


# Healthy Eating as a New Way of Life: A Qualitative Study of Successful Long-Term Diet Change

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## Abstract

**Background:** Improving diet quality has been shown to be an effective way to improve health and well-being. Yet information on how to assist those wanting to transition to and maintain a healthier diet is still limited. The aim of this study was to explore what motivated people to initiate and maintain a healthy diet.

**Methods:** Semi-structured interviews were conducted with 20 participants (all Australian residents) who had made significant improvements to their diets and had maintained these changes for a minimum of two years ( $n_{female} = 15$ ,  $n_{male} = 5$ ,  $M_{age} = 37.7$ ,  $SD = 12.4$ ). The transcripts were analysed using thematic analysis which identified five overarching themes: A desire to feel better, investigation and learning, helpful habits, benefits, and values.

**Results:** Participants reported a strong wish to feel better and investigated the role of diet as a possible way to improve well-being. Through daily habits and continuous engagement with the topic, healthy eating became a way of life for many participants. Experiencing the benefits of a healthier diet and having developed strong values regarding diet and health supported long-term maintenance.

**Conclusions:** Findings from the present study contribute to the literature in highlighting the importance of internal motivation and autonomy for health behaviours. Findings may inform the development of healthy eating interventions. Encouraging autonomy, fostering values aligned with a healthier diet, and helping individuals establish daily habits is likely to support change.

## Keywords

healthy diet, motivation, habits, health behaviour

## Highlights

### What do we Already Know About This Topic?

Despite knowledge about the potential benefits, helping people transition to healthier diets is very challenging in both research and community settings.

### How Does Your Research Contribute to the Field?

This research explored the experiences of those who have made successful, long-term diet changes, a highly under-researched group in this field.

### What Are Your Research's Implications Towards Theory, Practice, or Policy?

Findings may inform intervention design in both research and community setting, pointing towards the importance of autonomy, values, and habits for diet change.

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## Introduction

A healthy diet is associated with physical<sup>1</sup> and mental health.<sup>2,3</sup> Yet only 1% of Australians consume enough fruits and vegetables per day to meet national dietary guidelines.<sup>4</sup> Processed foods high in salt, saturated fat and sugars are consumed in excess, with junk food accounting for over a third of the daily energy intake in both adolescents and adults.<sup>5</sup> Poor diet quality constitutes a preventable risk factor for overweight, obesity and many chronic illnesses (e.g. Refs. 5-7). While in the past the dominant research focus has been on the effect of diet on weight and physical health, in the last decade, an increasing amount of evidence has also linked poor diet quality to poorer mental health outcomes, such as depression.<sup>3,8,9</sup> Recent intervention studies have shown that improving diet quality can reduce depressive symptoms (for a meta-analysis, see Refs. 2 and 10). Lifestyle interventions that improve diet quality therefore have the potential to positively affect both physical and mental health, thereby reducing the burden of disease on both fronts.<sup>11,12</sup>

Most research on lifestyle change stems from studies assessing the effectiveness of intervention programs which encourage healthy eating and/or exercise to produce weight loss or manage chronic disease.<sup>13,14</sup> These studies generally report low adherence<sup>15,16</sup> and high rates of attrition.<sup>14</sup> Successful, long-term behaviour change, particularly when it comes to health behaviours, remains an elusive goal.<sup>17</sup>

To address these issues, facilitators of and barriers to change have become one area of focus of lifestyle research.<sup>13</sup> However, while this has produced a lot of helpful information, there remains a lack of information about successful long-term change, specifically how to induce this change. This is due to a number of limitations. First, following participants over extended periods of time is not always feasible, so many studies cannot offer long-term data. Second, and even when long-term data can be collected, long-term behaviour change appears to be a rare phenomenon. The typical pattern reported in weight loss research consists of short-term weight loss being often followed by a long-term remission to baseline starting weight.<sup>18,19</sup> Finally, another important reason for the lack of information on successful lifestyle change relates to the way data on facilitators of lifestyle change is generally collected. Often data is collected from all or some participants of a lifestyle intervention to look for associations between participant characteristics and indicators of success (e.g. Refs. 20 and 21). However, these interventions are not generally successful at producing long-term behaviour change<sup>14,18</sup> and therefore may not be a good source of information on success. Qualitative designs also often interview a sample of a target population that would benefit from healthier lifestyles (for example, those affected by obesity or chronic illness) to learn more about what is perceived as helpful or unhelpful when attempting to adopt a healthier lifestyle (e.g. Refs. 22 and 23). Therefore, a large amount of the evidence base on lifestyle change comes from

participants who were in fact not successful in making long-term lifestyle changes. Although there is a small amount of research on 'super-achievers' in the weight loss literature,<sup>24,25</sup> few studies have explored the experiences of those who successfully maintained a healthy diet following a lifestyle change. Understanding the motives and processes of those who were successful in changing their lifestyle is likely to be helpful when designing an intervention which aims to produce such a change.

Given this gap in lifestyle change research to date, the present study aimed to explore the factors that motivate individuals to initiate changes to their diet, and to explore the factors that facilitate the maintenance of these changes over time. There were two research questions: (1) What motivates people to initiate dietary lifestyle changes? (2) What helps people maintain long-term dietary lifestyle changes?

## Methods

The current study employed an in-depth exploratory qualitative research design, drawing upon a social constructionist interpretative framework. Social constructionism recognises that participants' perspectives and experiences are unique, and used to construct meaning.<sup>26</sup> This approach therefore seeks to construct meaning out of the descriptions participants provide of their experiences and to distinguish patterns within the data (64).

## Participants

Participants were included in the study if they were adults ( $\geq 18$  years old), in control of their diet (i.e. not having their meals provided for them by another person or institution), self-identified as having made a significant positive change to their diet quality, and to have maintained this change for two or more years. For the purpose of this study, positive change was defined as a meaningful reduction of foods which have been associated with chronic disease and poorer mental health outcomes (i.e. 'junk food' and processed foods), and an increase in foods which have been shown to be health promoting (e.g. whole foods, such as fruits and vegetables). Examples of processed and whole foods were provided on the flyer. Although participants self-identified, a brief screening questionnaire was used to assess whether interested participants fulfilled these criteria. Participants were also asked to describe their previous and current dietary patterns in detail during the interview. A full table showing participants' descriptions of their previous and current diets can be obtained from AJAJ upon reasonable request. An extract of this table can be found in the results section (Table 2).

## Recruitment

Participants were recruited via advertising with a virtual flyer in various online Facebook groups for people interested in

health and nutrition, whereby snowball sampling from initial contacts was also used. A research project Facebook page was created for potential participants to message directly upon interest. Participants were then invited to provide an email address for further communication. A brief screening questionnaire was sent to interested participants via email to ensure they met the inclusion criteria. Participants were asked to confirm that they were 18 years or older, how long ago their change in diet had occurred, and to describe their previous and current dietary habits.

### Data Collection

Ethical approval was obtained from the Curtin University Human Research Ethics Committee (HRE2020-0714). Participants received a participant information sheet and consent form via email upon their expression of interest. Semi-structured interviews were conducted between December 2020 and February 2021, lasting on average for 52.75 minutes ( $SD = 11.9$ ) with a range of 33–75 minutes. Participants were interviewed either face-to-face or via a video conferencing platform. Informed consent was gained prior to conducting interviews. An interview guide was used with questions concerning reasons for wanting to eat healthier, how the new lifestyle had been maintained successfully over the years, and what challenges were experienced with the change in diet. Interviews were recorded digitally and transcribed verbatim.

### Data Analysis

Thematic content analysis as outlined by Braun and Clarke<sup>27</sup> was used to analyse the data and identify common themes. This is a six-step process.<sup>27,28</sup> First, during immersion, recordings were listened to and transcripts read several times to achieve familiarisation and to note items of potential interest. Second, codes were attached to each aspect of the data which related to the research questions. Third, inductive analysis was used to identify themes in the data that linked to the research questions and to combine codes to form these broader themes. Fourth, themes and their relationships with each other were reviewed and cross-checked for overlap to ensure that they were supported by the data. Fifth, the themes were defined and named to accurately capture the essence of each theme. Finally, the analysis was finalised, and results were written up with the goal to provide sufficient data to justify the identified themes.

Yardley's<sup>29</sup> quality principles of sensitivity to context, commitment and rigour, transparency and coherence, and impact and importance were used to guide the research process. An audit trail of the research process was constructed to track decisions throughout the research process. During stages three to six of the analysis,<sup>27</sup> emerging codes and themes were discussed and any differences resolved via consensus. Any other emerging ethical and methodological

issues were also discussed regularly, and a reflexive journal was kept to reflect upon the research process and any relevant assumptions and biases.<sup>30,31</sup>

## Results

Participant demographics are reported in Table 1. A sample of participants' descriptions of their diets before and after their change process can be found in Table 2. A summary of the qualitative results with verbatim examples and pseudonyms can be found in Table 3.

Of the 20 participants, 15 were female and five male. The average overall age was 37.7 years ( $SD = 12.4$ ) with a range of 23 to 72. Nine participants were born in Australia, two in New Zealand, and nine overseas; however, all were residing in Australia. Four participants were living alone; all other participants lived with at least one other person. The majority ( $n = 17$ ) of participants were working. All but one participant with a leg injury exercised regularly with an average of 4.7 days exercised per week. Fifteen participants reported physical health issues prior to their change in diet and five reported current issues. All participants were asked whether they used a specific term to describe their current diet. These terms are listed in Table 1.

The thematic analysis identified five themes regarding the participants' motivation to change their diet and their successful maintenance of their new lifestyle: a desire to feel better, investigation and learning, helpful habits, benefits and values (Table 3).

Pseudonyms are used in the following to anonymise the participants' quotes.

### A Desire to Feel Better

Most participants referred to a desire to feel better as the primary catalyst for initiating diet changes. Suffering from health issues which significantly impacted their quality of life was frequently cited: *'[I had] chronic fatigue, I was sleeping like 18 hours a day and still waking up tired, couldn't operate functionally as a human'* (Allan) and *'I was diagnosed with PCOS [polycystic ovarian syndrome]... [my periods] were so truly painful... my stomach was bloated all the time'* (Danica). Some participants reported being unsatisfied with the responses they received from their doctor or health professional: *'They either wanted to like prescribe drugs or just didn't know what was going on'* (Bree). For several participants, being unhappy with their body and weight was cited as either the main or an additional cause of distress: *'I didn't like looking in the mirror'* (Nika) and *'I hated myself. I was not comfortable in my own skin'* (Klara).

Health and weight issues were linked to a strong desire to change: *'The saviour was me getting chronically sick... that was my wake-up call'* (Allan) and *'I was like, okay, something's got to change, because I don't want to keep feeling like*

**Table I.** Participant Demographics.

Characteristic	n
Gender	
Female	15
Male	5
Age (years)	
20s	6
30s	9
40s	1
50s	3
60s	0
70s	1
Country/continent of birth	
Australia	9
New Zealand	2
Europe	4
North America	2
South America	1
Asia	1
Living situation	
With partner (no children)	9
With partner and children	5
Alone	4
With child (no partner)	1
With family	1
Employment	
Working	17
Retired	2
Unemployed	1
Current diet description term	
Whole food plant-based	9
Mediterranean	2
Whole foods	2
Autoimmune protocol	1
Vegetarian	1
Bulletproof	1
Plant-based	1
Paleo	1
Nourishment	1
No label	1
Health issues	
Prior to diet change	15
Current	5
Exercise (average)	
1x/week	1
3x/week	3
4x/week	4
5x/week	7
6x/week	2
Daily	7

*this every day*' (Bree). This desire to feel better was also often the start to a research journey: *'I was like "look if doctors can't do anything, I feel there's something more that can be done"'* (Jessica).

## Investigation and Learning

Information was identified as an important factor in both the initiation and the maintenance of a healthier diet. Multiple participants reported that they more or less accidentally came across some piece of information which led them to consider lifestyle changes as a possible way to improve their well-being. This information often came in the form of documentaries: *'I was so shocked by what I saw in that film'* (Constance) or books: *'The fundamental thing was reading a book called [title]'* (Dusty). Others actively sought this information to improve their health condition: *'I started just like doing a heap of research into fibromyalgia'* (Jessica). After initial curiosity was sparked, most participants reported continuing to engage in investigation: *'It sent me on a rabbit hole of learning about nutrition'* (Nika) and *'that process was really just a lot of research and reading'* (Thea).

This process of investigation, where participants researched either their condition or healthy eating in general, led to the formation of new perspectives and beliefs. Many reported considering the impact of their diet for the first time: *'I never really considered that what I ate could have such a big impact on my health'* (Allan) and *'I used to think, am I having too many or too few calories? It wasn't really where it was coming from'* (Dusty). As one participant explained:

*I had no idea that any of this might be associated with my diet. I had never received that kind of dietary advice before, that your diet can impact things like your period, or your mood or how much energy you've got. (Amara)*

While most participants described a thorough process of *'self-research'* (Rose), only two participants accessed support from a health professional during their transition. Although the reasons for this were not explicitly explored during the interviews, one participant explained: *'I don't necessarily like to be told what to. I'd rather understand the reasons behind it'* (Alexander), and another noted: *'I guess cos I've been doing quite well on my own'* (Ella).

## Helpful Habits

A variety of habits were identified as playing a role in the maintenance of a healthier diet. All participants described preparing the majority of their meals themselves: *'I basically started preparing and cooking my own food rather than eat out'* (Mateo). Many participants described meal planning practices that made the process more convenient: *'I cook a big meal at night and then I'll have the leftovers for lunch'* (Catherine) and *'we plan all our meals for the week, and we go shopping once'* (Sarina). When participants reported an increase in consumption of homemade meals, they also reported a decrease in eating outside of home. Many reported

**Table 2.** A sample of five participants' descriptions of their diet before and after their change.

Verbatim Examples of Previous Diet	Verbatim Examples of Current Diet
'Whatever was on offer' 'I consumed also soft drinks... a lot of beer' 'lots of breads' 'usually went out for lunch to a restaurant' 'I'd have like a 300 gramm steak with mashed potatoes' 'yo-yoing about... whatever was in my fridge' 'there was a lot of take-out, a lot of freezer meals' 'Snacks in between ... lots of chips as well...crisps'	'a smoothie in the morning'; 'do not [consume soft drink] anymore'; 'a bowl of mixed salad... some form of protein' 'often I precook a curry on the weekend... mostly vegetable-based' 'Muesli and yogurt... eggs or tofu scramble with vegetables' 'Lunch and dinner...one pot meals... like a chickpea curry ... roasted vegetables with quinoa' 'salad... with some sort of grain' 'mixed nuts or fruit'
'Going to Maccas every second or third day with friends' 'buying frozen meals... because I just couldn't be bothered cooking' 'minimum veggies and fruit' 'throughout the day snacking on chips, on lollies, having Cokes and soft drinks' 'I used to work in hospitality and... get food at the restaurant' 'toast and instant noodles' 'trying to have like the cheapest meals ever...\$5 pizzas of Dominoes.'	'a smoothie in the morning' 'avocado with beans on toast, baked beans on toast' 'For lunch, I will make quesadillas' 'a salad with roasted chickpeas, baked sweet potato' 'For dinners ... a sauteed curry or a red or green Thai curry with brown rice' 'juices in the morning and... cereal... a small yogurt or some kind of fruit ... mango, banana, apple, whatever' 'lunch I have ... veg as well... cut up capsicum or some cherry tomatoes ... ..a sandwich' 'most of the time I cook ... steaks or lasagna or pasta'
'I used to... binge a lot on sugary foods' 'I didn't eat a lot of fruit then' 'I was having a lot of rice, pasta, pre-packaged like warm-up meals' 'a couple nights a week take away foods like hot chips, pizzas, pasta'	'A smoothie with coconut milk and lots of fruit and veg' 'sometimes I have scrambled eggs for breakfast' 'dinners are normally... very limited on processed foods, I make a lot of it myself ... meat and vegetables... cauliflower pizza'

Participants' pseudonyms in order: Alexander, Catherine, Danica, Ella, Jessica. Full table with all participants' descriptions available from (author initials) upon reasonable request

**Table 3.** Overview of Qualitative Results with Verbatim Examples.

Themes	Verbatim Example (Pseudonym)
A desire to feel better	'The saviour was me getting chronically sick... that was my wake-up call' (Allan) 'I used to get these terrible pains in my stomach, and nobody could really work out what they were' (Constance) 'I didn't like looking in the mirror' (Nika)
Investigation and learning	'It was that documentary (...) that did lead me into reading lots of the literature' (Ivan) 'I never really considered that what I ate could have such a big impact on my health' (Allan) 'I think the success came from education' (Thea)
Helpful habits	'We plan all our meals for the week, and we go shopping once' (Sarina) 'One pot meals, anything that's convenient and easy and freezable' (Catherine) 'We don't eat out huge amounts and when I do, I try and make better choices' (Sarina)
Benefits	'I think the biggest motivator for me was my health changed drastically' (Danica) 'I had more clarity of mind, less mood swings, (...) more motivation to exercise' (Mateo)
Values	'I want to live a really healthy life. (...) I know that I can affect the quality of the life that I have' (Amara) 'It's proven to be really great for my health and how I feel about my contribution to the planet' (Thea)

that they still ate at restaurants occasionally, but less frequently: '*occasionally that [eating out] is fine for me, but it's not something I'm doing regularly*' (Alexander).

Another practice that was frequently cited by participants was substituting a previously eaten food with a healthier version: '*If I was like craving sweet food, I would find an alternative that didn't have sugar and additives to*

*it*' (Bree) or '*it has to be like 90% dark chocolate, chocolate that sort of is on the healthier side*' (Ivan). Keeping things out of the house that were not considered healthy or too tempting was also cited by many as a helpful habit. '*Just don't have them in the house*' (Klara) and '*just removing that temptation completely*' (Catherine) were frequently offered strategies.

These daily habits appeared to contribute significantly to the consistency with which the participants followed their healthier diets. The habit of having ‘treats’ regularly in moderation alongside a healthy diet was rarely reported, and many criticised the concept of moderation in regard to unhealthy foods: ‘Moderation usually doesn’t work very well for me. For me it’s easier to completely eliminate things’ (Alexander) and ‘I feel like if moderation was a concept that worked, in the medical community, we wouldn’t have 80% obesity rates in [suburb]’ (May).

## Benefits

The health benefits that were experienced as part of the change in diet were frequently cited as motivating: ‘I think the biggest motivator for me was my health changed drastically’ (Danica) and ‘all of my gut issues went away’ (Bree). An increase in energy was also frequently cited by participants: ‘you’ve got so much more energy’ (Klara) and ‘I had a lot more motivation to exercise and workout because I had this abundance of energy’ (Mateo). A number of female participants referred to positive changes in their menstrual cycles: ‘my periods became like less heavy and much less painful’ (Amara).

In addition to physical health benefits, the experience of positive changes to their mental health was also cited by most participants. Several participants referred to an increase in happiness due to better physical health: ‘I was just really happy that my health was getting better’ (Danica). Some reported noticing increased stability of mood: ‘less mood swings, my mood more generally felt more stable’ (Mateo). ‘Mental alertness’ (Rose) or ‘clarity of mind’ (Allan) was also frequently cited, as well as increased self-confidence: ‘I just feel more confident, and I feel more myself’ (Ella).

Participants also frequently cited feeling worse when occasionally diverging from their ideal diet: ‘Now if I eat something too sugary, I feel awful afterwards’ (Bree) and ‘if I eat really poorly, I just feel really unwell, and no one wants to feel like that’ (May).

The benefits experienced were clearly linked to successful maintenance of their new diet: ‘Once I felt this good, having felt so bad prior, there was just never a chance of ever going back’ (Allan) and ‘I guess I just felt the difference between when I was feeling, you know, tired and lethargic, and then switching to this diet and feeling so much healthier’ (Bree).

## Values

Values appeared to play a big role in the maintenance of a healthier diet. Many participants cited being healthy as a strong value that shaped their decisions: ‘I want to live a really healthy life’ (Amara) and ‘I felt like a moral imperative to kind of do better... for myself, my own health’ (Mateo).

Health was often seen as a basis needed to achieve other goals in life: ‘I have, like, so many goals in life and I just want to feel good to accomplish them all’ (Maya).

Preventing disease was also frequently cited as a strong value: ‘I don’t want to develop health issues when I’m older’ (Sarina) and ‘I know that I can affect the quality of the life that I have’ (Amara).

Ethical and environmental concerns were also identified as key values connected to dietary choices. Some participants referred to avoiding plastic and waste: ‘I end up avoiding processed food predominantly because it’s often not packaged in a very environmentally sustainable way’ (Rose). Many participants described that concerns about practices of animal agriculture and their environmental impact contributed to their motivation to consume whole plant foods: ‘I understood about the ethical component of raising animals in bulk for food, how it affects the environment’ (Maya). A number of participants described how their values around health and the environment appeared to stack to form a ‘sort of value set’ (May) that provided continuous motivation: ‘there’s just so many reasons in my mind to keep doing it’ (Bree).

## Discussion

This study explored what motivates people to initiate dietary lifestyle changes and how they maintain changes long-term. Participants reported that having a strong desire to feel better motivated them to make changes. Previous research has found little evidence to suggest that health or weight issues alone provide sufficient motivation for behaviour change. While some studies have found that serious health concerns can motivate health behaviour change,<sup>32-34</sup> a lack of lifestyle change in those with chronic disease is more commonly reported.<sup>35</sup> For example, a cancer or heart disease diagnosis does not consistently lead to health-protective changes (e.g. Refs. 36-38). Therefore, a desire to feel better may be a prerequisite to change rather than a predictor of success following execution of health behaviour changes.

Learning new information about the impact of diet on health influenced both initiation and maintenance of diet changes. Many participants reacted to their desire to feel better with a thorough investigation process that produced new knowledge. However, research has shown that information is not generally an effective motivator for behaviour change. For example, the reduction in smoking rates is predominantly accredited to changes in the environment (smoking and advertising bans, increased costs) as opposed to the dissemination of information on its negative health effects.<sup>39,40</sup> Instead of knowledge itself, the willingness to be wrong and adopt new perspectives may be a driver for successful lifestyle changes. Previous research has shown that a common barrier to health behaviours is the belief that one is already sufficiently active or eats healthily enough,



even though exercise and dietary recommendations are not met.<sup>41,42</sup> Similarly, Hardcastle et al<sup>35</sup> reported cancer survivors' scepticism regarding the importance of diet for health. In the current study, participants reported a change in their views on what was healthy and how diet impacted health. The ability to be open to new views that conflict with current beliefs may be an important factor contributing to successful lifestyle changes.

Habits were commonly identified as helpful for maintenance. This is consistent with previous research pointing to the power of habits for eating behaviours. For example, studies suggest that people will consume food out of habit despite not wanting to eat it or not liking it<sup>43,44</sup> and that those who consistently engage in health behaviours do so out of habit.<sup>45,46</sup> This may explain why helpful habits, rather than resisting temptation, were identified as a common theme. All participants described a number of habits that integrated their new lifestyle into their daily life. These included meal planning, meal preparation and 'environmental reengineering'<sup>17</sup> by keeping unhealthy foods out of the house and avoiding tempting environments such as restaurants. Learning more about how people establish healthy eating patterns voluntarily, and how to assist with habit formation, may be avenues for future interventions.

All participants reported benefits associated with their switch to a healthier diet. These benefits often aligned with their desire to feel better by improving the undesirable health issues. As such, they were commonly experienced as highly motivating for both short-term and long-term maintenance. Initially, these benefits appeared to have fostered the participants' willingness to learn more about healthy eating, motivating them to seek more information. The benefits also motivated long-term maintenance, possibly supported by the commonly reported experience that diversion from the new diet led to a reduction in well-being. Studies have found that those who are not successful in making lifestyle changes often consider healthy eating to be unenjoyable and a threat to their quality of life.<sup>47,48</sup> The experience of feeling better may therefore lead to a change in views, where the new diet is viewed as enjoyable and rewarding, rather than a sacrifice. The dietary changes reported in this study were often quite significant, which may result in more noticeable benefits. This may be one reason why previous research has found that stricter diets tended to be more successful, with greater dietary changes producing greater adherence.<sup>49-51</sup>

Values which aligned with a healthy diet were the last theme identified in this study. Participants frequently reported that their values contributed to their motivation to maintain a healthier diet. Previous research suggests that sustainability values are associated with higher diet quality,<sup>52</sup> more healthy eating actions and concern with health.<sup>53</sup> For participants of this study, it appeared as though the relevant values were often formed during their transition to a healthier diet as part of the investigation process. It appears

as though learning more about environmental impacts and ethical concerns led to a new source of motivation to avoid processed foods. Further research on whether fostering values can elicit healthy eating motivation could be an interesting area of future research.

The findings of the current study are consistent with self-determination theory (SDT; Ref. 54). All participants appeared to be internally motivated, with many showing signs of intrinsic motivation, by reporting that their lifestyle was based on personal values and a desire for self-awareness. Their motivation was regulated by a strong interest in health and enjoyment of their lifestyle which provided inherent satisfaction.

In addition to the concept of internal motivation, SDT also stipulates three universal human needs which support change: autonomy, competence and relatedness.<sup>54</sup> Regarding the need of autonomy, only two of the twenty participants reported accessing support from health professionals regarding their diet. Instead, most participants independently configured their new diets based on their own investigation. Research suggests that people often construct their own definitions of healthy eating<sup>53,55</sup> and are more willing to trust their own definition of healthy eating, over dietary recommendations provided by government bodies.<sup>55-57</sup> To increase motivation to eat healthier, it may therefore be helpful encourage investigation around health, rather than only providing instructions. Further research could investigate whether investigation of the benefits of a healthy diet can foster a desire to change.

The second universal need of SDT is competence, the sense of being able to control the outcome and experience mastery.<sup>54</sup> The benefits participants reported are likely to have contributed to their sense of competence. Being able to cause improvement in well-being and even resolve health issues through their own behaviour led participants to feel in control of their health. As mentioned above, greater dietary changes may be associated with greater benefits and thereby increased likelihood of adherence.<sup>49-51</sup>

The third universal need of relatedness aligns with the participants' relationships with their partners and other likeminded people who shared their values of health. Previous studies suggest that social pressures can be a barrier to lifestyle change<sup>13</sup> and that romantic partners may facilitate or hinder weight loss depending on their behaviour.<sup>58</sup> This suggests that lifestyle interventions may benefit from elements which include or address the participant's partners or social network.

The findings of the current study add to the evidence base pointing to the usefulness of SDT as a framework for health behaviours.<sup>59-61</sup>

### ***Strengths and Limitations***

The main strength of the current study is that it recruited only those who made a major lifestyle change and successfully maintained this new lifestyle long-term. Previous research

collected information on diet changes from those who had attempted to change, rather than those who were successful.<sup>13</sup> This study adds to existing research pointing to SDT as a useful framework for understanding health behaviour change.<sup>59,62</sup> Limitations of this study include the small number of men (five out of twenty participants). Men are reported to be more likely to have a poor diet and less likely to be interested in or initiate lifestyle change (e.g. Refs. 32 and 63). Therefore, future studies may wish to explore male-specific motivations associated with significant and sustained dietary changes to improve our understanding of how to reach and engage men in lifestyle interventions.

### Future Research

Many of the participants in the current study described a journey that appeared to have taken them through all six stages of motivation according to SDT.<sup>54</sup> Future research could identify such participants and explore in detail what promoted them to progress through these stages of behaviour change. Learning how an individual progresses towards internal motivation, in the domain of diet specifically, may inform the design of interventions to assist with this process.

Another avenue for future research could be incorporating an assessment of the participants' motivational stages according to SDT into lifestyle interventions. This could provide information about the intervention's effectiveness in relation to the different stages and whether the intervention has the potential to foster progression towards internal motivation. Person-centred counselling or health coaching could help prepare less internally motivated individuals for successful participation by identifying and addressing individual barriers to change.

Lastly, an interesting avenue for future research may be how to incorporate elements into lifestyle interventions which provide a greater sense of autonomy to participants. For example, participants could be asked to investigate the link between their health concern and diet on their own before being presented with information.

### Conclusion

This study explored what motivates people to initiate and maintain long-term dietary lifestyle changes. Participants identified a wish to feel better and information on the possible impact of diet as important for their initiation of change, while maintenance was linked to continuous learning about diet, helpful daily habits, the experience of health benefits and strong values associated with dietary intake. The field may benefit from further studies exploring the experiences of those who adopted a healthier diet after having been reluctant to do so in the past.

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### Authors' contributions

This research was completed by AJ as partial fulfilment of a Master of Psychology research thesis under supervision of MOC and BL.

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The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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### Ethics Approval

Ethical approval was obtained from Curtin University Human Research Ethics Committee (HRE2020-0714).

### Informed Consent

Consent was obtained from participants prior to the interviews.

### Data Availability

The de-identified data are available upon reasonable request from (author initials have been removed for anonymous peer review).

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