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Changing eating habits and the impact on sustainable consumption: an analysis of the flexitarians' journey from the perspective of Life Course Paradigm Theory

Mudanças de hábitos alimentares e o impacto no consumo sustentável: uma análise da jornada de flexitarianos sob a ótica da Teoria do Paradigma do Curso de Vida

El cambio de hábitos alimentarios y su impacto en el consumo sostenible: un análisis del viaje flexitariano desde la perspectiva de la Teoría del Paradigma del Curso Vital

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KEYWORDS
Sustainability. Flexitarianism. Life Course Paradigm Theory.

Abstract: There is a transformation in the eating habits of a group of consumers that can lead to more sustainable consumption on a larger scale, which is linked to a reduction in meat consumption, but in a more flexible and less restrictive way compared to vegetarianism. This phenomenon is called flexitarianism. Thus, this paper aims to analyze the adaptation processes to the new flexible diet in light of the Life Course Paradigm Theory (LCP). Qualitative research was conducted using 24 semi-structured interviews with people who have become flexitarian. The results showed that the presence of vegetarians in the relational cycle contributed to the decision to change and allowed access to information related to environmental damage. Regarding the actual timing of the change, health was the primary motive, followed by environmental concerns. Regarding the phase of adaptation to change, the economic situation and high meat prices emerged in the reports as conditions that facilitated the decrease in consumption. Another point that emerged in the adaptation process was the acquisition of the social role of the spouse, which was linked to a context of change toward a more sustainable behavior. The reports perceived a greater concern about the origin of the food. As a future study, we suggest a study on identity and feelings involved in the process of reducing meat consumption.

PALAVRAS-CHAVE
Sustentabilidade. Flexitarianismo. Teoria do Paradigma do Curso de Vida.

Resumo: *Existe uma transformação nos hábitos alimentares de um grupo de consumidores, o que pode levar a um consumo mais sustentável em escala mais ampla, vinculado a uma redução no consumo de carne, porém de maneira mais flexível e menos restritiva em comparação ao vegetarianismo. Esse fenômeno é chamado de flexitarianismo. O objetivo deste estudo é analisar os processos de adaptação à nova dieta flexível sob a perspectiva da Teoria do Paradigma do Curso de Vida. Foi conduzida uma pesquisa qualitativa na qual foram realizadas 24 entrevistas semiestruturadas com pessoas que adotaram o estilo de vida flexitariano. Os resultados mostraram que ter no ciclo relacional vegetarianos contribuiu para a decisão de mudança no futuro e permitiu o acesso à informação relacionada a danos causados ao meio ambiente. Em relação ao momento efetivo da mudança, a preocupação com a saúde foi o principal motivador, seguido pelas preocupações ambientais. Na fase de adaptação à mudança, a situação econômica e os preços elevados da carne emergiram nos relatos como fatores que facilitaram a redução do consumo. Além disso, o papel social de cônjuge foi identificado como um elemento relacionado à adoção de comportamentos mais sustentáveis. Também foi observada uma maior preocupação com a origem dos alimentos nos relatos dos participantes. Como sugestão para estudos futuros, sugere-se investigar a questão da identidade e dos sentimentos envolvidos no processo de redução do consumo de carne.*

PALABRAS CLAVE
Sostenibilidad. Flexitarianismo. Teoría del Paradigma del Curso de la Vida.

Resumen: *Se está produciendo una transformación en los hábitos alimentarios de un grupo de consumidores, que puede conducir a un consumo más sostenible a mayor escala, lo que está relacionado con una reducción del consumo de carne, pero de una forma más flexible y menos restrictiva en comparación con el vegetarianismo. Este fenómeno se denomina flexitarianismo. Así, el objetivo de este trabajo es analizar los procesos de adaptación a la nueva dieta flexible a la luz de la Teoría del Paradigma del Curso de la Vida. Se llevó a cabo una investigación cualitativa en la que se realizaron 24 entrevistas semiestructuradas a personas que se han vuelto flexitarianas. Los resultados mostraron que tener en el ciclo relacional vegetarianos contribuyó a la decisión de cambiar en el futuro y permitió acceder a información relacionada con los daños al medio ambiente. En cuanto al momento real del cambio, la salud fue el principal motivador, seguido de la preocupación por el medio ambiente. En cuanto a la fase de adaptación al cambio, la situación económica y los altos precios de la carne surgieron en los informes como condiciones que facilitaron la disminución del consumo. Otro punto que surgió en el proceso de adaptación fue el hecho de adquirir el rol social de cónyuge, que se vinculó a un contexto de cambio hacia un comportamiento más sostenible. Se percibió en los relatos una mayor preocupación con el origen de los alimentos. Como estudio futuro, sugerimos un estudio sobre la identidad y los sentimientos en el proceso de reducción del consumo de carne.*

Introduction

Soil degradation, the burning of forests for agricultural use, and deforestation are some consequences of agriculture heavily based on grain production. Notably, 80% of deforestation is for agricultural purposes (Crippa et al., 2021), and 70% of water is exploited in regions of high agricultural production (Whitmee et al., 2015). In addition, the current omnivorous diet can increase global agricultural greenhouse gas emissions by 80% by 2050 (Whitmee et al., 2015). On the other hand, the adoption of the Mediterranean diet (based on vegetables, fruits, seafood, grains, sugars, oils, eggs, dairy products, and moderate amounts of poultry, pork, beef, and lamb), pescetarian diet (similar to the latter but without the consumption of animals, except fish and seafood) or vegetarian diet (without the consumption of animals) can help reduce the impact of agriculture on the environment (Tilman & Clark, 2014). Adopting new diets, sustainable trade, and reducing waste may prevent more than two-thirds of future biodiversity losses (Leclère et al., 2020).

Despite the promising scenario for environmental issues with the change in diet, the adoption of a new lifestyle, whether vegetarian or less strict (midway between the vegetarian and omnivorous diets), involves some social impasses. These include prejudice since, in the past, vegetarians were associated with hypochondriacs and even drug users (Sadalla & Burroughs, 1981). Today, however, they are perceived as people who care about health, animal welfare, and the environment (Lea & Worsley, 2003).

Reducing meat consumption is a trend in high-income countries (Dagevos, 2021). In Brazil, this movement has also begun, and according to The Good Food Institute (2020), the rate of people who reduced their meat consumption is already 49%, out of which 29% consume beef only once a week. Those who follow this diet can also be called flexitarians, i.e., people who have reduced their consumption of red or white meat without completely excluding it from their diet (Rosenfeld et al., 2020a).

Choices to transform food consumption are not random and are connected to previous events, contexts experienced by the individual, and even how they adapt to changes throughout life (Moschis, Mathur, & Shannon, 2020). The day-to-day dynamism that covers gradual or abrupt, expected or unexpected changes will also influence how a person eats. Thus, when an individual adopts a new diet, it is necessary to observe the entire change process until the transformation occurs (Moschis et al., 2020).

Therefore, different events can influence changes in various areas, such as family, education, work, and diet (Moschis et al., 2020). Thus, the Life Course Paradigm (LCP) Theory allows us to observe the behavior change process. By encompassing Normative Theory and Social Capital Theory, LCP helps us understand the social identity proposed by Tajfel (1978, apud Coleman & Williams, 2013).

From a research perspective, there is a demand for studies that observe the changes in habits resulting from the search for more sustainable forms of consumption (Costa Filho et al., 2021). Sustainable consumption is understood as the satisfaction of individual needs in terms of acquisition, use, and disposal without compromising the satisfaction of other people's needs in the current and future context (Geiger et al., 2018). Among the many possibilities for sustainable consumption is the reduction of meat, the habit targeted in this study, which strongly relates to the high levels of greenhouse gas emissions in the food sector (Ivanovich et al., 2023). The process of reducing meat consumption faces a series of barriers and resistance from consumers, which

include social, cultural, historical, and economic factors (Kemper, 2020), so investigating this process helps to clarify more effective ways of adopting this dietary transition. In this sense, this study seeks to understand the events associated with the process of consumers reducing meat consumption, analyzing the adaptations that have occurred in their lives in light of the LCP.

Theoretical elements

Sustainable consumption

Problems on an international scale, such as climate change, world population growth, and inequality in the distribution of consumer goods, have required changes in consumption patterns (Gwozdz et al., 2020). Sustainable consumption, as an essential aspect of sustainable development, involves not only economic and environmental aspects but also social ones related to the quality of life and equity in the accessibility of resources (Araújo et al., 2020; Bartolj et al., 2018).

Some authors emphasize the need to investigate sustainable consumption from a systemic viewpoint (Bengtsson et al., 2018; Oliveira et al., 2018) that considers the different actors (Kiss et al., 2018) and also the complementarity of their roles in achieving more sustainable modes of consumption (Liu et al., 2017). Hence, consumers play an essential role in promoting sustainable consumption by exercising citizenship (Oliveira et al., 2018); other actors include governments, companies, civil society, and other organizations.

Among the different topics investigated in sustainable consumption, studies on food, clothing, and mobility stand out (Geiger et al., 2018). Concerning food, the authors point out that studies on this topic focus mainly on meat, dairy products, and organic food consumption.

Flexitarians

Flexitarianism is a diet incompatible with a uniform eating style, which offers different degrees of restriction in relation to meat consumption (Dagevos, 2021; Dagevos & Voordouw, 2013). In this diet, individuals move from more restrictive to less restrictive attitudes, which can be closer to or further from vegetarianism (Beardsworth & Keil, 1991). The individual makes the choice, allowing for a gradual change to a more restrictive diet, such as vegetarianism (Haverstock & Forgays, 2012). A study carried out in the United Kingdom showed that if the population reduced their consumption of red and processed meat and increased their consumption of fruit and vegetables, greenhouse gas emissions could be reduced by 17% (Whitmee et al., 2015). This reduction could be a type of flexitarian diet classified as pro-flexitarianism, with a moderate reduction in meat consumption (De Gavelle et al., 2019), or light flexitarianism, in which no meat is consumed a day a week (Verain et al., 2015).

In Brazil, flexitarianism has grown significantly in recent years. According to The Good Food Institute (2020), 50% of respondents have reduced their meat consumption, both in quantity and frequency. Regarding Brazil's geographical profile, the survey showed that the Northeast Region has the highest number of flexitarians, with around 53% of the population reducing their animal product consumption.

As for the social profile, 54% of flexitarians in Brazil are women, and 52% are young people aged between 18 and 24. This social profile is similar to that revealed in a survey carried out thirty years ago in London, which showed that women between 16 and 24 were also the most significant group who avoided eating meat (Beardsworth & Keil, 1991).

The decision to adhere to a diet is directly

related to the individual's belonging to a social group (Bisogni et al., 2002). Some flexitarians consider diet very important, so they tend to identify themselves more as vegetarians than omnivores (people who eat all kinds of food) (Rosenfeld et al., 2020b). Assuming social identities such as being flexitarian or vegetarian, even if only still considering it, i.e., without actually following the diet, can enable the transformation of consumption towards more sustainable consumption patterns due to changes in diet (Carfora et al., 2017; Rosenfeld et al., 2019; Stoll-Kleemann & Schmidt, 2017).

One of the crucial factors for a person to stick to a specific diet is the connection with a social group that follows the same pattern. Through this, they acquire a social identity that accompanies their lifestyle (Rosenfeld & Burrow, 2017). Another aspect that corroborates the maintenance of the restrictive diet is having a network of relationships with the same practices, especially in the case of men (Lea & Worsley, 2003; Pachucki et al., 2011; Stoll-Kleemann & Schmidt, 2017). Belonging to a group is important and contributes to self-categorization (Rosenfeld et al., 2020b).

Regarding the behavior of flexitarians, they endorse carnism less than omnivores (Rosenfeld et al., 2020b). Although they do not make radical changes, they are perceived by omnivores as people who give up the sensory pleasure of meat while avoiding moral conflicts because they do not face the exclusion of meat in favor of animals (Rothgerber, 2014, Rothgerber, 2015; Ruby & Heine, 2011). However, they have high levels of moral satisfaction because they follow a diet that generates benefits for social and environmental sustainability (Bratanova et al., 2015). These benefits are revealed in more sustainable (Tilman & Clark, 2014) and ethical agricultural practices, like the consumption of local and seasonal food, which contributes to fair trade and the strengthening of local economies (Bratanova et al., 2015), as well as to healthier food alternatives (Mullee et al., 2017). In addition, the flexitarian diet also provides benefits in reducing greenhouse gas emissions (Whitmee et al., 2015), as it is directly associated with reducing meat consumption, as well as favoring the preservation of natural resources, such as water (Whitmee et al., 2015) and soil, and influencing the reduction of deforestation and the loss of ecosystems (Leclère et al., 2020).

Life Course Paradigm Theory (LCP)

While developing LCP, particularly behavior adaptation skills, Moschis (2007) identified that consumption changes over different ages, life stages, and moments of major transformations concerning past and future expectations (Moschis, 2021). LCP aims to study change in people's lives to understand how and why events determine actions and thoughts, which in turn will generate changes in consumer behavior.

Looking at the LCP illustration (Figure 1), we see that there are factors that precede Time 1 (T1), which are individual, gender, and personality characteristics, as well as sociocultural contexts and choices (Bolger et al., 1988, apud Moschis et al. 2020). Structural variables are also related to subculture, family, economic situation, and legislation.

The factors that make up the process of adaptation based on the changes experienced (Moschis et al., 2020) are central to behavior change. The "events" that occur at T1 are perceived as social, environmental (the environment in which the person is inserted), or individual (biological, cognitive, or behavioral) causes and may be classified as: a) expected (graduation, volunteering) or unexpected (disasters, loss of spouse); b) gradual or abrupt, either individually or in the

family unit; and c) related to behavior or choices (such as a major purchase).

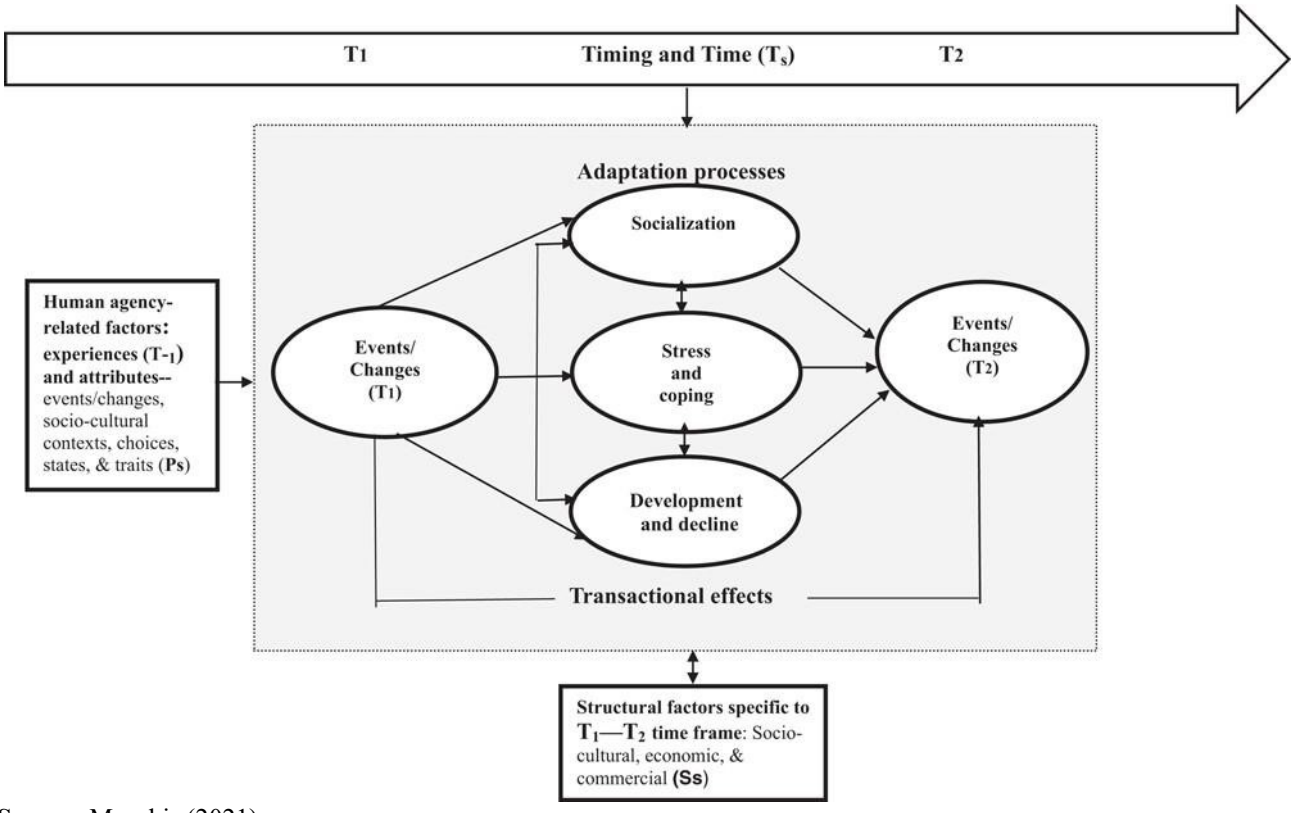
Transactional Effects also affect the likelihood of other events occurring at Time 2 (T2), thus demonstrating interdependence with T1, such as parents going to the market less often due to lack of time. The events at T1 trigger the Adaptation Process, which includes socialization, stress and coping, development and decline, and generate the results of the change at T2.

The Socialization Process includes some behavioral or cognitive changes that require the individual to take on new social roles, such as spouse or retiree. The "Stress and Coping" process shows the search for strategies to deal with stressful situations, which can be behaviors. Moreover, "Development and Decline" deals with changes in human capital, such as acquiring knowledge and skills. Environmental factors influence this development at a proximal level, such as work, or a distal level, such as socioeconomic class and culture.

At T2, we find the results, i.e., the consequences or changes. This is when the change in purchasing behavior occurs. It can occur abruptly (quit smoking) or gradually (change in body weight) and can take on a behavioral and mental form of short (classes) or long duration (maintaining materialistic attitudes).

Therefore, changes generate physical, social, and emotional demands on individuals. As a result of adaptation, patterns of thought and action develop and change. It is important to note that some events are interdependent and simultaneous (Gierveld & Dykstra, 1993). From the Life Course Paradigm Theory perspective, observing the transition and continuity of food consumption is possible.

Figure 1
Life Course Paradigm



Source: Moschis (2021)

Methodological elements of the research

In light of the LCP, we conducted this qualitative research to understand the events associated with reducing meat consumption. The subjects were selected intentionally from WhatsApp groups, and a snowball strategy was used to recruit new participants. Data was collected via semi-structured interviews.

Participants were chosen among those who had experienced the phenomenon of flexitarianism, i.e., people who had reduced their meat consumption for at least three months (Dagevos, 2021; Rosenfeld, 2018). Meat means red meat, poultry, pork, fish, and seafood. According to the study by Hoek et al. (2017), people who adhered to the diet for allergy reasons were eliminated.

We conducted twenty-four interviews, totaled 16 hours, with participants over 18 living in Brazil. The interviews, in Portuguese, followed an interview protocol and were approved by the Plataforma Brasil Ethics Committee under number 5344441. In addition, they were randomly assigned different names to preserve the interviewees' anonymity and confidentiality.

The data was analyzed using the content analysis software Atlas.TI, and the first step was transcribing the interviews, which resulted in 357 pages. Based on the transcribed text, the next stage consisted of carefully reading the transcripts and identifying the categories based on existing literature. For this study, the mixed method was chosen to define the categories. The categories in Table 1 were defined based on the literature and focused on achieving the research objective. To this end, sub-coding methods were used (Saldaña, 2016).

The next step was to review the text units in the categories, in which a list was developed with the significant statements made by the interviewees, eliminating the excerpts that were not in line with the research objective. We noted that some texts were not allocated to the previous categories, so categories were created after coding. Another researcher validated all this process. Finally, the coding process also identified different classifications of the intensity of the diets reported by the respondents, which in this study were classified as: pro-flexitarian, light flexitarian, flexitarian, moderate flexitarian, and heavy flexitarian. These terms appear in existing literature related to flexitarians but are not systematized into categories.

Table 1
Category list

Related objective	Category	Description	References
Before change (T1)	Context Variables	Describe individual characteristics, like gender, personality, and events prior to T1, such as sociocultural contexts, choices, and micro or macro factors that define the person's context.	Moschis et al. 2020
Trigger T1	Events at T1	Describe the events, i.e., the responses given or choices made by the individual, which have social, environmental (referring to the person's surroundings), or individual (biological, cognitive, or behavioral) causes. Events can be: A. Expected (graduation, retirement, volunteering) or unexpected (disasters, accidents, loss of a spouse); B. Gradual or abrupt; C. Related to behaviors or choices (marriage, a major purchase).	Moschis, 2021
Change adaptation process	Adaptation Mechanisms	Describe the adaptation mechanisms (AM) triggered by the event at T1. They can be: A. Socialization Mechanisms and Normative Theory: describe changes that require the individual to take on new social roles and thus adapt behavior; B. Stress and Coping: describe changes after a stressful event that will lead to the search for behaviors to deal with the stress; C. Development and Human Capital: describe changes in the development process, such as in human capital.	Moschis, 2021
Change results	Events at T2	Describe the results of the changes that have taken place, i.e., the type of diet that has been followed. For this study, the interviewees were classified as: A. Pro-flexitarian: those who moderated their consumption of red meat to a medium degree, not as much as the flexitarians or others who did it more substantially; B. Light flexitarians: those who consume meat 5 to 6 days a week; C. Moderate flexitarians: those who eat meat only half the week; D. Heavy flexitarians: those who eat meat 1 or 2 days a week; E. Flexitarian: those who drastically reduce the amount of animal protein they consume (e.g., consume it around once or twice a month or year).	Götze & Brunner, 2021; Dagevos, 2021; Verain, Dagevos & Antonides, 2015; Malek & Umberger, 2021

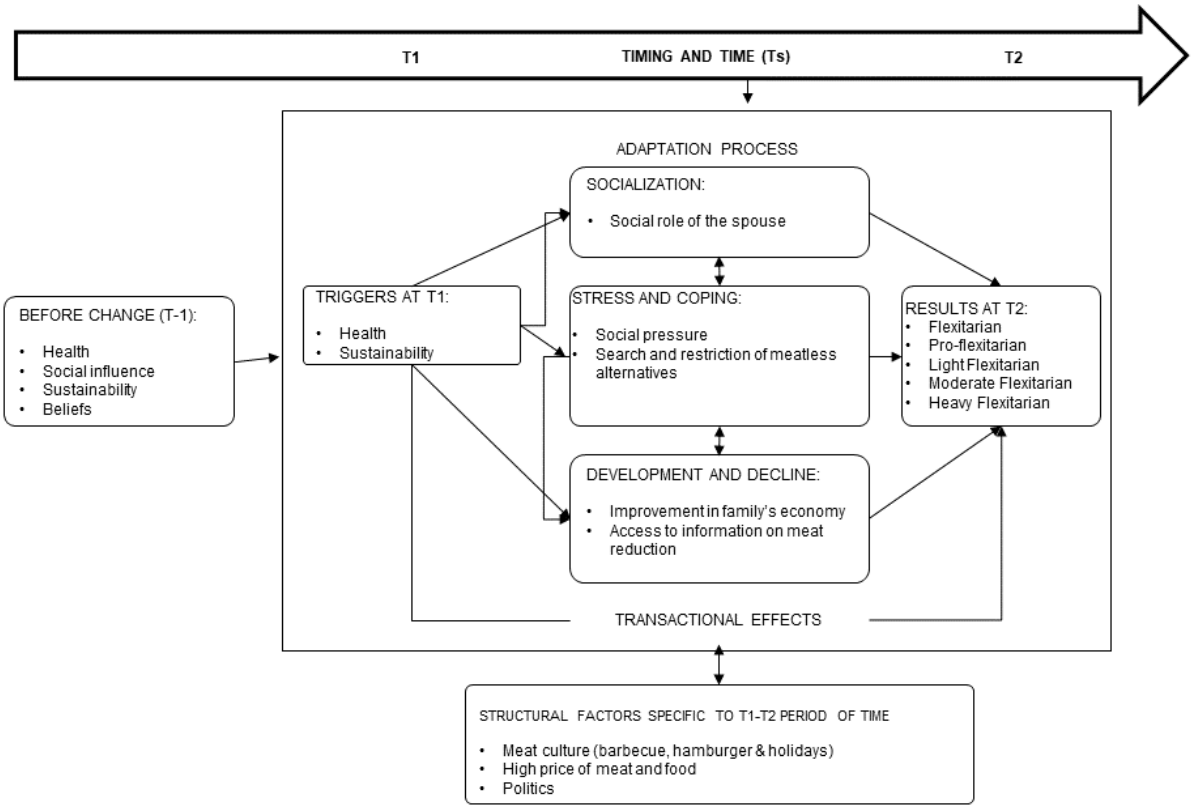
Source: Created by the authors

Presentation and discussion of results

We were looking for the factors that contribute to behavior change, the events that determine the change, how people adapt to it, and the diet they adopt at the end of the process. With these elements, it was possible to draw up the LCP model for the trajectory of changing eating habits, especially in relation to meat consumption (Figure 2). Each block of the flexitarian journey is discussed in detail below.

Figure 2

The flexitarian journey from the LCP perspective



Source: Created by the authors

Before the change in behavior

The elements that emerged from the responses before the change in behavior concerning the consumption of animal protein were health, social influence, information (about animal mistreatment and the effects on the environment), and spirituality. Health was one of the main elements, and the interviewees cited a feeling of well-being and lightness when not consuming red meat. Others mentioned digestion problems, such as gastritis; in one case, health was related to the profession: the interviewee mentioned that eating red meat, among other factors, may harm his voice.

The social environment's influence on the individual while reducing meat consumption occurs in family, friendship, and romantic and professional relationships. Changing the social cycle can be an incentive to discover other eating habits. For example, having vegan or vegetarian acquaintances influences a reduction in meat consumption. In the case of romantic relationships, these incentives can occur between couples who live together or not:

> "I was going out with someone, we went for a pizza, I ordered a pepperoni pizza and the person said they didn't eat meat, [...] I thought: 'How nice, I could stop too" (Bruna).

In the professional field, we noticed that some professions are related to this type of diet, especially when linked to social areas:

> "[…] so, working in the social area, reading all these reports [about the impact of meat on health and on the environment], I think that this has influenced [my eating habits]"

(Luana).

Concern about sustainability issues has also impacted reducing meat consumption, and the themes explored by most interviewees were the actions of the meat industry and animal ethics. Awareness that the consumption of animal protein is harmful to the environment also emerged concerning access to information: "Understanding the greenhouse effect problems caused by intensive livestock farming" (Arthur). In addition, culinary skills were mentioned: "I was learning to cook too, and I was trying out other things" (Eduarda).

The interviewees' information sources are the most diverse, from people close to them who follow vegetarianism to the internet: "There was a huge wave of vegetarianism [4 years ago]" (Olívia). Influencers were cited as a source: "Hanna, that former Big Brother girl" (Davi), as well as "documentaries [...] on Netflix, which you watch and are quite shocking" (Elisa).

> Spirituality was also mentioned as a factor prior to the change, either yoga: "In the very principles of yoga, it's recommended that you don't eat meat (Laís) or other religions: "And then that got me thinking (...). I asked myself: 'Why can't I eat red meat?'" (Alice).

Triggers for Time 1 of change

Different aspects can trigger behavioral changes, health being the major one, with examples such as the need for surgery or dieting to lose weight. Another frequently cited factor is moving: "to restructure my life here [in São Paulo], to have my own kitchen" (Gabriel). Low-quality meat was also mentioned as a trigger:

> "I was in Rio and I remember it was very difficult, I hardly ate meat anymore and I remember there was a tray and the meat was awful" (Isadora).

The environmental awareness factor emerged again at this stage: "We already sorted the garbage, we already had an awareness [...] but we needed to change this part of our diet [...]" (João). Spirituality was also mentioned, this time as a trigger:

> "There were a few things, one of which was that I was going to take part in a ritual and for this ritual I needed to stop eating meat [...]" (Bruna).

Ecological motivation also appeared as a trigger for change:

> "Again, it's not such a radical issue to stop consuming all types of meat, but it helps [...] I can maybe reduce my carbon footprint here [...] on the planet a little bit." (Arthur).
>
> "So I think that eating meat and reducing meat consumption are decisive factors in improving the scenario in the medium and long term. World environmental scenario, etc." (Laura).

Adaptation processes and structural factors

Adaptation takes place between T1 and T2, through different adaptation mechanisms, which are behavioral or cognitive changes, or the socialization process, the search for strategies to deal with stressful situations, or the stress and coping process, and changes in human capital, such as acquiring knowledge and skills, which is the process of development and decline.

Concerning adaptation mechanisms, in the reports, it was possible to perceive the social norm of playing a new role, such as being a spouse or the possibility of becoming a mother. These roles influenced the adaptation of behavior towards more sustainable practices, but it had already begun

before T1, with marriage, and at T1, with access to information:

> "And then, a sense of concern, I think, about the future, I had just [gotten] married, I'd been married for two years, I was strongly thinking about having children at the time. I started to worry a lot about the future" (Sara).

Access to information on reducing consumption is a fundamental development item for creating alternative dishes that supplement the lack of protein. Therefore, lack of information becomes a barrier to reduction:

> "Okay, I want to cut down on meat, but I know that somehow I need to reinforce my sources of protein and other things, that it's not just that, my knowledge about this is very shallow" (João).

In another interview, the role of spouse was mentioned again but associated with an improvement in financial status:

> "[...] that was when we started to choose, and changed our eating habits; we started to have more conditions to make this change" (João).

Concerning stress and coping, there is social pressure related to the lack of support for the decision to reduce animal protein consumption, such as: "She [her mother] criticized me a lot" (Alice). Even when family members do not live in the same house, this judgment is perceived, so they avoid commenting on the subject: "My father is a very carnivorous person, so I don't go into detail with him" (Laura). The coping strategy was also used in the search for alternative foods and preparations to avoid "craving" when faced with specific meat dishes:

> "Well, I was enjoying discovering new things, but sometimes I still had a strong desire for some things, [...] then my mother would make a stroganoff and I would feel like it, [...] but little by little it got better, [...] I discovered other things and it became quite easy to do without meat" (Elisa).

On the other hand, this search is not easy, especially away from the big cities: "outside São Paulo, for example, I don't think most places are prepared for vegetarians" (Samuel).

When observing family habits from the interviewees' past, meat was also "at every meal [...] for lunch and dinner" (Ana), as well as their parents' appreciation: "they like meat a lot, my father loves barbecue" (Sara). In another report, the family cultural issue is a reason for allowing consumption:

> "Once or twice a year, when I visit my mother, she likes to eat steak parmigiana and I end up eating it together with her" (Arthur).

Barbecue is a solid cultural food in the reports, being present in a context of socializing, which for some interviewees represents moments when "sometimes you feel like eating red meat" (Eduarda), or else it is a social situation that some interviewees prefer to avoid.

Structural variables also influence this process between T1 and T2 and are related to culture, family, economic situation, and legislation, for example. The following structural variables were registered: the high price of meat and the Covid-19 pandemic. In relation to meat, the reports showed the price as a current factor: "Lately, we have an economic issue with red meat, the price has doubled" (Miguel).

Political influence also emerged in the reports as a factor influencing change:

> "My husband and I, we were going through a very nonconformist process, with the [political] situation, with various points, and then we started to see what we could do, and one of the things we realized was to reduce meat consumption" (Sara).

Results at T2

Time 2 is when the purchasing behavior change occurs. The interviews assessed behavioral changes in reducing meat consumption. Interviewees who had reduced their consumption of animal protein to something sporadic and monthly were classified as flexitarians. On the other hand, those who had reduced the quantity but not the frequency were classified as pro-flexitarians. The following classification was established for people who changed their frequency in different degrees: light flexitarians (consume protein five to six days a week), moderate flexitarians (consume protein half the week), and heavy flexitarians (consume protein only one or two days a week) (Dagevos, 2021; Götze & Brunner, 2021).

Discussion of the results

In the analysis of the results, events that can occur before the actual start of the change, which happens at a certain T1, were identified, as shown in Figure 2. It was identified that this need to reduce meat consumption in the past, motivated by health, did not have temporal continuity until the decision was triggered at T1. On the other hand, the relational cycle with vegetarians or vegans contributed to future decision-making at T1. For example, the flexitarians did not cook meat at home in families with at least one vegetarian member. This is because the social norm tends to be established without consuming meat (Rosenfeld et al., 2019).

Thus, according to the reports, such a closer relationship with vegetarians and vegans brought flexitarians three elements: information, learning, and practicality. Information came about through access to issues related to animal ethics, the meat industry, and the damage caused to the environment. By acquiring this knowledge, the individual begins questioning industry practices, the food system, and the supply chain (Kemper, 2020). As for learning, this relationship brings an exchange of recipes and an understanding of how the daily life of someone who does not consume animal protein works. Previous research shows that flexitarians with a primarily vegetarian social network will be more motivated towards these behaviors (Rothgerber & Tomiyama, 2019). Influencers and streaming channels such as Netflix also worked as sources of information for some respondents.

Social networks and their influencers have also contributed to the change in behavior, especially among younger people, with posts of photos and meat-free recipes (Ge, Scalco & Craig, 2022). In the reports of this study, there were comments about the wave of vegetarianism on the internet.

Therefore, we concluded that whenever there is a social influence on the individual to acquire the flexitarian diet, it is through someone with a more restrictive diet, not someone who has reduced meat consumption or merely knows about flexitarianism. The interviewees mentioned vegetarians or vegans as their references in changing eating behavior, even though they had not changed their diets to more restrictive models (i.e., they had not become vegetarian or vegan themselves).

Religious food issues (e.g., Catholicism during feast periods, Buddhism, Judaism, Islamism, Adventistism) (Forestell, 2018) also appeared before the decision to reduce animal protein consumption, contributing to the future transformation in the interviewees' behavior.

Drastic changes at work or in personal life also impact food-related behavior (Devine et al., 1998). Thus, some events mark the exact moment of behavior change at a given T1 and occur beyond previous contexts. Health is the primary motivation for habit change and is one of the main drivers for reducing animal protein consumption, alongside concern for animal

welfare and environmental concerns (Boer et al., 2018; Lentz et al., 2018).

On the other hand, although health is considered when following a flexible diet, some people who reduce their meat consumption do not agree that eating meat is "unhealthy" (Mullee et al., 2017). In the reports, it was possible to identify one individual who indicated that the reduction was due to a need to lose weight and not for reasons associated with disease.

Another critical factor was a significant change in personal life, such as living alone, in another city or state, or with someone else. In a Dutch study with young adults, this factor was also related to decreased meat consumption (Van den Berg et al., 2022). However, in the case of the present research, this occurred at various ages, from youngsters to people over forty.

Issues related to environmental concerns and animal ethics were also mentioned in the reports as triggers for change. Previous studies have shown that consumers are increasingly concerned about animal welfare and their own food safety (Alonso, González-Montaña, & Lomillos, 2020). In fact, the ecological motivation that drives behavior change was present in this study, which is in line with the study by De Backer and Hudders (2015).

Structural variables such as the economic situation and high meat prices emerged in the reports as conditions that facilitated the decrease in consumption. This information was also found in studies from other countries, such as New Zealand and the Netherlands (Lentz et al., 2018; Van den Berg et al., 2022).In this vein, some studies have shown that lower-income families tend to follow a more flexitarian diet than high-income families (Ipsos, 2018).

As seen above, adaptation to change is caused by three adaptation mechanisms: socialization, stress, and development. Concerning the socialization mechanism, acquiring the social role of the spouse was a turning point for one of the interviewees, who was already in the context of changing to more sustainable behavior. Theory shows that major changes, such as career transformations, starting university, or even divorce, strongly influence eating habits (Devine et al., 1998).

Regarding stress in the adaptation process, following a specific diet requires social support. In other words, having a different diet within a social cycle can damage interactions and even lead to exclusion (Hargreaves et al., 2021). Furthermore, prejudice and lack of support were mentioned in the reports of this research. Thus, it is noteworthy that proper support allows people who have changed their diet to have a better quality of life (Hargreaves et al., 2021). One of the main reasons for exceptions in meat consumption is social pressure, which is also very present in our reports, revealing consumption on trips with large groups and on occasions of family tradition.

There is a similarity in the reports of social pressure between vegetarians and flexitarians. The pressure to consume meat is present in the same relationship sources, such as friends, family, romantic partners, or work colleagues (Rosenfeld & Tomiyama, 2019). In this study, no respondents reported returning to meat consumption due to romantic partners; on the contrary, this was a reason for moving towards further reduction.

In relation to the development item of the adaptation process, there is a search for knowledge on how to reduce meat, which has already been pointed out in previous studies (Kemper, 2020; Stoll-Kleemann & Schmidt, 2017). However, doctors or nutritionists were not cited as a source of information in the latter, unlike the reports in this survey, in which the interviewees mentioned that they needed or sought the support of these professionals for the new diet.

In our survey, almost all the interviewees

showed little interest in meat and were aware of the need to reduce their consumption. When asked about the next steps concerning the diet, people chose to keep it as it was or reduce their consumption of animal protein a little more, as in the studies by Malek and Umberger (2021b).

The only person who did not mention the environment or animal ethics in the interview was a meat lover. This corroborates Graça, Calheiros, and Oliveira's (2015) studies, showing negative associations between decreasing consumption and self-identifying as someone who consumes meat with pleasure. In this case, reduction only happened because of a comorbidity associated with obesity.

It was noticeable in the reports, especially from those who still consume beef, a more significant concern with the origin of this food, which involves its production chain. Recent studies corroborate this concern and show a growing search for "animal welfare-friendly" products (Alonso et al., 2020). In another study, the production and origin of food were motivations for reducing animal protein consumption, even up to the point of anti-consumption (Malek & Umberger, 2018).

The industrial issue of meat production opens up the discussion on the market for alternative proteins (Green et al., 2022) that were mentioned in the reports in an ambivalent way, with positive comments as an alternative to meat, and negative ones because they would resemble meat, a texture that individuals do not like.

Final considerations

This research aimed to understand how the process of reducing meat consumption takes place. The first finding was the multiplicity of moments in life when individuals change their relationship with meat (in childhood, when health problems occur, when interacting with social groups that do not consume meat, when interacting with religious issues, after marriage, when exposed to more information about environmental issues or ethics in the treatment of animals, through the influence of social media and other sources of information). It is worth noting that previous studies have focused on identifying factors at the time of change. This study advances the discussion by shedding light on the events that occur before the change and which cumulatively contribute to the change itself.

Some events mark the timing of behavior change at T1, which occurs before the previous contexts. Health was the major trigger at T1, in line with studies that point out that this is one of the main drivers for reducing animal protein consumption, alongside the concern for animal welfare and environmental concerns (Boer et al., 2016). Another critical factor for this group was a significant change in personal life, such as living alone, in another city, or with another person; a Dutch study showed this to be related to reduced meat consumption (Van den Berg et al., 2022). Another trigger worthy of mention is the concern about environmental and animal ethics issues.

Among the variables for adapting to change, two prevalied: the price of meat and cultural issues. In general, there is greater difficulty in finding a meat substitute, especially in the case of barbecue or hamburgers, regional Brazilian dishes, and holidays (Easter, Christmas, and New Year). At these times, it is common for the interviewees to indulge themselves with meat.

When considering adaptation mechanisms, it was possible to identify the influence of social roles or stress caused by health problems (e.g., craving for a particular meat-based food preparation). Therefore, the social pressure of the omnivorous norm is a determining factor in generating stress and encouraging increased consumption as a way of coping.

Being on a new diet requires knowledge of how to reduce meat nutritionally, as well as culinary skills, knowledge of recipes, and time for this activity. From this, it is noteworthy that the search for more sustainable consumption habits is not exclusive to the consumer but involves other agents who play critical roles. In the context investigated, doctors and nutritionists play an informative role in this process. In addition, companies participate in making alternative products to meat, such as plant-based products, accessible to consumers in urban centers and beyond them.

Concerning the limitations of this study, they cover our sample, which cannot be generalized to a large population, and do not provide all the possible nuances about the phenomenon explored. As such, future research suggests a study on identity and feelings involved in the process of reducing meat consumption since declaring oneself a flexitarian, for example, has an impact on the individual's image, which triggers emotions that also affect self-esteem (Leary & Baumeister, 2000). In addition, we suggest a study to observe the adaptation mechanisms used in the migration to flexitarianism, as the study by Van den Berg et al. (2022), which showed a reduction in meat consumption among young Dutch who changed homes.

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