

Article

Psychological Processes Underlying an Omnivorous, Vegetarian, or Vegan Diet: Gender Role Self-Concept, Human Supremacy Beliefs, and Moral Disengagement from Meat

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Abstract: Most people consume meat regularly but simultaneously claim to be animal lovers, which should lead to a state of cognitive dissonance and cause distress. Against this backdrop, it is important to understand why some people decide to stop consuming meat or completely eschew animal products, while others do not. Research has shown gender and self-regulatory mechanisms as important factors, but the underlying psychological processes require further examination. In total, 3259 vegans, vegetarians, and omnivores completed an online questionnaire about their diet, gender role self-concept, moral disengagement from meat consumption, and human supremacy beliefs. The results showed that male vegans described themselves as more feminine but no less masculine than male omnivores, while no such differences were found in women. Furthermore, omnivores reported the highest moral disengagement from meat consumption, followed by vegetarians and vegans. The same was true of human supremacy beliefs. Moreover, the results showed that not only is diet itself related to differences in human supremacy beliefs but also the motives for this diet, with health and environmental motives being associated with stronger human supremacy beliefs than animal-related motives. These findings present practical implications for animal rights activists, marketing, and the health and education sectors.

Keywords: diets; gender role self-concept; human supremacy; masculinity; meat paradox; moral disengagement



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1. Introduction

Humans' eating habits impact not only their health but also the environment and the lives of the millions of non-human animals that are bred and slaughtered each day [1]. The breeding of these animals has negative effects on land and water use, biodiversity, and climate change. Livestock are one of the most significant contributors to greenhouse gas emissions (GHGE). In 2006, 18% of the yearly GHGE stemmed from the livestock industry, which is more than the emissions of all means of transport combined [2]. Moreover, there is a link between red and processed meat consumption and increased mortality risk from cardiovascular disease and cancer [3]. The consumption of processed meat has been classified as carcinogenic, and the consumption of red meat has been classified as probably carcinogenic by the World Health Organization [4].

Individuals follow different diets and therefore also have different dietary patterns. Omnivores generally consume all kinds of food, including those derived from animals. They only exclude products for reasons of taste, or medical (e.g., allergies) and/or religious reasons [5]. All types of vegetarianism eschew at least some kind of meat. Pescatarians eschew red meat and poultry but consume fish [6]. Lacto-ovo vegetarians additionally avoid fish. Further subgroups are lacto vegetarians, who exclude eggs, and ovo vegetarians, who exclude dairy products [7]. In general, vegetarianism is defined as the eschewal of all kinds of meat, including red meat, poultry, and fish, which means that pescatarianism is

not always considered a subgroup of vegetarianism [8]. Vegans eschew meat, fish, eggs, dairy products, and honey [7]. Lifestyle vegans additionally avoid some or all products derived from animals (e.g., leather) and/or products that are tested on animals [5].

Many studies treat vegetarians and vegans as a single group—e.g., [9]—although Rosenfeld [10] found that they differ not only in the restrictiveness of their diet but also in their dietary identity. For example, vegans see their dietary patterns and identity as more intertwined [10]. The two main motives for following a vegan or vegetarian diet are personal health and ethical concerns, whereas the latter can be divided into animal-related and environmental motives [11,12]. It is also relevant to mention that veg*ns (The term “veg*ns” is used when referring to vegans and vegetarians) often have several different motives for following their diet [13]. Many previous studies have disregarded this fact, e.g., [14].

Research examining individual differences in dietary patterns has found that men are less likely than women to follow a vegetarian diet. When they do decide to become vegetarian, they differ from female vegetarians in their strictness and dietary motivation. Men are more likely to “cheat”, and have less prosocial motivation for their diet [15]. Additionally, several studies have shown that meat is associated with masculinity in Western culture, e.g., [16–19]. Nakagawa and Hart [20] even found that threatening male omnivores’ masculinity led to higher meat attachment and significantly lower willingness to follow a vegetarian diet. Vegans, vegetarians, and omnivores are perceived differently by others in terms of masculinity, e.g., [18,21]. A recent study by Thomas [21] showed that while vegetarians are not perceived as less masculine than omnivores, vegans are ascribed lower masculinity.

Masculinity and femininity are not only ascribed by other people but also represent facets of one’s gender role self-concept (G-SC), which is defined as a self-description of stereotypically masculine (e.g., solution-focused, logical, and harsh) or stereotypically feminine attributes (e.g., emotional, tender, and anxious), with masculinity and femininity representing independent dimensions [22–24]. G-SC had been conceptualized as consisting solely of desirable attributes for decades, e.g., [23]. Recently, however, it has been suggested that not only positive but also negative attributes are gendered [25], and studies have shown the differential effects of positive and negative aspects of masculinity and femininity, e.g., [26]. Greenebaum and Dexter [27] examined how male vegans perceive their masculinity, and found that vegans tend to ascribe to themselves a so-called ‘hybrid masculinity’. Hybrid masculinity is characterized by rejecting many stereotypically masculine attributes while preferring values associated with femininity, which are then modified and adjusted to better fit traditional masculine standards. Male vegans argue that veganism is fundamentally masculine because following this diet requires not only courage, strength, and self-control but also the determination to show compassion and empathy towards animals.

Another important psychological phenomenon contributing to meat consumption is moral disengagement. Moral disengagement theory presumes that people who engage in unethical or harmful but also cherished behavior tend to apply moral disengagement mechanisms to justify and maintain their behavior [28,29]. In recent years, moral disengagement has been identified as a psychological mechanism at play in meat consumption, e.g., [30,31]. In general, most people do not want animals to suffer, but also enjoy consuming meat, which leads to animals being killed. This contradiction is called ‘the meat paradox’ [32]. In order to resolve this cognitive dissonance, one can either align one’s behavior with one’s moral values by no longer consuming meat and instead following a vegetarian or vegan diet, or one can bring one’s beliefs into alignment with one’s behavior. As the omnivorous diet is still predominant, it seems that most people pursue the latter option [33,34]. People provide a variety of justifications for maintaining their meat consumption, which can be assigned to different categories, e.g., [1,5,16]. According to Graça et al. [31], moral disengagement from meat can be divided into five facets: means–ends justification, desensitization, the denial of negative consequences, diffused responsibility, and reduced perceived

choice. They found moral disengagement to be a mediator between the frequency of meat consumption and willingness for meat substitution, with high moral disengagement being related to more frequent meat consumption. In addition, moral disengagement from meat was higher in men than in women [31]. Moreover, Buttlar and Walter [35] found that there are differences in moral disengagement from meat between omnivores and non-omnivores, with omnivores more frequently utilizing moral disengagement mechanisms.

Another moral disengagement mechanism related to meat consumption might be human supremacy, which is the belief that humans are superior to animals [36]. Hence, human supremacy is a special case of social dominance orientation (SDO) [37], i.e., the approval of inequality between social groups and group-based dominance that is associated with negative attitudes toward human out-group members [37,38]. Women in general have been found to endorse human supremacy beliefs to a lesser extent because they are more empathic and lower in SDO than men [39]. A study by Dhont and Hodson [39] indicated that people with higher SDO consume more meat due to their greater endorsement of human supremacy beliefs. In addition, human supremacy beliefs are connected to dehumanization, a mechanism of moral disengagement that ascribes less humanity to an out-group [40]. Reducing human supremacy beliefs could even lead to a decline in speciesism [41]. According to Rosenfeld [42], speciesism can predict whether a person follows a vegan versus a vegetarian diet, with vegans endorsing speciesism to a lesser extent than vegetarians.

2. The Present Study

Meat consumption is not only associated with animals' suffering but also with environmental degradation and health concerns. Therefore, it is essential to understand which psychological processes contribute to meat consumption and why many individuals are aware of the negative consequences but still refrain from adopting a more plant-based diet. This study aimed to obtain a better understanding of the underlying psychological processes of eating meat by focusing on gender role self-concept as an individual attribute, and moral disengagement and human supremacy beliefs as self-regulatory mechanisms associated with meat consumption. Furthermore, we explored whether different motives for certain diets are differentially associated with human supremacy beliefs.

The first aim of this study was to investigate whether and how vegans, vegetarians, and omnivores differ in their G-SC. We included both positive and negative prototypically masculine and feminine attributes, which has never been done before. In general, several studies have shown that veg*ns are perceived as less masculine than omnivores by others, e.g., [18,21]. In contrast, only two studies [27,43] have examined veg*ns' views on their masculinity and femininity, but they conducted qualitative interviews rather than taking a quantitative approach. In these studies, male vegans did not seem to perceive themselves as being less masculine, and framed their dietary choice as being driven by rationality [27,43]. Therefore, we do not expect differences in self-ascribed masculinity between veg*ns and omnivores. However, we predict that veg*ns will score higher in femininity than omnivores, as most veg*ns have animal-related motives for their diet [11,12] and therefore are likely to be more empathic [44]. Because both vegans and vegetarians eschew meat, we do not expect them to differ in their femininity and masculinity.

The second aim of the present research was to examine differences in moral disengagement from meat and human supremacy beliefs between men and women with different diets. Buttlar and Walter [35], as well as Ang et al. [45], found that omnivores exhibit a higher level of moral disengagement from meat than non-omnivores. We expect our findings to be similar. Graça et al. [31] found that men engaged in more moral disengagement than women, which we also hypothesize for this study. However, they did not differentiate between diets when examining gender differences. As both vegans and vegetarians already eschew meat [7], and because all statements regarding moral disengagement from meat refer to meat consumption [31], we do not expect vegans and vegetarians to differ from each other in their moral disengagement mechanisms. Because human supremacy could

be a frequently used justification for consuming meat [16], we expect omnivores to more strongly endorse human supremacy beliefs than veg*ns. Additionally, human supremacy beliefs might also be a mechanism of moral disengagement from meat in which vegans and vegetarians differ, as vegans have been found to reject speciesism to a greater extent than vegetarians [42]. In terms of gender differences, we hypothesize that women will endorse human supremacy beliefs less than men, in line with the results from [39].

The third aim of this study was to investigate whether different motives for veganism and vegetarianism are related to the endorsement of human supremacy beliefs. Rosenfeld [42] found that animal-related motivation for a vegan or vegetarian diet was highly negatively correlated with speciesism. As environmental and health motives have nothing to do with animal welfare or animal rights [11], in contrast to animal-related motives, we expect that veg*ns with animal-related motives will endorse human supremacy beliefs less than environmental and health veg*ns.

3. Materials and Methods

3.1. Participants and Design

The sample consisted of 3259 participants (15.6% men and 84.4% women) whose age ranged from 18 to 76 years ($M = 32.72$ years; $SD = 11.77$ years). In total, 1922 participants followed a vegan diet, 602 followed a vegetarian diet, and 735 followed an omnivorous diet. Most of the participants had completed university (52.3%), followed by secondary education with a high school diploma (36%), secondary education without a high school diploma (8.4%), and compulsory education only (3.3%). In total, 1286 participants lived in Germany, 1239 lived in Austria, 129 lived in Switzerland, and 605 lived in other countries all over the world, primarily in Australia, the UK, or the US.

The study aimed to include vegans, vegetarians, and omnivores. However, pescatarians were not considered to be a subgroup of vegetarians, as they differ in their dietary motivation and degree of speciesism [6]. Therefore, the 187 pescatarians who completed the study were not included in the analyses. Moreover, Pribis et al. [46] found that individuals often identify as a part of a certain dietary group even when it does not coincide with their eating behavior. Therefore, we not only asked participants whether they were vegans, vegetarians or omnivores but also assessed their frequency of meat consumption. Self-labeled veg*ns who reported eating meat were also not included in the analyses. Participants who did not complete the full survey were also excluded. Overall, 388 people started the survey but did not finish it, with most stopping during the statements about moral disengagement from meat. As demographic and dietary information was assessed at the end of the survey, it is impossible to make assumptions about their reasons for stopping. Minors were not included in the study for ethical reasons. Additionally, people who did not identify as male or female were not included in the analyses, as there were not enough participants for a reliable analysis.

3.2. Procedure

The participants were recruited via Instagram and Facebook groups mostly related to either a plant-based diet or meat consumption. Two example groups were “Berlin Vegan” and “BBQ & Grillfreunde Österreich” [Friends of Grilling and BBQ in Austria]. The participants were invited to complete an online questionnaire on the platform www.soscsurvey.de (accessed on 5 January 2020) [47]. In the beginning, they were informed that the study examines the relationship between diets, personality traits, and attitudes toward meat consumption, and that their participation is anonymous and voluntary. After providing informed consent, they could begin the survey. Following the data collection, the participants were thanked and given the opportunity to enter a draw to win one of three 20€ Amazon gift cards. The survey was available from 28 March to 28 April 2020.

3.3. Measures

3.3.1. Gender Role Self-Concept

The participants' G-SC was used as a dependent variable. It was assessed using the Positive–Negative Sex-Role Inventory (PN-SRI; 25). It consists of two main scales, masculinity (MAS) and femininity (FEM), divided into four subscales: positive masculinity (MAS+), negative masculinity (MAS−), positive femininity (FEM+), and negative femininity (FEM−). Each subscale consists of six items, for a total of 24 items (e.g., MAS+: “solution-focused”, MAS−: “ostentatious”, FEM+: “emotional”, FEM−: “anxious”). The participants were asked to indicate to what extent each attribute applies to their personality on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The mean values were calculated, with higher values indicating higher masculinity/femininity. The Cronbach's α coefficients for the four subscales and two main scales were good, with 0.80 (MAS+), 0.80 (MAS−), 0.84 (FEM+), 0.78 (FEM−), 0.73 (MAS), and 0.78 (FEM).

3.3.2. Moral Disengagement and Human Supremacy Beliefs

Moral disengagement from meat was a dependent variable. It was measured with the Moral Disengagement in Meat Questionnaire [MDMQ; 31], which consists of the global scale and five subscales: means–ends justifications (MEJ), desensitization (DES), denial of negative consequences (DEN), diffused responsibility (DIF), and reduced perceived choice (RED). The questionnaire initially consisted of 20 items (e.g., MEJ, “The human being has needs that include eating meat”; DES, “If I saw an animal being killed I would have no problems eating it”; DEN, “By eating meat I engage with an industry responsible for major damages”; DIF, “Even if I change my habits; I don't make a difference by myself”; RED, “It's easy to have a meat-free diet”). Human supremacy beliefs, assessed with a six-item scale (e.g., “The life of an animal is just not of equal value as the life of a human being”) from Dhont and Hodson [36], were included as an additional subscale of the MDMQ. The participants were asked to rate how much they agree or disagree with each statement on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The mean values were calculated, with higher values indicating higher levels of moral disengagement from meat consumption. The initial Cronbach's α coefficients for the subscales MEJ, DEN, and DIF were 0.76 (MEJ), 0.48 (DEN), and 0.67 (DIF). However, each of these subscales reached a considerably higher internal consistency—and therefore higher reliability—after one item was removed (MEJ, “The problems associated with meat also apply to other foods”; DEN, “By eating meat I'm also responsible for the problems associated to its production”; DIF, “I will consider changing my habits only if others also change theirs”). After removing these three items, the Cronbach's α coefficients for the subscales and the global scale were 0.88 (MEJ), 0.89 (DES), 0.81 (DEN), 0.78 (DIF), 0.83 (RED), 0.84 (HSB), and 0.94 (global scale). In the end, 23 items were used to measure moral disengagement from meat.

3.3.3. Diet and Dietary Pattern

Diet was used as an independent variable. In order to assess it, the participants were asked which of the following four categories described their diet and dietary pattern in a closed-ended, single-choice question: (a) vegan, defined as “I do not eat any animal products including meat, fish, milk, eggs and honey”; (b) vegetarian, defined as “I do not eat any meat or fish”; (c) pescatarian, defined as “I do eat fish, but I do not eat red meat or poultry”; or (d) omnivore, defined as “I do eat red meat or poultry”. Each diet was described because participants might have been unfamiliar with some of the terms, and to make sure participants' self-identifications were consistent with the corresponding dietary pattern, as this was a problem in previous studies, e.g., [6].

3.3.4. Frequency of Meat Consumption

Participants reported their frequency of meat consumption with a single item from Hoek et al. [48] using the following categories: never, less than once per week, once or twice

per week, three or four times per week, and five times or more per week. The frequency of meat consumption was evaluated for all participants—including veg*ns—in order to check the accuracy of the information provided on their diet and dietary patterns. Individuals who made inconsistent statements about their diet and frequency of meat consumption were excluded from the analyses.

3.3.5. Motives for Diet

The motives for the diet were added as an independent variable. Veg*ns were asked to indicate their motive/s for choosing their diet with a multiple-response question. The respondents could choose any number of the following options: (a) animal-related motives, (b) health motives, (c) environmental motives, and (d) other (opportunity to name further motives).

3.3.6. Demographics

Demographic information was gathered at the end of the survey, including the participants' gender, age, country of current residence, and level of education. Gender was used as an independent variable.

3.4. Analysis

Statistical analyses were carried out with the IBM SPSS Statistics 27 software for Windows [49], using factorial MANOVAs, one-way MANOVAs, a Mann–Whitney test, an independent factorial ANOVA, and a Welch's ANOVA. The significance level was set at 0.05 for all analyses. In order to account for the familywise error rate resulting from multiple testing, Holm–Bonferroni correction [50] was applied using Holm–Bonferroni Sequential Correction: An EXCEL Calculator [51].

4. Results

Correlations of the analyses' dependent variables can be found in Table 1.

Table 1. Correlations between the PN-SRI subscales and MDMQ.

Variable	1	2	3	4	5
1. MAS+	—				
2. MAS−	0.02	—			
3. FEM+	−0.09 ***	−0.29 ***	—		
4. FEM−	−0.34 ***	−0.12 ***	0.17 ***	—	
5. MDMQ (global scale)	0.05 ***	0.18 ***	−0.25 ***	−0.12 ***	—

Note: MAS+ = positive masculinity subscale, MAS− = negative masculinity subscale, FEM+ = positive femininity subscale, FEM− = negative femininity subscale, and MDMQ = Moral Disengagement in Meat Questionnaire. *** $p < 0.001$.

4.1. Differences in G-SC

In order to determine whether and to what extent men and women with different diets differ in their G-SC, a factorial MANOVA was conducted. The independent variables (IVs) were diet and gender, and the dependent variables (DVs) were the facet subscales of G-SC, i.e., positive and negative masculinity and femininity. Descriptive statistics for all of the groups are depicted in Table 2, and correlations among the DVs are shown in Table 3. The multivariate results indicated that both main effects were significant, for diet, $F(8, 6502) = 10.05$, $p < 0.001$, $\eta_p^2 = 0.01$, Pillai's trace = 0.02, and gender, $F(4, 3250) = 24.76$, $p < 0.001$, $\eta_p^2 = 0.03$, Pillai's trace = 0.03, indicating a difference in the facets of G-SC between men and women, and between individuals with different diets. The interaction between diet and gender was also significant, $F(8, 6502) = 2.93$, $p = 0.003$, $\eta_p^2 = 0.004$, Pillai's trace = 0.01. In Table 4, all of the significant univariate ANOVAs after applying a Holm–Bonferroni correction are depicted. One can see that all of the univariate effects were significant for both diet and gender. Women scored higher on positive and negative femi-

ninity, while men scored higher on positive and negative masculinity. As homoscedasticity was not given for all of the subscales, Games–Howell post hoc tests were used to investigate the main effect of diet. Significant differences between the diets are presented in Figure 1. In order to further investigate the diet*gender interaction, the data were split by gender, and a one-way MANOVA was conducted with diet as the IV. A significant difference between diets on the combined DVs occurred among men, $F(8, 1004) = 6.11, p < 0.001, \eta_p^2 = 0.05$, Pillai's trace = 0.09, and also among women, $F(8, 5494) = 5.84, p < 0.001, \eta_p^2 = 0.008$, Pillai's trace = 0.02. After applying a Holm–Bonferroni correction, significant differences between diets were found among men for all subscales: positive masculinity, $F(2, 504) = 4.73, p = 0.02, \eta_p^2 = 0.02$, negative masculinity, $F(2, 504) = 6.13, p = 0.006, \eta_p^2 = 0.02$, positive femininity, $F(2, 504) = 13.18, p < 0.001, \eta_p^2 = 0.05$, and negative femininity, $F(2, 504) = 4.02, p = 0.02, \eta_p^2 = 0.02$. Among women, only positive masculinity differed between diets, $F(2, 2749) = 12.93, p < 0.001, \eta_p^2 = 0.009$. Homoscedasticity was not given for all subscales. Therefore, Games–Howell post hoc tests were applied to identify differences between the three diets. Significant differences between men and women with different diets are presented separately in Figure 2.

Table 2. Descriptive statistics for PN-SRI subscales by gender and diet.

Gender	Variable	Diet			
		All Groups ^a	Vegan ^b	Vegetarian ^c	Omnivore ^d
		<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)
Men	MAS+	5.71 (0.75)	5.76 (0.75)	5.35 (0.80)	5.72 (0.72)
	MAS−	2.79 (1.01)	2.66 (1.02)	2.57 (0.83)	2.95 (1.00)
	FEM+	5.19 (0.97)	5.41 (0.91)	5.37 (0.81)	4.97 (0.99)
	FEM−	3.38 (1.02)	3.50 (1.05)	3.53 (0.87)	3.25 (0.99)
Women	MAS+	5.35 (0.81)	5.42 (0.81)	5.25 (0.81)	5.26 (0.77)
	MAS−	2.42 (0.88)	2.39 (0.88)	2.42 (0.87)	2.49 (0.86)
	FEM+	5.71 (0.83)	5.74 (0.82)	5.71 (0.80)	5.63 (0.86)
	FEM−	3.73 (1.06)	3.75 (1.08)	3.77 (1.06)	3.65 (1.03)
Both	MAS+	5.41 (0.81)	5.46 (0.81)	5.26 (0.81)	5.41 (0.78)
	MAS−	2.48 (0.91)	2.43 (0.90)	2.43 (0.87)	2.64 (0.94)
	FEM+	5.63 (0.87)	5.70 (0.84)	5.69 (0.80)	5.41 (0.96)
	FEM−	3.68 (1.07)	3.72 (1.08)	3.76 (1.05)	3.52 (1.03)

Note: PN-SRI = Positive–Negative Sex-Role Inventory, MAS+ = positive masculinity subscale, MAS− = negative masculinity subscale, FEM+ = positive femininity subscale, and FEM− = negative femininity subscale. ^a $n = 3259$ (567 men, 2752 women). ^b $n = 1922$ (288 men, 1694 women). ^c $n = 602$ (35 men, 567 women). ^d $n = 735$ (244 men, 491 women).

Table 3. Correlations Between PN-SRI Subscales.

Variable	1	2	3	4
1. MAS+	—	0.00	−0.05	−0.29 ***
2. MAS−	−0.01	—	−0.22 ***	0.08
3. FEM+	−0.06 **	−0.28 ***	—	0.16 ***
4. FEM−	−0.33 ***	0.15 ***	0.14 ***	—

Note: Correlation coefficients for men are reported above the diagonal; those for women are reported below the diagonal. PN-SRI = Positive–Negative Sex-Role Inventory, MAS+ = positive masculinity subscale, MAS− = negative masculinity subscale, FEM+ = positive femininity subscale, and FEM− = negative femininity subscale. ** $p < 0.01$. *** $p < 0.001$.

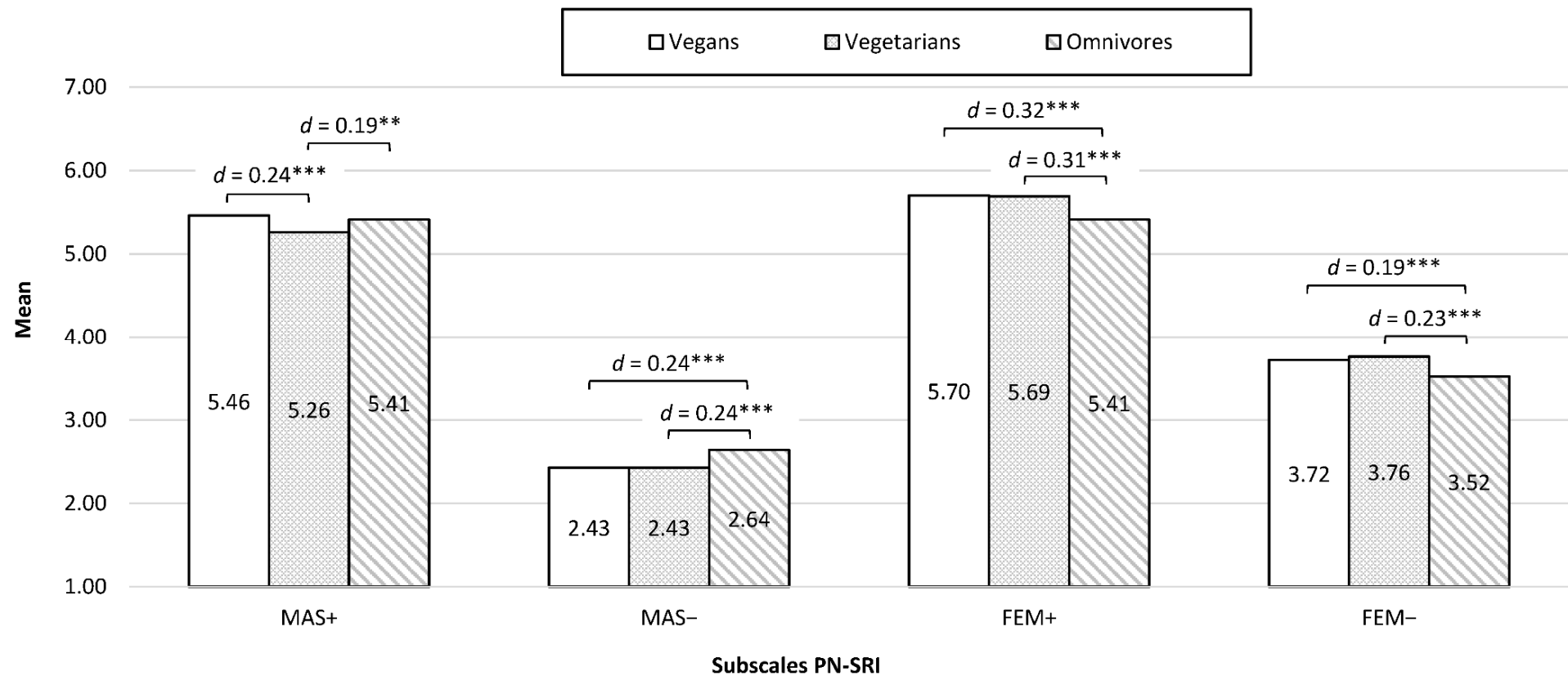


Figure 1. Significant mean differences and effect sizes of the PN-SRI subscales by diet. *Note:* PN-SRI = Positive–Negative Sex-Role Inventory, MAS+ = positive masculinity subscale, MAS− = negative masculinity subscale, FEM+ = positive femininity subscale, and FEM− = negative femininity subscale. $^{**} p < 0.01$. $^{***} p < 0.001$.

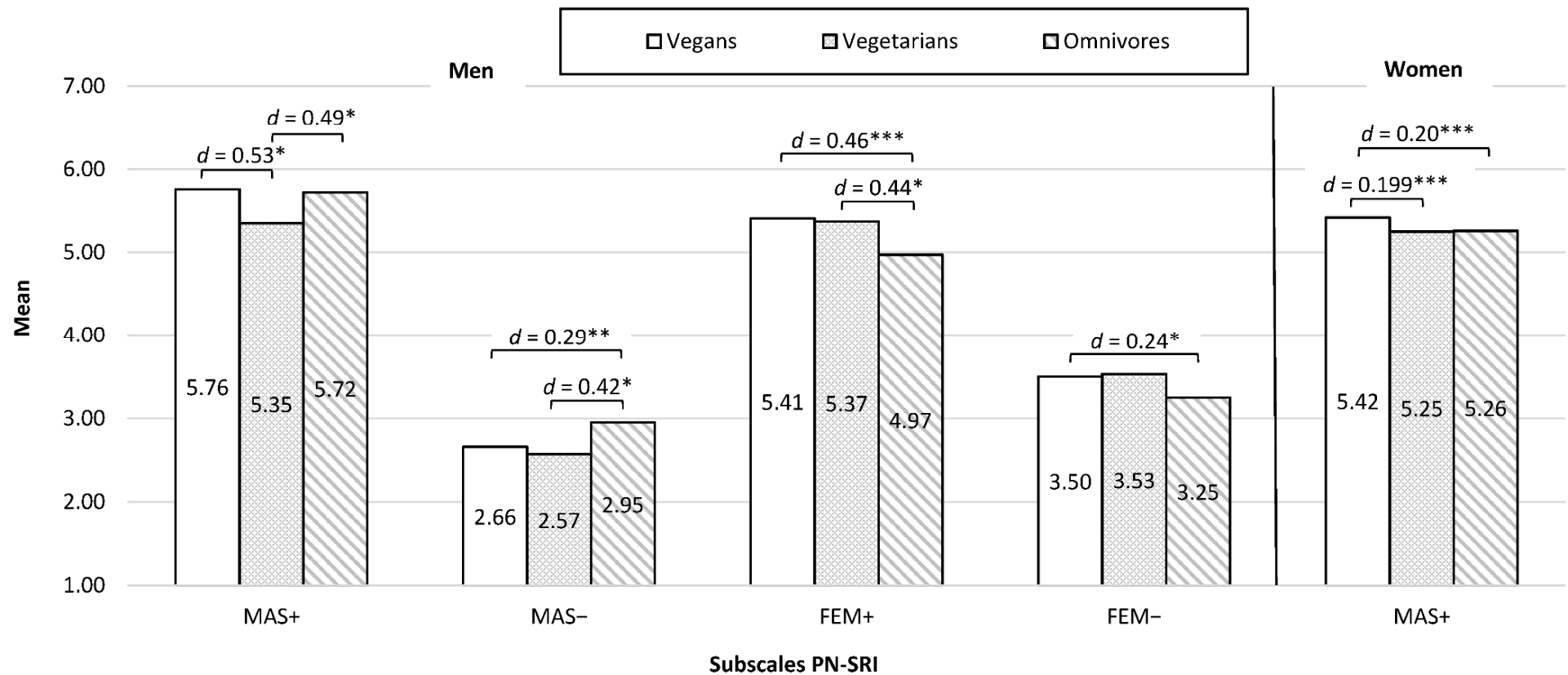


Figure 2. Significant mean differences and effect sizes of PN-SRI subscales by gender and diet. *Note:* PN-SRI = Positive–Negative Sex-Role Inventory, MAS+ = positive masculinity subscale, MAS– = negative masculinity subscale, FEM+ = positive femininity subscale, and FEM– = negative femininity subscale. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$.

Table 4. Univariate effects on positive and negative masculinity and femininity.

IV	DV	F	df	Error df	p	η_p^2
Diet	MAS+	8.38	2	3253	<0.001	0.005
	MAS−	9.62	2	3253	<0.001	0.006
	FEM+	19.48	2	3253	<0.001	0.01
	FEM−	5.57	2	3253	0.004	0.003
Gender	MAS+	31.47	1	3253	<0.001	0.01
	MAS−	23.08	1	3253	<0.001	0.007
	FEM+	58.90	1	3253	<0.001	0.02
	FEM−	16.85	1	3253	<0.001	0.005
Diet × Gender	FEM+	7.11	2	3253	0.004	0.004

Note: PN-SRI = Positive–Negative Sex-Role Inventory, MAS+ = positive masculinity subscale, MAS− = negative masculinity subscale, FEM+ = positive femininity subscale, and FEM− = negative femininity subscale. $n = 3259$ (567 men, 2752 women).

4.2. Differences in Moral Disengagement from Meat and Human Supremacy Beliefs

The effect of gender and diet on moral disengagement from meat was investigated for the global scale as well as for all of the subscales. Diet and gender were the IVs, while the moral disengagement from meat subscales and the global scale were the DVs. Descriptive statistics for each group are depicted in Table 5, and the correlations among the DVs are shown in Table 6. For the global scale, an independent factorial ANOVA was calculated. Both main effects—diet, $F(2, 3253) = 1936.44$, $p < 0.001$, $\eta_p^2 = 0.54$, and gender, $F(1, 3253) = 67.74$, $p < 0.001$, $\eta_p^2 = 0.02$ —were significant. Moreover, the interaction between diet and gender was also significant, $F(2, 3253) = 41.65$, $p < 0.001$, $\eta_p^2 = 0.03$. In Table 7, all of the significant univariate ANOVAs after applying a Holm–Bonferroni correction are depicted. All of the univariate effects were significant for diet, gender, and the diet*gender interaction. Men scored higher on the global scale and all subscales than women. While the effect sizes for gender and the diet*gender interaction were all small or negligible, the effect sizes for diet were all large, except for the *Diffused Responsibility* subscale, which had a medium effect size. In order to investigate the main effect of diet, Games–Howell post hoc tests were applied, as homoscedasticity was not given. These tests indicated that vegans (-1.29 , 95% CI $[-1.36, -1.23]$, $p < 0.001$, $d = 2.37$) and vegetarians (-1.16 , 95% CI $[-1.23, -1.09]$, $p < 0.001$, $d = 2.06$) scored significantly lower on the global moral disengagement scale than omnivores. Vegans additionally had significantly lower scores than vegetarians (-1.14 , 95% CI $[-0.17, -0.10]$, $p < 0.001$, $d = 0.44$). Significant differences between different diets on the subscales are presented in Figure 3. In order to further examine the interaction between gender and diet, the data were split by gender. Due to the violation of homoscedasticity, a Welch’s ANOVA was conducted in order to analyze the global scale for men, Welch’s $F(2, 96.6) = 415.34$, $p < 0.001$, $est. w^2 = 0.62$, and women, Welch’s $F(2, 858.1) = 758.89$, $p < 0.001$, $est. w^2 = 0.36$. Games–Howell post hoc tests indicated that male vegans (-1.53 , 95% CI $[-1.65, -1.40]$, $p < 0.001$, $d = 2.63$) and male vegetarians (-1.38 , 95% CI $[-1.57, -1.19]$, $p < 0.001$, $d = 2.32$) scored significantly lower on the global moral disengagement scale than male omnivores. However, the scores of male vegans and male vegetarians did not significantly differ from each other. Additionally, the post hoc tests showed significantly lower moral disengagement in female vegans than female vegetarians (-0.14 , 95% CI $[-0.18, -0.11]$, $p < 0.001$, $d = 0.46$) and female omnivores (-1.14 , 95% CI $[-1.21, -1.07]$, $p < 0.001$, $d = 2.32$). In comparison with female omnivores, female vegetarians reported significantly less moral disengagement (-1.00 , 95% CI $[-1.08, -0.92]$, $p < 0.001$, $d = 1.96$). In order to further examine the differences in the subscales, the data were again split by gender and a one-way MANOVA was conducted. There was a significant difference between the diets with regard to the combined DVs among men, $F(12, 1000) = 43.76$, $p < 0.001$, $\eta_p^2 = 0.34$, Pillai’s trace = 0.67, and also among women, $F(12, 5490) = 211.61$, $p < 0.001$, $\eta_p^2 = 0.32$, Pillai’s trace = 0.63. Table 8 shows that after a Holm–Bonferroni correction was applied, the univariate ANOVAs all remained

significant. Due to the violation of the equality of covariance and homoscedasticity, Games–Howell post hoc tests were conducted. As depicted in Figure 4, male vegans did not score significantly lower than male vegetarians on any subscale of moral disengagement. Furthermore, both groups had significantly lower scores than the male omnivores on all of the subscales. Figure 5 shows that female vegans scored significantly lower than female vegetarians, and female vegetarians scored significantly lower than female omnivores on all of the subscales of moral disengagement.

Table 5. Descriptive statistics for MDMQ by gender and diet.

Gender	Variable	Diet			
		All Groups ^a	Vegan ^b	Vegetarian ^c	Omnivore ^d
		<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)
Men	MEJ	2.15 (1.25)	1.19 (0.35)	1.32 (0.43)	3.17 (1.05)
	DES	2.51 (1.44)	1.46 (0.74)	1.71 (1.06)	3.60 (1.17)
	DEN	1.66 (0.85)	1.12 (0.27)	1.24 (0.43)	2.24 (0.89)
	DIF	1.96 (1.11)	1.46 (0.83)	1.71 (0.83)	2.47 (1.15)
	RED	2.03 (1.19)	1.18 (0.29)	1.27 (0.35)	2.92 (1.13)
	HSB	2.47 (1.02)	1.90 (0.77)	1.94 (0.73)	3.08 (0.91)
	Global scale	2.13 (0.95)	1.38 (0.33)	1.53 (0.38)	2.91 (0.75)
Women	MEJ	1.47 (0.78)	1.17 (0.32)	1.30 (0.43)	2.73 (0.97)
	DES	1.56 (0.96)	1.28 (0.59)	1.40 (0.71)	2.72 (1.31)
	DEN	1.28 (0.55)	1.10 (0.27)	1.21 (0.41)	1.99 (0.78)
	DIF	1.55 (0.77)	1.37 (0.63)	1.56 (0.76)	2.13 (0.94)
	RED	1.37 (0.69)	1.12 (0.28)	1.24 (0.40)	2.39 (0.97)
	HSB	1.86 (0.79)	1.65 (0.65)	1.84 (0.71)	2.59 (0.87)
	Global scale	1.52 (0.57)	1.28 (0.27)	1.43 (0.34)	2.43 (0.64)
Both	MEJ	1.58 (0.91)	1.17 (0.32)	1.30 (0.43)	2.88 (1.02)
	DES	1.71 (1.10)	1.31 (0.62)	1.42 (0.74)	3.01 (1.33)
	DEN	1.34 (0.62)	1.11 (0.27)	1.22 (0.41)	2.07 (0.83)
	DIF	1.61 (0.85)	1.38 (0.65)	1.57 (0.76)	2.25 (1.03)
	RED	1.48 (0.82)	1.13 (0.28)	1.25 (0.39)	2.57 (1.06)
	HSB	1.95 (0.86)	1.68 (0.67)	1.85 (0.71)	2.75 (0.91)
	Global scale	1.61 (0.68)	1.30 (0.28)	1.43 (0.34)	2.59 (0.72)

Note: MDMQ = Moral Disengagement in Meat Questionnaire, MEJ = means–ends justification, DES = desensitization, DEN = denial of negative consequences, DIF = diffused responsibility, RED = reduced perceived choice, and HSB = human supremacy beliefs. ^a *n* = 3259 (567 men, 2752 women). ^b *n* = 1922 (288 men, 1694 women). ^c *n* = 1902 (35 men, 567 women). ^d *n* = 735 (244 men, 491 women).

Table 6. Correlations for MDMQ.

Variable	1	2	3	4	5	6	7
1. MEJ	—	0.71 ***	0.75 ***	0.56 ***	0.85 ***	0.63 ***	0.91 ***
2. DES	0.58 ***	—	0.65 ***	0.42 ***	0.67 ***	0.64 ***	0.84 ***
3. DEN	0.68 ***	0.51 ***	—	0.52 ***	0.73 ***	0.59 ***	0.84 ***
4. DIF	0.41 ***	0.29 ***	0.40 ***	—	0.54 ***	0.45 ***	0.70 ***
5. RED	0.74 ***	0.52 ***	0.62 ***	0.39 ***	—	0.60 ***	0.89 ***
6. HSB	0.49 ***	0.46 ***	0.48 ***	0.35 ***	0.40 ***	—	0.78 ***
7. Global scale	0.86 ***	0.77 ***	0.78 ***	0.62 ***	0.80 ***	0.71 ***	—

Note: Correlation coefficients for men are reported above the diagonal; those for women are reported below the diagonal. MDMQ = Moral Disengagement in Meat Questionnaire, MEJ = means–ends justification, DES = desensitization, DEN = denial of negative consequences, DIF = diffused responsibility, RED = reduced perceived choice, and HSB = human supremacy beliefs. *** *p* < 0.001.

Table 7. Univariate effects for moral disengagement mechanisms.

IV	DV	F	df	Error df	p	η_p^2
Diet	MEJ	1845.55	2	3253	<0.001	0.53
	DES	872.65	2	3253	<0.001	0.35
	DEN	836.04	2	3253	<0.001	0.34
	DIF	241.87	2	3253	<0.001	0.13
	RED	1364.73	2	3253	<0.001	0.46
	HSB	394.92	2	3253	<0.001	0.20
Gender	MEJ	17.50	1	3253	<0.001	0.005
	DES	66.43	1	3253	<0.001	0.02
	DEN	8.61	1	3253	0.003	0.003
	DIF	13.72	1	3253	<0.001	0.004
	RED	29.10	1	3253	<0.001	0.009
	HSB	32.10	1	3253	<0.001	0.01
Diet \times Gender	MEJ	26.34	2	3253	<0.001	0.02
	DES	32.84	2	3253	<0.001	0.02
	DEN	10.93	2	3253	<0.001	0.007
	DIF	4.68	2	3253	0.009	0.003
	RED	36.31	2	3253	<0.001	0.02
	HSB	7.14	2	3253	0.002	0.004

Note: MEJ = means–ends justification, DES = desensitization, DEN = denial of negative consequences, DIF = diffused responsibility, RED = reduced perceived choice, and HSB = human supremacy beliefs. $n = 3259$ (567 men, 2752 women).

Table 8. Univariate effects for moral disengagement mechanisms divided by gender.

IV	DV	F	df	Error df	p	η_p^2
Men	MEJ	408.54	2	504	<0.001	0.62
	DES	285.47	2	504	<0.001	0.53
	DEN	180.77	2	504	<0.001	0.42
	DIF	61.26	2	504	<0.001	0.20
	RED	288.98	2	504	<0.001	0.53
	HSB	126.03	2	504	<0.001	0.33
Women	MEJ	1775.48	2	2749	<0.001	0.56
	DES	639.40	2	2749	<0.001	0.32
	DEN	810.77	2	2749	<0.001	0.37
	DIF	214.17	2	2749	<0.001	0.135
	RED	1242.31	2	2749	<0.001	0.48
	HSB	331.98	2	2749	<0.001	0.20

Note: MEJ = means–ends justification, DES = desensitization, DEN = denial of negative consequences, DIF = diffused responsibility, RED = reduced perceived choice, and HSB = human supremacy beliefs. $n = 3259$ (567 men, 2752 women).

In order to investigate whether different motives for veganism and vegetarianism are related to human supremacy beliefs, the data were split by diet. The motives for following a vegan or vegetarian diet were the IV, and endorsement of human supremacy beliefs were the DV. Descriptive statistics are depicted in Table 9. A Mann–Whitney test indicated that vegans with animal-related motives exhibited significantly lower endorsement of human supremacy beliefs than vegans with health and/or environmental motives but no animal-related ones, $U (n_1 = 1727, n_2 = 181) = 83,987.5, p < 0.001, r = 0.24$. In total, the motives explained 5.6% of the variance in endorsement of human supremacy beliefs among vegans. The same effect was found for vegetarians, $U (n_1 = 512, n_2 = 76) = 10,059.0, p < 0.001, r = 0.28$, where motives explained 7.9% of the variance in endorsement of human supremacy beliefs.

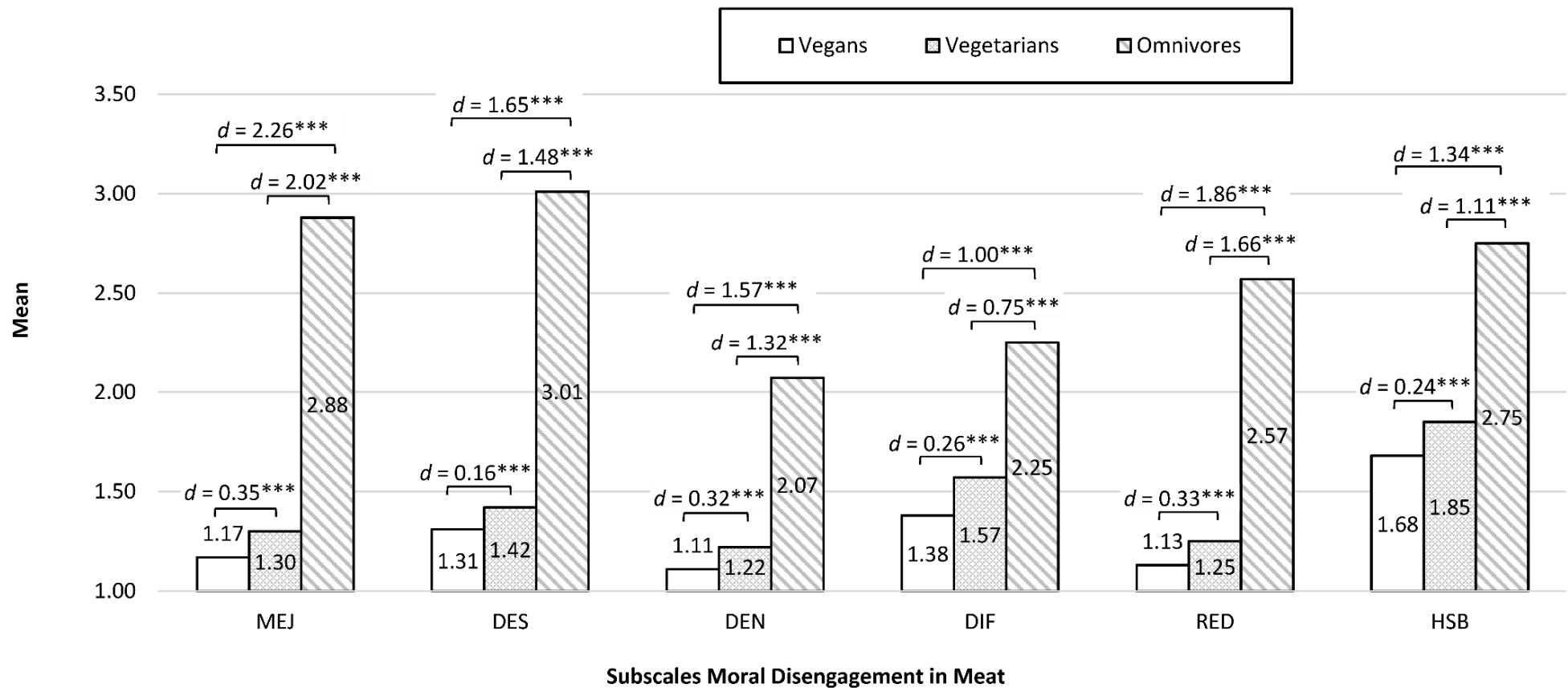


Figure 3. Means and effect sizes of the MDMQ subscales. *Note:* MDMQ = Moral Disengagement in Meat Questionnaire, MEJ = means–ends justification, DES = desensitization, DEN = denial of negative consequences, DIF = diffused responsibility, RED = reduced perceived choice, and HSB = human supremacy beliefs. *** $p < 0.001$.

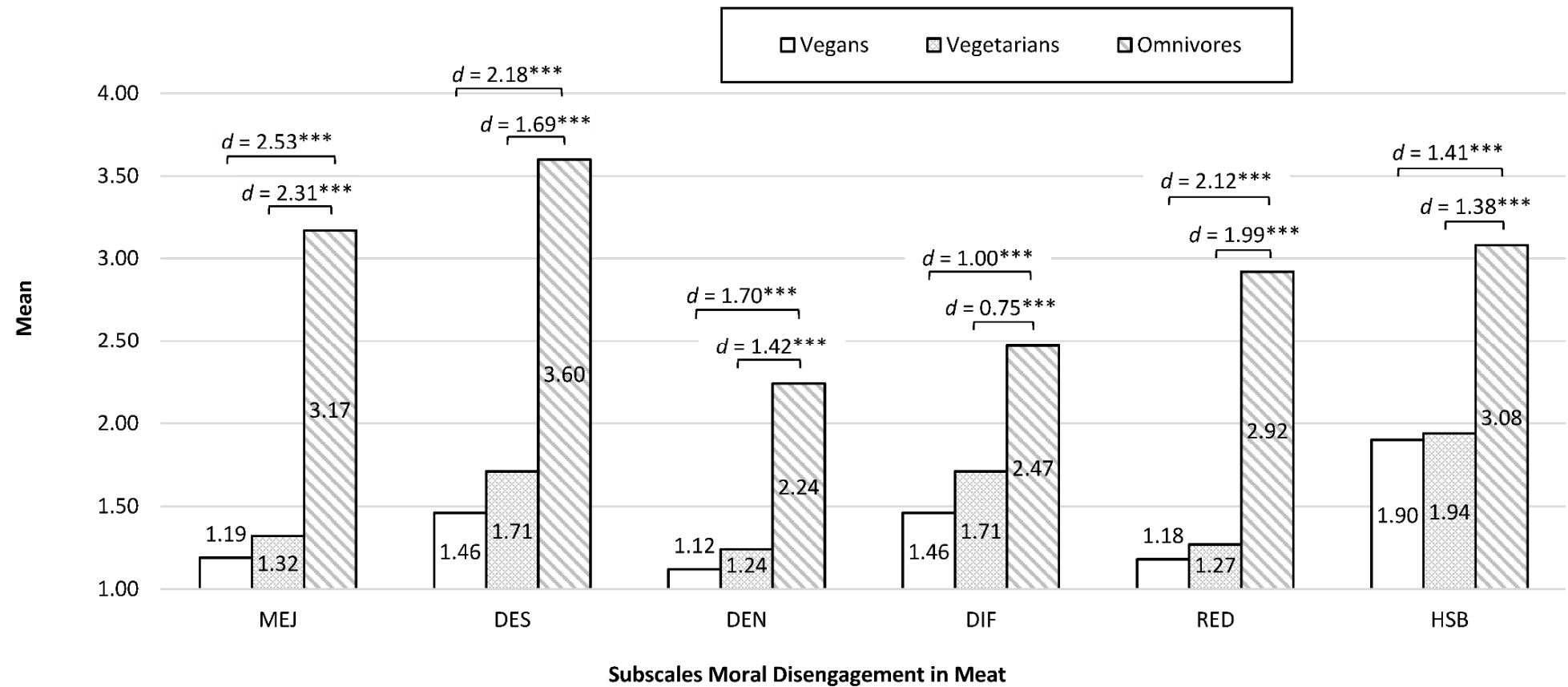


Figure 4. Means and effect sizes of the MDMQ subscales in men. *Note:* MDMQ = Moral Disengagement in Meat Questionnaire, MEJ = means–ends justification, DES = desensitization, DEN = denial of negative consequences, DIF = diffused responsibility, RED = reduced perceived choice, and HSB = human supremacy beliefs. *** $p < 0.001$.

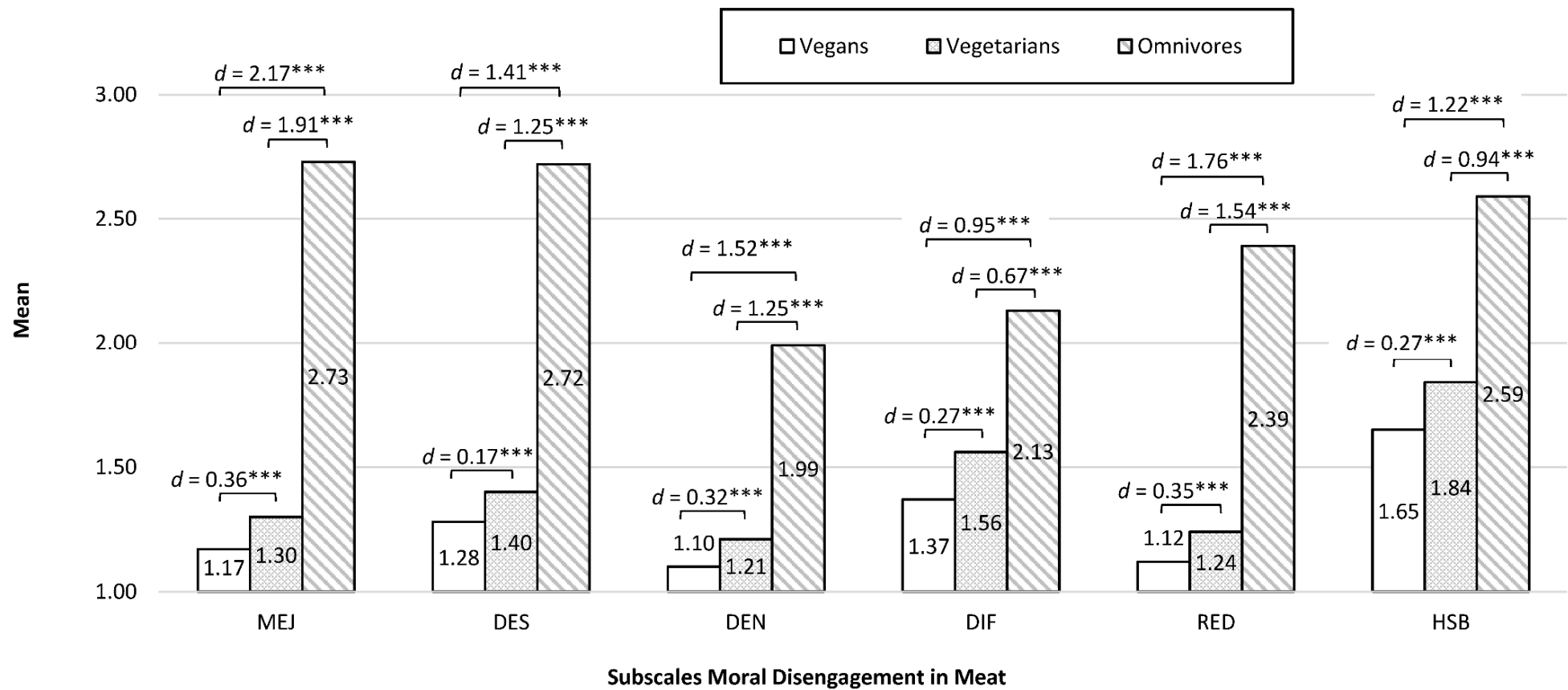


Figure 5. Means and effect sizes of the MDMQ subscales in women. *Note:* MDMQ = Moral Disengagement in Meat Questionnaire, MEJ = means–ends justification, DES = desensitization, DEN = denial of negative consequences, DIF = diffused responsibility, RED = reduced perceived choice, and HSB = human supremacy beliefs. *** $p < 0.001$.

Table 9. Descriptive statistics for HSB by diet and motives.

Diet	Variable	Motives					
		Animal-Related ^a			Health and/or Environmental but Not Animal-Related ^b		
		<i>M</i>	<i>SD</i>	<i>Mdn</i>	<i>M</i>	<i>SD</i>	<i>Mdn</i>
Vegan	HSB	1.61	0.60	1.50	2.30	0.91	2.17
Vegetarian	HSB	1.75	0.65	1.67	2.42	0.79	2.33

Note: HSB = human supremacy beliefs. ^a *n* = 2239 (1727 vegans, 512 vegetarians). ^b *n* = 257 (181 vegans, 76 vegetarians).

5. Discussion

The negative consequences of meat consumption are becoming more and more undeniable. Not only the animals slaughtered for human consumption but also humans themselves are affected, as meat consumption has proven negative effects on human health and the environment. Factory farming is a breeding ground for zoonotic diseases [52,53] and a major contributor to antibiotic resistance [54]. Animal husbandry also drives climate change by accounting for 44% of anthropogenic GHGE [55]. These negative effects have created a need to scrutinize meat consumption from a psychological perspective. It is crucial to understand how the cognitive dissonance resulting from the meat paradox is resolved and why some people decide to stop consuming meat while others do not. In addition, it is important to examine whether people with different diets differ in their gender-role self-concept, as meat continues to be associated with masculinity [17]. Hence, masculinity could be one reason why men tend to eat more meat and are less likely to pursue plant-based diets than women. Moreover, there is a lack of scientific research on the psychological differences between vegans and vegetarians and the role of different motives for following a specific diet.

5.1. Summary and Interpretation

Our study revealed that the G-SC is associated with the extent of moral disengagement from meat. Femininity correlates positively and masculinity correlates negatively with moral disengagement from meat, which is not surprising given the research on this topic to date. However, the associations with positive femininity and negative masculinity are significantly stronger than those with negative femininity and positive masculinity. This indicates that being emotional, empathic and sensitive (positive femininity) but not being anxious, disoriented, or naïve (negative femininity), and being arrogant, harsh, and inconsiderate (negative masculinity) but not being logical, analytical or solution focused (positive masculinity) is related to using moral disengagement mechanisms to justify and maintain meat consumption despite the cognitive dissonance arising from the meat paradox. This finding emphasizes the importance of considering positive and negative facets of the G-SC in the context of moral disengagement from meat.

The first aim of this study was to investigate whether and how vegans, vegetarians, and omnivores differ in their G-SC. When examining the G-SC of individuals with different diets, we found that vegans and omnivores differ significantly in their negative masculinity, positive femininity, and negative femininity, but not their positive masculinity. Vegans use more positive and negative feminine attributes to describe themselves, while also using fewer negative masculine ones. Vegans and vegetarians differ only in their positive masculinity, with vegetarians scoring significantly lower than vegans. Comparing vegetarians and omnivores, vegetarians scored lower on masculinity and higher on femininity in terms of both the positive and negative aspects. However, the effect sizes for the differences between the three diets were all small or negligible. When including gender, we found that male vegans did not use fewer positive masculine attributes (e.g., rational) to describe themselves than male omnivores. This is interesting, as male vegans are often perceived as less masculine by others, e.g., [21]. Mycek [43] found that male veg*ns use rationality to

justify their diet as a way to maintain their masculine identity. Surprisingly, in our study, we found differences in positive masculinity between male vegans and vegetarians, with male vegetarians scoring significantly lower on positive masculinity than male vegans and male omnivores. A reason for this might be that vegetarians identify less with their diet than vegans [10], and therefore do not feel the urge to defend their diet choice with rationality. Additionally, while a vegan diet is perceived as violating masculine norms, this is not the case for a vegetarian diet [21]. Our study was the first to differentiate between positive and negative aspects of femininity and masculinity as they relate to meat consumption. We discovered a different pattern for negative masculinity than for positive masculinity: male veg*ns ascribed fewer negative masculine attributes to themselves than male omnivores, but there were no significant differences between male vegans and male vegetarians. This indicates that male vegans and male vegetarians internalize negative masculine attributes like being harsh less than male omnivores, as such attributes might contradict the values of these diets. As expected, male veg*ns also used significantly more positive feminine attributes (e.g., emotional) and more negative feminine (e.g., anxious) attributes to describe themselves than male omnivores. These results correspond with the finding by Greenebaum and Dexter [27] that male vegans embrace feminine values like compassion and empathy for animals. In addition, male omnivores who feel the urge to prove their masculinity by consuming meat might be hesitant to use stereotypically feminine attributes to describe themselves. However, most of the effect sizes between men with different diets were small, except for the medium-sized difference between male vegans and male vegetarians with regard to positive masculinity. Of the two significant differences between women with different diets, only the difference between female vegans and female omnivores for positive masculinity was small rather than trivial. The reason why female vegans ascribe more positive masculine attributes to themselves than female vegetarians and omnivores might be that veganism is perceived as solution-focused, rational, and practical by all vegans, not just men. However, women do not feel the urge to prove their masculinity [21], which could be the reason for the small effect size. The differences between female vegans and female vegetarians might be due to the same proposed explanation as in men.

The second aim of the present study was to investigate differences in moral disengagement from meat and human supremacy beliefs between men and women with different diets. As expected, the men scored higher than the women on all of the subscales, including human supremacy beliefs. However, as already mentioned, the effect sizes were small and even trivial for some subscales. In line with previous studies, e.g., [35], the results showed greater moral disengagement from meat and human supremacy beliefs among omnivores than veg*ns. When comparing vegans to vegetarians, as hypothesized, there was no significant difference among men. Among women, vegans scored significantly lower on moral disengagement than vegetarians. As both vegans and vegetarians already eschew all kinds of meat [7], and given that nearly all the statements referred to meat consumption, it was not expected that they would differ in most of the moral disengagement mechanisms. They were only expected to differ in their endorsement of human supremacy beliefs. However, the effect sizes of the differences between female vegans and female vegetarians were all small, except for desensitization, where the effect was trivial. The fact that there was no significant difference between male vegans and vegetarians is due to the smaller sample of men, as the mean values are almost the same in men and women. Nevertheless, the small effect sizes in women indicate that the lower endorsement of human supremacy beliefs leads people to follow a plant-based diet but not necessarily a vegan diet. Vegetarians might exhibit greater moral disengagement from animal products apart from meat. They might use the same moral disengagement mechanisms as omnivores to justify their specific diet. Instead of applying them to the meat context, they use them to justify the consumption of other animal products. However, further research is needed to conclude this matter. In addition, our results are culture specific. Future studies should consider that food-related perceptions as well as gender-specific characteristics can vary based on cultural settings [56,57]. Furthermore, the decision for a

diet is influenced by various psychological variables, not all of which could be taken into account in this study. We focused on moral disengagement, human supremacy beliefs and G-SC. As can be seen from the explained variance, these factors do not fully clarify how the decision for a diet originates. Future research should focus more on what the subjective meaning of meat-eating is. Moreover, the questions of how food-related information is processed, and which subjective cost–benefit evaluation takes place in deciding to form and maintain eating habits definitely require further examination. The third aim of this study was to examine whether different motives for veganism and vegetarianism are connected to the endorsement of human supremacy beliefs. Our results confirm that not only diet but also (and mainly) the motives for a specific diet are responsible for differences in the endorsement of human supremacy beliefs among veg*ns. Veg*ns with animal-related motives had lower human supremacy beliefs, in line with the hypothesis stated above. This is important, as most previous studies comparing ethical veg*ns and health veg*ns only included a person’s main motive for their diet in the analysis, e.g., [14], and as far as we know, studies on human supremacy beliefs have not taken motives into account at all. However, this finding leads to another question: Why do vegetarians with animal-related motives still consume animal products other than meat, even though their endorsement of human supremacy beliefs is only slightly different from that of vegans with the same motives? A possible explanation might be that vegetarians are simply unaware that they still contribute to harming animals through other forms of consumption. Future research should investigate this animal product paradox among vegetarians in addition to the meat paradox among omnivores.

5.2. Practical Implications

The findings of this study have important practical implications. The results suggest that male vegans do not use significantly fewer positive masculine attributes to describe themselves than male omnivores. These findings do not match with the perceived masculinity of vegans by pescatarians and omnivores [21]. This might be interesting in terms of consumer and market research. When designing advertisements for vegan products, it is important to present vegan products in a way that also appeals to “masculine” men; for example, we should present vegan meat alternatives as the only rational decision. One could, for example, present evidence-based statistics showing that following a plant-based diet is in fact solution-focused and the most rational course of action regarding one’s dietary choice. Additionally, it might be helpful to use words like “logical” and “practical” in the commercial, or to let vegan athletes show that one does not have to eat meat to be strong. An example, not for a commercial but a movie, is ‘The Game Changers’ [58]. In this movie, athletes talk about their experiences and the benefits of following a plant-based diet. After frequently seeing such commercials in the media, male omnivores might not feel like their masculinity is being threatened by choosing the vegan or vegetarian option instead of a meat dish (see [16] for similar suggestions). The same strategy, namely framing vegan products and plant-based diets as masculine, might also help environmental organizations and animal rights activists. As a result, more men might reduce their meat consumption or even follow a plant-based diet.

For animal rights activists, it might also be useful to know that the motives for a diet play an important role in the endorsement of human supremacy beliefs. When talking to a vegetarian, they could first ask for the motives for following this diet. If the person has animal-related motives, it might be sufficient to inform the person about the circumstances in the dairy, egg, and honey industry, and show some footage. Some people, however, might already have this knowledge and use moral disengagement mechanisms to avoid changing their habits. For vegetarians, it might be more useful to concentrate on moral disengagement in animal products overall and not only in meat. In this case, it might be helpful to find out if and which moral disengagement mechanisms are used, and to try to let the person critically reflect on these justifications while giving them food for thought. This applies to omnivores as well. If a person does not have any animal-related motives, it

might be necessary to talk about human supremacy beliefs first and then establish what keeps them from following a more plant-based diet.

The negative effects of meat consumption on the environment and public health are increasingly discussed in the media and by experts. Because of this, it is very likely that sooner or later the health and the education sector will have to deal with this topic. Because a higher extent of moral disengagement is associated with lower willingness to reduce meat consumption [31], it is important to know how to diminish moral disengagement. To the best of our knowledge, there are no studies on how to do this in a meat context. However, Bustamante and Chaux [59] found that an intervention consisting of critical thinking and social regulation strategies could reduce moral disengagement towards stealing in a pedagogical context. Therefore, it might be possible to adapt this intervention and use it to diminish moral disengagement in meat. Another important measure could be educating young people about the fact that masculinity is just a construct created by humans. Gender norms and stereotypes can cause men to feel pressured to live up to gender expectations to appear masculine. For example, according to Rothgerber [16], the consumption of meat is linked to the desire to conform with gender expectations. Thus, when eating meat, they feel like “real” men [16]. Therefore, it is necessary to address this in the education sector and thereby bring about a dissolution of these stereotypes, norms, and expectations. One example of combatting gender stereotypes in the classroom is the REFLECT program [60], which fosters teachers’ competence in promoting gender equality in education.

5.3. Limitations and Further Research

Although the present study yielded important results, some limitations should also be mentioned. Firstly, the large sample consists of people who participated voluntarily in the online survey. Therefore, the sample is not representative of the overall population. Additionally, only 35 male vegetarians took part in the study. One of the reasons for this small sample in comparison to the other diets was the exclusion of self-identified male vegetarians who occasionally ate meat. Moreover, the response rate of women to surveys is generally higher than that of men [61,62]. Further research should focus on gathering a larger sample size of male participants. Nevertheless, our study showed that researchers should not rely on simple self-identification when examining diets; they should also collect information on the frequency of animal product consumption.

Furthermore, it must be highlighted that this study focused solely on dietary patterns. Thus, when talking about vegans we refer only to their eating habits, rather than seeing veganism as a lifestyle. Therefore, we did not ask whether participants attend zoos, use products such as leather, or refrain from using products that have been tested on animals. It is important to gain further insight into this scarcely researched aspect of veganism. However, this might be difficult to achieve, as there is no clear dividing line for some topics. For instance, some vegans feed meat to their companion animals, while others do not [63,64]. Hence, it is necessary to define a set of criteria a priori. A potentially worthwhile direction for future research might then be the relationship between veganism as a lifestyle, motives for following this diet, and dietary identity.

Another limitation is the fact that the MDMQ is designed for omnivores. Therefore, some statements imply that the person consumes meat. The feedback received showed that a few people did not know how to correctly answer these statements, and as a result chose the middle option. It might be possible to make small adaptations to the scale for veg*ns, or to add a short explanation on how to answer such statements in the beginning. A promising direction for further research is to examine moral disengagement not only in the context of meat consumption but concerning animal products overall. This would allow deeper insight into the differences between vegans and vegetarians.

6. Conclusions

As the psychological processes behind the adoption of different diets are a relatively new field, there remains a lack of research and a great deal of uncertainty surrounding this topic. In particular, differences between vegans and vegetarians, the role of gender, and motives for plant-based diets have hardly been examined. This work offers new insight into the psychological differences between vegans, vegetarians, and omnivores. We focused on their G-SC and the extent of their moral disengagement from meat, while also examining the role of different motives for plant-based diets. The results were partly in accordance with our hypotheses, yet at other times completely contrary to our expectations. For example, as hypothesized, male veg*ns used more positive feminine attributes than male omnivores to describe themselves. However, while male vegetarians additionally ascribed fewer positive masculine attributes to themselves, there was no significant difference between male vegans and male omnivores in these attributes. Another interesting finding was that the endorsement of human supremacy beliefs in veg*ns can inter alia be attributed to different motives for following this diet. In order to better understand the differences between vegans and vegetarians, it would be important to examine moral disengagement in the context of animal products overall, not just meat. Further studies will be needed in order to disentangle this completely. Nevertheless, this study already provides practical implications for market research, animal rights activists, and the health and education sectors. These implications make it possible to challenge the stereotype that “real” men eat meat. Moreover, education about plant-based diets could help people critically reflect on their eating habits and reduce their meat consumption. Hence, education could be key to providing a better life for both humans and animals.

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