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Thesis

The impact of social norms on attitude towards alternative protein consumption: a comparison between the Swedish and Dutch population

Area of interest: Sustainable consumption in a food context

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Preface

Join me in the journey through relationships between societal norms, attitudes, and dietary behaviors regarding meat substitutes within the contexts of the Netherlands and Sweden. This research explains more about those relationships and what further research can be done in this field to explore more to be able to understand consumers regarding the acceptance of meat substitute.

Abstract

In this study wo examined how people in the Netherlands and Sweden feel and think about meat alternatives and if social norms influence their choices. We learned that if people believe their friends or family like meat alternatives, they are more likely to try them too. In Sweden, people might be more driven by their personal feelings rather than what others are doing when choosing to eat meat alternatives. In contrast, Dutch people seemed more influenced by what other people think.

Introduction

The demand for meat-free and meat-alternative products is rising worldwide due to the increasing number of vegans and vegetarians (Dagevos, 2014). Furthermore, there is also a growing interest in reducing or avoiding red meat consumption among consumers (Sadler, 2004). This has led to the emergence of a new dietary pattern, known as flexitarianism, which involves part-time vegetarianism or reducing individual meat consumption to the recommended dietary guidelines for health (Raphaely & Marinova, 2014).

Meat alternatives, also known as meat replacers, meat substitutes, or meat analogues, are food products that emulate the taste, appearance, and texture of meat, poultry, fish, or shellfish, while providing a similar nutritional value, including essential vitamin B-12 (Shurtleff & Aoyagi, 2014). These alternatives are often vegetable-based and can be made from a variety of proteins, such as tofu, wheat gluten, Tempeh, and nuts (Shurtleff & Aoyagi, 2014).

In Europe, concerns about animal welfare, reactive nitrogen and greenhouse gas emissions have prompted public interest in consuming less meat products (Westhoek et al., 2014). Furthermore, eating meat may become less fashionable (Dagevos & Voordouw, 2013). The number of self-identified vegans has been increasing in the United States, Germany, and the United Kingdom, particularly in developed countries (Radnitz, Beezhold & DiMatteo, 2015). Additionally, empirical studies on meat consumption in the Netherlands suggest that consumers are becoming meat reducers, with some willing to go without it at least one day a week (Dagevos & Voordouw, 2013).

The consumption of alternative proteins, such as plant-based proteins, is becoming increasingly popular as people become more aware of the environmental and health benefits associated with these food products. Despite this, there is still a lack of understanding of the social norms surrounding alternative protein consumption and how these norms impact attitudes towards these food products. This lack of understanding is a barrier to the further adoption of alternative proteins, and thus it is important to explore this issue in more detail.

Social norms are defined as “shared expectations about appropriate behaviour in a particular context” (Chebbi & Ehrlich, 2017). They are a primary source of motivation for individuals to engage in behaviours, such as eating specific types of food products (Chebbi & Ehrlich, 2017). Therefore, social norms play a significant role in determining what type of food products people will consume. In the context of meat alternatives, social norms can be seen as having a direct influence on the acceptance and consumption of these products.

Previous studies showed that people tend to conform to the dietary behaviours of those around them. A study by Radnitz et al. (2015) found that individuals’ willingness to consume vegan and vegetarian diets was influenced by the people they interacted with on a daily basis. Additionally, studies by Dagevos & Voordouw (2013) and Raphaely & Marinova (2014)

found that positive social interactions with family, friends, and the media can increase the likelihood of individuals adopting a vegetarian or semi-vegetarian diet.

In conclusion, social norms play a significant role in determining the acceptance and consumption of alternative proteins. Cultural, institutional, and interpersonal norms can shape individuals' attitudes towards these food products and can be maintained through different forms of social control. Therefore, it is important to better understand the social norms surrounding the consumption of alternative proteins in order to promote the adoption of these food products.

Comparing the attitudes towards alternative protein consumption in Sweden and the Netherlands is particularly interesting because these two countries have distinct cultural, historical, and societal contexts that shape their food habits and attitudes towards food products. For example, the Netherlands has a long history of meat production and consumption, which is deeply ingrained in the country's culture and society. According to a study by Dagevos & Voordouw (2013), meat consumption in the Netherlands is relatively high and there is a growing trend of consumers reducing their meat intake.

In contrast, Sweden has a strong tradition of environmental consciousness and sustainability, which is reflected in the country's dietary habits and attitudes towards food products. Westhoek et al. (2014) found that in Sweden, there is a higher acceptance of alternative protein sources due to the country's awareness of the environmental impact of meat production and consumption. Additionally, a study by Raphaely & Marinova (2014) found that the flexitarian dietary pattern, which involves reducing meat consumption, is more common in Sweden compared to other European countries.

Individuals' willingness to consume vegan and vegetarian diets is influenced by the people they interacted with on a daily basis. This suggests that social norms play a significant role in determining what type of food products people will consume and the attitudes they have towards alternative protein sources. Comparing the attitudes towards alternative protein consumption in these two countries can provide valuable insights into how cultural, historical, and societal contexts shape attitudes towards alternative proteins, and how social norms influence the acceptance and consumption of these products.

The Netherlands has a more regulated food industry compared to Sweden, this can also shape the way alternative proteins are marketed and perceived by consumers, and thus can affect the level of acceptance and consumption.

In this study, the focus will be on the role of social norms and their effect on consumers' attitudes towards meat alternatives. Also, the effect of attitude towards meat alternatives on actual consumption of meat alternatives will be measured. Next to that, the comparison between the Netherlands and Sweden will be made to gain valuable insights.

Theoretical and practical relevance

Research on the impact of social norms on attitudes towards alternative protein consumption is highly relevant to the theoretical understanding of how social norms shape consumer behaviour. Social norms are powerful influences on consumer behaviour, and research on this topic can help to inform theories of consumer behaviour and decision-making. This research can also provide insight into how social norms can be used to encourage more sustainable consumption practices, such as the adoption of alternative proteins. Next to that, this research can help to inform public policy decisions related to food consumption and sustainability.

This research is also relevant to practical applications. It helps to inform marketing and communication strategies that are designed to encourage more sustainable consumption practices. Public policy decisions related to food consumption and sustainability will made easier when having more information. Next to that, this research can provide insight into how social norms can be used to encourage more widespread adoption of alternative proteins. It provides us with more knowledge on how to inform the design of interventions that are aimed at changing consumer attitudes and behaviours related to alternative protein consumption.

By comparing the attitudes towards alternative protein consumption in two different countries, we can better understand the factors that influence consumer attitudes and identify strategies for promoting the adoption of alternative proteins in different cultural and societal contexts.

Theoretical Framework

Social norms

In order to better understand the role of social norms in the consumption of alternative proteins, it is important to consider the various ways in which social norms can be formed and maintained. Social norms are formed through cultural, institutional, and interpersonal influences, and can be maintained through different forms of social control. Cultural norms are based on collective beliefs and values and provide a shared interpretation of what is socially acceptable behaviour (Chebbi & Ehrlich, 2017). Institutional norms are created through the enforcement of laws, regulations, and policies. Finally, interpersonal norms are formed through direct interactions with others, such as family, friends, and the media (Chebbi & Ehrlich, 2017).

Cultural norms can shape individuals' beliefs and attitudes towards alternative proteins. For instance, the traditional Western diet is mostly based on animal proteins, and therefore traditional values may lead individuals to see alternative proteins as non-traditional and unfamiliar. Similarly, institutional norms can have a significant impact on the acceptance and consumption of alternative proteins. For example, the availability of alternative proteins in supermarkets, restaurants, and cafeterias can increase the chance of individuals trying them. Next to that, certain policies, such as taxes and subsidies, can influence the price and availability of alternative proteins, and thus their consumption.Interpersonal norms are especially important when it comes to the acceptance and consumption of alternative proteins. Social interaction with family, friends and the media can influence individuals' attitudes towards vegetarian and vegan diets (Dagevos & Voordouw, 2013; Radnitz et al., 2015; Raphaely & Marinova, 2014). For example, a study by Raphaely & Marinova (2014) found that individuals who had positive interactions with their family and friends were more likely to adopt a vegetarian or semi-vegetarian diet. Similarly, the study by Radnitz et al. (2015) found that individuals were more likely to adopt a vegan diet if they had positive interactions with the media.

Social perceived pressure: descriptive and injunctive norms

Descriptive norms refer to how people actually behave in a specific situation, while injunctive norms refer to how people should behave in a given situation (Šedová, Slovák & Ježková, 2016). Descriptive norms are based on observations of people's actual behaviour, while injunctive norms are based on shared values and beliefs. As an example, a descriptive norm could be people greeting each other with a handshake in a certain community, while an injunctive norm could be for people to be polite to strangers in the same community.

Descriptive norms in the case of alternative protein consumption would refer to the observed behaviour of family, friends, and the broader society in terms of their consumption of alternative protein products (Šedová, Slovák & Ježková, 2016). According to a study by

Dagevos & Voordouw (2013), positive social interactions with family, friends, and the media can increase the chance of consumers to choose for vegetarian or plant-based options.

Injunctive norms would refer to how people should behave in a given situation (Šedová, Slovák & Ježková, 2016). In the case of alternative protein consumption, injunctive norms would refer to the shared values and beliefs about the consumption of alternative protein products. For example, if an individual perceives that their community values environmental sustainability and health, they may be more likely to adopt alternative protein products as it aligns with these shared values. A study by Westhoek et al. (2014) found that in Sweden, there is a higher acceptance of alternative protein sources due to the country's strong tradition of environmental consciousness and sustainability.

Norm Activation Model (NAM)

A validated instrument that will be used to examine descriptive and injunctive norms is norm activation model (NAM). This is a social psychological model that explains how individuals' pro-environmental behaviors are influenced by personal and social norms. According to the NAM, personal norms are internalized moral standards that individuals use to guide their behavior, while social norms are perceived behavioral expectations of others in a given situation (Schwartz, 1977).

The NAM posits that the activation of personal norms leads to greater willingness to act in an environmentally friendly manner, especially when personal norms are consistent with pro-environmental attitudes and beliefs (Stern et al., 1999). Furthermore, the activation of social norms can also influence behavior by creating social pressure to conform to the perceived normative expectations of others.

Research has supported the applicability of the NAM in various contexts, including environmental behaviors such as recycling (Bamberg & Möser, 2007), water conservation (Bolderdijk et al., 2013), and energy conservation (Abrahamse et al., 2005).

In the context of attitudes towards meat substitutes, social norms may play an important role in shaping individuals' attitudes and behaviors. Research has shown that both descriptive and injunctive norms can influence attitudes towards meat substitutes (Onwezen et al., 2013). Descriptive norms reflect individuals' perceptions of how others behave, while injunctive norms reflect individuals' perceptions of how others think they should behave.

Measuring descriptive and injunctive norms using validated instruments can provide a better understanding of the role of social norms in shaping attitudes towards meat substitutes. Onwezen et al. (2013) provide examples of validated items for measuring both types of norms in their study on attitudes towards meat substitutes.

Attitude-Behavior Context Scale (ABCS)

The Attitude-Behavior Context Scale (ABCS) used by Boer et al. (1991) is a framework used to explain the gap between attitudes and behavior. It suggests that the relationship between attitudes and behavior is influenced by the context in which the behavior occurs.

According to the ABCS, there are three factors that influence the relationship between attitudes and behavior:

1. Attitude Strength: This refers to the degree to which a person's attitude is strong, consistent, and relevant to the behavior. If a person's attitude is strong and relevant to the behavior, it is more likely to predict their behavior.
2. Behavioral Specificity: This refers to the degree to which the behavior being measured is specific to the attitude being assessed. If the behavior being measured is closely related to the attitude being assessed, it is more likely to predict behavior.
3. Contextual Factors: This refers to the situational factors that may influence the relationship between attitudes and behavior. These factors may include social norms, environmental cues, and the perceived control a person has over the behavior.

The ABCS framework suggests that attitudes are most likely to predict behavior when the attitude is strong, the behavior is specific to the attitude, and the contextual factors are supportive of the behavior. On the other hand, when attitudes are weak, the behavior is not specific to the attitude, or the contextual factors are unsupportive of the behavior, the attitude-behavior relationship may be weak or nonexistent.

Attitude Behavior gap

Attitude-behavior gap refers to the phenomenon where an individual's attitudes or beliefs about a behaviour do not always align with their actual behaviour (Ajzen & Fishbein, 2005). This means that even if an individual holds a positive attitude towards a behaviour, they may not engage in that behaviour. This gap is often attributed to a variety of factors such as a lack of perceived behavioural control (Ajzen, 1991), lack of personal motivation (Fishbein & Ajzen, 1975), and conflicting social norms (Šedová, Slovák & Ježková, 2016).

In the context of alternative protein consumption, the attitude-behaviour gap could play a role in answering the research question by highlighting that even if individuals hold positive attitudes towards alternative protein consumption, they may not engage in this behaviour. For example, an individual may hold positive attitudes towards the health and environmental benefits of alternative protein products (Westhoek et al., 2014), but may not consume them due to a lack of perceived behavioural control (Ajzen, 1991) such as availability and affordability of these products.

Conflicting social norms may also play a role in the attitude-behaviour gap (Šedová, Slovák & Ježková, 2016). For example, an individual may have a positive attitude towards alternative protein consumption but may be influenced by social norms that discourage this

behaviour, such as the belief that meat is a necessary component of a traditional meal (Dagevos & Voordouw, 2013).

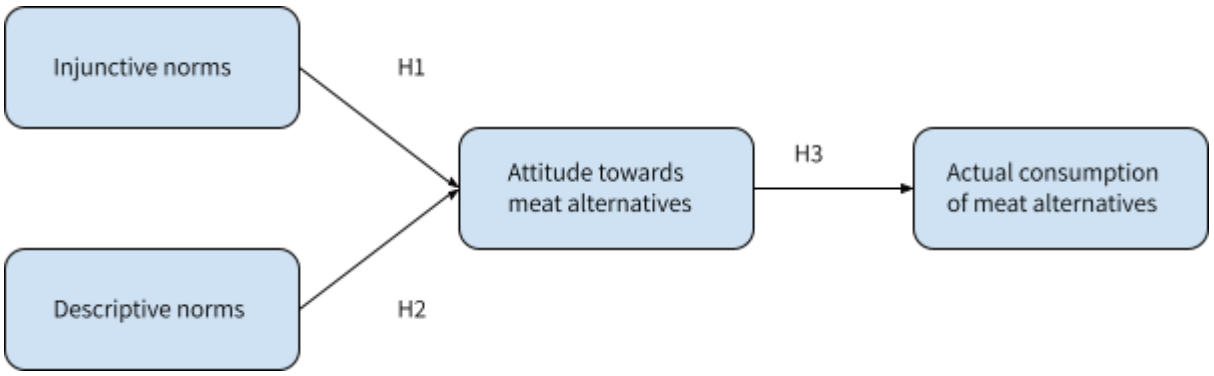
Research hypotheses

Hypotheses

Hypothesis 1: Injunctive norms related to the consumption of meat alternatives will have a significant positive impact on attitude towards meat alternatives.
Hypothesis 2: Descriptive norms related to the consumption of meat alternatives will have a significant positive impact on attitude towards meat alternatives.
Hypothesis 3: Attitude towards meat alternatives will have a significant positive impact on the actual consumption of meat alternatives.

In all hypotheses a distinction will be made to compare the results from Swedish participants to the results from Dutch participants.

Model



Method

Methodological underpinnings

The study is grounded in a quantitative research approach, selected for its appropriateness in exploring attitudes and behaviors related to meat alternatives. Quantitative research allows for the systematic collection and analysis of numerical data, offering a precise means to examine the relationships between variables. Given the goal of investigating participant attitudes and behaviors, this approach provides the necessary structure for hypothesis testing.

The chosen research model is designed to explore the complex dynamics between the two different social norms, attitudes, and actual consumption behavior in the context of meat alternatives. It consists of two interconnected parts, each addressing distinct aspects of this relationship. Therefore two validated instruments were found to explain both parts carefully.

Injunctive norms dictate how we should behave (indicating what the social environment approves or disapproves of). Injunctive norms are measured using items based on Onwezen et al. (2013). Respondents were asked to rate, on a 7-point scale, to what extent they believe their family, friends, and colleagues expect them to exhibit certain choice behaviors. Descriptive norms are based on what others do. People use these norms as information about what constitutes appropriate behavior (indicating what the social environment does). Descriptive norms are also measured with items based on Onwezen et al. (2013). Respondents were asked to rate, on a 7-point scale, to what extent they think their family, friends, and colleagues engage in certain choice behaviors. Onwezen's research was clearly executed and her experience in investigating consumer behavior in this field made it a reliable instrument to use in this research. The Norm Activation Model (NAM) provides a comprehensive framework for examining the influence of social norms on attitudes. The NAM components of injunctive and descriptive norms align perfectly with the first part of our research model, offering a systematic approach to measure the impact of social norms on attitudes.

The second part of the research model delves into the connection between attitudes and actual consumption behaviors regarding meat alternatives. It assesses the impact of attitudes on participants' real-world dietary choices, focusing on whether positive attitudes toward meat alternatives translate into actual consumption. The Attitude-Behavior Context Scale (ABCS) was used by Boer et al. (1991) in their study on the relationship between attitudes and behavior towards energy conservation. Their study found that the ABCS framework was a good predictor of energy conservation behavior. The Attitude-Behavior Context Scale (ABCS) is a good validated instrument for measuring the relationship between attitudes and behavior. They found that the ABCS framework was a good predictor of energy conservation behavior, which is somewhat different than meat alternative consumption, but still both eco friendly behaviour. The ABCS is also based on a well-established theoretical framework, the

theory of planned behavior. Finally, the ABCS is easy to use and administer, making it a good choice for researchers who are interested in measuring the relationship between attitudes and behavior. During this study it was important to focus on attitude and behaviour, but not context to keep it understandable and the items were selected for those specific factors.

Participants

The study involved participants from the Netherlands and Sweden. People from all different ages, education backgrounds, employment statuses, and dietary preferences were included.

Sampling and Data Collection

Sampling-selection of participants is the process of choosing a subset of individuals from a population to participate in a research study. The goal of sampling is to select a sample that is representative of the population, so that the results of the study can be generalized to the population as a whole. The sample was selected using convenience sampling, and participants were recruited through social media platforms such as Instagram and LinkedIn. Using convenience sampling can be a practical and efficient way to gather a diverse sample. It allows for a broad range of participants with varying backgrounds and preferences, which is suitable for studying attitudes and behaviors related to meat alternatives. However, this method has limitations, such as potential selection bias and the inability to generalize findings to the entire population and less suitable for research where the goal is to generalize the findings to the population as a whole. In total a number of 245 participants of which mostly females (60% to 37& males) filled out the survey. The biggest age group was 25-34 years old consisting of 161 people (65,7%). 130 people from Sweden and 115 people from The Netherlands. Most common educational level was graduate or professional degree (MA, MS, MBA, PhD, Law Degree, Medical Degree etc) with 157 people representing 64,1% of the group. Most people were working fulltime 156 people (63,7%). The people had various diets with most of them being flexitarian (82 people (33,5%))

Measures

Injunctive and descriptive norms

The Norm Activation Model (NAM) was used to measure the injunctive and descriptive norms related to meat alternative consumption (H1 & H2). Onwezen et al. (2013) found that the Norm Activation Model was effective in predicting pro-environmental behavior, making it a suitable choice for predicting attitudes and behavior towards meat alternatives in this study. The part linked to injunctive and descriptive norms from that study was used to investigate participants' injunctive and descriptive norms. These norms were measured with items based on Onwezen et al. (2013).

The following questions were used to measure the injunctive norms:

- I believe that my friends want me to consume meat alternatives
- I believe that my family wants me to consume meat alternatives

- I believe that my colleagues want me to consume meat alternatives

The following questions were used to measure the descriptive norms:

- How often do you think your family members consume meat alternatives?
- How often do you think your friends consume meat alternatives?
- How often do you think your colleagues consume meat alternatives?
- How often do you think the average person in your country consumes meat alternatives?

The study used a Likert-type scale to measure attitude towards meat alternatives, ranging from 1 (strongly disagree) to 7 (strongly agree).

Justification of the Norm Activation Model

The choice of using the Norm Activation Model (NAM) to measure injunctive and descriptive norms related to meat alternative consumption in the study is justified based on its prior effectiveness in predicting pro-environmental behavior, as demonstrated by Onwezen et al. (2013). The NAM was developed by Schwartz (1977) and has been extensively tested and refined over the past several decades. It has already established the effectiveness of the Norm Activation Model in predicting pro-environmental behavior. Since the consumption of meat alternatives can be considered a pro-environmental behavior due to its lower environmental impact compared to conventional meat consumption, it is reasonable to assume that the model can be applied to this context as well. However, one of the limitations of using the NAM, or any self-reporting method, is the potential for social desirability bias. Participants may provide responses that they believe are socially acceptable rather than reflecting their true attitudes or behaviors. This bias can affect the accuracy of the results.

Attitude towards meat alternatives

Attitude-Behavior Context Scale (ABCS) was used to measure the effect of attitude towards meat alternatives on actual consumption of meat alternatives (H3). The Attitude-Behavior Context Scale consists of items that can be applied to any kind of behavior, in this the behavior is ‘Eating meat alternatives’ and it will be implemented as following:

Attitude Items:

- Eating meat alternatives is a healthy choice for me
- I believe that consuming meat alternatives is morally right
- I feel that meat alternatives are a good substitute for meat
- I think that eating meat alternatives is enjoyable
- I believe that consuming meat alternatives is better for the environment than eating meat

Behavior Items:

- I have tried meat alternatives before

- I have purchased meat alternatives before
- I have cooked with meat alternatives before
- I have eaten meat alternatives instead of meat before
- I regularly include meat alternatives in my diet

Participants were asked to rate their agreement with each of the attitude items using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). For the behavior items, participants were asked to indicate whether they have performed each behavior before (yes/no response). For the context items, participants were asked to rate their agreement with each statement using a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The context items are unnecessary for the research questions but can be used for further researches. The Attitude-Behavior Context Scale (ABCS) used by Boer et al. (1991) can be used in this survey.

Justification of the Attitude-Behavior Context Scale

The Attitude-Behavior Context (ABCS) scale is a well-established and validated tool for measuring attitudes and behaviors towards specific behaviors. It is a good reason to use the ABCS scale from Boer et al. (1991) to measure the relationship between attitudes towards meat alternatives and actual consumption of meat alternatives for several reasons.

First, the ABCS scale has been used in a wide range of studies to measure attitudes and behaviors towards a variety of different behaviors, including environmental protection behaviors, such as recycling and energy conservation. This suggests that the ABCS scale is a versatile and adaptable tool that can be used to measure attitudes and behaviors towards a wide range of different target behaviors.

Second, the ABCS scale has been shown to be a reliable and valid measure of attitudes and behaviors. This means that the ABCS scale consistently produces accurate and meaningful measurements of attitudes and behaviors.

Third, the ABCS scale is relatively easy to use and administer. This makes it a practical tool for use in research studies.

Overall, the ABCS scale is a well-established and validated tool for measuring attitudes and behaviors towards specific behaviors. It is a good reason to use the ABCS scale from Boer et al. (1991) to measure the relationship between attitudes towards meat alternatives and actual consumption of meat alternatives for several reasons, including its versatility, reliability, validity, and ease of use.

There are some additional benefits of using the ABCS scale to measure attitudes towards meat alternatives and actual consumption of meat alternatives:

- The ABCS scale is a multi-dimensional scale, meaning that it measures different aspects of attitudes and behaviors. This allows for a more comprehensive understanding of the relationship between attitudes and behaviors.

- The ABCS scale is a context-specific scale, meaning that it takes into account the context in which attitudes and behaviors occur. This is important because the context can play a significant role in influencing attitudes and behaviors.
- The ABCS scale has been used in cross-cultural studies, meaning that it can be used to measure attitudes and behaviors in different cultures. This makes it a useful tool in comparing attitudes and behaviors across different cultures.

Generally we can conclude, the ABCS scale is a validated tool for measuring attitudes and behaviors towards specific behaviors, including meat alternatives.

Procedure

Participants were asked to complete an online survey. Before completing the survey, participants were be given a brief introduction to the study and asked to provide their consent to participate. They will also be informed that their participation is voluntary, and they can withdraw from the study at any time without any penalty. The survey took approximately 5-10 minutes to complete. Participants were asked to provide demographic information such as age, gender, and education level. They were also be asked about their diet.

Data Analysis

This study aimed to assess both injunctive and descriptive norms associated with meat alternatives consumption, along with attitudes towards and actual consumption of meat alternatives. The collected data was subjected to analysis employing SPSS version 29. Initially, the data was prepared, and mean scores were calculated to create viable variables for further analyses. Descriptive statistics were employed to derive insights about the respondents regarding. These insight could tell how generalizable the results would be for the population.

Additionally, Cronbach's alpha analyses were conducted to ensure the internal consistency of the measures. It provides an estimate of how well the items measure a single underlying construct or concept. Values range from 0 to 1, with higher values indicating better reliability. An alpha value closer to 1 suggests that the items have relatively high internal consistency, while a value closer to 0 indicates low consistency.

The hypotheses were examined using linear regression analysis to understand the relationship between the means of the different variables. The coefficient of determination and its adjusted value were calculated to quantify how much variability in the dependent variables could be explained by the independent variables, with the adjusted value accounting for the number of predictors in the model. The Standard Error of the Estimate was computed to gauge the accuracy of the model's predictions. The ANOVA table confirmed the significance of the regression model, and the coefficients table provided insights into the relationship strength and direction, including how changes in the independent variables might predict

changes in the dependent variables.

Results

Participant Demographics and Characteristics

The study's participants displayed a diverse range of demographic profiles and characteristics:

- The gender distribution revealed that 37.1% identified as Male, 60.0% as Female, 0.8% as Non-binary/third gender, and 0.8% preferred to self-describe. Additionally, 1.2% of participants preferred not to disclose their gender.
- Out of the 0.8% preferred to self-describe, participants used terms as such as "Agender" (0.4%) and "demi-guy" (0.4%).
- Age distribution showcased varying groups: 0.4% were under 18, 16.3% were aged 18-24, 65.7% were aged 25-34, 13.1% were aged 35-44, 2.9% were aged 45-54, 1.2% were aged 55-64, and 0.4% were aged 65 or older.
- Geographical distribution indicated that 53.1% of participants resided in the Netherlands, while 46.9% were from Sweden.
- In terms of education, participants reported diverse levels: 0.4% had completed Some Secondary education, 0.8% had Secondary education, 1.6% had Vocational or Similar education, 4.9% had completed Some University but no degree, 28.2% held a University - Bachelors Degree, and the majority, 64.1%, possessed a Graduate or professional degree (MA, MS, MBA, PhD, Law Degree, Medical Degree etc).
- Employment status distribution highlighted that 63.7% of participants were working full-time, 11.4% were working part-time, 1.2% were unemployed and looking for work, 0.4% identified as homemakers or stay-at-home parents, 21.6% were students, and 1.6% indicated other employment statuses.
- Regarding dietary preferences, 29.4% identified as Meat eaters, 33.5% as Flexitarians, 3.7% as Pescatarians, 11.0% as Vegetarians, and 22.4% as Vegans.

We see the following demographic profiles and characteristics for the Swedes:

- The gender distribution among Swedish respondents indicated that 41.7% identified as Male, 57.4% as Female, and 0.9% as Non-binary/third gender. Furthermore, 0.9% preferred not to disclose their gender.
- When considering age distribution, the breakdown for Swedish participants was as follows: 14.8% were aged 18-24, 67.8% were aged 25-34, 13.9% were aged 35-44, 2.6% were aged 45-54, and 0.9% were aged 65 or older.
- In terms of education levels, Swedish participants reported the following: 0.9% had Secondary education, 5.2% had completed Some University but no degree, 26.1% held a University - Bachelors Degree, and the majority, 67.8%, possessed a Graduate or professional degree (MA, MS, MBA, PhD, Law Degree, Medical Degree etc).
- Regarding employment status, the distribution among Swedish participants revealed that 63.5% were working full-time, 5.2% were working part-time, 2.6% were

unemployed and looking for work, 27.0% were students, and 1.7% indicated other employment statuses.
- Lastly, in terms of dietary preferences, Swedish respondents' choices were as follows: 48.7% identified as Meat eaters, 25.2% as Flexitarians, 4.3% as Pescatarians, 9.6% as Vegetarians, and 12.2% as Vegans.

And for the Dutch, we see the following demographic profiles and characteristics:

- The gender distribution among Dutch respondents revealed that 33.1% identified as Male, 62.3% as Female, 0.8% as Non-binary/third gender, and 1.5% preferred to self-describe. Additionally, 2.3% of participants preferred not to disclose their gender.
- Out of the 1.5% preferred to self-describe, participants used terms as such as "Agender" (0.8%) and "demi-guy" (0.8%).
- When considering age distribution, the breakdown for Dutch participants was as follows: 0.8% were under 18, 17.7% were aged 18-24, 63.8% were aged 25-34, 12.3% were aged 35-44, 3.1% were aged 45-54, and 2.3% were aged 55-64.
- In terms of education levels, Dutch participants reported the following: 0.8% had completed Some Secondary education, 0.8% had Secondary education, 3.1% had Vocational or Similar education, 4.6% had completed Some University but no degree, 30.0% held a University - Bachelors Degree, and the majority, 60.8%, possessed a Graduate or professional degree (MA, MS, MBA, PhD, Law Degree, Medical Degree etc).
- Regarding employment status, the distribution among Dutch participants highlighted that 63.8% were working full-time, 16.9% were working part-time, 0.8% identified as homemakers or stay-at-home parents, 16.9% were students, and 1.5% indicated other employment statuses.
- Lastly, regarding dietary preferences, Dutch respondents' choices were as follows: 12.3% identified as Meat eaters, 40.8% as Flexitarians, 3.1% as Pescatarians, 12.3% as Vegetarians, and 31.5% as Vegans.

Reliability of the items

Variable	**Cronbach's Alpha Swedish**	**Cronbach's Alpha Dutch**
Injunctive norms (3 items)	0,787	0,740
Descriptive Norms (4 items)	0,797	0,451
Attitude (5 items)	0,821	0,778
Behaviour (5 items)	0,912	0,734

The table presents Cronbach's Alpha values for different scales related to injunctive norms, descriptive norms, attitude, and behavior. Cronbach's Alpha is a measure of internal consistency, which assesses how well the items within each scale correlate with each other.

Higher Cronbach's Alpha values generally indicate greater internal consistency, suggesting that the items in the scale are measuring the same underlying construct more reliably.

In the Swedish context, the scales show consistent internal reliability. For the injunctive norms scale, the Cronbach's Alpha is 0.787, indicating a good level of internal consistency. The descriptive norms scale also demonstrates reasonable internal consistency with a Cronbach's Alpha of 0.797. The attitude scale scores even higher with a Cronbach's Alpha of 0.821, indicating strong internal consistency. Lastly, the behavior scale exhibits the highest internal consistency among the Swedish respondents, as reflected by a Cronbach's Alpha of 0.912.

On the other hand, the Dutch respondents' data presents a more mixed picture in terms of internal consistency. The injunctive norms scale showcases good internal reliability with a Cronbach's Alpha of 0.740. However, the descriptive norms scale has a relatively low Cronbach's Alpha of 0.451, suggesting that the items in this scale might not be consistently measuring the same underlying construct within the Dutch group. The attitude scale exhibits reasonable internal consistency with a Cronbach's Alpha of 0.778, and the behavior scale again shows strong internal consistency with a Cronbach's Alpha of 0.734.

In summary, the Cronbach's Alpha values provide insights into the internal consistency of the survey scales across Swedish and Dutch respondents. While the scales related to injunctive norms, attitude, and behavior generally exhibit good to strong internal reliability in both groups, the descriptive norms scale appears to show lower internal consistency among Dutch respondents. This information can guide researchers in interpreting the reliability of their survey measures and making informed decisions about the robustness of their findings.

Hypothesis testing

Hypothesis 1: Injunctive norms related to the consumption of meat alternatives will have a significant positive impact on attitude towards meat alternatives.

Sweden
The correlation coefficient (R) between "Injunctive Norms" and "Attitude" is approximately 0.278. This value suggests a moderate positive correlation between the two variables for respondents in Sweden. The coefficient of determination (R^2) is approximately 0.077. This value indicates that around 7.7% of the variability in "Attitude" can be explained by the variability in "Injunctive Norms". The adjusted R^2 is approximately 0.069. Adjusted for the number of predictors in the model, it is slightly lower than the R^2. The Std. Error of the Estimate (approximately 1.26060) indicates the average amount by which the actual "Attitude" values might differ from the predicted values based on the model.

The "Regression" row in the ANOVA table indicates that the model accounts for a significant amount of variance in "Attitude" for respondents in Sweden, as indicated by the F-statistic (9.484) and its associated p-value (0.003).

The "Constant" row in the coefficients table represents the intercept of the regression line for respondents in Sweden. The "Injunctive Norms" row provides information about the relationship between this variable and "Attitude". The unstandardized coefficient (B) for "Injunctive Norms" is approximately 0.297. This indicates that, on average, for a one-unit increase in "Injunctive Norms," "Attitude" is expected to increase by 0.297. The standardized coefficient (Beta) is approximately 0.278. This indicates the strength and direction of the relationship between the variables, considering their standard deviations.

This regression analysis suggests that there is a moderate positive correlation between "Injunctive Norms" and "Attitude" among respondents in Sweden. The model explains around 7.7% of the variability in "Attitude," and the relationship is statistically significant ($p = 0.003$). For every one-unit increase in "Injunctive Norms," "Attitude" is expected to increase by approximately 0.297 units for respondents in Sweden.

Netherlands
The correlation coefficient (R) between "Injunctive Norms" and "Attitude" is approximately 0.287. This value indicates a moderate positive correlation between the two variables. The coefficient of determination (R^2) is approximately 0.083. This value indicates that around 8.3% of the variability in "Attitude" can be explained by the variability in "Injunctive Norms". The adjusted R^2 is approximately 0.075. This value adjusts for the number of predictors in the model and is slightly lower than the R^2. The Std. Error of the Estimate (approximately 0.98289) indicates the average amount by which the actual "Attitude" values might differ from the predicted values based on the model.

The "Regression" row in the ANOVA table shows that the model accounts for a significant amount of variance in "Attitude," as indicated by the F-statistic (11.521) and its associated p-value (<0.001).

The "Constant" row in the coefficients table represents the intercept of the regression line. The "Injunctive Norms" row provides information about the relationship between this variable and "Attitude". The unstandardized coefficient (B) for "Injunctive Norms" is approximately 0.219. This indicates that, on average, for a one-unit increase in "Injunctive Norms," "Attitude" is expected to increase by 0.219. The standardized coefficient (Beta) is approximately 0.287.

This regression analysis suggests that there is a moderate positive correlation between "Injunctive Norms" and "Attitude" among respondents in the Netherlands. The model explains around 8.3% of the variability in "Attitude," and the relationship is statistically significant. For every one-unit increase in "Injunctive Norms," "Attitude" is expected to increase by approximately 0.219 units.

Hypothesis 2: Descriptive norms related to the consumption of meat alternatives will have a significant positive impact on attitude towards meat alternatives.

Sweden
The correlation coefficient (R) between "Descriptive Norms" and "Attitude" is approximately 0.154. This value indicates a weak positive correlation between the two variables for respondents in Sweden. The coefficient of determination (R^2) is approximately 0.024. This value suggests that around 2.4% of the variability in "Attitude" can be explained by the variability in "Descriptive Norms". The adjusted R^2 is approximately 0.015. This adjusted value is slightly lower than the R^2 and accounts for the number of predictors in the model. the Std. Error of the Estimate (approximately 1.29686) indicates the average amount by which the actual "Attitude" values might differ from the predicted values based on the model.

The "Regression" row in the ANOVA table suggests that the model does not account for a statistically significant amount of variance in "Attitude" for respondents in Sweden, as indicated by the F-statistic (2.731) and its associated p-value (0.101). The "Residual" row represents the unexplained variance or error in the model.

The "Constant" row in the coefficients table represents the intercept of the regression line for respondents in Sweden. The "Descriptive Norms" row provides information about the relationship between this variable and "Attitude." The unstandardized coefficient (B) for "MeanDescriptiveNorms" is approximately 0.180. This indicates that, on average, for a one-unit increase in "Descriptive Norms," "Attitude" is expected to increase by 0.180. The standardized coefficient (Beta) is approximately 0.154.

This regression analysis suggests a weak positive correlation between "Descriptive Norms" and "Attitude" among respondents in Sweden. The model explains around 2.4% of the variability in "Attitude," but the relationship is not statistically significant ($p = 0.101$). The impact of "DescriptiveNorms" on "Attitude" seems to be limited for respondents in Sweden.

Netherlands
The correlation coefficient (R) between "DescriptiveNorms" and "Attitude" is approximately 0.186. This value indicates a weak positive correlation between the two variables for respondents in the Netherlands. The coefficient of determination (R^2) is approximately 0.034. This value suggests that around 3.4% of the variability in "Attitude" can be explained by the variability in "Descriptive Norms". The adjusted R^2 is approximately 0.027. This adjusted value is slightly lower than the R^2 and accounts for the number of predictors in the model. The Std. Error of the Estimate (approximately 1.00833) indicates the average amount by which the actual "Attitude" values might differ from the predicted values based on the model.

The "Regression" row in the ANOVA table indicates that the model accounts for a statistically significant amount of variance in "Attitude" for respondents in the Netherlands, as indicated by the F-statistic (4.570) and its associated p-value (0.034).

The "Constant" row in the coefficients table represents the intercept of the regression line for respondents in the Netherlands. The "Descriptive Norms" row provides information about the relationship between this variable and "Attitude." The unstandardized coefficient (B) for

"Descriptive Norms" is approximately 0.234. This indicates that, on average, for a one-unit increase in "Descriptive Norms," "Attitude" is expected to increase by 0.234. The standardized coefficient (Beta) is approximately 0.186.

This regression analysis suggests a weak positive correlation between "Descriptive Norms" and "Attitude" among respondents in the Netherlands. The model explains around 3.4% of the variability in "Attitude," and the relationship is statistically significant ($p = 0.034$). For every one-unit increase in "Descriptive Norms," "Attitude" is expected to increase by approximately 0.234 units for respondents in the Netherlands.

However it should be mentioned that the descriptive norms scale has a relatively low Cronbach's Alpha of 0.451, which makes is doubtful whether this outcome should be taken into account.

Hypothesis 3: Attitude towards meat alternatives will have a significant positive impact on the actual consumption of meat alternatives.

Sweden
The correlation coefficient (R) between "Attitude" and "Behavior" is approximately 0.636. This value indicates a moderate positive correlation between the two variables for respondents in Sweden. The coefficient of determination (R^2) is approximately 0.405. This value suggests that around 40.5% of the variability in "Behavior" can be explained by the variability in "Attitude." The adjusted R^2 is approximately 0.400. This adjusted value is slightly lower than the R^2 and accounts for the number of predictors in the model. The Std. Error of the Estimate (approximately 1.14710) indicates the average amount by which the actual "Behavior" values might differ from the predicted values based on the model.

The "Regression" row in the ANOVA table indicates that the model accounts for a highly statistically significant amount of variance in "Behavior" for respondents in Sweden, as indicated by the F-statistic (76.248) and its associated p-value (< 0.001).

The "Constant" row in the coefficients table represents the intercept of the regression line for respondents in Sweden. The "Attitude" row provides information about the relationship between this variable and "Behavior." The unstandardized coefficient (B) for "Attitude" is approximately 0.719. This indicates that, on average, for a one-unit increase in "Attitude," "Behavior" is expected to increase by 0.719. The standardized coefficient (Beta) is approximately 0.636.

This regression analysis suggests a moderate positive correlation between "Attitude" and "Behavior" among respondents in Sweden. The model explains around 40.5% of the variability in "Behavior," and the relationship is highly statistically significant ($p < 0.001$). For every one-unit increase in "MeanAttitude," "MeanBehavior" is expected to increase by approximately 0.719 units for respondents in Sweden.

Netherlands
The correlation coefficient (R) between "Attitude" and "Behavior" is approximately 0.622. This value indicates a moderate positive correlation between the two variables for respondents in the Netherlands. The coefficient of determination (R^2) is approximately 0.387. This value suggests that around 38.7% of the variability in "Behavior" can be explained by the variability in "Attitude."The adjusted R^2 is approximately 0.382. This adjusted value accounts for the number of predictors in the model. The Std. Error of the Estimate (approximately 0.53121) indicates the average amount by which the actual "Behavior" values might differ from the predicted values based on the model.

The "Regression" row in the ANOVA table indicates that the model accounts for a highly statistically significant amount of variance in "Behavior" for respondents in the Netherlands, as indicated by the F-statistic (80.126) and its associated p-value (< 0.001).

The "Constant" row in de coefficients table represents the intercept of the regression line for respondents in the Netherlands. The "Attitude" row provides information about the relationship between this variable and "Behavior." The unstandardized coefficient (B) for "Attitude" is approximately 0.414. This indicates that, on average, for a one-unit increase in "Attitude," "Behavior" is expected to increase by 0.414. The standardized coefficient (Beta) is approximately 0.622.

This regression analysis suggests a moderate positive correlation between "Attitude" and "Behavior" among respondents in the Netherlands. The model explains around 38.7% of the variability in "Behavior," and the relationship is highly statistically significant ($p < 0.001$). For every one-unit increase in "Attitude," "Behavior" is expected to increase by approximately 0.414 units for respondents in the Netherlands.

Hypothesis checking

- Hypothesis 1 is supported, as injunctive norms consistently and significantly impact attitude positively in both Sweden and the Netherlands.
- Hypothesis 2 is unsupported. In the Netherlands, the impact of descriptive norms on attitude is statistically significant, but not reliable enough. However, in Sweden, this impact is statistically insignificant.
- Hypothesis 3 is supported, with a strong positive relationship found between attitude and behavior across both countries.

Discussion

In this section, we delve into a comprehensive discussion of the results obtained from the study on injunctive norms, descriptive norms, attitudes and behaviors towards meat alternatives among participants from the Netherlands and Sweden. By analyzing the data within a broader context of these two countries, we aim to provide insights into the complex interplay of social influences, attitudes, and behaviors of sustainable food consumption.

Demographic characteristics

The diverse range of demographic profiles and characteristics by the study's participants underscores the cross-sectional nature of this research, capturing a snapshot of attitudes and behaviors among individuals from the Netherlands and Sweden. However, it is important to acknowledge that the method of collecting responses via social media platforms, such as Instagram and LinkedIn, may have introduced a potential bias in the sample composition, leading to what is known as a skewed representation of the population. Such biases are inherent to convenience sampling and can result in an overrepresentation who have a specific interest in the subject matter, potentially leading to an underrepresentation of less active social media users or those with differing perspectives (Dillman et al., 2014).

To overcome this limitation and improve the quality of the study's findings, future research could consider a more comprehensive and representative sampling method, such as random sampling or stratified sampling (Dillman et al., 2014). These methods would provide a better reflection of the population's demographics, reducing the risk of selection bias and increasing the study's external validity. Using a broader range of recruitment channels, maybe also offline channels, could also help to create a more diverse range of participants for better representation (Dillman et al., 2014).

Scale Reliabilities and Methodological Considerations

In this research, Cronbach's Alpha coefficients were calculated for various scales, including injunctive norms, descriptive norms, attitude, and behavior, across both Swedish and Dutch respondents. While higher Cronbach's Alpha values suggest stronger internal consistency, values above 0.7 are generally considered acceptable for research purposes.

In the Swedish context, the scales related to injunctive norms, attitude, and behavior demonstrated strong internal consistency, with Cronbach's Alpha coefficients exceeding the threshold of 0.7. However, the descriptive norms scale in the Swedish sample showed a Cronbach's Alpha value of 0.797, indicating reasonable but potentially weaker internal consistency. This suggests that the items within the descriptive norms scale might not be as consistent in measuring the same underlying construct among Swedish participants.

In the Dutch context, the descriptive norms scale displayed a lower Cronbach's Alpha of 0.451, signaling a potential issue with the reliability of this scale. The relatively low internal

consistency of this scale in both countries causes problems in interpreting the results associated with descriptive norms (George & Mallery, 2003).

A methodological consideration to be mindful with is the potential influence of response bias on the survey results. Participants may have engaged in social desirability bias, responding in ways that align with perceived societal norms or their own self-concept (Lönnqvist, Verkasalo & Bezmenova, 2007). This bias could affect scales related to injunctive norms and attitudes toward meat alternatives, as participants might provide socially acceptable responses rather than showing their genuine attitudes or behaviors (Podsakoff et al., 2003). To address this, future research could incorporate strategies such as randomized response techniques, or utilizing indirect measures to minimize the impact of social desirability bias (Tourangeau & Yan, 2007).

Hypothesis Testing and Implications

The hypotheses tested in this study aimed to explore the relationships between injunctive norms, descriptive norms, attitude, and behavior regarding meat alternatives consumption among participants from the Netherlands and Sweden. The results provided valuable insights into the factors influencing individuals' attitudes and behaviors in these two countries.

Hypothesis 1 proposed that injunctive norms related to meat alternatives consumption would positively impact attitudes toward meat alternatives. The findings revealed that this hypothesis was supported in both the Swedish and Dutch contexts. The positive relationship between injunctive norms and attitudes suggests that individuals who perceive social approval from their peers, family, and colleagues to consume meat alternatives are more likely to hold favorable attitudes toward these products. This aligns with previous research emphasizing the role of social norms in shaping attitudes and behaviors related to sustainable consumption (Onwezen et al., 2013.

Hypothesis 2 proposed that descriptive norms related to meat alternatives consumption would have a positive impact on attitudes toward meat alternatives. While the results indicated a significant impact of descriptive norms on attitude in the Netherlands, this relationship's inconsistency across the two countries warrants further exploration. The weak and non-significant impact of descriptive norms on attitude in Sweden might indicate that in this context, personal experiences and values play a more substantial role in shaping attitudes than perceived societal norms. These findings emphasize the potential heterogeneity in cultural norms and individual motivations, suggesting that interventions aimed at promoting meat alternatives consumption should consider local contextual factors (Thøgersen & Ölander, 2003).

Hypothesis 3 suggested that attitudes toward meat alternatives would positively influence actual consumption behavior. The results strongly supported this hypothesis in both countries, highlighting the pivotal role of attitudes as a predictor of behavior change. Individuals who perceive meat alternatives as healthier, morally right, environmentally friendly, and enjoyable

are more likely to incorporate them into their diets. This underscores the importance of targeted campaigns and interventions aimed at fostering positive attitudes toward meat alternatives, which could subsequently translate into increased consumption (Boer et al., 2018).

In conclusion, this study sheds light on the intricate interplay between injunctive norms, descriptive norms, attitudes, and behavior regarding meat alternatives consumption in the Netherlands and Sweden. The findings contribute to the field of sustainable consumption by highlighting the role of social norms and attitudes in shaping behavior change. The study's implications extend to practitioners aiming to promote meat alternatives adoption while acknowledging the need for refined survey items, diverse sampling strategies, and strategies to mitigate response biases. Future research could delve deeper into cultural nuances, incorporate more representative sampling methods, and explore the effectiveness of interventions tailored to specific societal contexts.

Cross-Cultural Differences: Sweden vs. Netherlands

An important aspect of this study is the comparison between two cultural contexts: Sweden and the Netherlands. These countries, often known for their progressive stances on sustainability and environmental consciousness, show subtle but significant differences in the factors influencing meat alternatives consumption.

The Netherlands, known for pioneering in sustainability and innovation, has been at the forefront of promoting plant-based diets and meat alternatives. For example, the European Institute of Innovation & Technology (EIT Food) has discussed how Europe, including countries like the Netherlands, is seeing an uprising in plant-based food innovation (EIT Food, 2020). The Dutch government's interest in reducing meat consumption and greenhouse gas emissions aligns with global trends where governments collaborate with food industries to encourage sustainable food choices (FAO, 2019). The relatively higher prevalence of flexitarian and vegan dietary preferences among Dutch participants in various studies resonates with the country's dedication to sustainable consumption practices.

Sweden, on the other hand, has a strong relationship with sustainability, driven by cultural values of environmental stewardship and responsible living (Nordlund & Garvill, 2002). Despite a lesser prominence in meat alternatives discourse compared to the Netherlands, Sweden's cultural emphasis on nature, clean energy, and waste reduction might influence participants' attitudes and behaviors toward sustainable food choices (Gatersleben, Steg, & Vlek, 2002). While the current study did not find a significant impact of descriptive norms on attitude among Swedish participants, this could be attributed to a more complex mix of individual motivations and societal norms (Steg, Dreijerink, & Abrahamse, 2005).

These cross-cultural variations underscore the importance of context-specific interventions and campaigns to promote meat alternatives consumption. While the Netherlands' innovative approaches could serve as models for other countries, such strategies might need adaptation to suit Sweden's unique cultural landscape and environmental values (Aschemann-Witzel et

al., 2018). The findings also point to the need for nuanced research that explores the intersection of cultural values, social norms, and sustainability to tailor interventions effectively.

Methodological and Conceptual Reflections

It's important to acknowledge the limitations of the study in order to interpre the findings in the right way. The reliance on convenience sampling raises questions about the representativeness of the sample and the potential for selection bias. A broader and more diverse sample could provide a more accurate representation of the target populations. Additionally, the self-reported nature of the data could introduce response biases and social desirability effects, impacting the validity of the results. Future research could consider using alternative sampling methods and incorporating objective measures of behavior to improve the reliability of findings.

The study focused on a specific set of factors (norms and attitudes) influencing meat alternatives consumption behavior. However, it's important to recognize that other variables, such as personal values, perceived barriers, and cultural norms, may also play a role in shaping individuals' dietary choices. Future research could adopt a more comprehensive approach by integrating a broader range of psychological, sociocultural, and economic factors to create a more holistic understanding of sustainable dietary behavior

Implications for Practice and Policy

The study's findings offer valuable insights for policymakers and organizations aiming to promote sustainable diets. The significant impact of injunctive norms on attitudes suggests that interventions targeting social norm perceptions can be effective in fostering positive attitudes towards meat alternatives. Social marketing campaigns, educational initiatives, and interventions can leverage injunctive norms to promote sustainable food choices. However, the findings related to descriptive norms warrant careful consideration, particularly due to the scale's lower reliability among Dutch participants.

Validity and Reliability

Validity ensures that the research measures what it intends to measure, and reliability pertains to the consistency of the research measurement. Both are critical aspects to ensure the integrity and usefulness of the findings.

Validity

Construct Validity: The constructs, in this study, were drawn from established theoretical frameworks. The use of the Norm Activation Model (NAM) and the Attitude-Behavior Context Scale (ABCS) ensured that the constructs have already undergone scrutiny in

previous studies. The construct validity was ensured by adapting questions directly from Onwezen et al. (2013) and Boer et al. (1991). This way, the study's measures align well with the intended constructs.

Content Validity: The content of the questions was designed to comprehensively cover the domain of interest, specifically the attitudes, behaviors, and norms related to meat alternative consumption. The inclusion of a range of items from injunctive norms to descriptive norms, and attitude to behavior helps to ensure content validity.

Criterion Validity: While the study focuses on predictive validity (predicting behaviors from attitudes and norms), the actual consumption of meat alternatives serves as a criterion for the validity of the scales. Future studies might consider using a more objective criterion measure, such as actual purchase data or diary recordings, to further enhance criterion validity.

Reliability

As previously mentioned, the Cronbach's alpha analyses were conducted to ensure the internal consistency of the measures. This assesses the degree to which all the items in a test measure the same concept or construct. As reliability is a measure of consistency, the Cronbach's alpha provides evidence on how consistently the items measure the intended constructs.

Test-Retest Reliability: Although not mentioned in this method, future studies should consider administering the same survey to a subset of the participants at two different points in time. By correlating the results from Time 1 and Time 2, the consistency of the responses over time can be assessed. Values closer to 1 would indicate high test-retest reliability.

Inter-item Reliability: Inter-item reliability checks how individual items within a scale correlate with each other. Given that Cronbach's alpha is already calculated, this gives an indication of the inter-item reliability. However, researchers might also consider computing inter-item correlations to provide further information about how each item relates to others within the same scale.

Conclusion

This research investigated the interrelations between injunctive norms, descriptive norms, attitudes, and behaviors concerning meat alternatives consumption in the Netherlands and Sweden. The study encompassed a cross-sectional design, with data collected from a diverse range of demographic profiles through social media platforms like Instagram and LinkedIn. This method posed potential biases due to its convenience sampling nature, leading to concerns about overrepresentation of specific groups and underrepresentation of others.

Regarding the scales used, while most demonstrated satisfactory internal consistency (with Cronbach's Alpha values above 0.7), the descriptive norms scale presented reliability issues, especially in the Dutch context. Response bias was also considered a potential challenge, as participants might align their answers with perceived societal norms rather than their genuine beliefs.

Three central hypotheses were tested:

1. Injunctive norms related to meat alternatives would positively influence attitudes - this was supported in both contexts.
2. Descriptive norms would have a positive effect on attitudes - the results were inconsistent across countries, with a significant impact noted in the Netherlands but not in Sweden.
3. Attitudes would have a positive influence on meat alternative consumption - strongly supported in both countries.

Cross-cultural observations were integral to the study. The Netherlands displayed a dedication to sustainable consumption practices and innovations in plant-based diets. In contrast, Sweden, while deeply rooted in environmental stewardship, had less emphasis on meat alternatives but a strong alignment with nature and waste reduction.

However, the study had its limitations, mainly concerning its sampling method and the potential for selection and response biases. Also, while the study considered norms and attitudes, other potential factors, such as personal values and cultural norms, might play a significant role in determining dietary choices.

The research highlighted the nuanced relationship between social norms, attitudes, and behavior regarding meat alternatives consumption in the Netherlands and Sweden. It underscored the vital role of injunctive norms in shaping favorable attitudes toward these products, while also pinpointing potential reliability issues with descriptive norms. The findings contribute to understanding sustainable consumption and offer valuable insights for targeted campaigns, especially in acknowledging local cultural factors. However, there's a call for future research to consider more diverse sampling, refine survey items, and delve deeper into cultural nuances and other influential variables. Practitioners and policymakers can leverage this study's outcomes to better tailor interventions for promoting sustainable dietary choices.

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