# A Qualitative Study of Health-Related Beliefs and Practices among Vegetarians 

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#### Abstract

The process of becoming a vegetarian involves changes in several life aspects, including health. Despite its relevance, however, little research has been carried out to analyze vegetarians' self-perceived health, and even less empirical attention has received in the Romanian population. This study aimed to assess health-related beliefs and practices among vegetarian adults in a Romanian sample. We have undertaken 20 semi-structured interviews ( 10 males, 10 females) based on a snowball sample with a mean age of 31 years. The interview guide was divided into three sections: causes of adopting the diet, general aspects (beliefs, practices, tensions, and conflicts) and consequences of adopting the diet (significant changes, positive aspects, and difficulties, physical and mental health). Additional anamnestic data were reported by means of a questionnaire. Data analyses were performed using Tropes text analysis software (v. 8.2) and SPSS software (v. 24.0.) Findings showed that most of the participants considered a vegetarian diet as a natural and healthy choice as opposed to meat-eating, which is not healthy, and its consumption should be moderated among omnivores. A higher proportion of participants ( $65 \%$ ) had an average body mass index (BMI), and several women even assumed having certain affections that no longer occur after following a vegetarian diet. Moreover, participants admitted having better moods and mental health status, given their self-contentment with the dietary choice. Relatives were perceived as more skeptical about their practices than others, and especially women had this view. This study provides a valuable insight into health-related beliefs and practices and how a vegetarian diet might interact.


Keywords-Health-related beliefs, health, practices, vegetarians.

## I. Introduction

VEGETARIANISM has become a common concern in many societies. It is not only a cognitive or an emotional response to food consumption but also an embodied practice that can act as an indicator of identity [1]-[3]. The transition to vegetarianism involves several changes in an individual's behaviors and social interactions, aspects that might also affect his health and well-being [4].

## II.Literature Review

The nature of the relationship between vegetarianism and health is controversial. The vegetarian diet has been associated with a lower incidence of health issues related to cholesterol, chronic degenerative diseases, hypertension, coronary artery disease, gallstones, type II diabetes, strokes, and certain types of cancer [5], [6]. Other studies [7] report a lower frequency of harmful behaviors (e.g., cigarette consumption) among vegetarians indeed, but on the contrary, poorer health

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(allergies, mental disorders, a higher incidence of cancer), a greater need for health care and a lower quality of life.
An indicator of health among vegetarians is the BMI. Several studies have indicated high levels of physical health and a lower BMI among vegetarians and a very low one among vegans [5], [7]-[16]. It is suggested that vegetarians, having a lower BMI than non-vegetarians, report a slight decrease in mortality from ischemic heart disease, probably due to low blood cholesterol levels, as opposed to nonvegetarians [17]. Surprisingly, although there have been general differences in BMI between vegetarians and nonvegetarians, obesity is common among Indians, who are known to follow a vegetarian diet on a large scale [18], [19].
Representations of vegetarianism are diverse: from positive and assumed attitudes to radical ones. It seems that individuals have the most positive attitudes and beliefs regarding the type of diet they follow, and those more negative attitudes and view towards the type of diet most different from the one followed [20]. Some people experience a paradox regarding, on the one hand, meat consumption and, on the other hand, the care expressed towards animals [21]. In this respect, a relevant distinction is made between 'healthy' vegetarians and 'ethical' vegetarians [22], [23]. Thus, healthy vegetarians focus on changing their diet to eliminate the possibility of disease, while ethical vegetarians choose to change their diet for moral reasons, being concerned about animal welfare and being more likely to switch to veganism.
Comparing to non-vegetarians, vegetarians have more positive attitudes regarding information about a particular product, vegetarian stores, health, organic products, but also towards events and social relationships [24]. Moreover, vegetarians have more positive attitudes and beliefs, along with stronger intentions in following a vegetarian diet, as opposed to non-vegetarians [25].
Several studies show that there is a predisposition among women to become vegetarians as opposed to men [26]-[29]. Compared to men who mainly believe that by our human nature we are made to eat meat, women are especially tempted to become vegetarians, and they also take more into account the hostility of family or partner as significant barriers to adopting a vegetarian diet [30]. Generally, friends and family have a neutral or even favorable attitude towards men's vegetarian diet, while family members of vegetarian women, especially men, are significantly more hostile to such a diet [31].

Many motivations lead a person to become a vegetarian. However, there is very little evidence of the consequences of adopting a vegetarian diet in terms of practices or changes in
beliefs and behaviors [32]. This study aimed to assess healthrelated beliefs and practices among vegetarian adults in a Romanian sample.

## III. Methods

## A. Participants

20 vegetarians $(\mathrm{M}=10 ; \mathrm{F}=10)$ were recruited based on a snowball sample. The respondents were young people with a mean age of 31 years and being vegetarians for at least 2 years. The overall mean duration of being vegetarians was 6 years. The majority of participants lived in the urban area ( $95 \%$ ), had a high level of education ( $75 \%$ ), was Christian Orthodox ( $60 \%$ ), and was in a partnership or married ( $70 \%$ ). Only 8 vegetarians out of 20 admitted not eating meat since they become vegetarians.

## B. Instruments

A semi-structured, face-to-face interview was used to study health-related beliefs and practices among vegetarians. The interview guide included 11 questions organized in 3 sections: (a) causes of adopting the diet; (b) general aspects, such as beliefs, practices, tensions, and conflicts; (c) consequences of adopting the diet - significant changes, positive aspects, and difficulties, physical and mental health.

## 1. Interview Questions

Each interview followed a semi-structured protocol, was $10-30$ minutes long, and was conducted in Romanian. The respondents were asked the following questions:

1) How exactly did you choose to become a vegetarian?
2) What do you think about the vegetarian diet?
3) What about the omnivore one?
4) How easy/difficult was it for you to choose a vegetarian diet?
5) How did those around you reacted to changing your diet?
6) How have you changed since you started a vegetarian diet?
7) What are the advantages/disadvantages of the vegetarian diet?
8) How have you improved your life as a result of your vegetarian diet?
9) What are the difficulties you encountered?
10) Have you noticed any changes in your physical health?
11) Have you noticed any changes in your physical health?
2. Anamnestic and Demographic Data

Additional anamnestic data and demographics were reported using a questionnaire. The anamnestic questionnaire referred to health conditions in different areas of the body, BMI, or general health status. Demographic data referred to age, gender, duration of being a vegetarian, residence area (rural/urban), educational level (less/middle/high), relationship status (single/in a relationship/married) and religion (orthodox/catholic/protestant/other).

## C.Data Gathering Procedure

## 1. Data Collection

A snowball sampling technique was used in selecting the respondents. After having selected the respondents through a snowball sampling technique, we discussed the confidentiality and purpose of the research and gave informed consent. Demographic data were assessed orally at the end of the interview. The anamnestic data sheet that the respondents filled up was also presented.

Participants were asked to comment on their beliefs and practices freely. We initiated a more in-depth discussion of specific topics if the participant did not specify an answer. Also, we informed the respondents that the interview would be recorded. The semi-structured interviews were all performed for over 3 months.

## 2. Data Analysis

Data analysis was performed using Tropes text analysis software (v. 8.2) and SPSS software (v.24.0.). In the Tropes' semantic analysis, after terms have been coded, we checked the similarity of codes with the actual text and cleared for any inadvertences. After that, the significant universes of references, along with specific relevant relations, were extracted. SPSS software was used in assessing the sample and different percentages and descriptive data that could not be obtained with Tropes software.

## IV. Results

We first analyzed the causes of adopting a vegetarian diet, which refers to means of becoming vegetarian. This universe of discussion included friends, decisions, health, and animal care (Fig. 1). In order to become vegetarians, several participants followed or were moved by the example of a friend $(\mathrm{n}=7$ ). The decision to become vegetarian was also a natural choice or a specific one (e.g., little tolerance to meat, the death of a relative). Among all vegetarians in this study, 12 were ethical vegetarians ( $60 \%$ ), and 8 were healthy vegetarians ( $40 \%$ ).


Fig. 1 General causes of adopting the vegetarian diet
Findings showed that most of the participants considered the vegetarian diet a natural and healthy choice instead of meat-eating, which is unhealthy, and meat consumption should be moderated among omnivores (Fig. 2). Being a meateater was seen as a more accessible and flexible choice for omnivores. Moreover, the environmental impact of meat consumption was questioned. In this study, vegetarians considered themselves very tolerant with omnivores, whereas they stated they experienced negative opinions coming from omnivores.


Fig. 2 Vegetarians' attitudes towards meat
Participants thought that omnivores usually questioned them about protein deficiency and health issues. Relatives were perceived even more skeptical about their practices than others, and especially women had this view. However, most of the participants ( $85 \%$ ) considered that it was easy to adjust to the vegetarian diet, and it might have been a bit more challenging after becoming a vegetarian.

Respondents generally had good health prospects, and most of their common affections were related to gastric issues ( $35 \%$ ). Moreover, respondents admitted having better moods and mental health status, given their self-contentment with the dietary choice (Fig. 3). The fact that they were consonant with their ethical and ecological values was considered to improve their mental states. Vegetarians are assumed to have fewer food options (especially when they go out to eat) and are now more attentive to the specific products they buy.


Fig. 3 The relation between vegetarianism and health
A higher proportion of participants ( $65 \%$ ) had an average BMI, and several women ( $n=4$ ) even assumed having certain affections that no longer occurred after following a vegetarian diet (e.g., digestive or skin issues, dizziness, gynecological issues). Even when vegetarians in the study stated their health is similar to the previous one (before becoming a vegetarian), it usually happened because they did not have previous health issues, or they could not identify changes that have to do with their new diet.

## V.DISCUSSION

This study aimed to assess health-related beliefs and practices among vegetarian adults in a Romanian sample. Findings showed that most of the participants considered a vegetarian diet as a natural and healthy choice as opposed to
meat-eating, which is not healthy, and its consumption should be moderated among omnivores. This was also previously reported by findings of most positive attitudes and beliefs regarding the type of diet one follows and more negative attitudes, and views towards the type of diet most different from the one followed [20].
Participants generally had good health prospects and most of their common affections were related to gastric issues ( $35 \%$ ). Moreover, participants admitted having better moods and mental health status, given their self-contentment with the dietary choice. The fact that participants were consonant with their ethical and ecological values was considered to improve their mental states. Some people experience a paradox regarding, on the one hand, meat consumption and, on the other hand, the care expressed towards animals [21].
Vegetarians assumed to have fewer food options (especially when they go out to eat) and that they are now more attentive to the specific products they buy. This is in line with the results in which, compared to non-vegetarians, vegetarians have more positive attitudes regarding information about a particular product, vegetarian stores, health, organic products, but also towards events and social relationships [24].
A higher proportion of participants ( $65 \%$ ) had an average BMI. These findings are surprising, given the fact that several studies have indicated a lower BMI among vegetarians and a very low one among vegans [5], [7]-[16]. It is suggested that vegetarians, having a lower BMI than non-vegetarians, report a slight decrease in mortality from ischemic heart disease, probably due to low blood cholesterol levels compared to nonvegetarians [13]. However, studies also indicate a lower frequency of obesity in vegetarians compared to nonvegetarians [17], and obesity is prevalent among Indians, who are known to follow a vegetarian diet at a large scale [18], [19].
Several women ( $\mathrm{n}=4$ ) assumed having certain affections that no longer occurred after following a vegetarian diet (e.g., digestive or skin issues, dizziness, gynecological issues). This fact might be due to the health effects of a vegetarian diet [5], [6]. Even when participants stated their health state is similar to the previous one (before becoming vegetarians), it usually happened because they did not have previous health issues, or they could not identify changes that have to do with their new diet.

Being a meat-eater was seen as a more accessible and flexible choice for omnivores. Moreover, the environmental impact of meat consumption was questioned. In this study, vegetarians considered themselves very tolerant with omnivores, whereas they stated they experienced negative opinions coming from omnivores. Relatives were perceived as more skeptical about their practices than others, and especially women had this view. Compared to men who mainly believe that by our human nature we are made to eat meat, women are especially tempted to become vegetarians, and they also take more into account the hostility of family or partner as significant barriers to adopting a vegetarian diet [30]. Generally, friends and family have a neutral or even favorable attitude towards men's vegetarian diet, while family members
of vegetarian women, especially men, are significantly more hostile to such a diet [31].

The obvious limitation of this study is the cross-sectional nature of the investigation and the number of variables that might interfere when assessing the relationship between health and vegetarianism. Also, auto-reporting data using interviews is a subjective technique of study as opposed to other advanced quantitative approaches. Moreover, the studied sample was small and was not integrally formed from pure vegetarians; some were occasionally tempted or wished to eat meat. However, our study focused on vegetarians' attitudes, and not on their behaviors. From this point of view, we could state that we have obtained veritable data from a sample of Romanian participants. This study provides a valuable insight into health-related beliefs and practices and how a vegetarian diet might interact. Recommendations for future research are to explore the study further and supporting the findings by using more advanced techniques and more participants to participate in interviews.

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## References

[1] C. A. Bisogni, M. Connors, C. M. Devine, and J. Sobal, "Who we are and how we eat: a qualitative study of identities in food choice" Journal of Nutrition Education and Behavior, 2002, 34(3), 128-139.
[2] C. M. Devine, J. Sobal, and C. A. Bisogni, "Food choices in three ethnic groups: Interactions of ideals, identities, and roles" Journal of Nutrition Education, 1999, 31(2), 86-93.
[3] J.Twigg, "Food for thought. Purity and vegetarianism" Religion,1979, 9, 13-35.
[4] J. Jabs, J. Sobal, and C. M. Devine, "Managing vegetarianism: Identities, norms and interactions" Ecology of food and nutrition, 2000, 39(5), 375-394.
[5] American Dietetic Association, "Position of the American Dietetic Association and Dietitians of Canada: vegetarian diets" Journal of the Academy of Nutrition and Dietetics, 2000, 103(6),748.
[6] T. J. Key, P. N. Appleby, G. K. Davey, N. E. Allen, E. A. Spencer, and R. C. Travis, "Mortality in British vegetarians: review and preliminary results from EPIC-Oxford." The American journal of clinical nutrition, 2003, 78(3), 533S-538S
[7] N. T. Burkert, J. Muckenhuber, F. Großschädl, E. Rásky, and W. Freidl, "Nutrition and health - the association between eating behavior and various health parameters: a matched sample study" PloS one, 2014, 9(2), e88278.
[8] J. T. Dwyer, "Health aspects of vegetarian diets" The American journal of clinical nutrition, 1988, 48(3),712-738.
[9] M. L. Slattery, D. R. Jr. Jacobs, J. E. Hilner, B. J. Caan, L. Van Horn, C. Bragg, and K. A. Liu, "Meat consumption and its associations with other diet and health factors in young adults: the CARDIA study" The American journal of clinical nutrition, 1991, 54(5), 930-935.
[10] T. J. Key, G. K. Davey, and P. N. Appleby, "Health benefits of a vegetarian diet" Proceedings of the Nutrition Society, 1999, 58(2), 271 275.
[11] T. J. Key, G. E. Fraser, M. Thorogood, P. N. Appleby, V. Beral, G. Reeves, and J. Mann, "Mortality in vegetarians and non-vegetarians: detailed findings from a collaborative analysis of 5 prospective studies" The American journal of clinical nutrition, 1999, 70(3), 516s-524s.
[12] S. I. Barr and T. M. Broughton, "Relative weight, weight loss efforts and nutrient among health-conscious vegetarian, past vegetarian and non-
vegetarian women ages 18 to 50" Journal of the American College of Nutrition, 2000, 19(6), 781-788.
[13] T. J. Key, P. N. Appleby, and M. S. Rosell, "Health effects of vegetarian and vegan diets" Proceedings of the Nutrition, 2006, 65(1), 35-41.
[14] S. Baines, J. Powers, and W. J. Brown, "How does the health and wellbeing of young Australian vegetarian and semi-vegetarian women compare with non-vegetarians?" Public health nutrition, 2007, 10(5), 436-442.
[15] W. J. Craig and A. R. Mangels, "Position of the American Dietetic Association: vegetarian diets" Journal of the American Dietetic Association, 2009, 109(7), 1266-1282.
[16] S. Tonstad, T. Butler, R. Yan, and G. E. Fraser, "Type of vegetarian diet, body weight, and prevalence of type 2 diabetes" Diabetes care, 2009, 32(5), 791-796.
[17] T. Key and G. Davey, "Prevalence of obesity is low in people who do not eat meat" Bmj, 1996, 313(7060), 816-817.
[18] P. S. Shetty, "Nutrition transition in India" Public health nutrition, 2002, 5(1a), 175-182.
[19] S. A. Jebb, K. L. Rennie, and T. J. Cole, "Prevalence of overweight and obesity among young people in Great Britain" Public health nutrition, 2004, 7(3), 461-465.
[20] R. Povey, B. Wellens, and M. Conner, "Attitudes towards following meat, vegetarian and vegan diets: an examination of the role of ambivalence" Appetite, 2001, 37(1), 15-26.
[21] E. Harmon-Jones and J. Mills, "An introduction to cognitive dissonance theory and an overview of current perspectives on the theory" in E. Harmon-Jones Ed., Cognitive dissonance: Reexamining a pivotal theory in psychology, 1999, pp. 3-24.
[22] P. Rozin, M. Markwith, and C. Stoess, "Moralisation and becoming a vegetarian: The transformation of preferences into values and the recruitment of disgust" Psychological Science, 1997, 8(2),67-73.
[23] J. Jabs, C. M. Devine, and J. Sobal, "Model of the process of adopting vegetarian diets: Health vegetarians and ethical vegetarians" Journal of Nutrition Education, 1998, 30(4), 196-202.
[24] A. C. Hoek, P. A. Luning, A. Stafleu, and C. Graaf, "Food-related lifestyle and health attitudes of Dutch vegetarians, non-vegetarians consumers of meat substitutes, and meat consumers" Appetite, 2004, 42(3), 265-272.
[25] M. T. Conner and L. van Dyck, "Attitudes and beliefs of vegetarians and non-vegetarians" Paper presented to $16^{\text {th }}$ Annual Scientific Meeting of Agev and European Interdisciplinary Meeting, October 1993, Postdam, Germany. Agev Publication Series, Vol. 10.
[26] J. M. Smart, "The gender gap. If you're a vegetarian, odds are you're a woman. Why?" Vegetarian Times, 1995, 210, 74-81.
[27] A. Worsley and G. Skrzypiec, "Teenage vegetarianism. Prevalence, social and cognitive contexts" Appetite, 1998, 30, 151-170.
[28] A. Beardsworth and A. Bryman, "Meat consumption and vegetarianism among young adults in the UK" British Food Journal, 1999, 101, 289300.
[29] C. Stahler, "How many youth are vegetarian" Vegetarian Journal, 2005, 24(4).
[30] E. Lea and A. Worsley, "Benefits and barriers to the consumption of a vegetarian diet in Australia" Public Health Nutrition, 2003, 6(5), 505511.
[31] B. Merriman, "Gender differences in family and peer reaction to the adoption of a vegetarian diet" Feminism \& Psychology, 2010, 20(3), 420-427.
[32] A. Beardsworth and T. Keil, "Health-related beliefs and dietary practices among vegetarians and vegans: a qualitative study" Health Education Journal, 1991, 50(1), 38-42.

