietary budgets are very different. The problem is you can buy a burger king for two pounds against buying fresh fruit and vegetables which are much more expensive. Unfortunately, people are always going to default to the cheaper, easier option. Changes need to be made at the legislation level, hitting the source, who make it so readily available. We need to put more emphasis on the suppliers so that they take responsibility for it.” (FG7, P2) |
| Stake | The involvement and interest in the process and outcome, of consuming or reducing sugar, sweeteners or sweet-tasting foods | “You know, cause [participant name] sees it as a, a treat. Whereas I will kinda see it more as like a staple, like something you have every day. Yeah or, or at least more often than not. Maybe not every day. But more often than not.” (DI1, P2) “Although there are a notable amount of people now who are kinda you know driving the healthy lifestyle, there is still a lot of people who are, you know, probably more in line with where I am, and slightly beyond, which is like pffttt! Yeah, if you make it easy for me maybe but I’ve got other fish I need to fry right now and I’m not gonna get there.” (DI1, P2)  “I don’t use them. I mean (pause) since I don’t add stuff anyway, I’m not um, don’t add sugar or artificial sweetener.” (FG1, P2)  “No I don’t have any problem like cause I don’t have cravings for it so I’m, I’m good.” (I1, P1)  “I don’t add sugar really to anything. (pause) and um, I, for me personally I wouldn’t ever stop to think about whether a sweetener was good bad or indifferent I just don’t use them so they’re not really on my radar.” (FG3, P1)  “I feel like all of the things I prioritise in my shopping list low sugar isn’t really (pause) something I would think of.” (FG5, P2)  “And maybe relating it to their experience for example if you’re talking with people who are, very much into putting sugar in their coffee. You (pause) kind of shape your, education, based on that. Because they are interested in that one. If you talk about something else and if they don’t already consume it they won’t listen but if you relate it to their, experience they will listen.” (FG2, P5) |
| **Personal Responsibility |** One has an active relationship with sugar, sweeteners and sweet-tasting foods. | | |
| Informed Choice | The ability to understand each option and make the decision | “I don’t think it works telling people these days, don’t do this. (pause) Because you know, if someone said to me don’t do that, I’d just gonna ignore you and do it. (pause) If someone said hey, I know you like that and that’s fine. But just so you know, this is a better option. And this is better for you and here is why. But I you know what, I’d listen to that.” (DI1, P2)  “But until such point is I know, what are the sweeteners I can use and how they work versus sugar, I would still carry on with sugar until I have that knowledge.” (DI1, P2)  “It’s so hard to identify these days what is really, bad for you what is not so bad because you have to go and read it all. You know um whether that would be a easier way to do it maybe that, would it be a step too far, could we do something in in between? But I think it would be beneficial to help consumers identify more easily (pause) what what’s in food and (pause) what’s bad for you.” (FG1, P4)  “There’s a lot of (pause) questions about (pause) uh how far (pause) the difference between providing information about what people might want to do and actually trying to get them to do something else (pause) now I find that it’s actually intervening in their, in their own private life, for example.” (FG1, P2)  “I think you have to be s-sort of consciously aware of the quantities and the (pause) macronutrients that’s (pause) in a product. Um (pause) when you’re readin’ reading those labels and and trying to make a sort of, an informed decision on on what you then buy I think that I think that’s one of the real issues?” (FG1, P1)  “No I don’t think so, but because I’m I don’t know what’s in it and I’ve never kind of I always never curious cause I always knew what’s in the cube so I always use the cube. I guess it’s it’s kind of what you know about it and familiarity.” (FG2, P5)  “Because at the end of the day, its’ a free world and and we cou we’re all at liberty to make our own choices. But (pause) the information just needs to be. A bit clearer.” (FG3, P2)  “Yeah like it’s education isn’t it? But they can’t just put that out there as, we think you should eat less without explaining why and who it affects and what.” (FG3, P3)  “I don’t think that’s (pause) that’s gonna be an answer to take something and replacing with something else. So, as I said we don’t know the effect long term of all those artificial sweeteners in our bodies as well! So why would you do that?” (I1, P1)  “I think a combination would work well, like education and scare tactics would work together, because people would understand the reasons behind it rather than just being told ‘don’t do this’.” (FG6, P3)  “Yeah but at the end of the day if the customer wants it then surely they should pay for it? They aren’t forcing them to consume it.” (FG6, P1)  “There should definitely be traffic light thing, it’s good cause it’s a rule and you can see it on everything and it’s consistent over all foods, education need to be a simple rule so they can work out in the shop like you say you’re not going to get your phone out if you’re in a hurry.” (FG5, P4) |
| Self-Regulation | Managing one’s own consumption; modifying own behaviour such as intake or exercise accordingly | If I, yeah doing sport and I think oh! I can afford to, have a can of Fanta because. You know? I’ve just done three hours on the court!” (FG3, P3)  “Um, if I’ve got something sweet in the house (pause) I’ll eat it and that’s possibly why I don’t buy, that sort of thing from (pause) from the supermar- if I want something sweet, I’ll get it.” (FG1, P1)  “The traffic light system, occasionally I’ll, if I think I’ll, all I’ll measure it by is like adding up what’s red in the sugar zone, I’ll just go ‘oh okay, that meal is mostly red for sugar so I’ll make sure the other meals are not red in other areas’ so I make sure it’s like lower, a different colour for anything else I buy, and that they don’t add up. I could be buying four fucking things in the red zone and be like ‘oh yeah that’s fine cause I’ve had like seven things in the orange or green’.” (FG4, P1)  “Well I buy basic cornflakes and cut up a banana really thinly and I never eat raisins cause they’re unappealing I do that now cause I know I’ve got to eat more fibre and fruit helps it carry it through I have chocolate one or two times a week, not a big bar, it’s going on average like I binge and then I don’t touch anything for two weeks.” (FG4, P1)  “I really like home cooking so I don’t like to buy things cause actually when you look at the content of sugar say in a, pre-made Bolognese sauce or something, it’s really really high. Um (pause) and I uh (pause) so I-I like to like, just cook things like make them, from the ingredients, rather than using a tin of food or whatever or a bottle of food.” (DI1, P1)  "And I get them in bulk from those other things that I shouldn’t have too much of? I kinda take them out of (pause) th- the healthier options.” (FG3, P3)  “When um this meal I drink water, next meal I will like, treat myself like have a cup of (pause) um soft drink? Yeah. (FG2, P1)  “I try and balance it, some days I think I have way over two thousand but the next day I’ll be healthier and have a salad or something.” (FG6, P1)  “And if I need to have one KitKat, I will have that KitKat because. It won’t affect me that much. Cause it’s just once a month or something.” (FG2, P5)  “I programme myself to like it too I think I’m used to it, a lot of people say they can’t taste it but I don’t really care, you get used to bitter tastes, like I’ve got used to black tea, I used to hate it and now I love it.” (FG5, P1)  “To be fair I started using honey instead of sugar in tea and coffee so I started doing that and it doesn’t even taste that different. I bought sweetener for the first time yesterday, Canderal.” (FG5, P2) |
| Internal Conflict | Struggling to balance out motives, feelings and behaviours; pull and tug between two opposing voices | “Whether I’ll ever completely get away from it? I don’t know. But I think I’d probably move towards, kinda the way that [participant name] has Innocent smoothies which is, you have them every so often, because it’s nice. But it’s not part of your staple day to day. Um, so I think it’d probably be more towards that I can’t ever act- can’t see myself ever completely ditching it?” (DI1, P2)  “I honestly don’t know because I do eat a lot of sugar (laughs) So, uh removing from my life I think that would be very very challenging for me.” (FG2, P6)  “Some of the time that will be a fact that people (pause) are gonna consider when going to cause if you say oh it’s the same you think, do I want to be healthy? Or do I not? But I, don’t know what that is, thirty pence cheaper?” (FG1, P1)  “Let’s say we’re not gonna have cake anymore because you can’t make cake without either sugars or sweeteners alright so, if we get rid of both those things there’s no more cake. (pause) To me, th-the life is too short, to do away with, good things in life.” (DI1, P2)  “Yeah or a bit of fruit but I don’t always want a bit of fruit, I don’t want that sort of sweet I want a bit of naughty sweet.” (FG5, P3)  “You feel you being demonised cause actually you deserve that treat cause you’ve worked for it.” (FG3, P3)  “I do crave fizzy drinks, but like, and I know they’re bad, and I try not to do it that much but like, I don’t really care even though I know they’re bad, cause I want it.” (FG4, P4)  “Yeah I definitely have, I know I eat too much sugar, I’m always trying to go on a diet but I usually end up back at square one as I give in too easily.” (FG6, P1) |
| Motivation | The extent of the drive or desire that stimulates behavioural change | “Well for sure the educating the people but sometimes you know no matter how much knowledge you have it’s more about changing the behaviour.” (I1, P1)  “It’s more about a caring for yourself. Rather than oh I don’t want to do that because it’s gonna be bad.” (I1, P1)  “Yeah. Um but there is a lot of temptation around us all the time everywhere um and I guess, it’s um it’s just making small adjustments and, and maybe different choices rather have a piece of fruit, um instead of a biscuit or, something like that.” (FG1, P4)  “Yeah I agree, there seems to be a sudden health kick in our generation and everyone is trying to be healthier than each other, it’s actually quite competitive I guess.” (FG6, P2)  “I lack the willpower, at the moment to do it. I think this stage of life we’re at at the moment, with two young children, where you’re constantly tired. And I know, the answer to get natural energy and all the rest of it, is to eat healthily and do exercise. But when you’re coming off the back of about two hours sleep, you don’t really want those things.” (DI1, P2) |
| **Understanding |** Acquiring, comprehending and applying insights on sugar, sweeteners and sweet-tasting foods. | | |
| Delivery of Information | How information on sugar, sweeteners or sweet-tasting foods is disseminated and received | “Catchy infographics, I find those really, like impactful advertising, just on visual, you know when they have like heaps of sugar to display to everyone on those stupid diet programs, to be fair that is more impactful than the traffic light system.” (FG4, P1)  “But, so basically all those packaging, like they mostly use like bright colours like red and stuff. I think that’s kind of like sending that sort of, um, yeah. Idea to your brain that that you should be that that is kind of, you know attractive. For the consumer, that’s how it’s designed.” (FG2, P6)  “I think schools do quite well, because my kids are a lot more aware of sugar than we ever were when we were kids. They even asked me to put an app on my phone where you can scan food bar codes and it tells you the number of sugar cubes in it.” (FG7, P5)  “The news and stuff the press has been released about it. But I just know, there is a negative undertone.” (DI1, P2)  “Where’s you said the World Health Organisation uh where, um I mean, you know (pause) presumably the the the broad sheets would have it but where else would you get uh a World Health Organisation message?” (FG3, P1)  “I think more of, th-the leaflets visual leaflets like that you know, if if they were put around schools or organisations you know to actually have a visual because, you don’t really think about that? When you havin’ the drink while you don’t realise that necessarily? Um, so it-it makes you realise? It-it’s there in your face?” (FG1, P4)  “People are heavily influenced by their parents so maybe also (pause) gettin’, well yeah. Just you tackle it at every angle I guess. Schools, parents, workplace.” (FG1, P1)  “What was interesting to me was when Jamie Oliver went into schools and he said to the kids choose your lunch. He then said to them before you can eat this you need to burn off the calories around the running track that this food contains. I thought that was brilliant for visualising how much they have got to do to burn off their chosen food.” (FG7, P2)  “The news media pack up on the headline and they don’t really fully explain it and everybody just sees the headline and (pause) and and (pause) just changes habits, sometimes unnecessarily.” (FG3, P2)  ”How do we get our information and how much time do we spend and where do we get reliable sources about you know just, you have somebody on the internet who’s an influencer or whatever and it has in the background a bottle of something uh and you know and there’s people looking at that how do we choose our reliable sources to find out about these things so, it takes a lot of time and uh you’ll have to look at these things and spend time, really trying to understand.” (FG1, P2) |
| Awareness | A general knowledge of, being conscious about, sensing issues related to sugar, sweeteners or sweet-tasting foods | “When people talk think about sugar, they think about like adding sugar to tea, or you know, coffee and stuff like that maybe, some cookies, cakes, sweet things. And they don’t realise how much sugar is in (in overlap) other type of food? So they they, they (pause) you know they- they they eat so much (pause) like, processed food.” (FG1, P3)  “In the sort of the whole process of promoting a balanced diet, then (pause) it’s not necessarily, just about (pause) uh cutting down on sugar cane cutting down on coke because it’s got too much sugar in it. It’s about an awareness sort of. (pause) all the other products that don’t look like sugary products.” (FG3, P2)  “Yeah yeah I think people are wisening up because information is out there in a way which is more accessible, not just kinda studies going on behind everyone’s back.” (FG4, P1)  “If you had asked me two years ago I would have assumed if it was labelled no added sugar then it would have no sugar in it. It is only more recently that I suspect sweeteners have been added.” (FG7, P4)  “Yeah I have definitely cut down, I put on quite a lot of weight a few years ago and I made a conscious effort to change my diet and I lost quite a lot of weight, it was definitely related to how much sugar I consumed.” (FG6, P2)  “Thing is I feel like I don’t really understand it but I always go for low fat or low sugar or no added sugar like I would always go for that if I had a choice.” (FG5, P2)  “But people are so oblivious to it and there’s no stuff on the news about it like with kids you need to cut back because parents just don’t really realise how bad it really is for children when they just give them sweets and stuff.” (FG5, P3)  “Also I don’t think people are aware of the damage that they are doing to their health because there’s so much out there, or maybe people just turn a blind eye to it.” (FG6, P1)  “I know that it’s generally considered bad for you but if, you wanted me to go into specifics before you answered that truthfully, I couldn’t have given you, the specifics other than saying I know it’s bad for me on a general level.” (DI1, P2)  “I think instead of preventing it, they should encourage them and then help them see other options other than saying oh this is too expensive you can’t buy it now... Cause I’ve seen it, after Brexit, in some shops (pause) For example there’s a certain thing, sausage or whatever I buy, and there’s five or ten p difference. People don’t realise is just because I always buy that one, I will realise. But I won’t know the reason behind it. I will just assume it’s Brexit. But it might be, the sugar tax in that sausage. (pause) You don’t know.” (FG2, P5) |
| Perception | The way one interprets or regards information related to sugar, sweeteners and sweet-tasting foods. | “But brown rice is better for you so surely brown sugar is.” (FG5, P2)  “It doesn’t count! Cause it’s a drink!” (FG1, P1)  “Well the key is, is when they follow it with the word drink… because there’s orange juice (pause) drink, then its’ like uh oh [it’s got something else].” (FG3, P1 & P2)  “It’s a natural fruit. It’s a natural sugar! It’s natural sugar I think it’s different sugar.” (FG1, P4)  “I mean, the general idea of sugar like I know uh glucose, fructose, like um lactose, like all the, um types of… Yeah where you get sugar from. And for example some of them your body doesn’t produce and, um so you need to get them for example glucose, and things. But I don’t know about the general sweeteners.” (FG2, P5)  “If I have the chance between sugar and honey? Yeah I will choose honey because it’s natural.” (FG2, P2)  “Uh, so if you have like (pause) wholemeal food, it contains different types of sugar different types of carbs, (pause) as compared to fruits. Cause th-the fruit, um, they contain a lot of glucose and fructose which are like, simple sugars?... i-in fruit you-you’ve got th-th-the type of sugar that you actually use quite quickly?... So uh (pause) as compared to, let’s say, whole-grain, um (pause) pasta or whatever, which also contains a lot of (pause) carb, that’s that is a different type… from what I know, it’s for your health, it’s better to eat vegetables, rather than fruits? Or grains? If you if you need carbs. If you need this type of uh (pause) thing. It’s better to eat grains or y’know cereals, without, added sugar. Uh, rather than fruit?” (FG1, P3)  “Oh yeah white is so bad for you, they have to bleach it and put sugar in it.” (FG5, P2) |
| Proficiency | The deeper knowledge and expertise in matters related to sugar, sweeteners or sweet-tasting foods | “Thing is they’re always like no added sugar but I didn’t realise as soon as you blend fruit that your body treats it as white sugar, out the packet, and also like if you made a smoothie with like two bananas, one apple, that would only count as one of your five a day, as soon as you blend it the sugar becomes free radicals or something and your body just treats it as sugar.” (FG5, P2)  “It’s a lot of lack of education in, like, knowing that actually if you, cook a tomato sauce or something like the sugars within the tomato, or you know there’s a, the fruit and food and vegetables have, naturally occurring stuff in them. So you don’t actually need to add, anything to it. So you will still get a feeling of like oh like in a cake you could add some banana or something, and you get some sweetness instead of (laughs) instead of adding sugar you know there’s lots of things like that.” (DI1, P1)  “The addition of sugar on proteins (inaudible). You know, um help cancer cells to, (sigh) um metabolise certain uh things such as collagen for example you know when if the cancer cells can degrade collagen better. They um, they can go from one tissue to another so that’s uh, that’s for example. An example of study.” (I1, P1)  “People just don’t realise it’s not only about like, sugar cubes or something like that.” (FG1, P3)  “I feel like coke is the drink where people are very educated on, like everyone knows it’s bad.” (FG5, P3)  “I think a lot has been done to educate people on sugar, but there seems to be no education on sweeteners and what they are.” (FG7, P4) |
| Reasoning | To apply logic while processing information, in order to form inferences about sugar, sweeteners or sweet-tasting foods | “There’s a lot of messages around and I think now, there’s more of an emphasis on (pause) people (pause) lookin’ at it thinking right what do I do? But th-then some people think that’ll never happen to me. Whoosh! Shall eat what I want.” (FG3, P1)  “Yeah like I don’t know what to believe any more because there are so many of this fad diets and all that I like don’t know who to trust.” (FG5, P4)  “I think you might be replacing one bad thing with another bad thing!” (FG7, P1)  “I think my concern would be if people, mis-interpreted the message that said sweeteners are okay, and sugars are less okay. People might think, well I won’t bother exercising now and they think then if if I just turn to sweeteners.” (FG3, P1)  “I would buy, the normal one? But just eat less? Probably? So if if I if I (pause) did buy, a lite version of something I would probably (pause) be thinking that okay I can eat more because it’s lite?” (FG1, P1)  “How do we get our information and how much time do we spend and where do we get reliable sources about you know just, you have somebody on the internet who’s an influencer or whatever and it has in the background a bottle of something uh and you know and there’s people looking at that how do we choose our reliable sources to find out about these things so, it takes a lot of time and uh you’ll have to look at these things and spend time, really trying to understand.” (FG1, P2)  “I-I think it’s something complex debate about, just because something technically could be called natural whether or not that it is it’s actually is more beneficial (pause) than something that was (pause) i-in effect (pause) cooked up in a lab, that doesn’t necessary follow that that’s better than that, simply. Bu-but it’s quite a complex matter.” (FG1, P2)  “I think maybe if you suffer from diabetes or something like that there are possibly some sweeteners that are better for blood sugar regulation, I don’t really know. Yeah, I think that would maybe be an advantage, but from my point of view, someone that doesn’t have a condition, I don’t see any advantage.” (FG7, P3)  “But is this being considered? Because what now what I’m thinking is, um obviously uh there’re other stuff that are quite (pause) you know, not so beneficial even harmful, uh in the shops. So it’s not just bout sugar, but if we actually, go for this, these regulations in terms of what every single thing we eat (pause) then it would be the end of an era. Of marketing and brands and everything.” (FG2, P6) |
| **It’s Not Up to Me |** One takes a passive approach towards sugar, sweeteners and sweet-tasting foods, because intake is subject to other factors. | | |
| Beyond Individual Control | Factors beyond the control of an individual, including external influences | “They probably just have one, so they make that choice for you really, in terms of sweeteners.” (FG1, P4)  “Fair enough if you’re big and you’re top of reasonable BMI and that’s the way, like I know someone who’s got a thyroid problem and it doesn’t matter how clean she eats she will put on weight and she’ll go running every week but she’s still a big woman and she can’t help it, probably really depressing and crappy on their self-esteem.” (FG4, P1)  “But also, it depends on your, previous experiences. For example. Up your upbringings, what they drink what they eat. And then you see what they eat and you do the same so.” (FG2, P5)  “Yeah as a kid I had way more sugar than my children have now. Every time I was picked up from school or play group my mum would give me a bag of sweets. Golden syrup on my porridge.” (FG7, P3)  “I think we’re lucky in this country as well cause I’ve travelled a lot and m- orange juice for example over here (pause) if it says natural, pure orange juice it is a hundred percent pure orange juice in America for example, you try finding orange juice, That doesn’t have added sugar (pause) it used to be very hard they are getting better but they used to be yeah. Not available!” (FG3, P3)  “Yeah but at the same time you might want baked beans but you’re not asking for all the extra added sugar which has gotten has increased drastically over the years like it didn’t used to have that much sugar in it, and you can’t really get ones without the enormous amount of sugar in it and that’s not necessarily their fault, baked beans are supposed to be healthy for you, it’s the manufacturers’ fault for putting that much in there in the first place.” (FG5, P1)  “I think the nation is starting to become a lot healthier in general, like I’ll admit I used to be someone who would always buy a fizzy drink, thinking about it now I don’t really know why but I always did, now I rarely even look at them and I usually buy water.” (FG6, P1)  “I think people need professional help! You know for sugar? Cause of the fact that I’ve I- I- y-yeah. I think she’s right. It is a drug (pause) and when I when I need, I need it.” (FG2, P6)  “I think the trouble is, I only noticed it when I went on a sugar-free diet, is that you don’t realise how accustomed your palate is to sweetness. So with ketchup and other things like that you wouldn’t imagine are loaded with sugar they are. You don’t realise how your palate has become accustomed to such a sweet taste in everything and then when you remove the sugar completely everything becomes so bland.” (FG7, P2) |
| Strategies and Regulations | Legislations; official large-scale measures put in place | “I think some places they (pause) cause it’s less (pause) you sort of automatically get th-the diet? Because it’s cheaper? As opposed to getting I think if you asked for, a coke they almost I-I don’t know how true this is.” (FG1, P1)  “You know, if it’s really a health issue problem, it has to be you know, peep-people can’t take responsibility most of the time, so you know that’s, that’s a lot to do with that! You know, teaching people how to take responsibilities… But, at the end of the day, you know, if that doesn’t work, is like people are children you know, you have to tell them off and the only way is punishment! Isn’t it?” (I1, P1)  “It’s a government’s responsibility to make sure companies are in like, and if there’s a UK health crisis aa best method of treating best method of disease or not is prevention, so you need to, you need to set the standard, you can’t just rely on people to know what’s best for them.” (FG4, P1)  “IF there were more taxes which manufacturers had to fork out for then maybe they’d actually stop filling their products with so much sugar, that’s the message which is trying to be achieved at the end of the day.” (FG6, P2) |
| Deception | The idea of traps, tricks or temptations by manufacturers; distrust of food industry | “I think people don’t really think about what they’re putting in their shopping baskets, there’s so many brands of the same stuff and so many adverts, it’s easy to fall into the trap of buying things rather than sticking to a plan/shopping list.” (FG6, P2)  “I think it’s sneaky how much they put in stuff, it can be hard to stick to your plan or keep things in moderation when companies load things with sugar and fat.” (FG6, P3)  “Some big companies are being um getting paid by some of the big companies to the doctors and they are giving kind of (pause) prejudice or kind of biased advice? So you shouldn’t always trust the professionals as well. I just like, do some research, ask people, what are their opinion, and stuff. So don’t just go to professionals.” (FG2, P5)  “Well I’m a cynic with this kinda stuff and I work in marketing. So (pause) y’know, I know first-hand, that, it is spin city you know? Everything is being spun. So it’s just that oh no sugar, uhhuh? What else is in it then? Because I’m tasting sweetness somewhere, and unless you’re some kind of magician, you’ve put something in it to make it sweet, so you saying no sugar it’s just like okay, well how’re you harming me (pause) somewhere else?” (DI1, P2)  “Cause obviously they’re not allowed to lie on the tables but I feel like they deliberately make it confusing cause obviously it’s in their interest that you don’t understand.” (FG5, P2)  “I feel tricked, how much was there already if there’s no added sugar.” (FG5, P4) |