



THE UNIVERSITY *of* EDINBURGH

Edinburgh Research Explorer

It's easy to maintain when the changes are small

Citation for published version:

Wehbe, L, Banas, K & Papias, E 2022, 'It's easy to maintain when the changes are small: Exploring environmentally motivated dietary changes from a self-control perspective', *Collabra*, vol. 8, no. 1. <https://doi.org/10.1525/collabra.38823>

Digital Object Identifier (DOI):

[10.1525/collabra.38823](https://doi.org/10.1525/collabra.38823)

Link:

[Link to publication record in Edinburgh Research Explorer](#)

Document Version:

Publisher's PDF, also known as Version of record

Published In:

Collabra

General rights

Copyright for the publications made accessible via the Edinburgh Research Explorer is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.


Take down policy

The University of Edinburgh has made every reasonable effort to ensure that Edinburgh Research Explorer content complies with UK legislation. If you believe that the public display of this file breaches copyright please contact openaccess@ed.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.



Social Psychology

It's Easy to Maintain When the Changes Are Small: Exploring Environmentally Motivated Dietary Changes From a Self-control Perspective

Lara H. Wehbe¹ ^a, Kasia Banas², Esther K. Papies¹ 

¹ School of Psychology and Neuroscience, University of Glasgow, Glasgow, Scotland, UK, ² Usher Institute, University of Edinburgh, Edinburgh, UK

Keywords: flexitarian, self-control, identity, habit, social norms, qualitative research.

<https://doi.org/10.1525/collabra.38823>

Collabra: Psychology

Vol. 8, Issue 1, 2022

Reducing meat and dairy intake is necessary to mitigate the effects of animal agriculture on global warming. Here, we examine the experiences of environmentally motivated meat and dairy reducers. Specifically, we examine whether shifting towards and maintaining sustainable eating behaviours requires self-control. We conducted a pre-registered qualitative online study surveying 80 participants to explore their experiences of reduction, particularly the role of self-control, habits, identity, and social norms. We analysed the data using reflexive thematic analysis and generated three themes. Theme 1 captures participants' incompatible short-term and long-term motivations, which led to experiences of conflict and required self-control to manage. Theme 2 describes aspects of food and social environments, such as social feedback and food availability, cost, and appeal, that hindered or supported participants' attempts at reducing meat and dairy intake. This theme also revealed that most reducers did not want to identify with specific dietary groups, particularly flexitarians. Theme 3 captures strategies, varying in effort, that helped participants overcome internal conflicts or challenges from the food and social environment. Examples include avoiding choice situations, or behavioural substitution, which facilitated behaviour maintenance through small and comfortable changes that fit with participants' taste, skills, and habits. Our findings highlight the need to temper negative social feedback and introduce more availability and favourable social norms to support meat and dairy reduction. Interventions that aim to support the transition to sustainable eating also need to consider the social identities of consumers.

1. Introduction

Current levels of meat and dairy consumption in Western societies are unsustainable and need to be rapidly reduced to curb climate change (Clark et al., 2020; Committee on Climate Change, 2018; Masson-Delmotte et al., 2019). Modern meat and dairy farming not only contributes to greenhouse gas emissions and environmental degradation (Federici et al., 2015; Vermeulen et al., 2012; Willett et al., 2019) but also raises ethical concerns (Cornish et al., 2016). Further, the excessive consumption of these foods can negatively impact human health (Hansen et al., 2018). Consumers are increasingly aware of the environmental impacts, and many are open to adapting their diets (Sanchez-Sabate & Sabaté, 2019).

Research has generated a large body of literature on vegans and vegetarians (Hoffman et al., 2013; Judge & Wilson,

2019; Rosenfeld & Burrow, 2017), but meat and dairy reducers remain an underexplored group (Graça et al., 2019; Taufik et al., 2019). Especially dairy reduction is under-researched (Sandberg, 2021). While vegan diets may be the most sustainable, it is unlikely that most Western populations would adopt them. Therefore, encouraging smaller-scale reductions among mainstream consumers may be more realistic (Graça, Oliveira, et al., 2015). Consequently, it is important to understand the daily-life experiences of consumers reducing meat and dairy consumption, in order to understand what could be done to best support their efforts. This paper aims to explore the experiences of meat and dairy reducers who are driven by environmental motives.

a Corresponding author: Lara H. Wehbe, l.wehbe.1@research.gla.ac.uk, Room 520, 62 Hillhead Street, Glasgow, G12 8QB

1.1. Meat and Dairy Reducers: What is known about the process of reduction?

We define meat and dairy reducers as individuals who are actively trying to reduce their meat and dairy intake, even though we acknowledge that they may not always be successful. Meat and dairy reducers may vary widely in their consumption frequencies of certain foods and their dietary identification (Malek & Umberger, 2021). The reduction process often follows a specific order based on food status hierarchy (Grassian, 2020), potentially based on perceived human-animal similarities (Rothgerber, 2014). Reducers often begin avoiding red meat first, followed by white meat, dairy, eggs, then seafood. However, there is variability in this pattern (Calton et al., 2014). Additionally, there is variability in dietary group identification: meat and dairy reducers may identify as omnivores or as flexitarians, vegetarians, or semi-vegans. At face value, these dietary groups may seem categorically different in how frequently people consume animal foods, but consumers understand and identify with these groups in variable ways. For example, individuals who eat fish, yet do not consider fish as meat, may identify themselves as vegetarians (Rosenfeld & Tomiyama, 2021), and flexitarians who do not consume meat may not identify with vegetarians to avoid stigmatisation (Rosenfeld et al., 2020). We will explore this issue in the current study to better understand the role that such identity processes may play for meat and dairy reducers.

Meat and dairy reducers may reduce consumption of these foods for various reasons, which might translate to different processes and outcomes. Numerous researchers have explored the primary motives that meat and dairy reducers hold, such as health, animal welfare, and the environment (De Backer & Hudders, 2014; Grassian, 2020; Hielkema & Lund, 2021; Lacroix & Gifford, 2019; Rothgerber, 2015). While one systematic review suggested that individuals reducing meat intake for ecological reasons are a minority (Sanchez-Sabate & Sabaté, 2019), another more recent review highlights that both sustainability and health are currently important motives for reducing meat and dairy consumption (see Dagevos, 2021). Given the climate emergency, we predict that in the future, the group of consumers trying to reduce their meat and dairy consumption for environmental reasons will increase (Bastian & Loughnan, 2017; Mathur et al., 2020). Therefore, the current article focuses on exploring the experiences of environmentally motivated meat and/or dairy reducers.

The literature on shifting from meat-based to plant-based diets is rapidly growing (Graça et al., 2019; Stoll-Kleemann & Schmidt, 2017; Taufik et al., 2019), and has identified a broad array of barriers and enablers to reducing meat consumption. Meat disgust (Rothgerber, 2014), awareness of climate impacts (Kirsten et al., 2020), as well as supportiveness from others (Haverstock & Forgays, 2012; Hielkema & Lund, 2021), are some of the factors that enable consumers to reduce their meat and dairy consumption. In contrast, meat attachment, hedonic enjoyment of meat (Graça, Calheiros, et al., 2015), and the belief that consuming meat is natural, normal, necessary, and nice (Pi-

azza et al., 2015) can be barriers to reducing the consumption of meat. Meat reducers also need to confront norms and attitudes that favour meat-eating (Grassian, 2020), especially for men, and may struggle to overcome their own meat consumption habits (Hoek et al., 2017). Barriers may also include the lack of information and cooking skills, social prejudices and lack of support, as well as moral disengagement, liking of meat, and frequent meat-eating (Graça et al., 2019). Meat reducers may further face barriers such as food neophobia and identity-incongruence (Hielkema & Lund, 2021). For young adults, their sense of control over their food choices, cravings, conflicting eating motives, and compromises at social gatherings may be additional barriers (Kemper & White, 2021).

Similarly, environmental factors such as visibility, proximity, and availability of foods, can strongly shape choices. A review of 15 articles on nudging consumers' food choices shows the promising effect of making changes to the food environment on choice without depriving consumers of choices (Bucher et al., 2016). Other research showed similar effects of nudging on increasing fruit and vegetable intake (Broers et al., 2017) and healthier diets and nutritional choices (Arno & Thomas, 2016).

Thus, there are many barriers and facilitators to reducing meat and dairy intake, and meat and dairy reducers need to navigate often challenging food environments with varying availability of sustainable food choices. This suggests that self-control might play an important role in maintaining reduction behaviour. To our knowledge, no research has attempted to explore the experiences of environmentally motivated meat and dairy reducers from a self-control perspective. Therefore, that is the focus of the current article.

1.2. Possible Self-Control Challenges of Reducing Meat and Dairy Intake

Meat and dairy reducers often need to overcome pre-existing meat-eating and dairy-eating habits, temptations to consume meat and dairy, or social norms promoting the consumption of meat (Zur & Klöckner, 2014). Encountering such barriers may lead to the need for self-control. While the evidence on barriers to reduction is increasing in the literature, little is known about the psychological experiences of meat and dairy reducers and the social and environmental factors influencing them (Graça et al., 2019). In this paper, we address these gaps by exploring whether reducing meat and/or dairy requires self-control, the situations that necessitate the exertion of self-control, and how individuals manage these challenges.

Self-control has been defined as "the ability to restrain impulses in the service of greater goals and priorities" (Milyavskaya & Inzlicht, 2017, p. 1). While this has often been understood as requiring effort, it has also been suggested that self-control can be effortless, for example when adaptive habits are developed and automatically inhibit desires (Adriaanse et al., 2014). The relationship between self-control and behaviour change maintenance has been previously examined mainly in health domains. For instance, self-control predicted adherence to weight-loss pro-

grams (Baker & Kirschenbaum, 1993; VanEpps et al., 2016). In the domain of meat reduction, one study found no effects of self-control on adherence to vegan, vegetarian, and health-related diets (Cruwys et al., 2020). Others suggested that reducers who identified as omnivores more strongly reported a need for self-control than vegetarians (Allen et al., 2000), perhaps because vegetarians rely more on their social identity and motivation to adhere to their diets rather than their psychological capacities. To the best of our knowledge, there has been no research with the primary aim of exploring the role of self-control in the process of reducing meat and dairy intake, and we aim to fill this gap in the literature.

Meat and dairy reducers may experience conflict between their long-term reduction goals, and their habits and desires to consume these foods. Like most eating behaviour, the consumption of meat and dairy is influenced by habits and liking, as most people have frequently consumed these foods from an early age (Papies, Johannes, et al., 2020; van't Riet et al., 2011). Inhibiting habits and food temptations typically requires self-control (Adriaanse et al., 2014; van't Riet et al., 2011; Wood & Neal, 2007), as also suggested by dual-process theories (Hofmann et al., 2008). Indeed, self-control processes are often activated when conflict between desires and higher-order goals is detected (Inzlicht & Schmeichel, 2012; Kotabe & Hofmann, 2015). Some of these processes may be deliberate and effortful, but dual-process models of behavioural regulation suggest that effortful processes are more likely to guide behaviour when sufficient self-control resources are available (Baumeister et al., 1994; de Ridder et al., 2012). Thus, both self-control processes and self-control resources may play a key role in enabling the reduction meat and dairy intake and in developing strategies to maintain this behavioural change.

The mechanisms of behavioural maintenance that have been identified for successful health behaviour change may also play a role in reducing meat and dairy intake for environmental reasons. Health behaviour maintenance models suggest that self-control is essential for dealing with sources of tension, or struggles of maintenance (Greaves et al., 2017; Kwasnicka et al., 2016). Tension may arise from external influences (e.g., social pressure) and individual capacities (e.g., motivation). In the context of our research, we propose that managing tension, such as inhibiting desires and old habits, may be required to transition to and maintain the reduction of meat and dairy.

Another self-control challenge that may influence the reduction process is the management of conflicting social norms. Social norms and the social environment influence eating behaviour, such that people are motivated to eat the foods that are normative in their society or the social groups they identify with (Demarque et al., 2015; Higgs, 2015). Consuming meat and dairy is the norm for most Western societies (Willett et al., 2019), and deviating from this norm may challenge one's social identity. Vegans and vegetarians have often managed this challenge by developing a strong sense of identification with their dietary group, a key factor in the maintenance of their diet (Cruwys

et al., 2020). On the other hand, flexitarians view their diet as less central to their identity, which might make their transition more challenging (Rosenfeld et al., 2020). Meat and dairy reducers may not necessarily strongly identify with any dietary group. Little is known about meat and dairy reducers' social identities and how they shape their experiences and behaviours. The current research addresses this gap.

1.3. The current study

Understanding what facilitates and hinders meat and dairy reduction is important, because it could inform ways to better support individuals transitioning to reduced meat and dairy diets (Graça et al., 2019). Here, we explored the experiences of individuals in this transition, to ultimately identify ways to better support them toward more sustainable diets. We conducted qualitative research to address the following research questions:

1. How do people perceive and experience the transition towards more sustainable eating behaviours?
2. Does shifting towards and maintaining sustainable eating behaviours require self-control? If so, what are the situations where people feel they need to exert self-control? And how do they deal with these challenges?
3. What are the roles of habits, identities, and social norms in the transition towards and in the maintenance of sustainable eating behaviours? And how do people experience them?

2. Methods

We developed an online qualitative survey for our comparative case study design (Braun et al., 2020). A key advantage of online survey methods is that it allows for potentially rich data from a broad representation of individuals and experiences (Braun et al., 2020). We asked participants questions related to their current diet and their reduction goals and experiences. All study materials, including the full survey schedule and data, are available on the Open Science Framework (OSF; <https://osf.io/vuhsy/>).

2.1. Procedure

We held question creation meetings using the research aims, research questions, and relevant theories on behavioural change and self-control (Greaves et al., 2017; Kotabe & Hofmann, 2015; Kwasnicka et al., 2016). We ensured an open-ended format (Korstjens & Moser, 2018) and piloted the survey for comprehension ($n = 5$). The resulting survey included 14 open-ended questions covering various aspects of the reduction experience (see [Table 1](#)).

Then, to yield a deeper understanding of participants' experiences, we asked four background questions on current meat and dairy intake (e.g., "In a typical week, how often do you eat meat?", "In a typical week, how many times would you like to eat dairy?"), on current diet ("Which of these describes you best at the moment?" response options: "I am currently trying to reduce meat, not dairy", "I

Table 1. Main questions of the survey schedule as shown to participants.

- 1) Tell us about your experience in changing your eating behaviour. How is the reduction of meat and/or dairy going for you?
- 2) Can you tell us about when you started to reduce meat/dairy? Was it a specific event that triggered this change? Why did you decide to change?
- 3) Tell us about the changes in your eating habits while you are trying to reduce meat and/or dairy. Which new habits have you been able to maintain and which not? Please describe.
- 4) Can you tell us about some of the challenges you experience when trying to reduce your meat and/or dairy consumption?
- 5) Have you ever felt conflicted, for example, because you felt like eating meat and/or dairy? How did you respond? What happened?
- 6) Can you tell us about the effort that this change in eating behaviour is taking? Why is it more difficult at some times than at others? Can you give us an example of when it is easy and an example of when it is difficult to reduce meat and/or dairy? Please explain.
- 7) How confident do you feel in your ability to change your eating habits?
- 8) Tell us what helps you maintain your new eating habits of reducing meat and/or dairy. What are effective ways that help you reduce meat and/or dairy? Give us an example and describe.
- 9) Can you tell us about an experience of going back into your old behaviour of consuming higher quantities of meat and/or dairy (if any)? Why did this occur? How did you respond?
- 10) What do other people in your life think of you reducing meat and/or dairy? How do they react? Can you give an example? Do other people's responses affect you in any way? Do they help or hinder you?
- 11) How do you think your decision of reducing meat and/or dairy impacts others in your direct environment?
- 12) Do you currently see yourself as a person who eats meat, a flexitarian, a vegetarian, or a vegan? What do you think about these groups? Please explain.
- 13) What would make it easier for you to reduce your meat and/or dairy intake? Is there anything that you, people, or organisations in your daily life environment could do to help you?
- 14) How do you feel in general about your transition to reducing meat and/or dairy?

am currently trying to reduce dairy, not meat”, “I am currently trying to reduce both meat and dairy”), and on the desired future intake of these foods (“In a typical week, how many times would you like to eat meat?”, “In a typical week, how many times would you like to eat dairy?”). Finally, we asked demographic questions, such as age, gender, occupation, education, perceived social class, and nationality.

Question 13 asks for participants' suggestions about what they, or others, could do to make their dietary transition easier and more enjoyable. The responses to this question were gathered into one subtheme (3.3.3) where we included counts of participants mentioning each contextual strategy. Although generating meaning from the data partly depends on more comprehensive patterns (Sandelowski, 2001), we believe that displaying the counts for this subtheme will provide a comprehensive overview for the reader of what lay people think could help them in their reduction process.

The study received ethical approval from the University of Glasgow Research Ethics Committee. To enhance transparency, we pre-registered the study and documented the complete research process (see OSF; <https://osf.io/bhvyw>). Pre-registration can help ensure that the a-priori decisions to observing the data are maintained and encourage new intentional decisions in case of changes (see Haven & Van Grootel, 2019; Kern & Gleditsch, 2017).

2.2. Participants

Participants were recruited through the online research platform Prolific (prolific.co). Inclusion criteria were: living in the UK, between 18 to 65 years of age, and being fluent in

English. One thousand participants answered three screening questions (average duration 1 min; payment £0.1); “Are you currently trying to reduce your meat and/or dairy intake?”, “What is the most important motive for you to reduce meat and/or dairy right now?”, and “Which of the following dietary categories do you see yourself belonging to?”. We selected participants who were trying to reduce meat and/or dairy and indicated that their most important motive was environmental. In the rest of this article, we refer to these participants interchangeably as meat and dairy reducers or meat and/or dairy reducers. We excluded vegans and self-identified omnivores who did not want to reduce meat intake ($n = 192$). Then, 239 participants who satisfied the inclusion criteria (female: 192/ male: 42/ other: 5) were invited to the main survey. Participants completed the survey on Qualtrics (average duration 30 min; payment £3.75). In line with research on reducers (Dagevos, 2021), most participants were female.

We stopped data collection once 80 participants had completed the main survey. This predetermined sample size was based on recommendations for sample size with online qualitative surveys (Braun et al., 2017, 2020; Malterud et al., 2016) and our budget limits (see OSF). We also used the definition of data saturation as “the point where no new and meaningful information is being generated” (O'Reilly & Parker, 2013). Saturation of new information started at the 65th case. However, we were more interested in the quality of the generated data described as data ‘sufficiency’ or ‘quality’ (Braun & Clarke, 2019). All authors discussed data saturation and quality thoroughly in weekly analysis meetings.

2.2.1. Sample Description

A summary of demographic information about our sample is presented in Table 2. Detailed demographics can be found in the Supplemental Materials on the OSF.

Self-identified omnivores in our sample reported consuming meat meals moderately often (range: 4 – 10 meat meals per week) and dairy more frequently (range: 5 – 21 dairy-containing meals per week). Self-identified flexitarians reported consuming meat and dairy less frequently (1-10 and 0-14 meals with meat/dairy, resp.). Some self-reported vegetarians reported eating meat (including fish) once or twice a week and dairy between 0 to 14 meals per week, while others described themselves as “strict vegetarians” and reported eating no meat and eating dairy at most a few times a week.

2.3. Data Analysis

In our analysis, we developed thematically organised patterns throughout the dataset, supported by quotes. We adopted a reflexive thematic analysis (Braun & Clarke, 2006, 2013, 2014, 2019) and followed the six stages of reflexive thematic analysis using NVivo Software (Windows Version 12) as a qualitative analysis management tool (Castleberry & Nolen, 2018; Maher et al., 2018; Silver & Lewins, 2014). We used a hybrid approach of inductive and deductive coding (Fereday & Muir-Cochrane, 2006), generating broad data-driven conclusions and using pre-existing theories to guide our observations with an a-priori list of codes (see OSF). In other words, we explored and analysed the data separately from the relevant theories highlighted in the above section, and later, we discussed how the data links to the theories. The generated codes followed the process described in Table 3.

Since the flexible theoretical framework of this method can lack a grounding orientation (Braun & Clarke, 2013), we adopted critical realism as a methodological framework compatible with thematic analysis (Braun & Clarke, 2019; Fletcher, 2017). Critical realism’s approach consists of causal or generative mechanisms (Bhaskar, 2013; Sayer, 2010). It begins with identifying the social problem and infers backwards to conceptualise from empirical data about the phenomenon whilst drawing on understandings from previously established knowledge in a different context. This perspective aligns with our aim to understand the subjective meaning and experiences and identify the mechanisms that underpin the maintenance of reducing meat and dairy for environmental reasons.

We conducted an additional exploratory analysis to explore how our 80 participants reported their dietary group membership in the pre-screening study versus the main study. In the pre-screening study, participants responded by choosing one of the following categories: ‘omnivore’, ‘flexitarian’, ‘vegetarian’, ‘vegan’, or ‘other’. We compared these responses to participants’ answers to the open-ended question in the main survey ‘Do you currently see yourself as a person who eats meat, a flexitarian, a vegetarian, or a vegan? What do you think about these groups? Please explain’.

Table 2. Frequency Table Summarizing Participants’ Demographics and Dietary Background (N = 80).

	Participants
Gender	
Female (F)	63
Male (M)	15
Non-Binary (NB)	2
Age Range	
[18 - 25]	19
[26 - 35]	21
[36 - 45]	17
[46 - 55]	17
[56 - 65]	6
Education Status	
Secondary	7
College	20
Undergraduate	37
Graduate	14
Doctoral	2
Current Diet	
Reducing both meat and dairy	48
Reducing meat only	28
Reducing dairy only	4
Meat Goals	
No reduction	8
Less than 50% reduction	20
50% reduction	9
More than 50% reduction	15
Full reduction	20
Increase	8
Dairy Goals	
No reduction	18
Less than 50% reduction	21
50% reduction	8
More than 50% reduction	11
Full reduction	14
Increase	8

Note. All demographic and background questions were asked in open format, except for the educational qualification question. Meat and dairy goals were determined using percentages comparing participants’ approximal current intake (e.g., “how often do you eat meat”) and their approximal desired consumption in the near future (e.g., “how many times would you like to eat meat”). ‘Increase’ represents that a participant reported a higher number for desired future consumption than for current consumption.

Table 3. Thematic analysis process based on the six phases outlined by Braun and Clarke (2006, 2013, 2019).

Phases	Process	Author involvement
Phase 1: Data familiarisation	The process of familiarisation encompasses the researcher to immerse in the data by reading and rereading the dataset while taking notes of initial thoughts and insights.	LW engaged with recurrent reading of the dataset to increase familiarity with the data. Apart from reading the dataset as a whole, LW also read the individual cases in context with the background and demographic information prior to coding.
Phase 2: Initial code generation	The process of coding the data involves creating and assigning codes to categorise the data extracts.	Initial exploratory annotations were made, which included descriptive comments of the data. LW coded responses and focused on commonalities and differences based on the frequency, representativeness, and meaningfulness. Codes and extracts were fed back to KB and EP periodically, generating in depth descriptions through discussions.
Phase 3: Initial themes generation	The process of generating initial themes involves clustering together codes that are related within and across the individual cases.	Throughout the discussion process, LW generated initial themes and fed them back to KB and EP. The authors considered deviant cases in their discussions and brought in the different perspective that allows for an unbiased immersion in participants' experience and lens of the analysis.
Phase 4: Reviewing and refining themes	The process of reviewing and refining themes entails verifying whether the themes are an accurate representation of the data.	LW examined the themes across the entire dataset and the coded data. All authors approved the three generated themes to best fit the dataset.
Phase 5: Defining and naming themes	The process of defining and naming themes involves the development of a theme name that formulates the essence of the theme as well as a clear definition of the themes.	LW finalised the definition of all themes and fed those back to KB and EP.
Phase 6: Producing report	Writing the report represents the final stage of the analysis. The write up of the findings and each theme in turn present an opportunity for a final refinement of the themes.	LW developed the written report. All authors reviewed the report and contributed to the write-up and to linking the findings to previous literature and theories

2.3.1. Credibility strategies

Credibility was ensured through persistent observation of the data (Korstjens & Moser, 2018). Detailed descriptions of the participants' experiences and demographic context enhance transferability, making connections to help provide a comprehensive understanding of the participants' setting. While there are no set rules as to how many quotes should be used and from how many participants, the focus is on detecting themes that are reflected across the data (Eldh et al., 2020; Sandelowski, 1994). We held meetings periodically during the analysis phase to bring in different perspectives and build consensus. We also discussed and integrated the deviant cases from the patterns that emerged from the data analysis, to support a reflexive approach to research (see OSF). And finally, as the authors' positionality is pivotal in qualitative research, we declare that LW and EP do not consume meat and are currently trying to reduce dairy intake, while KB seldomly consumes meat and dairy and identifies as a flexitarian. LW kept a reflexive diary (Langdridge, 2007) throughout the data analysis process (see OSF).

3. Findings

Participants' responses varied across questions and ranged between 14 to 236 words per response, with an average of 73 words per response and no missing data across responses. We generated three themes from the data (see [Table 4](#)). The full supporting quotes for all themes can be found in the NVivo file uploaded on the OSF. Typographical errors were corrected to safeguard the flow of the quotes while conserving the meaning (see OSF). In each subtheme, tables include extracts from participants' experiences alongside a higher-order descriptive pattern that, together, provide a comprehensive overview of the theme at hand. Following each quote, we provide participants' self-reported gender to add depth to the illustrative purpose of our chosen quotes. Specific symbols in participants' extract include: [...] indicating where text has been removed to avoid redundancy and [Text] indicating where text has been replaced for clarifications and descriptions.

Table 4. Table of themes and subthemes.

Themes	Subthemes
1. Conflicting motivations	1.1. Initial motives and triggers for behavioural change and goal setting 1.2. Liking and prompted desires for meat and dairy 1.3. Experiences of conflict resulting from incompatible motivations
2. Barriers, and sometimes support, from the social environment and food environment	2.1. Barriers from the food environment 2.2. Barriers and support from the social environment
3. Strategies for managing conflict and efforts	3.1. Resolving internal conflicts 3.2. Resolving conflict from food and social environment 3.3. Wishful suggestions; what I and others can do

3.1. Conflicting Motivations

3.1.1. Initial motives and triggers for behavioural change and goal setting

Participants expressed many motives and triggers that prompted their intention to reduce meat and/or dairy consumption. Environmental motives together with other motives such as financial or health concerns, or animal ethics made participants want to limit their consumption of these foods (e.g., P40, M). Most participants described that their decision to change emerged gradually due to a cumulative awareness of the negative impacts of the meat and dairy industry on the environment. For instance, they continuously and increasingly sought knowledge from the media or the news (e.g., P20, F). Some changes occurred due to their worry and anticipation of future events (e.g., P50, F).

A few participants reported being triggered by turning point events, specific occurrences such as the Australian wildfires or watching slaughterhouse footage (e.g., P68, M), watching documentaries made by activists (e.g., P71, F), and their limited spending capacity due to the COVID-19 lockdown (e.g., P79, F). Nonetheless, environmental impacts and animal welfare provoked awareness of conflicting attitudes, beliefs, and behaviours that many participants held at the time of change initiation. As a result, participants' intentions (e.g., P50, F; P71, F; P21, F) and actions (e.g., P68, M) to reduce were primed by the discomfort they experienced. Most participants who did not want to eliminate meat entirely also strongly identified with meat consumers and viewed meat as central to their identity (e.g., P8, M). For supporting quotes, see [Table 5](#).

In summary, the data depicts various trajectories to changing behaviour. Sometimes, change was sudden, while other times, it gradually emerged through actively seeking information and increasing awareness about environmental, health, and animal welfare factors. These changes were initiated by past events or in anticipation of future events.

3.1.2. Liking and prompted desire for meat and dairy

Participants described their liking of meat and dairy, and their desires to eat these foods. These desires varied in strength (e.g., urges, cravings, or temptations). Some par-

ticipants struggled with the idea of completely cutting out meat, because they would miss the enjoyment from eating it (e.g., P55, F). They expressed how effortful they found it to eliminate these foods from their diets, especially when the sensory features of the foods triggered desires for meat and dairy (e.g., P66, F; P13, M), such as their smell, taste, and texture. Some participants described hunger as a factor that hindered their meat and dairy reduction, and some shared experiences of not feeling satiated after vegetarian dishes (e.g., P6, F). They also mentioned that it was easier to reduce meat consumption during the summer months, as opposed to winter, due to their desire for comforting foods in winter (e.g., P59, F).

Some participants justified their strong cravings by tying them to their felt bodily changes or perceptions of nutrition deficiencies such as iron and Vit. B12 (e.g., P38, F; P18, F). Many described that moods, such as feeling forgetful, distracted, lazy, stressed, or bored, triggered desires to eat more meat or dairy (e.g., P74, M; P26, F). A few participants shared experiences with feelings of idleness and tiredness towards the end of the week or day. In these situations, participants chose comfort, familiarity, and convenience, over the harder task of resisting meat. For supporting quotes, see [Table 6](#).

In sum, participants described liking and desires for meat and dairy foods. Internal situations such as hunger, health concerns, and various mood states often prompted the desire to eat meat or dairy.

3.1.3. Experiences of conflict resulting from incompatible motivations

Most participants experienced a range of conflicting motivations in many situations prior to and after consuming meat and dairy. The uncomfortable experiences of cognitive dissonance, where one's actions are not in line with one's beliefs, left some participants feeling guilty. Participants varied in their detection of conflict and motivation to control these difficulties and efforts. Some reported not feeling conflicted, felt comfortable bypassing the dissonance and justified why they do not want to fully eliminate meat or dairy (e.g., P53, M).

Participants described the conflicts between their desires to consume meat and dairy and their longer-term reduction goals. For instance, some felt conflicted between

Table 5. Data extracts for subtheme 3.1.1: Initial motives and triggers for behavioural change and goal setting.

Many different motives	"I have also found myself supporting other arguments (e.g., it's cheaper, moral, health etc...) rather than just the environmental angle." (P40, M)
Gradual change through increasing awareness	"Not a specific event - cumulative reading of lots of articles and to why we should reduce meat and dairy." (P20, F)
Gradual change through worry about the future	"I got increasingly concern about our human impact on the environment, including our consumption of meat [...], and meat free Monday is at least a start." (P50, F)
Specific event of watching disturbing animal cruelty videos	"I started reducing after I saw one of those leaked videos of a slaughterhouse online." (P68, M)
Specific event of watching documentaries	"I heard a speech by Greta Thunberg about how our consumption of meat is affecting climate change and wanted to take some action." (P71, F)
Specific event - Covid-19	"It's about 4 months precipitated by concerned about the environment and trying to reduce spending due to a reduction in income due to Covid." (P79, F)
Guilt and cognitive dissonance	"I have always been passionate about the environment and have been working around animals for years, so I've always held guilt with me about eating meat, hence why I am trying to reduce it now." (P21, F)
Dietary identification	"I'd consider myself somewhere in between a meat-eater and a flexitarian. I don't think I'd ever be able to not consume meat; I'd honestly consider it a part of who I am." (P8, M)

Table 6. Data extracts for subtheme 3.1.2: Liking and prompted desires of meat and dairy.

Missing meat	"I like the taste of meat so it's hard to consider cutting it out altogether as I'd miss chicken, bacon etc." (P55, F)
Desire triggered by thoughts of sensory features	"I often craved the taste of cheese on toast." (P66, F)
Desire triggered by sensory features	"The smell of bacon would, even years after abstaining... the smell of it frying would make my mouth water and stomach growl." (P13, M)
Craving triggered by low satiety	"Sometimes, I crave meat and fish. Veggie meals just don't fill me up enough." (P6, F)
Desire for meat/dairy triggered by winter	"But in the colder weather, I'm finding it more of a struggle. I think people crave filling stodgy food in the colder months, where in summer I'm happy with something like a jacket potato with salad." (P59, F)
Craving for meat due to iron deficiencies	"When I have my period, I craveeee red meat which I'm assuming is because of my iron levels or something? I always want red meat for that whole week which is hard." (P38, F)
Craving for dairy due to B12 deficiencies	"I eat healthy versions of yoghurts to help with my B12 deficiency and I am trying hard to not eat them." (P18, F)
Laziness leading to meat as a convenient choice	"I would say later in the week when I am feeling lazier about cooking food, it feels like a chore to find an unfamiliar vegetarian meal that I need to cook from scratch." (P74, M)
Emotional eating prompted by lapsing	"Initially if I feel frustrated in any other issue, the first thing I do is stress eating, and mainly meat. I found that as a negative habit and I gradually got out of it." (P26, F)

the desire to follow through with their new habits and the desire to consume comforting foods. They also mentioned the desire to eat a plant-based diet and to eat a nutritious diet, which requires additional awareness and research (e.g., P5, F). Others experienced strong desires to consume meat and dairy despite their awareness of the environmental and moral impacts of where their food was sourced from (e.g., P70, F).

At times, falling back into old habits and consuming meat and dairy also led to other emotional experiences of conflict, such as feeling disheartened (e.g., P57, F), worried, less determined, or even questioning own beliefs and reasons for wanting to reduce (e.g., P18, F). Finally, participants described conflict arising from having to choose from many options that vary on many dimensions (e.g., ethics,

nutritional qualities, or taste) and from having to deal with conflicting information (e.g., P52, F; P32, F). For supporting quotes, see [Table 7](#).

Overall, participants mentioned the many internal conflicts between their desires for meat and/or dairy and their longer-term reduction goals. As a result, they described cognitive dissonance, negative affect, and the struggle to balance sustainability, health, and taste.

3.2. Barriers, and sometimes support, from the food environment and the social environment

3.2.1. Barriers from the food environment

Participants noted that the food culture in the UK normalises meat and dairy consumption. Participants found it

Table 7. Data extracts for subtheme 3.1.3: Experiences of conflict resulting from incompatible motivations.

Bypassing cognitive dissonance	"On some level, I know there is cognitive dissonance. I can never TRULY justify factory farming etc... but I seem to have been able to bypass that quite comfortably." (P53, M)
Conflict between desires and goals	"Another challenge has been ensuring that I am getting the right nutrients from a plant-based diet. This takes some research. I also feel conflicted about wanting to stick to my new habits but also wanting to eat some comforting food." (P5, F)
Conflict between desire to eat meat and environmental awareness	"I sometimes feel conflicted as I do enjoy the taste of some meats, but I also understand that mass meat production burdens the environment." (P70, F)
Feeling disheartened from falling back into old dairy habits	"I was however disheartened at how easily I changed back; I immediately preferred dairy milk in hot chocolate, and it made going back to oat milk more difficult than the first time." (P57, F)
Negative affect from falling back into old dairy habits	"I feel like greed is overtaking my beliefs at times, and that I should be stronger and not eat dairy." (P18, F)
Conflict from too much choice	"I also feel overwhelmed at times trying to figure out how to make the most ethical choices when I shop for food products." (P52, F)
Decision conflict from incompatible motives	"With milk, do you choose almond or oat etc? Then there's the fact that I'm told a lot of the dairy alternatives are just as bad, if not worse for the environment than what meat is." (P32, F)

effortful to maintain resistance against the mainstream environment that normalised eating these foods since childhood (e.g., P25, F; childhood conditioning: P49, F). The availability of meat and dairy alternatives and the proximity and distribution of food shops affected participants' dietary choices. Participants who had started reducing meat and dairy intake several years ago reported that the availability of alternatives was much better now than in the past (e.g., P36, F). Nonetheless, most participants described that local food environments (e.g., shops, take-away food outlets, restaurants) were not particularly encouraging of vegan and vegetarian eating. However, this was better in summer (e.g., P17, F).

Most participants found vegan and vegetarian eating more difficult when eating out than at home. Although our survey was conducted during the COVID-19 lockdown, when restaurants were closed, participants described the lack of availability of meat-free or dairy-free options when eating out in the past (e.g., P40, M; P38, F). In contrast, most participants found eating at home was effortless, especially if they were in control of the food (e.g., P38, F). However, special occasions, such as Christmas, were challenging, mainly because they encouraged old habits of eating traditional foods and reduced participants' sense of control (e.g., P41, F).

Affordability was another factor influencing participants' food choices. Many mentioned their willingness to try meat and dairy alternatives, but found those foods more expensive than the foods they were trying to avoid (e.g., P38, F). Meat promotions enhanced participants' temptations to consume meat in restaurants when they wanted value for money (e.g., P51, F). Health-motivated participants avoided meat alternatives that they considered 'highly processed' and sought to source more expensive but higher quality meat from local or organic stores (e.g., P49, F). Participants reported feeling conflicted or uneasy (e.g., P30, F) when the food environment prompted them to make choices incompatible with their reduction goals (e.g., P5,

F), for instance, when they wanted to order take-out foods and there were few or no meat-free options. For supporting quotes, see [Table 8](#).

Overall, participants' responses evidence the influences of the food environment on their choices. The availability of foods, environmental food cues in different contexts (e.g., shops, in restaurants, at home generally, or at home during special occasions), and affordability impacted participants' purchase and consumption decisions. This, in turn, often led to experiences of conflict.

3.2.2. Barriers and support from the social environment

Many participants mentioned negative social perceptions of specific dietary groups. Self-reported vegetarians and self-reported omnivores both negatively perceived the flexitarian label (e.g., P69, M; P21, F). Although some participants identified as flexitarian, they found the term flexitarian vague and unclear, did not necessarily want to be identified as a flexitarian in their social context (P23, F), and indicated that this unclear dietary category may not be taken seriously by others (e.g., P29, F; A, P18, F). In addition, many participants and their social circles perceived vegans or vegetarians as a clear out-group (e.g., P14, F). Regardless of identification, participants reported perceiving negative attitudes from others that led them to doubt their own beliefs, negatively impacting their behaviour. While most of these impacts came from close family members (e.g., B, P18, F), a few participants reported being hindered by friends (e.g., P40, M).

Participants' sense of control diminished around others who consumed meat and dairy. Some reported feeling conflicted in these situations and found giving in was the easier choice (e.g., P34, F). Another significant barrier to participants' reduction was the traditional mindset of older generations around food (e.g., P41, F). When participants were offered foods containing meat or dairy, they did not refuse

Table 8. Data extracts for subtheme 3.2.1: Barriers from the food environment.

Cultural norms	"If it were more normalised to eat meat and dairy alternatives, I think it would be much easier for people who want to be vegetarian or vegan to make changes in their diets, including myself. If it weren't so embedded in our society to eat meat and dairy, it would be a lot easier." (P25, F)
Childhood conditioning	"It's tricky as I have been raised with the attitude that it isn't a proper meal without meat." (P49, F)
Increasing availability and improvements across time	"Making products more accessible would be useful. I know there's been a whole lot of improvement but there's still a fair way to go I reckon." (P36, F)
Seasonal availability	"It's obviously easier during the summer months when fruits and veggies are in more abundant supply." (P17, F)
Efforts vary in contexts	"I find it can really vary in how easy it is. Sometimes, if I'm at a local restaurant and the vegetarian options are really poor, I will be tempted to order a meat dish instead." (P40, M)
Traditional meals	"When it comes to occasions like Christmas, I just find it difficult to resist the traditional meal and tend to join in with the excuse that it's only once or twice a year." (P41, F)
Efforts vary across contexts (home vs. eating out)	"If I'm home in lockdown and cooking for myself, it's easy to get into a routine. Some weeks it's much harder, i.e., coming out of lockdown and heading to all my favourite old restaurants." (P38, F)
Affordability of meat and dairy alternatives	"The main challenge I have found has been the cost of meat and dairy alternatives" (P38, F)
Meat promotions	"I remember eating a large steak with a creamy sauce in a restaurant. [...]. It was cheaper on that day. I felt it was a very good deal to get so much steak for a lower price, so I ordered it." (P51, F)
Meat quality	"I would rather pay more for better quality and well looked after meat. Paying more though, means eating less." (P49, F)
Conflict due to lack of availability of meat alternative options	"I often feel like this [conflicted], especially if I want to order a takeaway but also don't want to eat meat." (P5, F)
Conflict due to availability of meat or dairy options	"I often feel conflicted knowing that chocolate or a lot of takeout options contain meat or dairy and when the temptation is there, the aftermath is usually feeling quite disappointed." (P30, F)

these foods, because they feared causing inconvenience to others (e.g., P4, NB) or wanted to avoid the confrontation (e.g., P71, F).

For some participants, having different diets within the household was a major barrier, causing additional expenses and food waste (e.g., P5, F). Others reported having full support from members of their household who were also reducing meat or dairy intake, or were reducing for longer periods of time. The variability in support impacted participants' enjoyment and effort. For many participants, social support facilitated their reduction maintenance. Participants felt validated and encouraged by social support and others' reduction efforts (e.g., P5, F), which increased their self-efficacy (e.g., P37, F). For others, however, this was more challenging: for example, a male participant reported facing stereotypes around men for trying to reduce the consumption of foods commonly associated with masculinity (e.g., P40, M). For supporting quotes, see [Table 9](#).

In sum, attitudes towards dietary groups affected participants' desire to identify with them. Many participants' responses highlight the social challenges they encountered when changing their diet, while some also reported supportive social influences, especially from others with similar dietary goals.

3.3. Management and strategies of conflicts and efforts

3.3.1. Resolving internal conflicts

Low-effort strategies, such as behavioural substitution, were most helpful, because they provided comfortable and small changes that fit participants' reduction and environmental goals, but also their liking and taste. These strategies entailed, for example, increasing the consumption of vegetables, other types of animal-based proteins, plant-based alternatives, or meat of better quality (e.g., P78, M; P22, F). Participants also emphasised positive feedback strategies or rewards from experiencing health benefits from their dietary change, which helped maintain their motivation (e.g., P36, F). Additionally, participants often re-evaluated their goals through this feedback process. They assessed their new habits, successes and failures, or enjoyment of their reduction experience, encouraging them to pursue their reduction goals further (e.g., P12, F).

Some participants acknowledged the effort and perseverance required for forming new habits, mentioning willpower, self-determination, and willingness. Once they experienced achievements and new habits, their confidence and self-efficacy increased, while the effort needed to manage barriers decreased (e.g., P43, F; P35, F). Participants

Table 9. Data extracts for subtheme 3.2.2: Barriers and support from the social Environment.

Vegetarian reducer – unhelpful label.	“I’m a vegetarian. Being a flexitarian is pointless, you either eat meat or you don’t.” (P69, M)
Omnivore reducer – perceived unworthy of other labels.	“I see myself as a meat-eater still as I don’t think I deserve to label myself as any other yet.” (P21, F)
Flexitarian reducer – unhelpful label.	“[I identify as a] flexitarian. Although the term is not one I would use to describe myself to others, I would say I am reducing my intake. The term seems made up.” (P23, F)
Negative perceptions of vegetarians	“I can imagine the idea of going vegetarian being the classical “but you don’t make friends with salad” jokes” (P14, F)
Negative aspect of dietary identification	“Why do people have to make such a fuss of what we do and don’t eat, is what I often wonder. If asked I will say. It is personal choice, and I don’t like labels.” (A, P18, F)
Impact of negative attitudes from family and others	“My family would criticise my diet and would or could not understand my reasons. Other peoples’ responses have upset me in the past. They have made me question my beliefs. They have also made me more determined.” (B, P18, F)
Toxic masculinity	“I have often had ridicule from friends. My circle of friends can be quite full of toxic masculinity, and not eating meat is seen as a weakness.” (P40, M)
Conflict from eating with people who eat meat	“[I feel conflicted] All the time. Again, it’s worse when I go out and if someone else gets something really good looking or smelling like meat when I’ve convinced myself that it’s veggie day.” (P34, F)
Conflict dependent on context	“It’s more difficult when eating out, or especially when visiting family. My parents have some set habits around cooking and stick to a range of quite traditional meat meals.” (P41, F)
Perceived inconvenience	“I don’t feel right forcing her [my mother] to prepare a separate meal/generally causing an inconvenience with food.” (P4, NB)
Fear of confrontation	“My extended family were focused on the fact that I wasn’t eating meat at large amount when I met up at Christmas [...]. It sparked a lot of debate and I hated being the centre of that attention. This has definitely influenced me in terms of not being as strict as I should be. I now eat meat when I go to their house to avoid this attention.” (P71, F)
The challenges of holding different diets within a household	“The main challenge for me has been that my partner does not want to reduce his consumption of animal products and it is not easy to cook two separate meals, it seems wasteful and more expensive.” (P5, F)
The benefits of holding similar diets within a household	“I have been doing this challenge with my wife which makes it a lot easier. We are able to cook things together and support each other.” (P40, M)
Social validation and support	“I do feel influenced and affected by friends’ opinions of me. I look to be validated by my social circle and they help me.” (P5, F)
Social support and behavioural contagion	“It helps me when there are people around me doing the same and encouraging me.” (P37, F)

noted that the process of changing their behaviour was often messy. They employed reframing strategies to accept the efforts needed to deal with challenging situations and reduce the dissonance when they had not acted according to their reduction goals. Such reframing was often effortful, but participants reported rewarding themselves for their efforts and progress when abstinence from meat and dairy was successful (e.g., P27, F; P26, F). They adopted a flexible mindset to help resolve and balance conflicting motivations (e.g., P60, F).

To stop themselves from consuming meat or dairy when feeling tempted, participants used cues or reminders of the health effects of eating meat and of the negative impacts of meat and dairy on the environment, future generations, and animal welfare. These reminders increased their sense of agency and impact on the world (e.g., P51, F; P18, F). Some participants described cooking new recipes as a strategy to deal with desires to consume meat and dairy, starting with small, achievable cooking tasks, while increasing the variety of dishes they could prepare to fuel their sense of

enjoyment (e.g., P30, F; P68, M). Finally, some participants reported simply liking meat and dairy alternatives more as time passed (e.g., P30, F; P24, M). This shift in liking may result from associative learning from their social context or the increased exposure to these alternative foods. For supporting quotes, see [Table 10](#).

In sum, participants evidenced both low-effort substitution and effortful reframing and reminder strategies to manage their internal struggles and conflicts throughout their reduction experience. Experiencing tangible health benefits helped participants maintain their efforts.

3.3.2. Resolving conflict from food and social environments

Participants resolved conflict from food environments with various low-effort strategies, such as avoiding the exposure to tempting foods (e.g., P48, F) and tempting choice situations (e.g., P1, F). Participants also used communication strategies, for example, when they feared causing in-

Table 10. Data extracts for subtheme 3.3.1: Resolving internal conflicts.

Low-efforts strategies: easy substitutions	"I maintain by not changing my meals, just replacing meat with veggie alternatives. So, I can still eat the food I like but without the guilt. Earlier this week, I used mushrooms instead of chicken in fajitas." (P78, M)
Low-efforts strategies: small changes	"The fish and vegetable increase in our diets has been maintained and therefore the lowering consumption of meat has also been maintained." (P22, F)
Rewards from tangible health benefits	"And while my main goal is environmental, I do definitely feel better and healthier when I don't consume dairy. Sometimes that is an easier motivator to focus on when I need an extra boost." (P36, F)
Goal malleability	"I've not stuck completely to Meat Free Monday, which was an intention, but I've stuck to reducing meat by 50% in each meal we eat." (P12, F)
Perseverance strategies: time and patience	"Very confident and a lot of it is habit and retraining your brain to think differently. It may take more time and effort to change, but it is worth it." (P43, F)
Perseverance strategies: willingness and openness	"Being willing to try new things and don't just stop keep trying till you find what works for you." (P35, F)
Reframing strategies: meat as a reward	"I find Sunday roast is keeping my meat intake going. I look forward to it and see it as a treat and a reward for abstaining all week." (P27, F)
Reframing strategies: self-reward	"Now, I have started to congratulate myself if I didn't eat meat for a month." (P26, F)
Reframing strategies: Flexibility	"I feel that having an all or nothing approach may not be particularly helpful in helping you achieve goals, and that feeling 'guilty' about something isn't necessarily productive. So, whilst I do feel conflicted, it's [lapsing is] not the end of the world." (P60, F)
Reminder of the health implications	"I think of the amount of cholesterol and fat that is going to line my arteries: "This will lead me to a heart attack. I will die because I wanted to eat more beef." This is very effective in stopping me from eating beef." (P51, F)
Reminder of environmental and ethical implications	"Effective ways that help me reduce dairy are to think about where the food originates from. I think about the animals and their welfare. I think about the brutality in the milk industry plus the negative health aspects of eating dairy." (P18, F)
Initial cooking strategies: increasing variety	"I also try to research recipes when bored and find easy ones to start with to build up more meal options." (P30, F)
Enjoyment and increasing variety	"I introduced new foods to my diet which I'm really enjoying. So far, I have stuck to it. [...]. I think the key is variety and I've found plenty of options on food I can eat which does not contain meat." (P68, M)
Developing a liking for alternative foods	"I have developed a real liking for tofu and tofu-based recipes which has helped." (P30, F)
Developing a liking for non-meat foods	"I was a very big meat-eater. A meal without meat didn't seem like a meal to me. After about two weeks there was a switch in my brain. I started to see non-meat meals as perfectly acceptable alternatives." (P24, M)

convenience to others or when others had ignored or forgotten their diet (e.g., P30, F). Others hid their dietary identity from others to minimise negative perceptions (e.g., P36, F), and sometimes gave in to temptations in social situations, compensating later by restricting their meat consumption (e.g., 71, F).

Action planning and meal planning were described as very valuable, and helped with time management, effort, and mindfulness. Participants used planning to increase the availability of non-meat or non-dairy meals at home, including freezing plant-based and prepared foods (e.g., P15, F; P16, F). Some participants rejected negative mainstream perceptions of vegans and vegetarians. Those surrounded by others with previous experience in reducing their meat and dairy intake, for instance, vegans and vegetarians, found their support helpful (e.g., P4, NB), for example, for discovering and exchanging recipes and for holding each other accountable. For supporting quotes, see [Table 11](#).

Overall, participants used strategies such as avoidance, communication, action planning, and recruiting social sup-

port to resolve the conflicts between their dietary goals and the food and social environment.

3.3.3. *Wishful suggestions: What I and others could do*

Participants described what they or others could do to make their reduction experience easier and more enjoyable.

Participants mentioned individual-level strategies (n = 10), stating that these mainly relied on self-control (n = 7). Participants also mentioned increasing their knowledge through recipes, videos (n = 4), and following social media accounts (e.g., P38, F) to maintain their motivation or continue with their improvements (n = 2). One participant mentioned the need to communicate more effectively with others to reduce temptations when offered meat (e.g., P20, F). As a result of contentment with their dietary reduction, some mentioned contemplating further reduction after receiving a new cookbook (e.g., P49, F).

Many participants mentioned interventions they would like others to do, mainly organisations (n = 61), such as increasing availability, accessibility, and variety of foods in

Table 11. Data extracts for subtheme 3.3.2: Resolving conflict from food and social environments.

Avoidance of exposure	"Avoiding meat aisles helps any temptation." (P48, F)
Avoidance of choice situations	"We order shopping online now. We do a weekly shop and that is all we get. It doesn't make us go and buy something we shouldn't." (P1, F)
Communication strategies	"I did sit him down the next day and explained why I didn't want to eat so much of these foods, and it would help if he found alternatives on occasions like this, which he has started to do." (P30, F)
Absence of communication: hidden diet	"I keep it [my diet] to myself as best as I can to avoid issues." (P36, F)
Compensation after eating meat	"I do eat meat when it's easier to. In my own time when it only affects me, I try to be stricter." (P71, F)
Increasing availability of vegetarian food at home	"Making sure I have veggie convenience food in stock for those time pushed moments." (P15, F)
Action/Meal planning	"Meal planning is most effective [...]. It means I am prepared when I do my grocery shopping, buy food accordingly, and then prepare meals more mindfully. If I did not meal prep, I would make dinner last minute and not be so conscious about the food I am buying/preparing." (P16, F)
Support from experienced others	"It was also helpful that a lot of my friends were vegan." (P4, NB)

Table 12. Data extracts for subtheme 3.3.3: Wishful suggestions: What I and others could do.

Education through media	"Following lots of environmental pages to stay educated and encouraged." (P38, F)
Reinforcing communication strategies	"I also need to be more vocal and ask people to stop offering me meat - because I really enjoy eating and I don't really ever refuse it." (P20, F)
Personal choice and education	"It is a personal choice, and I don't think it is up to supermarkets or environmentalist to pressure you, but some non-pushy education on the health benefits and environmental benefits can help." (P11, F)
Satisfaction leads to contemplation on further reduction	"I'm really happy with how things are going so far. I may try to introduce another meat-free day in the new year if I receive the meat-free cookbook I have requested for Christmas." (P49, F)
Taxation	"If the government put tax breaks on vegetarian food to make them cheaper." (P9, F)
Promoting healthy foods and attractiveness of advertisement	"Promotions in supermarkets would help as seems all promos are for unhealthy foods snacks. Make the advertisements for meat and dairy products less appetizing." (P35, F)
Need for education and understanding impact of choices	"People need to be educated on the impacts of their choices, shown the facts of production, the factory farms, the deforestation, soil erosion and climate change being all inter-connected." (P13, M)
Digital application for belonging, accountability, and motivation	"Having perhaps an app [phone application] where you can post pictures of your meals to have accountability. E.g., seeing that we've gone x number of days without meat, but doing this you've saved x amount of carbon emissions, [...] to make it a little more tangible." (P71, F)

Note. Some of the suggestions mentioned by participants were somewhat similar to the strategies listed in subthemes 3.3.1 and 3.3.2. To avoid repetition, we only evidenced participants' extracts in this table if they were not previously mentioned.

supermarkets and accessibility to easy and creative recipes (n = 57), availability of fresh fruits (n = 1), and accessibility and availability of "ethical" meat (n = 2). Participants wanted supermarkets to promote healthy, meat-free, dairy-free food options, rather than only unhealthy ones (n = 25). They also mentioned policy interventions that would increase taxes on the cost of meat (n = 2) (e.g., P9, F) or ban factory farming (n = 1). Others mentioned the need for better advertisement (e.g., P35, F), making vegan alternatives more attractive and meat and dairy foods less attractive (n = 2).

Participants wanted more support from their family, partners, or children (n = 24), and mentioned wishing that their social circle or the general population followed the

same diet as them (n = 20). Participants mentioned that their social circle and the general public needed to better understand the negative impacts of the animal industry on the environment (n = 7) (e.g., P13, M) and the impacts of their choices (n = 1), although most emphasised that diet is a personal choice (n = 79) (e.g., P11, F). One participant mentioned that shifting social norms would help.

One participant proposed developing a phone application to increase their sense of community, exchange recipes, and receive feedback on environmental impact (e.g., P71, F). Participants also suggested the need to improve the taste, texture, and quality of sustainable foods (n = 11), especially the taste of cheese alternatives (n = 6). For supporting quotes, see [Table 12](#).

3.4. Additional exploratory analysis

Dietary self-description in the main study was not always consistent with the pre-screening self-identification, particularly for omnivores and flexitarians. For instance, 17 participants who self-identified as omnivores or flexitarian in the pre-screening study later chose not to identify with any dietary group. Similarly, 43 participants who identified as omnivore or flexitarian in the main study reported that they would not choose these labels to identify themselves in social settings, despite choosing an appropriate label (e.g., "To be honest, I'd never heard of Flexitarian until now. But I guess I am flexitarian then." P68). All participants mentioned the importance of being flexible with their diets. When given the opportunity to express their dietary identity openly through open-ended questions, some of the self-reported omnivores and flexitarians deviated from their previous dietary identification responses. They reported instead that they preferred not using any label, possibly because this better depicts how they present themselves in their daily lives (e.g., "I just see myself as a person who eats meat. I am unsure what a flexitarian is.") or because the pre-screening question on diets was multiple choice, whereas the question in the main study allowed for open responses.

These findings could be important to consider in future studies. As lay people's representations of how they identify themselves may differ from that of researchers, researchers interested in the behaviour of reducing meat and dairy intake should consider not recruiting participants using labels such as "flexitarian", but rather by focusing on the behaviour of reducing. For further details on this exploratory analysis, see OSF.

4. Discussion

This study was designed to explore the experiences of environmentally motivated meat and dairy reducers from a self-control perspective, particularly to understand the role of habit, identity, and social norms in this transition.

4.1. Summary

Our analysis generated three main themes. The first theme reflects conflicting motivations and the need for self-control in reducing meat and/or dairy intake. The second theme illustrates the influence of food and social environments, such as availability and cost of foods, attractiveness of meat and dairy-based dishes, as well as negative social feedback and social support that impacted behaviour change. The third theme captured the strategies that participants used or said that they could use to help manage the conflicts and challenges resulting from their conflicting motivations and from their food and social environments. The preferred strategies were food substitutions and avoiding temptation. Graça et al. (2019) have suggested that further research is needed to better understand barriers and enablers of the individuals' capability, as well as aspects of the environmental opportunities, that may hinder or promote sustainable behaviour change. Our work addresses

this and shows that self-control resources, social environments, social identity, and affordances of the food environment play key roles in the reduction process, and that dietary identity challenges and the need for self-control vary across situations.

4.2. Links with existing research and theoretical implications

4.2.1. The need for self-control

One of the aims of this study was to explore the need for self-control in reducing meat and/or dairy intake. We found that most participants experienced self-control conflicts and, at times, cognitive dissonance and doubts. Self-control conflicts arose when goals to reduce meat and dairy intake were incompatible with desires and habits. We also observed conflicts between two incompatible goals (e.g., reducing meat intake and saving money). For instance, participants found it difficult to choose tasty, sustainable, and healthy foods to replace meat or dairy. Consistent with self-control theories (Inzlicht & Schmeichel, 2012; Kotabe & Hofmann, 2015), we found that detecting conflict prompted self-control processes, and these were often experienced as effortful.

In line with dual-process theories (Hofmann et al., 2008), our results suggest that automatic processes (e.g., desires and habits) often overrode controlled processes (e.g., deliberate pursuit of long-term goals), especially when resources were depleted. In such situations, for example when they felt stressed or tired, participants preferred the convenience of eating familiar foods. Self-control research indicates that working memory capacity and other factors moderate self-regulatory outcomes (Hofmann et al., 2008). Future research could examine which self-control moderators are most important in the transition to sustainable eating.

4.2.2. Behaviour maintenance strategies

In line with health behaviour change maintenance research (Greaves et al., 2017; Kwasnicka et al., 2016), our findings suggest that self-regulation of thought and behaviour is essential for dealing with sources of tension during behaviour change maintenance. Participants used various strategies for this. Effortful strategies included persistence, reminders, action planning, meal planning, and effective confrontations with challenging social influences. Low-effort strategies included the avoidance of choice situations, and easy and comfortable meal substitutions. The effort required for reframing strategies varied across participants. Adopting a flexible mindset as well as being open to experiences encouraged persistence and acceptance of lapses. Most participants reported continuously seeking out information from the media. This strategy fuelled the maintenance of the reduction behaviour.

Our findings are consistent with research suggesting that people who identify as vegetarians may be more open to experiences (Milfont et al., 2021), and this personality trait may make sustained dietary change easier. It is pos-

sible that, compared to people making health behaviour changes, environmentally motivated meat and dairy reducers are more intrinsically motivated, which might help their behaviour change. At the same time, it is possible that meat and dairy reducers are extrinsically motivated by social norms. Future research could address the role of intrinsic and extrinsic motivation in the maintenance of sustainable eating behaviour.

4.2.3. *The role of social identities*

Our research points to the important role of social identities in the reduction of meat and dairy intake. Consistent with previous findings (Rosenfeld & Tomiyama, 2021), participants' self-reported meat and dairy consumption did not map perfectly onto dietary identities; for example, some flexitarians reported eating more meat than some omnivores (see section 3.4). Aligned with previous findings (Rosenfeld & Burrow, 2017; Rothgerber, 2014), our findings suggest that participants' reports of belonging to a dietary group were based on their commitments to their reduction efforts, their social identification, dietary motivation, and adherence.

Additionally, our study adds insight into the highly variable ways in which people conceptualise their dietary identity. A large proportion of our participants who self-reported as omnivores or flexitarians in the pre-screening also reported negative attitudes towards dietary labelling (see section 3.4) in the main study. Possibly, dietary identification varies over time, and those with more variable diets do not find these labels helpful. There was less resistance to dietary labelling among self-reported vegetarians, compared to other participants in our study. The reason could be that vegetarians' identity is more central to their sense of self (Rosenfeld & Tomiyama, 2019).

Our findings are in line with the identity-based motivation theory (Oyserman, 2015), which suggests that differences in context change people's self-concept and identity-related motivations. For example, participants reported that eating a vegetarian diet was easier in situations where their reduction goals were salient, and where identity conflict was low. However, when eating out with friends, some participants chose a meat-based diet to conform to the friends' group norm. In other words, reducers seemed to juggle multiple diet-related identities that differ in salience across situations and prescribe different behavioural norms. This can explain why meat and dairy reducers prefer a flexible identity, although this is not always helpful for their reduction efforts. This is in line with previous research suggesting that identities can be seen as dynamic and fluid (Brubaker & Cooper, 2000), and suggests that this is very much true for food identities at the initial stages of dietary change, where individuals attempt to establish a new identity to categorise and define their eating behaviour.

More generally, our findings suggest that identity plays a key role in behaviour change, and might warrant more central integration in behaviour change models, such as the COM-B model (Atkins et al., 2017), where identity could be considered as affecting subjective social norms

(Gkargkavouzi et al., 2019), or the Transtheoretical Model of Behavioural Change (Prochaska et al., 2008), where identity processes could play a role across phases. Specifically, our findings suggest that social interactions polarised the meat and dairy reduction identities. While previous research shows that flexitarians may be less stigmatised than vegans (Rosenfeld et al., 2020), our findings indicate that flexitarians experienced social resistance to their diets as well. The vast majority of participants spontaneously highlighted that their eating behaviour was a personal choice, and participants found that identifying with a dietary group provoked negative stereotypes and social perceptions. At the same time, participants who found the vegan and vegetarian identity helpful mentioned having rewarding support from those groups. Indeed, identification with social groups that engage in meat and dairy reduction could help increase reducers' motivation and satisfaction with their dietary change.

In contrast, identification with groups for whom eating meat is normative could hinder reduction efforts by increasing the likelihood of social conflict or encouraging desires to consume meat and dairy. Previous research has shown that vegans tend to score lower than omnivores on the personality trait of agreeableness (Milfont et al., 2021), which might make it easier for them to disengage from prevailing social norms, and radically change their diet. Future research could explore how social interaction impacts meat and dairy reducers' sense of identification with a dietary group, and the role of personality traits in the management of these social influences.

Our findings on identity mechanisms in behavioural change are also relevant to spillover effects. Previous research has explored, for example, the spillover of sustainable eating between home and work settings (Verfuert et al., 2019). Environmental identity has been previously shown to mediate the effect of spillover on pro-environmental behaviours (Truelove et al., 2016), while more recently, this effect was not found (Xu et al., 2018). Our findings suggest that the settings that are studied in spillover effects should also be considered for their differing social influences, for example, eating with close family vs eating with colleagues, as the social identities activated by these situations matter. Understanding the social and identity dynamics of the different situations could help us understand exactly when spillover occurs, and when it does not.

4.2.4. *Habits and reward*

In line with habit research, our findings show that forming new habits played a key role in participants' reduction efforts (Gardner & Rebar, 2019; Lally & Gardner, 2013). Participants' sense of automaticity increased when they repeatedly avoided eating meat and dairy. This was achieved through behavioural substitutions, through the consistent repetition of the new behaviour (e.g., eating plant-based meals), and through reward (e.g., peer support and self-reward).

In line with the Grounded Cognition Theory of Desire (Papies, Barsalou, et al., 2020; Papies et al., 2017; Papies & Barsalou, 2015), we found that habitual situations

prompted mental simulations of eating and enjoying meat and dairy foods, which triggered desire, and at times, led participants to consume these foods (see Papies et al., 2021, 2022). For instance, desires were triggered by internal situations, such as hunger or certain mood states, or by external cues such as the sight or smell of liked foods. Especially when participants felt low in self-control resources, the desire to consume habitual foods was stronger. This suggests that participants' meat and dairy consumption habits were driven by expectancies of enjoying these foods, which is in line with the perspective that habitual behaviour is goal-driven (Kruglanski & Szumowska, 2020).

4.2.5. *The complexity of the reduction behaviour*

Our findings suggest that different related behaviours may support each other and interact in the different stages of behavioural change. As an example, engaging in meat reduction and reducing dairy may be interactive and mutually enforcing. Some participants who reported reducing dairy intake only reported having previously successfully reduced their meat consumption. It is possible that their success in one behavioural change informed their willingness and confidence to engage in another.

Additionally, our findings have implications for behaviour change models, for example, the Transtheoretical Model of Behavioural Change (Prochaska et al., 2008). While the Transtheoretical Model conceptualises the various stages through which an individual progresses during behaviour change as relatively distinct, we suggest that, for the complexity of the reduction behaviour, these stages are not mutually exclusive. In other words, individuals can find themselves in two or more stages at once. Most of our participants were reducing their meat and dairy intake and, therefore, engaging in two kinds of behaviour change, each with various strategies. For instance, some individuals reduced their meat portion size by 50%, only ate dairy when eating out, and planned to adopt meat-free weekdays. Future research would benefit from examining how related behaviours interact, and how this informs the progression between different stages of behaviour change.

4.3. *Applied implications*

Our findings have implications for the development of interventions and policy considerations to support the shift to sustainable diets.

4.3.1. *Creating awareness and motivation*

Our research suggests that it may be useful to repeatedly expose the public to reliable information about the role of food in climate change. Participants shared that repeatedly seeking information gradually increased their awareness of the climate emergency and propelled them into action. This is in line with research showing that receiving fourteen daily messages on the environmental benefits of reducing meat intake changed participants' attitudes (Carfora et al., 2019). Our findings suggest that the motivation to reduce meat and dairy intake may develop gradually, and that the

public's awareness may progressively increase their willingness to reduce or engage in further reduction. A large proportion of participants' suggestions to facilitate this transition was about the increase of awareness and knowledge in their social circles and the need to normalise meat and dairy reduction. Thus, the reinforcement of knowledge may be important to initiate and support the reduction process.

A greater focus of intervention research on the environment and choice architecture (Arno & Thomas, 2016; Broers et al., 2017; Bucher et al., 2016) could help alleviate the decision conflicts observed in our study. Indeed, participants suggested changes in availability and pricing that could help reduce the effort needed for reducing meat and/or dairy intake. Participants also found choosing from many options stressful, task as they held many motives and considerations that needed to be balanced (e.g., healthy, sustainable, and tasty). Again, changes in food policy, for example affecting taxation, subsidies, and food procurement in the public sector, could support environmentally motivated dietary changes by increasing access to tasty, healthy, and sustainable options.

4.3.2. *Identity as a potential intervention target*

Interventions supporting the transition to sustainable eating should consider the social identity of consumers, and ways to strengthen meat and dairy reducers' sense of identification with their dietary groups. This can be done by linking social identity to pro-environmental outcomes (van der Werff et al., 2014) and by promoting pro-environmental ingroup norms (Schultz et al., 2007), and could increase well-being and reduce doubt about dietary change. Social identity may also influence people's taste perception, such that identity-congruent foods are experienced as tastier (Hackel et al., 2018). Strengthening the dietary identity of consumers might further support them in their reduction experiences.

Additionally, the process of reducing meat intake may differ by gender; for example, social expectations around masculinity may deter men in their behaviour change process. Indeed, recent research has suggested that gender conformity is linked to meat consumption frequencies (Rosenfeld & Tomiyama, 2021). Understanding gender differences in how social influences impact people's meat and dairy consumptions can help strengthen efforts to improve the sustainability of eating patterns. Therefore, future work could consider the individual challenges across genders as to manage these and potentially strengthen their dietary identities with their decisions to reduce meat or dairy.

4.3.3. *Taste, availability, and affordability*

Policies to encourage sustainable and healthy eating must consider the taste, availability, and affordability of plant-based foods. Our findings suggest that small dietary changes helped participants stay engaged in their reduction efforts, as they led to experiences of success and new habits. Thus, attractive meat replacements continue to be important. Our participants also found that taste was a key factor in their efforts. In line with this, research has shown

that labelling plant-based foods by emphasising taste and reward may be an effective and low-cost strategy to increase the appeal of plant-based foods among habitual meat eaters (Papies, Barsalou, et al., 2020; Turnwald & Crum, 2019).

Finally, our participants reported that the lack of availability and affordability of attractive meat and dairy alternatives hindered their reduction efforts. Increasing the likelihood of people choosing plant-based foods is important and can be achieved by changes to the choice architecture, for example increasing availability (Garnett et al., 2019), using appealing language for plant-based foods (Papies, Johannes, et al., 2020; Turnwald et al., 2019), introducing financial incentives for sustainable alternatives (Willett et al., 2019), or shifting subsidies from animal agriculture to sustainable alternatives (Abadie et al., 2016).

4.4. Strengths and limitations

A strength of our study lies in the transparency through pre-registration, and credibility strategies such as bringing in different perspectives, peer debriefing, reflexivity, and negative case analysis, which strengthened the robustness of our analysis process. Additionally, there are benefits to both researchers and participants when using qualitative surveys. Qualitative online surveys offer rich data from a broad representation of individuals and experiences to explorative research. It provided us with diverse perspectives of the reduction experience. This diversity is useful when researching an underexplored area. At the same time, qualitative surveys offer participants full control over their research participation and bypass the traditional the power-dynamics of the researcher and the researched that takes place in qualitative interviews. In addition, participants' responses often provide more focused and targeted data as opposed to data from interviews (Braun et al., 2020; Braun & Clarke, 2013).

This study is not without limitations. First, online data collection risks excluding individuals from disadvantaged groups in society. Secondly, and as self-control theories guided our question generation, we acknowledge that our findings are limited in that participants were guided by the concepts introduced in the survey questions. In other words, it is possible that participants' responses referenced constructs such as habits and social norms because we asked about them, and that other aspects of the reduction process were less likely to be shared as a result. Future research may address this issue with either more open questions, or quantitative measures.

Despite the broad representation of experiences in our study, our findings remain contextualised within some boundaries. For example, our sample was predominantly female. It is possible that the processes involved in reducing meat and dairy intake differ between genders, as implied by one participant's comment on toxic masculinity. Additionally, our UK sample may also limit the transferability of our findings to different Western and non-Western cultures. Finally, only four participants of our sample were reducing only dairy intake. It is possible that the challenges and barriers for this group of reducers differ from the

majority of the participants. However, our aim was not to ensure representativeness but to explore the diverse lived experiences of reducing one's meat and/or dairy intake. Future research would benefit from exploring demographic (e.g., gender) and cultural differences, as well as differences between meat and dairy reducers in self-control, identity, and the social influence processes that affect their experiences of changes in eating behaviour.

Conclusion

This study has developed a rich picture of the experiences of a sample of UK residents reducing their meat and/or dairy intake for environmental reasons. We found that reducers often experienced conflict between different desires, habits, and motives, and needed self-control resources to manage them. Small and comfortable changes were experienced as preferred and effective strategies to maintain the reduction behaviour. However, social challenges and unclear identities hampered dietary change. Interventions should address these processes to support a wide-spread transition to sustainable diets.

Author Contributions

All authors have approved the final article.
 Contributed to conception and design: LW, EP
 Contributed to acquisition of data: LW
 Contributed to analysis and interpretation of data: LW, KB, EP
 Drafted and/or revised the article: LW, KB, EP
 Approved the submitted version for publication: LW, KB, EP

Acknowledgements

We would like to thank the members of the Healthy Cognition lab at the University of Glasgow for their useful feedback on an earlier version of this manuscript.

Funding

This research was funded by the College of Science and Engineering at the University of Glasgow, and by Research Grant ES/T011343/1 from the UK Economic and Social Research Council. For the purpose of open access, the author has applied a Creative Commons Attribution (CC BY) licence (where permitted by UKRI 'Open Government Licence' or 'Creative Commons Attribution No-derivatives (CC BY-ND) licence may be stated instead) to any Author Accepted Manuscript version arising'.

Competing Interests

We declare that we have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data Accessibility Statement

Submitted: December 01, 2021 PDT, Accepted: September 23, 2022 PDT

All materials can be found on the Open Science Framework (OSF; <https://osf.io/vuhsy/>).



This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CCBY-4.0). View this license's legal deed at <http://creativecommons.org/licenses/by/4.0> and legal code at <http://creativecommons.org/licenses/by/4.0/legalcode> for more information.

References

- Abadie, L. M., Galarraga, I., Milford, A. B., & Gustavsen, G. W. (2016). Using food taxes and subsidies to achieve emission reduction targets in Norway. *Journal of Cleaner Production*, 134, 280–297. <https://doi.org/10.1016/j.jclepro.2015.09.054>
- Adriaanse, M. A., Kroese, F. M., Gillebaart, M., & De Ridder, D. T. D. (2014). Effortless inhibition: Habit mediates the relation between self-control and unhealthy snack consumption. *Frontiers in Psychology*, 5. <https://doi.org/10.3389/fpsyg.2014.00444>
- Allen, M. W., Wilson, M., Ng, S. H., & Dunne, M. (2000). Values and Beliefs of Vegetarians and Omnivores. *The Journal of Social Psychology*, 140(4), 405–422. <https://doi.org/10.1080/00224540009600481>
- Arno, A., & Thomas, S. (2016). The efficacy of nudge theory strategies in influencing adult dietary behaviour: A systematic review and meta-analysis. *BMC Public Health*, 16(1), 1–11. <https://doi.org/10.1186/s12889-016-3272-x>
- Atkins, L., Francis, J., Islam, R., O'Connor, D., Patey, A., Ivers, N., Foy, R., Duncan, E. M., Colquhoun, H., Grimshaw, J. M., Lawton, R., & Michie, S. (2017). A guide to using the Theoretical Domains Framework of behaviour change to investigate implementation problems. *Implementation Science*, 12(1), 77. <https://doi.org/10.1186/s13012-017-0605-9>
- Baker, R. C., & Kirschenbaum, D. S. (1993). Self-monitoring may be necessary for successful weight control. *Behavior Therapy*, 24(3), 377–394. [https://doi.org/10.1016/s0005-7894\(05\)80212-6](https://doi.org/10.1016/s0005-7894(05)80212-6)
- Bastian, B., & Loughnan, S. (2017). Resolving the meat-paradox: A motivational account of morally troublesome behavior and its maintenance. *Personality and Social Psychology Review*, 21(3), 278–299. <https://doi.org/10.1177/1088868316647562>
- Baumeister, R. F., Heatherton, T. F., & Tice, D. M. (1994). *Losing control: How and why people fail at self-regulation* (pp. xi, 307). Academic Press.
- Bhaskar, R. (2013). *A Realist Theory of Science*. Routledge. <https://doi.org/10.4324/9780203090732>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp0630a>
- Braun, V., & Clarke, V. (2013). *Successful Qualitative Research: A Practical Guide for Beginners*. SAGE.
- Braun, V., & Clarke, V. (2014). What can “thematic analysis” offer health and wellbeing researchers? *International Journal of Qualitative Studies on Health and Well-Being*, 9(1), 26152. <https://doi.org/10.3402/ijhw.v9.26152>
- Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4), 589–597. <https://doi.org/10.1080/2159676x.2019.1628806>
- Braun, V., Clarke, V., Boulton, E., Davey, L., & McEvoy, C. (2020). The online survey as a qualitative research tool. *International Journal of Social Research Methodology*, 24(6), 641–654. <https://doi.org/10.1080/13645579.2020.1805550>
- Braun, V., Clarke, V., & Gray, D. (2017). Innovations in Qualitative Methods. In B. Gough (Ed.), *The Palgrave Handbook of Critical Social Psychology* (pp. 243–266). Palgrave Macmillan UK. https://doi.org/10.1057/978-1-137-51018-1_13
- Broers, V. J. V., De Breucker, C., Van den Broucke, S., & Luminet, O. (2017). A systematic review and meta-analysis of the effectiveness of nudging to increase fruit and vegetable choice. *European Journal of Public Health*, 27(5), 912–920. <https://doi.org/10.1093/eurpub/ckx085>
- Brubaker, R., & Cooper, F. (2000). Beyond “Identity.” *Theory and Society*, 29(1), 1–47. <https://doi.org/10.1023/a:1007068714468>
- Bucher, T., Collins, C., Rollo, M. E., McCaffrey, T. A., Vlioger, N. D., Bend, D. V. der, Truby, H., & Perez-Cueto, F. J. A. (2016). Nudging consumers towards healthier choices: A systematic review of positional influences on food choice. *British Journal of Nutrition*, 115(12), 2252–2263. <https://doi.org/10.1017/s000714516001653>
- Calton, E. K., James, A. P., Pannu, P. K., & Soares, M. J. (2014). Certain dietary patterns are beneficial for the metabolic syndrome: Reviewing the evidence. *Nutrition Research*, 34(7), 559–568. <https://doi.org/10.1016/j.nutres.2014.06.012>
- Carfora, V., Catellani, P., Caso, D., & Conner, M. (2019). How to reduce red and processed meat consumption by daily text messages targeting environment or health benefits. *Journal of Environmental Psychology*, 65, 101319. <https://doi.org/10.1016/j.jenvp.2019.101319>
- Castleberry, A., & Nolen, A. (2018). Thematic analysis of qualitative research data: Is it as easy as it sounds? *Currents in Pharmacy Teaching and Learning*, 10(6), 807–815. <https://doi.org/10.1016/j.cptl.2018.03.019>
- Clark, M. A., Domingo, N. G. G., Colgan, K., Thakrar, S. K., Tilman, D., Lynch, J., Azevedo, I. L., & Hill, J. D. (2020). Global food system emissions could preclude achieving the 1.5° and 2°C climate change targets. *Science*, 370(6517), 705–708. <https://doi.org/10.1126/science.aba7357>
- Committee on Climate Change. (2018). *Reducing UK emissions—2018 Progress Report to Parliament*. <http://www.theccc.org.uk/publication/reducing-uk-emissions-2018-progress-report-to-parliament/>
- Cornish, A., Raubenheimer, D., & McGreevy, P. (2016). What We Know about the Public’s Level of Concern for Farm Animal Welfare in Food Production in Developed Countries. *Animals*, 6(11), 74. <https://doi.org/10.3390/ani6110074>

- Cruwys, T., Norwood, R., Chachay, V. S., Ntontis, E., & Sheffield, J. (2020). "An Important Part of Who I am": The Predictors of Dietary Adherence among Weight-Loss, Vegetarian, Vegan, Paleo, and Gluten-Free Dietary Groups. *Nutrients*, 12(4), 970. <https://doi.org/10.3390/nu12040970>
- Dagevos, H. (2021). Finding flexitarians: Current studies on meat eaters and meat reducers. *Trends in Food Science & Technology*, 114, 530–539. <https://doi.org/10.1016/j.tifs.2021.06.021>
- De Backer, C. J. S., & Hudders, L. (2014). From Meatless Mondays to Meatless Sundays: Motivations for Meat Reduction among Vegetarians and Semi-vegetarians Who Mildly or Significantly Reduce Their Meat Intake. *Ecology of Food and Nutrition*, 53(6), 639–657. <https://doi.org/10.1080/03670244.2014.896797>
- de Ridder, D. T. D., Lensvelt-Mulders, G., Finkenauer, C., Stok, F. M., & Baumeister, R. F. (2012). Taking stock of self-control: A meta-analysis of how trait self-control relates to a wide range of behaviors. *Personality and Social Psychology Review*, 16(1), 76–99. <https://doi.org/10.1177/1088868311418749>
- Demarque, C., Charalambides, L., Hilton, D. J., & Waroquier, L. (2015). Nudging sustainable consumption: The use of descriptive norms to promote a minority behavior in a realistic online shopping environment. *Journal of Environmental Psychology*, 43, 166–174. <https://doi.org/10.1016/j.jenvp.2015.06.008>
- Eldh, A. C., Årestedt, L., & Berterö, C. (2020). Quotations in Qualitative Studies: Reflections on Constituents, Custom, and Purpose. *International Journal of Qualitative Methods*, 19, 1609406920969268. <https://doi.org/10.1177/1609406920969268>
- Federici, S., Tubiello, F. N., Salvatore, M., Jacobs, H., & Schmidhuber, J. (2015). New estimates of CO2 forest emissions and removals: 1990–2015. *Forest Ecology and Management*, 352, 89–98. <https://doi.org/10.1016/j.foreco.2015.04.022>
- Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating Rigor Using Thematic Analysis: A Hybrid Approach of Inductive and Deductive Coding and Theme Development. *International Journal of Qualitative Methods*, 5(1), 80–92. <https://doi.org/10.1177/160940690600500107>
- Fletcher, A. J. (2017). Applying critical realism in qualitative research: Methodology meets method. *International Journal of Social Research Methodology*, 20(2), 181–194. <https://doi.org/10.1080/13645579.2016.1144401>
- Gardner, B., & Rebar, A. L. (2019). Habit Formation and Behavior Change. *Oxford Research Encyclopedia of Psychology*. <https://doi.org/10.1093/acrefore/9780190236557.013.129>
- Garnett, E. E., Balmford, A., Sandbrook, C., Pilling, M. A., & Marteau, T. M. (2019). Impact of increasing vegetarian availability on meal selection and sales in cafeterias. *Proceedings of the National Academy of Sciences of the United States of America*, 116(42), 20923–20929. <https://doi.org/10.1073/pnas.1907207116>
- Gkargkavouzi, A., Halkos, G., & Matsiori, S. (2019). Environmental behavior in a private-sphere context: Integrating theories of planned behavior and value belief norm, self-identity and habit. *Resources, Conservation and Recycling*, 148, 145–156. <https://doi.org/10.1016/j.resconrec.2019.01.039>
- Graça, J., Calheiros, M. M., & Oliveira, A. (2015). Attached to meat? (Un)Willingness and intentions to adopt a more plant-based diet. *Appetite*, 95, 113–125. <https://doi.org/10.1016/j.appet.2015.06.024>
- Graça, J., Godinho, C. A., & Truninger, M. (2019). Reducing meat consumption and following plant-based diets: Current evidence and future directions to inform integrated transitions. *Trends in Food Science & Technology*, 91, 380–390. <https://doi.org/10.1016/j.tifs.2019.07.046>
- Graça, J., Oliveira, A., & Calheiros, M. M. (2015). Meat, beyond the plate. Data-driven hypotheses for understanding consumer willingness to adopt a more plant-based diet. *Appetite*, 90, 80–90. <https://doi.org/10.1016/j.appet.2015.02.037>
- Grassian, D. T. (2020). The Dietary Behaviors of Participants in UK-Based Meat Reduction and Vegan Campaigns – A Longitudinal, Mixed-Methods Study. *Appetite*, 154, 104788. <https://doi.org/10.1016/j.appet.2020.104788>
- Greaves, C., Poltawski, L., Garside, R., & Briscoe, S. (2017). Understanding the challenge of weight loss maintenance: A systematic review and synthesis of qualitative research on weight loss maintenance. *Health Psychology Review*, 11(2), 145–163. <https://doi.org/10.1080/17437199.2017.1299583>
- Hackel, L. M., Coppin, G., Wohl, M. J. A., & Van Bavel, J. J. (2018). From groups to grits: Social identity shapes evaluations of food pleasantness. *Journal of Experimental Social Psychology*, 74, 270–280. <https://doi.org/10.1016/j.jesp.2017.09.007>
- Hansen, T. H., Kern, T., Bak, E. G., Kashani, A., Allin, K. H., Nielsen, T., Hansen, T., & Pedersen, O. (2018). Impact of a vegan diet on the human salivary microbiota. *Scientific Reports*, 8(1), 5847. <https://doi.org/10.1038/s41598-018-24207-3>
- Haven, T. L., & Van Grootel, D. L. (2019). Preregistering qualitative research. *Accountability in Research*, 26(3), 229–244. <https://doi.org/10.1080/08989621.2019.1580147>
- Haverstock, K., & Forgays, D. K. (2012). To eat or not to eat. A comparison of current and former animal product limiters. *Appetite*, 58(3), 1030–1036. <https://doi.org/10.1016/j.appet.2012.02.048>
- Hielkema, M. H., & Lund, T. B. (2021). Reducing meat consumption in meat-loving Denmark: Exploring willingness, behavior, barriers and drivers. *Food Quality and Preference*, 93, 104257. <https://doi.org/10.1016/j.foodqual.2021.104257>
- Higgs, S. (2015). Social norms and their influence on eating behaviours. *Appetite*, 86, 38–44. <https://doi.org/10.1016/j.appet.2014.10.021>

- Hoek, A. C., Pearson, D., James, S. W., Lawrence, M. A., & Friel, S. (2017). Shrinking the food-print: A qualitative study into consumer perceptions, experiences and attitudes towards healthy and environmentally friendly food behaviours. *Appetite*, *108*, 117–131. <https://doi.org/10.1016/j.appet.2016.09.030>
- Hoffman, S. R., Stallings, S. F., Bessinger, R. C., & Brooks, G. T. (2013). Differences between health and ethical vegetarians. Strength of conviction, nutrition knowledge, dietary restriction, and duration of adherence. *Appetite*, *65*, 139–144. <https://doi.org/10.1016/j.appet.2013.02.009>
- Hofmann, W., Gschwendner, T., Friese, M., Wiers, R. W., & Schmitt, M. (2008). Working memory capacity and self-regulatory behavior: Toward an individual differences perspective on behavior determination by automatic versus controlled processes. *Journal of Personality and Social Psychology*, *95*(4), 962–977. <http://doi.org/10.1037/a0012705>
- Inzlicht, M., & Schmeichel, B. J. (2012). What Is Ego Depletion? Toward a Mechanistic Revision of the Resource Model of Self-Control. *Perspectives on Psychological Science*, *7*(5), 450–463. <https://doi.org/10.1177/1745691612454134>
- Judge, M., & Wilson, M. S. (2019). A dual-process motivational model of attitudes towards vegetarians and vegans. *European Journal of Social Psychology*, *49*(1), 169–178. <https://doi.org/10.1002/ejsp.2386>
- Kemper, J. A., & White, S. K. (2021). Young adults' experiences with flexitarianism: The 4Cs. *Appetite*, *160*, 105073. <https://doi.org/10.1016/j.appet.2020.105073>
- Kern, F. G., & Gleditsch, K. S. (2017). Exploring Pre-registration and Pre-analysis Plans for Qualitative Inference. *Unpublished*. <https://doi.org/10.13140/RG.2.2.14428.69769>
- Kirsten, H., Seib-Pfeifer, L.-E., Lüth, C. A., & Rosenfeld, D. L. (2020). Validation and application of a German version of the Dietarian Identity Questionnaire: Revealing differences between omnivores, vegetarians, and vegans. *Food Quality and Preference*, *86*, 103988. <https://doi.org/10.1016/j.foodqual.2020.103988>
- Korstjens, I., & Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice*, *24*(1), 120–124. <https://doi.org/10.1080/13814788.2017.1375092>
- Kotabe, H. P., & Hofmann, W. (2015). On Integrating the Components of Self-Control. *Perspectives on Psychological Science*, *10*(5), 618–638. <https://doi.org/10.1177/1745691615593382>
- Kruglanski, A. W., & Szumowska, E. (2020). Habitual Behavior Is Goal-Driven. *Perspectives on Psychological Science*, *15*(5), 1256–1271. <https://doi.org/10.1177/1745691620917676>
- Kwasnicka, D., Dombrowski, S. U., White, M., & Sniehotta, F. (2016). Theoretical explanations for maintenance of behaviour change: A systematic review of behaviour theories. *Health Psychology Review*, *10*(3), 277–296. <https://doi.org/10.1080/17437199.2016.1151372>
- Lacroix, K., & Gifford, R. (2019). Reducing meat consumption: Identifying group-specific inhibitors using latent profile analysis. *Appetite*, *138*, 233–241. <https://doi.org/10.1016/j.appet.2019.04.002>
- Lally, P., & Gardner, B. (2013). Promoting habit formation. *Health Psychology Review*, *7*(sup1), S137–S158. <https://doi.org/10.1080/17437199.2011.603640>
- Langdridge, D. (2007). *Phenomenological psychology: Theory, research, and method*. Pearson Education.
- Maher, C., Hadfield, M., Hutchings, M., & de Eyto, A. (2018). Ensuring Rigor in Qualitative Data Analysis: A Design Research Approach to Coding Combining NVivo With Traditional Material Methods. *International Journal of Qualitative Methods*, *17*(1), 1609406918786362. <https://doi.org/10.1177/1609406918786362>
- Malek, L., & Umberger, W. J. (2021). Distinguishing meat reducers from unrestricted omnivores, vegetarians and vegans: A comprehensive comparison of Australian consumers. *Food Quality and Preference*, *88*, 104081. <https://doi.org/10.1016/j.foodqual.2020.104081>
- Malterud, K., Siersma, V. D., & Guassora, A. D. (2016). Sample Size in Qualitative Interview Studies: Guided by Information Power. *Qualitative Health Research*, *26*(13), 1753–1760. <https://doi.org/10.1177/1049732315617444>
- Masson-Delmotte, V., Intergovernmental Panel on Climate Change, WMO, & United Nations Environment Programme. (2019). *Climate change and land: An IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems: summary for policymakers*. Intergovernmental Panel on Climate Change.
- Mathur, M. B., Robinson, T. N., Reichling, D. B., Gardner, C. D., Nadler, J., Bain, P. A., & Peacock, J. (2020). Reducing meat consumption by appealing to animal welfare: Protocol for a meta-analysis and theoretical review. *Systematic Reviews*, *9*(1), 3. <http://doi.org/10.1186/s13643-019-1264-5>
- Milfont, T. L., Satherley, N., Osborne, D., Wilson, M. S., & Sibley, C. G. (2021). To meat, or not to meat: A longitudinal investigation of transitioning to and from plant-based diets. *Appetite*, *166*, 105584. <http://doi.org/10.1016/j.appet.2021.105584>
- Milyavskaya, M., & Inzlicht, M. (2017). What's So Great About Self-Control? Examining the Importance of Effortful Self-Control and Temptation in Predicting Real-Life Depletion and Goal Attainment. *Social Psychological and Personality Science*, *8*(6), 603–611. <https://doi.org/10.1177/1948550616679237>
- O'Reilly, M., & Parker, N. (2013). 'Unsatisfactory Saturation': A critical exploration of the notion of saturated sample sizes in qualitative research. *Qualitative Research*, *13*(2), 190–197. <https://doi.org/10.1177/1468794112446106>
- Oyserman, D. (2015). Identity-Based Motivation. In *Emerging Trends in the Social and Behavioral Sciences* (pp. 1–11). American Cancer Society. <https://doi.org/10.1002/9781118900772.etrds0171>

- Papies, E. K., & Barsalou, L. W. (2015). Grounding desire and motivated behavior: A theoretical framework and review of empirical evidence. In *The psychology of desire* (pp. 36–60). The Guilford Press.
- Papies, E. K., Barsalou, L. W., & Ruz, D. (2020). Understanding Desire for Food and Drink: A Grounded-Cognition Approach. *Current Directions in Psychological Science*, 29(2), 193–198. <https://doi.org/10.1177/0963721420904958>
- Papies, E. K., Best, M., Gelibter, E., & Barsalou, L. W. (2017). The Role of Simulations in Consumer Experiences and Behavior: Insights from the Grounded Cognition Theory of Desire. *Journal of the Association for Consumer Research*, 2(4), 402–418. <https://doi.org/10.1086/693110>
- Papies, E. K., Claassen, M. A., Ruz, D., & Best, M. (2021). Flavours of desire: Cognitive representations of appetitive stimuli and their motivational implications. *PsyArXiv*. <https://doi.org/10.31234/osf.io/rkn26>
- Papies, E. K., Johannes, N., Daneva, T., Semyte, G., & Kauhanen, L.-L. (2020). Using consumption and reward simulations to increase the appeal of plant-based foods. *Appetite*, 155, 104812. <https://doi.org/10.1016/j.appet.2020.104812>
- Papies, E. K., van Stekelenburg, A., Smeets, M. A. M., Zandstra, E. H., & Dijksterhuis, G. B. (2022). Situating desire: Situational cues affect desire for food through eating simulations. *Appetite*, 168, 105679. <https://doi.org/10.1016/j.appet.2021.105679>
- Piazza, J., Ruby, M. B., Loughnan, S., Luong, M., Kulik, J., Watkins, H. M., & Seigerman, M. (2015). Rationalizing meat consumption. The 4Ns. *Appetite*, 91, 114–128. <https://doi.org/10.1016/j.appet.2015.04.011>
- Prochaska, J. O., Wright, J. A., & Velicer, W. F. (2008). Evaluating Theories of Health Behavior Change: A Hierarchy of Criteria Applied to the Transtheoretical Model. *Applied Psychology*, 57(4), 561–588. <https://doi.org/10.1111/j.1464-0597.2008.00345.x>
- Rosenfeld, D. L., & Burrow, A. L. (2017). The unified model of vegetarian identity: A conceptual framework for understanding plant-based food choices. *Appetite*, 112, 78–95. <https://doi.org/10.1016/j.appet.2017.01.017>
- Rosenfeld, D. L., Rothgerber, H., & Tomiyama, A. J. (2020). Mostly Vegetarian, But Flexible About It: Investigating How Meat-Reducers Express Social Identity Around Their Diets. *Social Psychological and Personality Science*, 11(3), 406–415. <https://doi.org/10.1177/1948550619869619>
- Rosenfeld, D. L., & Tomiyama, A. J. (2019). When vegetarians eat meat: Why vegetarians violate their diets and how they feel about doing so. *Appetite*, 143, 104417. <https://doi.org/10.1016/j.appet.2019.104417>
- Rosenfeld, D. L., & Tomiyama, A. J. (2021). How proximal are pescatarians to vegetarians? An investigation of dietary identity, motivation, and attitudes toward animals. *Journal of Health Psychology*, 26(5), 713–727. <https://doi.org/10.1177/1359105319842933>
- Rothgerber, H. (2014). A comparison of attitudes toward meat and animals among strict and semi-vegetarians. *Appetite*, 72, 98–105. <https://doi.org/10.1016/j.appet.2013.10.002>
- Rothgerber, H. (2015). Underlying differences between conscientious omnivores and vegetarians in the evaluation of meat and animals. *Appetite*, 87, 251–258. <https://doi.org/10.1016/j.appet.2014.12.206>
- Sanchez-Sabate, R., & Sabaté, J. (2019). Consumer Attitudes Towards Environmental Concerns of Meat Consumption: A Systematic Review. *International Journal of Environmental Research and Public Health*, 16(7), 1220. <https://doi.org/10.3390/ijerph16071220>
- Sandberg, M. (2021). Sufficiency transitions: A review of consumption changes for environmental sustainability. *Journal of Cleaner Production*, 293, 126097. <https://doi.org/10.1016/j.jclepro.2021.126097>
- Sandelowski, M. (1994). Focus on qualitative methods. The use of quotes in qualitative research. *Research in Nursing & Health*, 17(6), 479–482. <https://doi.org/10.1002/nur.4770170611>
- Sandelowski, M. (2001). Real qualitative researchers do not count: The use of numbers in qualitative research. *Research in Nursing & Health*, 24(3), 230–240. <https://doi.org/10.1002/nur.1025>
- Sayer, A. (2010). *Method in social science: A realist approach: Revised second edition*. Routledge. <https://doi.org/10.4324/9780203850374>
- Schultz, P. W., Nolan, J. M., Cialdini, R. B., Goldstein, N. J., & Giskevicius, V. (2007). The Constructive, Destructive, and Reconstructive Power of Social Norms. *Psychological Science*, 18(5), 429–434. <https://doi.org/10.1111/j.1467-9280.2007.01917.x>
- Silver, C., & Lewins, A. (2014). *Using Software in Qualitative Research: A Step-by-Step Guide*. SAGE. <https://doi.org/10.4135/9781473906907>
- Stoll-Kleemann, S., & Schmidt, U. J. (2017). Reducing meat consumption in developed and transition countries to counter climate change and biodiversity loss: A review of influence factors. *Regional Environmental Change*, 17(5), 1261–1277. <https://doi.org/10.1007/s10113-016-1057-5>
- Taufik, D., Verain, M. C. D., Bouwman, E. P., & Reinders, M. J. (2019). Determinants of real-life behavioural interventions to stimulate more plant-based and less animal-based diets: A systematic review. *Trends in Food Science & Technology*, 93, 281–303. <https://doi.org/10.1016/j.tifs.2019.09.019>
- Truelove, H. B., Yeung, K. L., Carrico, A. R., Gillis, A. J., & Raimi, K. T. (2016). From plastic bottle recycling to policy support: An experimental test of pro-environmental spillover. *Journal of Environmental Psychology*, 46, 55–66. <https://doi.org/10.1016/j.jenvp.2016.03.004>
- Turnwald, B. P., Bertoldo, J. D., Perry, M. A., Policastro, P., Timmons, M., Bosso, C., Connors, P., Valgenti, R. T., Pine, L., Challamel, G., Gardner, C. D., & Crum, A. J. (2019). Increasing Vegetable Intake by Emphasizing Tasty and Enjoyable Attributes: A Randomized Controlled Multisite Intervention for Taste-Focused Labeling. *Psychological Science*, 30(11), 1603–1615. <https://doi.org/10.1177/0956797619872191>

- Turnwald, B. P., & Crum, A. J. (2019). Smart food policy for healthy food labeling: Leading with taste, not healthiness, to shift consumption and enjoyment of healthy foods. *Preventive Medicine, 119*, 7–13. <https://doi.org/10.1016/j.ypmed.2018.11.021>
- van der Werff, E., Steg, L., & Keizer, K. (2014). Follow the signal: When past pro-environmental actions signal who you are. *Journal of Environmental Psychology, 40*, 273–282. <https://doi.org/10.1016/j.jenvp.2014.07.004>
- VanEpps, E. M., Downs, J. S., & Loewenstein, G. (2016). Calorie Label Formats: Using Numeric and Traffic Light Calorie Labels to Reduce Lunch Calories. *Journal of Public Policy & Marketing, 35*(1), 26–36. <https://doi.org/10.1509/jppm.14.112>
- van't Riet, J., Sijtsema, S. J., Dagevos, H., & De Bruijn, G.-J. (2011). The importance of habits in eating behaviour. An overview and recommendations for future research. *Appetite, 57*(3), 585–596. <https://doi.org/10.1016/j.appet.2011.07.010>
- Verfuërth, C., Jones, C. R., Gregory-Smith, D., & Oates, C. (2019). Understanding Contextual Spillover: Using Identity Process Theory as a Lens for Analyzing Behavioral Responses to a Workplace Dietary Choice Intervention. *Frontiers in Psychology, 10*, 345. <https://doi.org/10.3389/fpsyg.2019.00345>
- Vermeulen, S. J., Campbell, B. M., & Ingram, J. S. I. (2012). Climate Change and Food Systems. *Annual Review of Environment and Resources, 37*(1), 195–222. <https://doi.org/10.1146/annurev-environ-020411-130608>
- Willett, W., Rockström, J., Loken, B., Springmann, M., Lang, T., Vermeulen, S., Garnett, T., Tilman, D., DeClerck, F., Wood, A., Jonell, M., Clark, M., Gordon, L. J., Fanzo, J., Hawkes, C., Zurayk, R., Rivera, J. A., De Vries, W., Majele Sibanda, L., ... Murray, C. J. L. (2019). Food in the Anthropocene: The EAT–Lancet Commission on healthy diets from sustainable food systems. *The Lancet, 393*(10170), 447–492. [https://doi.org/10.1016/s0140-6736\(18\)31788-4](https://doi.org/10.1016/s0140-6736(18)31788-4)
- Wood, W., & Neal, D. T. (2007). A new look at habits and the habit-goal interface. *Psychological Review, 114*(4), 843–863. <https://doi.org/10.1037/0033-295x.114.4.843>
- Xu, L., Zhang, X., & Ling, M. (2018). Pro-environmental spillover under environmental appeals and monetary incentives: Evidence from an intervention study on household waste separation. *Journal of Environmental Psychology, 60*, 27–33. <https://doi.org/10.1016/j.jenvp.2018.10.003>
- Zur, I., & Klöckner, C. A. (2014). Individual motivations for limiting meat consumption. *British Food Journal, 116*(4), 629–642. <https://doi.org/10.1108/bfj-08-2012-0193>

Supplementary Materials

Peer Review History

Download: https://collabra.scholasticahq.com/article/38823-it-s-easy-to-maintain-when-the-changes-are-small-exploring-environmentally-motivated-dietary-changes-from-a-self-control-perspective/attachment/101875.docx?auth_token=vIHNYOPmGtBtYk5i59Kc
