

Two Surveys to Explore Associations Between Spontaneous Anomalous Experiences, and Fasting and Vegetarianism

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Abstract: Contemporary and historical accounts from spiritual traditions and elsewhere appear to suggest a role for fasting and vegetarianism in spiritual development and access to ‘supernormal powers.’ We recently interviewed psi adepts who used fasting and vegetarianism to support their work with psi and reported findings consistent with such accounts. However, it was not clear whether these associations apply only to particular elite practitioners or whether they might also apply to broader populations. We therefore proposed to conduct online questionnaire-based surveys of two separate samples recruited through Facebook groups consisting of vegans and vegetarians (N = 804) and those who practice fasting (N = 154) to see if these associations could be confirmed. Working with a vegan/vegetarian group allowed us to compare those who fast with those who do not; similarly, the fasting sample allowed us to compare vegans and vegetarians with those who eat meat. Preliminary findings indicate that significantly higher levels of self-reported anomalous experiences and abilities are reported by those who fast, engage in longer fasts, practice vegan or vegetarian over meat-eating diets, and vegan over vegetarian diets. The implications of these findings are discussed.

Keywords: *anomalous experiences, psi, spirituality, diet, food, vegetarian, fasting, vegan*

Accounts of miraculous events and supernormal powers associated with diet and dietary practices, particularly fasting and veg*anism,¹ are found across many diverse spiritual traditions. For example, the near ubiquity of fasting in shamanic practice that involves the cultivation of apparent supernormal powers (Winkelman, 1990) and the use of veg*anism by many within Hinduism, sometimes specifically for the attainment of supernormal powers (known in the yogic traditions as siddhis) (Lamb, 2011). Some authors have also related these practices to spirituality and psi. For example, Helena Blavatsky (1831-1891), co-founder of the Theosophical Society, suggested that eating meat hinders the attainment of ‘occult

¹ We employ the following definitions: fasting is intentional time-limited abstention from all or some food (Encyclopaedia Britannica, 2023a). Vegetarianism is abstention from eating meat, fish, and poultry, and sometimes additionally abstention from eggs and dairy, in which case it is more specifically known as a vegan diet (Encyclopaedia Britannica, 2023b). This formal definition of vegetarianism that includes all extents of consumption of animal products is a potential source of confusion. In popular parlance, the term ‘vegetarian’ is increasingly used to describe those who, while abstaining from eating meat, specifically *include* eggs and/or dairy products in their diet and is therefore used to distinguish the practice from veganism (e.g., Vegetarian Society, n.d.). While more precise terms for such vegetarians exist, namely lacto-ovo-vegetarian and lacto-vegetarian, such terms are unwieldy. Therefore, we have chosen in this paper to adopt the increasingly widespread practice (for example by Krizanova, 2021), of using the term ‘veg*an’ and its derivations to include all those who abstain from eating animal flesh, whether or not they eat eggs and/or dairy; ‘vegetarian’ in its popular usage to mean those whose diet excludes meat but includes eggs and/or dairy; and ‘vegan’ to mean those whose diet excludes all animal products.

powers' (Blavatsky, 1889); the psychical researcher Hereward Carrington (1880-1958) extolled the benefits of fasting and veganism for health-giving properties and the cultivation of 'psychic powers' (Carrington, 1908, 1920); and Rudolf Steiner (1861-1925) suggested that fasting and veg*anism enhances the process of spiritual development (Steiner, 1905). We provide a more substantial review of this literature in a previous publication (Daw et al., 2023).

Despite this widespread literature, there has, so far, been little empirical research into the potential effects of food on psi functioning. As an initial step in seeking to understand the phenomenology of this potential relationship, we conducted a study to explore how seven individuals who practice psi in a professional capacity utilized fasting and veg*anism to support their practice (Daw et al., 2023). Our participants self-identified as adept in mediumship (apparent communication with deceased persons), channeling (apparent communication with other incorporeal entities), out-of-body experiences, psychokinesis, and/or other manifestations of purported psi. We found that participants reported using fasting to facilitate psi because of perceived purification effects. They reported these benefits from fasting immediately prior to conducting psi-related sessions as well as on an ongoing basis in order to build a foundation from which to practice psi. Participants suggested that their veg*an diet was perceived to benefit psi because it improves mental clarity, is healthier, and because food is thought to have subtle energies that either hinder or support psi.

Objective

Given that the associations found in our previous study were obtained for a purposive sample of elite practitioners (Daw et al., 2023), our objective for this current study is to explore through the use of a survey instrument whether similar effects might be reported in larger samples of those engaged in fasting and veg*anism, drawn from a broader population who have not been selected for any particular aptitude for psi. In order to control for factors other than the specific dietary practice under investigation, our sampling strategy focused on two separate purposive samples: one sample consisted of veg*ans, which allowed us to compare those who fast with those who do not while controlling for the effects of veg*anism per se; the other sample consisted of those who engage in fasting, in order to compare veg*ans with those who eat meat, while controlling for the effects of fasting. In order to avoid a disjointed presentation of results, our principal means of structuring our paper is according to dietary practice rather than by sample.

Hypotheses and Exploratory Questions

The following hypotheses were pre-specified. The sample in which each hypothesis (H) and exploratory question (e) is explored is marked with a 'V' (for our veg*an sample) or 'F' (for our fasting sample).

Hypotheses and exploratory questions related to fasting are presented first. There was no clear indication from our psi adept study (Daw et al., 2023) as to which particular patterns of fasting might most affect psi, hence the use of exploratory questions addressing these matters rather than formal hypotheses. These exploratory questions were formulated in the light of a content analysis of responses to open-ended survey items.

H1: Respondents who engage in fasting will be more likely to report anomalous experiences and abilities than those who do not fast. V

e1: Does how long respondents have practiced fasting affect the extent of reported anomalous experiences and abilities? F

e2: Does the maximum duration of respondents' fasts affect the extent of reported anomalous experiences and abilities? F

e3: Does consuming limited amounts of food during fasting affect the extent of reported anomalous experiences and abilities? F

e4: Does consuming liquids during a fast affect the extent of reported anomalous experiences and abilities? F

Our hypotheses related to veg*anism are:

H2: Respondents with a veg*an diet will be more likely to report anomalous experiences and abilities than those who eat meat. F

H3: Respondents with a vegan diet will be more likely to report anomalous experiences and abilities than those with a vegetarian diet. V

Method

Participants

The veg*an survey recruited respondents ($N = 804$) via 13 Facebook special-interest groups that were focused on veg*anism or specifically on veganism (a list of these groups is available from the corresponding author). The ages of participants ranged from 18 to 80 ($M = 40$, $SD = 14$). In terms of gender, 638 were female (79%), 122 male (15%), 32 'other' (4%), and 12 gave no response (1.5%). Regarding nationality, 629 were British (78%), 64 were non-UK European (8%), 50 were from the US or Canada (6%), and 61 were from elsewhere (8%). Regarding highest educational qualification, 328 had a first degree (41%) and 216 had a postgraduate degree (27%) .

The fasting survey recruited respondents ($N = 154$) via 13 special-interest Facebook groups that were focused on fasting (a list of these groups is also available from the corresponding author). Ages of participants ranged from 18 to 102 ($M = 47$, $SD = 13$). In terms of gender, 122 were female (79%), 31 male (20%), and one 'other' (0.6%). Regarding nationality, 47 were British (31%), 39 were from the US or Canada (25%), 22 were non-UK European (14%), and 46 were from elsewhere (30%). In terms of highest educational qualification, 50 had a first degree (33%) and 55 had a postgraduate degree (36%)

Instruments/Measures

The surveys were hosted on JISC Online Surveys.² The same items were used for both surveys; however, items related to fasting were presented first for the fasting sample, and items related to dietary choic-

² JISC Online Surveys is available at: <https://www.onlinesurveys.ac.uk/>

es were presented first for the veg*an sample. A copy of the questionnaire is available as supplementary material at the link provided in the *Acknowledgements* section.

Fasting

Eleven items concerned fasting. The first item asked whether respondents currently engage in fasting and included our definition of fasting as intentional time-limited abstention from all or some food. For our fasting sample, the routing logic in our online questionnaire automatically prevented those who answered 'no' to this question from taking part in the rest of the survey. Therefore, for this sample, all responses that were submitted met our qualification criteria that participants must currently be engaging in fasting, and there was no need to remove respondents before analysis. Other items involved questions about specific patterns of fasting and whether respondents attributed any particular emotional, psychological, or spiritual effects to fasting.

Dietary Choices

Nine items concerned dietary choices. The first item consisted of seven possible responses to the question 'Which of the following best describes your diet?', namely: vegan, lacto-vegetarian, lacto-ovo vegetarian, pesco-vegetarian, semi-vegetarian (a person who does not consume red meat), occasional omnivore, and omnivore, along with definitions of these terms, reusing an original item constructed by Forestell et al. (2012). As well as being the subject of analysis, this item was also used to exclude the 38 respondents to our veg*an survey who did not meet our qualification criterion of being veg*an, i.e., those who did not respond to this item with either vegan, lacto-vegetarian, or lacto-ovo vegetarian. The second item was used to determine how long the respondent had been veg*an.

Other items concerned reason(s) for adopting a veg*an diet, whether they favored particular foods in their diet, whether they attributed any particular emotional, psychological, or spiritual effects to their diet, to what extent they followed a whole-food diet, their consumption of added sugars, and their consumption of alcohol.

Anomalous Experiences Inventory

We employed the Anomalous Experiences Inventory (AEI), which incorporates items related to psi, survival after death, mystical experiences or correlates of mystical experiences as described, for example, by Taylor and Egeto-Szabo (2017), and those related to 'high strangeness' (Hunter, 2021), such as witchcraft, and encounters with UFOs. The measure consists of five subscales, anomalous (or paranormal) experiences, anomalous abilities, anomalous beliefs, fear of the anomalous, and drug use, of which we deployed only two in accordance with our aims for this study, those related to anomalous experiences and anomalous abilities. After the removal of an item in the original anomalous experiences subscale because it is substantially the same as another ('I often have psychic experiences', which is similar to 'I have had a psychic experience'), these subscales consist of 28 and 16 items respectively. An example psi-related item from the experience subscale is 'I seem to become aware of events before they happen' (item P3, pertaining to precognition), and from the ability subscale, 'I am able to move or influence objects with the force of my mind alone' (item P30, pertaining to psychokinesis). These subscales have been assessed

as having good convergent validity in that they were found to be significantly correlated with other paranormal measures and with selected personality measures, and good reliability with KR20 values for the experience and ability subscales of .85 and .71, respectively (Gallagher et al., 1994). The AEI also has the advantage of being well-established through its deployment in several previous research studies (e.g., Rabeyron & Watt, 2010; Simmonds-Moore, 2009; Wahbeh et al., 2018).

These studies calculated AEI scores for each respondent by summing the number of yes responses within each subscale. We followed the same approach, which provides ranges for anomalous experience and ability scores of 0-28 and 0-16 respectively. However, because we used a Likert-type scale with response options of 'never', 'once', 'rarely', 'sometimes', and 'often', our procedure additionally involved converting responses into a binary yes/no response, with 'never' translating to 'no', and all other responses translating to 'yes'. Space precludes analysis of the Likert-type dimension in this paper. Most of our analysis involves comparing mean AEI experience and ability scores against the dietary variable pertinent to the hypothesis in question.

Demographics

Four items determined respondents' age, gender, highest educational qualification, and nationality.

Procedure

We posted a link to the relevant survey on the 26 Facebook groups that focused on either veg*anism or fasting. We also posted up to three reminders to these groups. The survey was open between 2 November and 12 December 2021.

The initial pages of the survey described the purpose of the study, along with the qualification criteria, and respondents' rights regarding withdrawal, anonymity, and confidentiality. Respondents were asked whether they consented to these stipulations. If they did, then they were presented with the rest of the survey. If they did not consent, the logic of the survey took them to a page thanking them for their interest, and they were unable to complete any further items. The survey culminated in a submission button the pressing of which meant that their data could not be withdrawn because data were provided anonymously and responses, therefore, could not be associated with individuals (see Ethical Considerations section).

Ethical Considerations

Ethical approval for this study was provided by the University of Northampton's Research Ethics Committee on 14 October 2021 (ref.: ETH2021-0128). Before posting the survey to any Facebook group, we secured explicit permission to do so from one of the administrators for that group. If such permission was not granted, then this Facebook group was not used to recruit participants. Qualification criteria for the study were that respondents should be veg*an (for the veg*an sample), or currently engaging in fasting (for the fasting sample), and over 16, the age suggested by the *BPS Code of Human Research Ethics* (Oates, 2021, p. 16) as acceptable for sole consent. Responses from anyone completing the survey who did not meet these criteria were excluded from analyses. Engagement with the research by respondents was voluntary and anonymous and respondents could choose not to respond to any question or item except the

item regarding consent. This consent item asked respondents to confirm their agreement with a series of statements that included indications that they understood the nature of the survey, that their participation was voluntary, that they were over 16, that they could withdraw from the survey only when answering the questions but would be unable to withdraw once they had submitted their responses, that their data would remain anonymous, and that this data could be made available for future research.

Other Considerations

Our interaction with participants (on Facebook) was conducted entirely by the first author and was friendly and informal.

Our a priori beliefs that the hypotheses in our study would be supported was, on a five-point scale, 3 for the first and third authors, and 4 for the second author (where 5 is strong belief, 4 is moderate belief, 3 is neutral, 2 is moderate non-belief, and 1 is strong non-belief).

Initial Data Processing

For the dietary-related and demographic measures, missing data resulting from a lack of response could not be reliably inferred from other responses and so these individual cases were excluded from any statistical analysis involving the pertinent variable, an approach known as ‘pairwise deletion’ (Pigott, 2001, p. 363).

For the veg*an survey, respondents who missed at least one item from the AEI experience and AEI ability subscales constituted 8% and 3.5% of the sample respectively; for the fasting survey, these figures were 8% and 4%. For most of these cases, we adopted an approach known as ‘multiple imputation’ (see Newman, 2014, and Sainani, 2015), assigning the respondent’s mean value for the items that had been completed for the pertinent subscale to the items that were missing. These values were then included in the calculation of AEI subscale scores for these respondents. We excluded the less than 1% of respondents who missed over half of the items in each of the subscales – a listwise deletion.

Statistical Tests

Table 1 shows the results of Shapiro-Wilk tests of normality for our samples alongside measures of kurtosis and skewness. In all cases, Shapiro-Wilk test results indicate a significant departure from normality; in addition, in some cases, our results for kurtosis and skewness exceed or approach values considered problematic, i.e., skewness value > 2.1 , excess kurtosis > 4.1 (Kim, 2013). Some commentators have argued that for sufficiently large populations (typically $N \geq 20$), such violations of normality do not negate the use of parametric tests (e.g., Kéry & Hatfield, 2003; Van den Berg, 2022). Nevertheless, we felt that the nature of our data indicated the use of nonparametric tests in order to instill confidence in our findings. While we found that both parametric and nonparametric tests led to the same conclusions for hypotheses in terms of significance-testing (although not always to the same levels of significance), effect sizes from parametric tests appeared in some instances to be inflated compared with corresponding effect sizes from nonparametric tests. Therefore, the analysis presented here is based on nonparametric tests, namely Mann-Whitney, Kruskal-Wallis, and Spearman’s Rank Correlation.

Effect sizes are reported using r for Mann-Whitney and Kruskal-Wallis tests (calculated using the formula provided by Fritz et al., 2012, p. 12), and r_s for Spearman's Rank Correlation tests, along with 95% confidence intervals (CIs) for these effect sizes (calculated using the *VassarStats* website [Lowry, 2023]). Although our hypotheses are directional, all analyses are conservatively set as two-tailed. While nonparametric tests do not compare means and standard deviations, we nevertheless provide these statistics for information.

Covariance Analyses

As well as items related to demographics, our survey also included items related to the consumption of whole-foods, added sugars, and alcohol (the primary results of which we are not presenting in this paper, as stated in the section *Instruments/Measures*). It is possible that any apparent finding that arises from hypothesis-testing may be due to a co-relationship with these demographic or dietary variables rather than an association with fasting or veg*an diets.

In order to investigate whether findings within our hypotheses and exploratory questions were maintained in the presence of any of these demographic and/or dietary co-relationships, we conducted covariance analyses for each of these variables. Because our samples are not normally distributed, we performed our covariance analyses using a non-parametric ANCOVA in the form of Quade's test (Quade, 1967) (Appendix A, Table A1).

The findings reported here for all but three of the hypotheses and exploratory questions were maintained when demographic and dietary covariates were taken into account. For one of these analyses (hypothesis H3 testing for the age covariate), our initial result was slightly above significance; however, this test involved nine fewer cases than our main hypothesis test because of missing data. Therefore, we assigned (imputed) the sample's mean age for these participants and reran the test after which this hypothesis's main finding was maintained. For the other exceptions (hypothesis H2 and exploratory question e1), a number of covariance analyses resulted in p-values slightly above significance level meaning that our unadjusted findings were not maintained. Except for our reporting for these instances, all other findings are reported without reference to the covariance analyses.

Results

Overall Sample

Table 1 shows AEI experience and ability scores for the veg*an and fasting samples as a whole. These scores are provided as context for results described below involving specific variables, as well as offering an opportunity for comparison with other studies that also employed the AEI (see Discussion).

Table 1.*AEI Experience and Ability Scores*

Subscale	Sample	Range	n	M (SD)	W	Kurtosis	Skewness
AEI experiences	Veg*an	0-28	799	7.2 (5.6)	.91, $p < .001$	0.72	1.04
AEI abilities		0-16	798	1.9 (2.8)	.72, $p < .001$	4.50	2.06
AEI experiences	Fasting	0-28	153	7.5 (6.0)	.93, $p < .001$	0.25	0.81
AEI abilities		0-16	153	2.2 (3.3)	.72, $p < .001$	3.14	1.88

Note. W = Shapiro-Wilk test of normality

Demographic Variables

Table 2 shows AEI scores for the veg*an sample in terms of gender and nationality demonstrating a highly significant difference for AEI experience scores by gender, a suggestive difference for AEI ability scores by gender, and a significant difference for AEI experience and ability scores by nationality. There was also a positive correlation between increasing age and both AEI experience scores, $r_s(788) = .07$, 95% CI [.001, .14], $p = .041$, and AEI ability scores, $r_s(787) = .12$, [.05, .19], $p < .001$. There was a negative correlation between highest educational qualification and AEI experience scores, $r_s(797) = -.08$, [-.15, -.01], $p = .030$, but no correlation with AEI ability scores, $r_s(796) = -.04$, [-.11, .03], $p = .290$.

Table 2 also shows AEI scores for the fasting sample demonstrating that there was no significant difference in the AEI mean scores by gender or nationality for this sample. There was also no correlation between increasing age and AEI experience scores, $r_s(150) = .12$, 95% CI [-.04, .27], $p = .150$, nor AEI ability scores, $r_s(150) = .49$, [.36, .60], $p = .552$.

Table 2.*AEI Experience and Ability Scores by Gender and Nationality*

Demographic Characteristic	Sample	AEI Experience					AEI Ability				
		n	M (SD)	Mean Rank	χ^2 p	r 95% CI	n	M (SD)	Mean Rank	χ^2 p	r 95% CI
Female ¹	Veg*an	634	7.3 (5.5)	405	13.12 .001**	.19 [.12, .26]	633	2.0 (2.8)	399	5.45 .065	-
Male		121	5.8 (5.5)	327			121	1.5 (2.4)	354		
Other		32	8.6 (6.9)	437			32	2.5 (3.5)	432		

UK ²		626	6.9 (5.4)	390			625	1.8 (2.6)	390		
US & Canada	Veg*an	50	8.7 (6.7)	447	11.23 .011*	.20 [.13, .27]	50	2.9 (3.3)	472	7.92 .048*	.15 [.08, .22]
European		62	7.0 (6.0)	384			62	2.1 (2.9)	398		
Other		61	9.2 (6.3)	482			61	2.4 (3.6)	434		
Female	Fasting	122	7.8 (6.1)	79	1.83 .401	-	122	2.3 (3.3)	78	1.40 .497	-
Male		30	6.1 (5.4)	67			30	2.0 (3.1)	73		
Other		1	7.0 (-)	82			1	0 (-)	36		
UK	Fasting	47	6.5 (6.3)	68	3.12 .373	-	47	2.1 (3.4)	71	2.82 .420	-
US & Canada		39	7.7 (6.0)	79			39	2.6 (3.3)	86		
European		22	7.9 (5.1)	83			22	2.3 (3.2)	79		
Other		45	8.1 (6.2)	82			45	1.9 (3.2)	74		

Note. X^2 = Kruskal-Wallis test statistic. r = highest effect size from post hoc Mann-Whitney tests, reported for significant results only. 95% CI = confidence interval for r . Sub-note 1 = for AEI Experience, there was a significant difference between Female and Male (Mann-Whitney U = 30766, p < .001) and between Male and Other (U = 1415, p = .019); sub-note 2 = for AEI Experience, there were significant differences between UK and Other (U = 14655, p = .003) and between European and Other (U = 1450, p = .026), and for AEI Ability, there was a significant difference between UK and U.S. & Canada (U = 12428, p = .012). * = significant at p < .05. ** = significant at p < .01.

H1 – Fasting

Hypothesis H1 states that ‘respondents who engage in fasting will be more likely to report anomalous experiences and abilities than those who do not fast’. Item F1 of our questionnaire posed the question ‘Do you currently engage in fasting? In other words, do you voluntarily abstain from food and/or liquids for periods longer than between regular mealtimes?’ Seventeen percent of the veg*an sample responded yes to this item, and this group reported higher AEI experience and AEI ability scores than those who do not fast, each to a highly significant degree (Table 3).

The hypothesis that those who engage in fasting will be more likely to report anomalous experiences and abilities than those who do not fast is confirmed.

Table 3.*AEI Experience and Ability Scores Related to Fasting*

Dietary Subsample	Sample	n	AEI Experience				n	AEI Ability			
			M (SD)	Mean Rank	U p	r 95% CI		M (SD)	Mean Rank	U p	r 95% CI
Fasters	Veg*an	132	9.2 (6.5)	475	34146 < .001**	.14 [.07, .21]	132	3.1 (3.8)	478	33608 < .001**	.16 [.09, .23]
Non-fasters		667	6.8 (5.4)	385			666	1.7 (2.5)	384		
No food while fasting	Fasting	130	7.5 (6.0)	70	563 .850	0.02 [-.15, .19]	130	2.3 (3.3)	71	439 .184	.11 [-.06, .27]
Some food while fasting		9	6.7 (4.6)	68			9	0.9 (1.7)	54		
No drink while fasting	Fasting	17	9.0 (6.0)	89	974 .185	.11 [-.05, .27]	17	3.5 (4.1)	92	932 .098	.13 [-.03, .28]
Some drink while fasting		134	7.2 (5.8)	75			134	1.9 (3.0)	74		

Note. U = test statistic for Mann-Whitney. r = effect size. CI = confidence interval for r. * = significant at $p < .05$. ** = significant at $p < .01$.

e1 – History Practicing Fasting and Anomalous Experiences

Item F7 asked respondents how long they have been practicing fasting in the form of the question ‘For how long have you been fasting like this [i.e., in terms of responses to items regarding the exact nature of their practice]? If you are unsure of months, please round up to the nearest year’. Responses to this item in the fasting sample ranged from one month to 35 years ($M = 3.6$ years, $SD = 5.4$). Exploratory question e1 regarding this variable is: ‘Does how long respondents have practiced fasting affect the extent of reported anomalous experiences and abilities?’

There was a significant positive correlation between the length of time practicing fasting and AEI experience in the fasting sample, $r_s(151) = .16$, 95% CI [.001, .32], $p = .042$, but not with AEI ability scores, $r_s(151) = .14$, [-.02, .29], $p = .089$.

However, after testing for covariance with age, nationality, the consumption of whole-foods, and the consumption of added sugars, the association between length of time practicing fasting and AEI expe-

rience was no longer significant (Table A1), indicating that there is no support for finding that those who have been practicing fasting for longer report higher levels of anomalous experiences or abilities.

e2 – Duration of Maximum Fast and Anomalous Experiences

As noted above, exploratory questions related to fasting were formulated through a content analysis of responses to open-ended items within the fasting section of the questionnaire. Item F4 asked ‘How long do you typically fast for?’ While some respondents answered with a single duration, for example, ‘16 hrs’ or ‘3 days’, many responded with a range, for example, ‘anywhere from 36 hours to four and a half days at a time’ or ‘1-9 days’. Using a content analysis, we transformed these responses into a single value representing the duration of the maximum fast reported by that respondent. Hence, the examples above translate to values of 0.7, 3.0, 4.5, and 9.0 days respectively.

Therefore, exploratory question e2 regarding this variable is: ‘Does the maximum duration of fasting affect the extent of reported anomalous experiences and abilities?’ The maximum length of fast of respondents in the fasting sample varied between 16 hours and 60 days with a mean of 4.9 days ($SD = 7.9$).

There were highly significant positive correlations in the fasting sample between fasting duration and AEI experience, $r_s(150) = .24$, 95% CI [.08, .39], $p = .003$, and AEI ability scores, $r_s(150) = .26$, [.10, .40], $p = .001$.

These results indicate that there is support for finding that those who fast for longer periods report higher levels of both anomalous experiences and abilities.

e3 – Consumption of Foods While Fasting

Item F2 asked ‘What food do you consume during your fast, if any?’. A content analysis of this item for the fasting sample revealed that 86% of respondents ($n = 131$) consume no food at all while fasting. Only 6% consume some amounts of food while fasting in the form of: dairy or plant-based milk in teas and coffees ($n = 3$), juices ($n = 1$), vegetables ($n = 1$), or other food ($n = 4$). Nine percent of responses ($n = 14$) were missing or unclear.

Exploratory question e3 regarding this variable is: ‘Does consuming limited amounts of food during fasting affect the extent of reported anomalous experiences and abilities?’ While AEI scores were higher for those who consumed no food at all during fasting compared to those who did consume food, there was no significant relationship (Table 3).

e4 – Consumption of Liquids While Fasting

Item F3 asked ‘Which liquids do you consume during your fast, if any?’ A content analysis of this item revealed that most respondents in the fasting sample (88%, $n = 136$) consume liquids while fasting. These liquids were in the form of caffeine drinks ($n = 86$), water ($n = 28$), salt/electrolytes ($n = 6$), dairy or plant-based milk ($n = 4$), juices ($n = 5$), or other non-caffeine drinks ($n = 7$). One response was unclear. Eleven percent of the sample ($n = 17$) drank nothing, a practice known as ‘dry fasting’.

Exploratory question e4 regarding this variable is: ‘Does consuming liquids during a fast affect the extent of reported anomalous experiences and abilities?’. While those who engage in dry fasting have higher AEI scores than those who consume liquids during a fast, these differences are not significant (Table 3).

H2 – Veg*an and Meat-Eating Diets

Hypothesis H2 states that ‘respondents with a veg*an diet will be more likely to report anomalous experiences and abilities than those who eat meat’. Item D1 of our questionnaire employed an original item constructed by Forestell et al. (2012), namely ‘Which of the following best describes your diet?’ with response options of vegan (those who eat no animal products), lacto-vegetarian (those who eat animal products related to milk but no meat or eggs), lacto-ovo-vegetarian (as for lacto-vegetarian but with the addition of eggs), pesco-vegetarian (those who eat seafood but no other meat), semi-vegetarian (those who eat seafood and white meat but no red meat), occasional omnivore (those who only occasionally eat meat), and omnivore (those who regularly eat meat).

The fasting sample reported a range of different diets related to meat and dairy consumption in their responses to this item, although it was heavily skewed to those who eat meat (those responding with one of the last four options), who constituted almost nine out of 10 of respondents. When response options were collapsed into two groups, categorized by whether or not respondents eat meat, veg*ans (the first three options only) showed significantly higher scores than meat eaters for both AEI experience and ability scores (Table 4).

However, after testing for covariance with the consumption of whole-foods, the association with AEI experience scores became suggestive rather than significant ($p = .074$, Table A1), indicating that there is only tentative support for this part of the hypothesis.

The hypothesis that those who follow a veg*an diet will be more likely to report anomalous experiences and abilities than those who eat meat is confirmed for anomalous abilities but only tentatively confirmed for anomalous experiences.

H3 – Vegan and Vegetarian Diets

Hypothesis H3 states that ‘respondents with a vegan diet will be more likely to report anomalous experiences and abilities than respondents with a vegetarian diet’. Almost four-fifths of the veg*an sample responded to item D1 (described in the preceding section) that their diet was vegan ($n = 633$) against just over a fifth who responded as vegetarian (i.e., lacto-vegetarian or lacto-ovo-vegetarian, $n = 171$).

Those with vegan diets showed both higher AEI experience and higher AEI ability scores than vegetarians. For AEI experience scores, this difference is not significant, but for AEI ability scores, this difference is significant (Table 4).

This hypothesis is confirmed with respect to anomalous abilities but not with respect to anomalous experiences.

Table 4.*AEI Experience and Ability Scores Related to Veg*an Diets and Meat-Eating*

Dietary Sub-sample	Sample	AEI Experience					AEI Ability				
		n	M (SD)	Mean rank	U p	r 95% CI	n	M (SD)	Mean rank	U p	r 95% CI
Veg*an	Fasting	19	10.2 (6.1)	98	868 .025*	.18 [.02, .33]	19	3.6 (3.9)	100	837 .011*	.21 [.05, .36]
Meat-eating		134	7.1 (5.9)	74			134	2.0 (3.1)	74		
Vegan	Veg*an	629	7.3 (5.8)	400	52929 .908	.01 [-.06, .08]	629	2.1 (2.9)	409	46959 .015*	.08 [.01, .15]
Vegetarian		169	6.9 (4.8)	402			169	1.4 (2.1)	363		

Note. Abbreviations are defined in the note for Table 3.

There were no correlations between the duration for which vegetarian respondents have been vegetarian and their AEI experience scores, $r_s(167) = .06$, 95% CI [-.09, .22], $p = .416$, and AEI ability scores $r_s(167) = .03$, [-.13, .18], $p = .712$. However, there were highly significant positive correlations between the duration for which vegan respondents have been vegan and their AEI experience, $r_s(628) = .14$, 95% CI [.06, .22], $p < .001$, and AEI ability scores, $r_s(627) = .14$, [.06, .21], $p < .001$.

Discussion

Overall AEI scores for our veg*an and fasting samples are broadly similar to those reported by others using the same measure. For example, Simmonds-Moore and Roe (2000) found means for their whole samples of 6.9 ($SD = 4.2$) and 1.4 ($SD = 2.1$) for AEI experience and ability, respectively, Rabeyron and Watt (2010) means of 6.2 ($SD = 4.5$) and 1.3 ($SD = 2.1$), and Simmonds-Moore (2009) a mean of 7.5 ($SD = 5.7$) for AEI experience. AEI scores for our fasting sample as a whole are higher than for our veg*an sample, although these are two separate purposive samples and so drawing conclusions from direct comparisons between them is problematic. In particular, the two samples have a marked demographic difference in relation to nationality, since our veg*an sample has a much higher proportion of UK respondents, who appear from our results to report lower AEI scores than respondents in other regions.

Our aims for this study were to explore whether there are associations between dietary practices and self-reported anomalous experiences in two purposive samples of those who engage in fasting and those who follow a veg*an diet, but who have not been selected for adeptness in psi.

In relation to the practice of fasting, Hypothesis H1 was confirmed, with those who fast reporting increased anomalous experiences and abilities compared with those who do not fast. These findings appear to support the recommendation within many spiritual traditions to practice fasting, such as Hinduism, where it is “a part of almost every devout Hindu household” (Rajendran, 2010, p. 31), and where some

contend that fasting may give rise directly to supernormal powers such as telepathy (Pearson, 1992, p. 432); and Islam, where it is one of five foundational pillars of the faith (Rahman et al., 2019).

Exploratory question e2 shows that those practicing longer fasts report increased anomalous experiences and abilities, which is in line with two participants in our psi adept study who reported profound experiences from extended periods of fasting (Daw et al., 2023), and accounts of long fasts by, for example, Krasskova (2017), a practitioner of neo-shamanism.

In contrast, while those consuming no food during a fast (exploratory question e3) and those consuming no liquids during a fast (exploratory question e4) reported higher levels of anomalous experiences and abilities, these differences were not significant.

In relation to practices involving the avoidance of consumption of animal products, hypothesis H2 was partially confirmed where self-reported anomalous abilities were significantly higher, and anomalous experiences suggestively higher, for veg*ans than for meat eaters. Hypothesis H3 was also partially confirmed where self-reported anomalous abilities were significantly higher for vegans than for vegetarians. These results demonstrate support for observations made by our psi adept participants that reducing or eliminating the consumption of animal products appears to support the manifestation of psi, and that abstaining from dairy may offer particular benefits (Daw et al., 2023). In addition, it appears that those who have been vegan for longer report increased anomalous experiences and abilities, suggesting a potential cumulative effect from following a vegan diet.

These findings lend weight to reports of veg*anism within spiritual traditions, such as widespread instances of shamans who avoid consuming meat because they believe that it “inhibit[s] the acquisition of [supernormal] power” (Walsh, 1994, p. 19). Recent authors also contend that meat and dairy restrict psi, such as Graham Nicholls, who writes that “paranormal experiences are easiest to achieve when the body’s energies are not taken up by the digestion of heavy food [i.e. meat and dairy] not ideally suited to our physiology” (Nicholls, 2012, p. 88). Despite these findings, we should note that the number of veg*ans within our fasting sample is small ($n = 19$) suggesting that research involving larger survey samples and using other modalities, such as experimental work, is needed to confirm these apparent effects.

The effect sizes found for significant results related to fasting were between $r = .14$ and $.26$, those related to veg*an and meat-eating diets were between $r = .08$ and $.21$, and for vegan versus vegetarian diets (a suggestive result), $r = .08$. These values would be classified as small effects, and may lend support for those who caution against overstating the importance of dietary practices, for example, Blavatsky (1889), who wrote that eating meat “will only retard ... [spiritual] progress a little” (p. 156), Carrington (1912), who suggested that it is “better to eat a moderate amount of any food upon the market and think nothing about it, than to eat the best of foods ... and keep worrying about them all the time” (p. 276), and Cousens (2009), who stated that “one cannot eat one’s way to God” (Part II, Introduction, para. 3).

However, while our effect sizes might be considered small, they do not necessarily rule out real-world significance for our findings (Roe, 2021). For example, Funder and Ozer (2019) list effect sizes for what they call “well-established findings in psychology” (p. 159) that are similar to or below those found in our study. These examples include:

Scarcity increases the perceived value of a commodity ($r = .12$), people attribute failures to bad luck ($r = .10$), communicators perceived as more credible are more persuasive ($r = .10$), and people in a bad mood are more aggressive than those in a good mood ($r = .41$). (p. 159)

As these authors suggest:

One is free to decide whether or not to interpret any of these findings as reliable or important, but to the extent that one does, the associated effect sizes provide a useful benchmark for interpreting other findings in the literature. (Funder & Ozer, 2019, p. 159)

It is also important to note that our findings relate to populations as a whole, which may mask potentially dramatic effects that have been noted by particular individuals. For example, one participant in our previous study estimated that adopting a vegan diet from being vegetarian led to an increase in his psi capabilities of around a third (Daw et al., 2023). It is well-established within parapsychology that individuals may have differing dispositions to anomalous experiences depending on a variety of factors, as discussed by Roe (2009, p. 38), among others. Therefore, it is conceivable that some individuals may also exhibit a greater propensity to mediating factors, such as dietary practices, as we consider in this study. This kind of impact can be obscured by averaging across a population. Even if an effect from dietary practices is confirmed by further research, it is possible that these practices may elicit different effects or strengths of effect depending on physiological types or other factors varying between individuals. For example, the Ayurvedic holistic system of healthcare, which includes within it a spiritual aspect, postulates three basic body types to consider when formulating recommendations related to diet and nutrition (Rastogi, 2014). Whether such differences related to anomalous phenomena actually manifest for dietary practices is a question for future research.

However, it is also possible that the effects we have found may be due to hidden factors that are associated with anomalous experiences as well as with a predilection for engaging in these dietary practices, such as creativity, personality, or practice of a spiritual discipline, all of which have previously been hypothesized to affect psi, for example (Cardeña et al., 2015; Honorton, 1997; Roe et al., 2007). These might be reflective of what Irwin (2009) has termed the worldview hypothesis.

While the use of purposive samples of veg*ans and of those who fast allowed us to control for other sources of variability, it does also restrict the generalizability of our findings. Differences in AEI scores between fasters and non-fasters were measured only among veg*ans, while differences in AEI scores between veg*ans and meat eaters were measured among only those who fast. This points to the need for more research on these associations with samples not selected according to diet. We should note that this observation does not apply to hypothesis H3 and the exploratory questions in the fasting sample because these inherently relate to constrained samples.

Our study also did not address questions regarding potential mechanisms for our observations of the associations between dietary practices, and anomalous experiences and abilities. While this was the focus for our study of psi adepts (Daw et al., 2023), its qualitative design means that further research is needed to establish which of the mechanisms suggested (purification for fasting, and mental clarity, health, and subtle energies for veg*an diets), or indeed other causal factors not yet considered, might play an objective explanatory role for our findings, assuming their confirmation in future research.

Our overall approach of using self-administered questionnaires imposes certain limitations. Firstly, the study is based on self-reported and subjectively-defined anomalous experiences and abilities. We cannot know whether respondents have been accurate in their recall of such experiences, due perhaps to lapses in memory or a misattribution of normal experiences to the paranormal. (Indeed, there is some evidence to suggest that those reporting anomalous experiences may be more susceptible to false memories [Wilson & French, 2006].) Secondly, it is not possible to determine exactly how people have interpreted items within measures. This is particularly problematic in this study for the AEI where it is possible that respondents might interpret certain items in this measure as non-exceptional, rather than anomalous, experiences. (For example, item P8, which supposedly was intended to pertain to telepathy – “I know what others are feeling or thinking without them telling me” – may be interpreted as empathy.) One way to address these limitations is through experimental work in order to explore whether associations we have found between dietary practices and anomalous abilities might be replicated under more controlled conditions, for example in the form of laboratory tests of psi.

Conclusion

This study indicated that higher levels of self-reported anomalous experiences or abilities or both are associated with the following dietary practices: the practice of fasting; longer fasts; veg*an over meat-eating diets; and vegan over vegetarian diets. To the best of our knowledge, this is the first time that research has shown measurable statistical associations between dietary practices and self-reported spiritual and psi experiences, albeit at small effect sizes. Further survey research would be beneficial to confirm and build on findings presented here. We also intend to follow this research with experimental work to explore whether dietary practices may affect performance at a psi task under controlled conditions.

Implications and Assumptions

This preliminary study implies that fasting and veg*an diets are associated with increased anomalous experiences and abilities. If a causal relationship is confirmed in subsequent research, this could have implications for conducting psi experiments where selection according to certain characteristics is sometimes recommended (e.g., Watt et al., 2020), for the treatment of traumatic ‘spiritual emergencies’ where eating meat and dairy is said to help in ‘grounding’ the individual (Grof & Grof, 1989), and for those seeking to pursue a spiritual path (such as dietary practices advocated by Cousens, 2009). More research is recommended to examine whether these preliminary results might be confirmed in surveys of larger and/or more general populations, and in other modalities such as experimental work, for example, to test the relative performance at a psi task of veg*ans and meat eaters (we are already engaged in such a study), or the impact of fasting.

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Authors' Contributions

The first author conceived, planned, and conducted the study, performed the statistical analyses, and wrote the original draft of the manuscript. The second and third authors provided the first author with doctoral supervision, reviewed and provided feedback on the overall approach and methods, and helped revise the manuscript.

Data Availability

The raw data supporting the conclusions of this article, along with other material mentioned in the text is available at: <https://zenodo.org/records/15544167>.

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Competing Interests

The authors confirm that there are no known conflicts of interest associated with this publication.

References

- Blavatsky, H. P. (1889). *The key to Theosophy* (Online ed). Theosophical University Press. https://www.theosociety.org/pasadena/key/key_to_theosophy.pdf
- Cardeña, E., Palmer, J., & Marcusson-Clavertz, D. (2015). *Parapsychology: A handbook for the 21st century*. McFarland & Company Incorporated Pub.
- Carrington, H. (1908). *Vitality, fasting and nutrition*. Rebman Company. <https://archive.org/details/vitality-fastingn00carrich>
- Carrington, H. (1912). *The natural food of man*. CW Daniel Amen Corner, EC. <https://archive.org/details/b28086612/page/n5/mode/2up>
- Carrington, H. (1920). *Your psychic powers and how to develop them*. Dodd, Mead and Company. <https://archive.org/details/yourpsychicpowe00carrgoog/page/n4/mode/2up>
- Cousens, G. (2009). *Spiritual nutrition: Six foundations for spiritual life and the awakening of Kundalini* (Kindle). North Atlantic Books.
- Daw, M. J., Roe, C. A., & Cooper, C. E. (2023). How fasting and vegetarianism is perceived to support psi among adepts. *Journal of Transpersonal Psychology*, 55(1), 111–133.
- Encyclopaedia Britannica. (2023a). *Fasting*. Encyclopaedia Britannica. <https://www.britannica.com/topic/fasting>
- Encyclopaedia Britannica. (2023b). *Vegetarianism*. Encyclopaedia Britannica. <https://www.britannica.com/topic/vegetarianism>
- Forestell, C. A., Spaeth, A. M., & Kane, S. A. (2012). To eat or not to eat red meat. A closer look at the relationship between restrained eating and vegetarianism in college females. *Appetite*, 58(1), 319–325. <https://doi.org/10.1016/j.appet.2011.10.015>
- Fritz, C. O., Morris, P. E., & Richler, J. J. (2012). Effect size estimates: Current use, calculations, and interpretation. *Journal of Experimental Psychology: General*, 141(1), 2–18. <https://doi.org/10.1037/a0024338>

- Funder, D. C., & Ozer, D. J. (2019). Evaluating Effect Size in Psychological Research: Sense and Non-sense. *Advances in Methods and Practices in Psychological Science*, 2(2), 156–168. <https://doi.org/10.1177/2515245919847202>
- Gallagher, C., Kumar, V. K., & Pekala, R. J. (1994). The Anomalous Experiences Inventory: Reliability and validity. *Journal of Parapsychology*, 58(4), 402–428.
- Grof, C., & Grof, S. (1989). Assistance in spiritual emergency. In S. Grof & C. Grof (Eds.), *Spiritual emergency: When personal transformation becomes a crisis* (pp. 191–197). Jeremy P Tarcher/Putnam.
- Honorton, C. (1997). The ganzfeld novice: Four predictors of initial ESP performance. *The Journal of Parapsychology*, 61(2), 143.
- Howitt, D. (2013). *Introduction to statistics in psychology*. Pearson Education UK. <http://ebookcentral.proquest.com/lib/northampton/detail.action?docID=5136847>
- Hunter, J. (2021). Deep weird: High strangeness, boggle thresholds and damned data in academic research on extraordinary experience. *Journal for the Study of Religious Experience*, 7(1), 5–18.
- Irwin, H. J. (2009). *The psychology of paranormal belief: A researcher's handbook*. University of Hertfordshire Press.
- Kéry, M., & Hatfield, J. S. (2003). Normality of raw data in general linear models: the most widespread myth in statistics. *Bulletin of the Ecological Society of America*, 84(2), 92–94. [https://doi.org/10.1890/0012-9623\(2003\)84\[92:nordig\]2.0.co;2](https://doi.org/10.1890/0012-9623(2003)84[92:nordig]2.0.co;2)
- Kim, H.-Y. (2013). Statistical notes for clinical researchers: assessing normal distribution (2) using skewness and kurtosis. *Restor Dent Endod*, 38(1), 52–54. <https://doi.org/10.5395/rde.2013.38.1.52>
- Krasskova, G. (2017). Fasting in the Northern tradition. In R. Kaldera (Ed.), *Wightridden: Paths of Northern Tradition Shamanism* (Kindle). Lulu.com.
- Krizanova, J. (2021). *Wellbeing & veganism: Happy and veg*an?* Vegan Society. <https://www.vegansociety.com/get-involved/research/research-news/wellbeing-veganism-happy-and-vegan>
- Lamb, R. (2011). Yogic powers and the Rāmānanda Sampradāy. In *Yoga powers: Extraordinary capacities attained through meditation and concentration* (pp. 427–458). BRILL.
- Lowry, R. (2023). *The confidence interval of rho*. VassarStats: Website for Statistical Computation. <http://vassarstats.net/rho.html>
- Newman, D. A. (2014). Missing data: Five practical guidelines. *Organizational Research Methods*, 17(4), 372–411. <https://doi.org/10.1177/1094428114548590>
- Nicholls, G. (2012). *Navigating the out-of-body experience: Radical new techniques* (Kindle). Llewellyn Publications, U.S.
- Oates, J. (2021). *BPS code of human research ethics*. The British Psychological Society.
- Pearson, A. M. (1992). “Because it gives me peace of mind”: Functions and meanings of vrats in the religious lives of Hindu women in Banaras [McMaster University]. <https://macsphere.mcmaster.ca/bitstream/11375/13681/1/fulltext.pdf>
- Pigott, T. D. (2001). A review of methods for missing data. *Educational Research and Evaluation*, 7(4), 353–383. <https://doi.org/10.1076/edre.7.4.353.8937>
- Quade, D. (1967). Rank analysis of covariance. *Journal of the American Statistical Association*, 62(33), 1187–1200.
- Rabeyron, T., & Watt, C. (2010). Paranormal experiences, mental health and mental boundaries, and psi. *Personality and Individual Differences*, 48(4), 487–492. <https://doi.org/10.1016/j.paid.2009.11.029>
- Rahman, F., Schimmel, A., & Mahdi, M. S. (2019). *Islam*. Encyclopaedia Britannica. <https://www.britannica.com/topic/Islam>
- Rajendran, N. S. (2010). Science of fasting: Aspects from Hinduism perspective. In R. Singh & A. M. C. Muhammed (Eds.), *Fasting and Sustainable Health Conference* (pp. 29–35). Healthy Lifestyle Cluster, Advanced Medical and Dental Institute, Universiti Sains Malaysia. <https://doi.org/ISBN:978-967-10331-0-4>

- Rastogi, S. (2014). Ayurvedic science of food and nutrition. In *Ayurvedic Science of Food and Nutrition* (Vol. 9781461496). Springer International Publishing. <https://doi.org/10.1007/978-1-4614-9628-1>
- Roe, C. A. (2009). The role of altered states of consciousness in extrasensory experiences. In M. D. Smith (Ed.), *Anomalous experiences: Essays from parapsychological and psychological perspectives* (pp. 25–49). McFarland & Company Incorporated Pub.
- Roe, C. A. (2021). Small wonder: Effect sizes in parapsychology. *The Magazine of the Society for Psychical Research*, 1, 4–5.
- Roe, C. A., Jones, L., & Maddern, C. (2007). A preliminary test of the 'Four-Factor Model' using a dream ESP protocol. *Journal of the Society for Psychical Research*, 71, 35–42.
- Rosnow, R. L., & Rosenthal, R. (2003). Effect sizes for experimental psychologists. *Canadian Journal of Experimental Psychology*, 57(3), 221–237. http://csaweb101v.csa.com/ids70/display_fulltext_html.php?SID=upckp1402lkt131arhba74ahg6&db=psycarticles-set-c&an=2003-08374-009&f1=1196-1961%2C57%2C3%2C221%2C2003&key=CEP%2F57%2Fcep_57_3_221&is=1196-1961&jv=57&-ji=3&jp=221-237&sp=221&ep=237&year=2003&mon=
- Sainani, K. L. (2015). Dealing with missing data. *PM and R*, 7(9), 990–994. <https://doi.org/10.1016/j.pmrj.2015.07.011>
- Simmonds-Moore, C. (2009). Sleep patterns, personality, and subjective anomalous experiences. *Imagination, Cognition and Personality*, 29(1), 71–86.
- Simmonds-Moore, C. A., & Roe, C. A. (2000). Personality correlates of anomalous experiences, perceived ability and beliefs: Schizotypy, temporal lobe signs and gender. *Proceedings of Presented Papers: The Parapsychological Association 43rd Annual Convention*, 276–291.
- Steiner, R. (1905). *Inner development*. Rudolf Steiner Archive & e.Lib. <https://wn.rsarchive.org/Lectures/EsoDevel/19051207p01.html>
- Taylor, S., & Egeto-Szabo, K. (2017). Exploring awakening experiences: A study of awakening experiences in terms of their triggers, characteristics, duration and after-effects. *The Journal of Transpersonal Psychology*, 49(1), 45–65.
- Van den Berg, R. G. (2022). *Shapiro-Wilk test - interpretation*. SPSS Tutorials. <https://www.spss-tutorials.com/spss-shapiro-wilk-test-for-normality/#shapiro-wilk-test-interpretation>
- Vegetarian Society. (n.d.). *What is a vegetarian?* Vegetarian Society. Retrieved May 19, 2023, from <https://vegsoc.org/info-hub/definition/>
- Wahbeh, H., Radin, D., Mossbridge, J., Vieten, C., & Delorme, A. (2018). Exceptional experiences reported by scientists and engineers. *Explore*, 14(5), 329–341. <https://doi.org/10.1016/j.explore.2018.05.002>
- Walsh, R. (1994). The making of a shaman: Calling, training, and culmination. *Journal of Humanistic Psychology*, 34(3), 7–30.
- Watt, C., Dawson, E., Tullo, A., Pooley, A., & Rice, H. (2020). Testing precognition and alterations of consciousness with selected participants in the ganzfeld. *Journal of Parapsychology*, 84(1), 21–37. <https://doi.org/10.30891/jopar2020.01.05>
- Wilson, K., & French, C. C. (2006). The relationship between susceptibility to false memories, dissociativity, and paranormal belief and experience. *Personality and Individual Differences*, 41, 1493–1502.
- Winkelman, M. J. (1990). Shamans and other "magico-religious" healers: A cross-cultural study of their origins, nature, and social transformations. *Ethos*, 18(3), 308–352.

Zwei Umfragen zur Erforschung von Zusammenhängen zwischen spontanen anomalen Erfahrungen, Fasten und Vegetarismus

Zusammenfassung: Zeitgenössische und historische Berichte aus spirituellen Traditionen und anderen Bereichen scheinen darauf hinzudeuten, dass Fasten und Vegetarismus eine Rolle bei der spirituellen Entwicklung und dem Zugang zu ‚übernatürlichen Kräften‘ spielen. Wir haben unlängst Personen befragt, die sich praktisch mit Psi-Phänomenen beschäftigen, die Fasten und Vegetarismus zur Unterstützung ihrer Arbeit mit Psi einsetzen und Ergebnisse anführen, die mit solchen Berichten übereinstimmen. Es war jedoch nicht klar, ob diese Zusammenhänge nur für bestimmte besonders begabte oder engagierte Praktizierende zutreffen oder ob sie auch für breitere Bevölkerungsgruppen gelten könnten. Wir führten daher Online-Fragebogen-basierte Umfragen mit zwei getrennten Stichproben durch, die über Facebook-Gruppen rekrutiert wurden und aus Veganern und Vegetariern (N = 804) sowie Fastenden (N = 154) bestanden, um zu sehen, ob diese Zusammenhänge bestätigt werden können. Die Wahl einer veganen/vegetarischen Gruppe ermöglichte es uns, die Fastenden mit den Nicht-Fastenden zu vergleichen; ebenso ermöglichte es uns die Fasten-Stichprobe, Veganer und Vegetarier mit denjenigen zu vergleichen, die Fleisch essen. Vorläufige Ergebnisse deuten darauf hin, dass diejenigen signifikant häufiger von anomalen Erfahrungen und Fähigkeiten berichten, die fasten oder längere Fastenzeiten einhalten, und die sich vegan oder vegetarisch anstatt mit Fleischkost ernähren, wobei die Häufigkeit bei veganer Ernährung noch höher ist als bei vegetarischer Ernährung. Die Konsequenzen dieser Ergebnisse werden diskutiert.

Schlüsselbegriffe: *anomale Erfahrungen, Psi, Spiritualität, Ernährungsweise, Ernährung, Vegetarier, fasten, vegan*

Deux enquêtes pour explorer les associations entre les expériences anomales spontanées, le jeûne et le végétarisme

Résumé : Les récits historiques et contemporains de diverses traditions spirituelles suggèrent que le jeûne et le végétarisme jouent un rôle dans le développement spirituel et l'accès aux « pouvoirs supernormaux ». Nous avons récemment interviewé des adeptes du psi qui utilisent le jeûne et le végétarisme pour supporter leur travail avec le psi et relataient des résultats consistant avec de tels récits. Cependant, on ignore si ces associations s'appliquent uniquement à une élite spécifique de ces praticiens ou si elles pourraient s'appliquer à des populations plus larges. Nous avons donc proposé de conduire des enquêtes basées sur des questionnaires en ligne avec deux échantillons distincts, recrutés via des groupes Facebook de végétariens et de végétariens (N = 804) et des praticiens du jeûne (N = 154) pour voir si ces associations pouvaient être confirmées. Travailler avec un groupe végétarien/végétarien nous a permis de comparer ceux qui jeûnent et ceux qui ne le font pas ; de la même manière, l'échantillon jeûnant nous a permis de comparer les végétariens et les végétariens avec ceux qui mangent de la viande. Les résultats préliminaires indiquent que des niveaux significativement plus élevés d'expériences anomales et de capacités auto-rapportées par ceux qui jeûnent, s'engagent dans des jeûnes plus longs, pratiquent des régimes sans viande, ou un régime végétarien plutôt que végétarien. Les implications de ces résultats sont discutées.

Mots-clefs : *expériences anomales, psi, spiritualité, régime, nourriture, végétarien, jeûne, végétarien*

Dos Encuestas para Explorar las Asociaciones entre Experiencias Anómalas Espontáneas, y el Ayuno y el Vegetarianismo

Resumen: Los relatos contemporáneos e históricos de tradiciones espirituales y otras fuentes parecen sugerir un rol para el ayuno y el vegetarianismo en el desarrollo espiritual y el acceso a “poderes supernormales”. Recientemente, entrevistamos a adeptos con habilidades Psi que han utilizado el ayuno y el vegetarianismo para suplementar su trabajo con Psi y han reportado hallazgos consistentes con estos relatos. Sin embargo, no está claro si estas asociaciones son exclusivamente aplicables a un grupo selecto de practicantes o si podrían aplicarse también a poblaciones más amplias. Por lo tanto, propusimos realizar encuestas virtuales dirigidas a dos muestras separadas y reclutadas a través de grupos de Facebook: veganos y vegetarianos (N = 804) y personas que practican el ayuno (N = 154), para evaluar si estas asociaciones podían confirmarse. Trabajar con un grupo de veganos/vegetarianos nos permitió comparar a quienes practican el ayuno con quienes no lo hacen; de manera similar, la muestra de personas que ayunan nos permitió comparar a veganos y vegetarianos con quienes consumen carne. Los hallazgos preliminares sugieren que quienes ayunan, realizan ayunos más largos, siguen dietas veganas o vegetarianas en lugar de consumir carne, y prefieren dietas veganas en lugar de vegetarianas, reportan niveles significativamente más altos de experiencias anómalas y habilidades Psi. Se discuten las implicaciones de estos hallazgos.

Palabras Clave: experiencias anómalas, Psi, espiritualidad, dieta, comida, vegetariano, ayuno, vegano

Appendix A

Table A1.
Tests of Covariance

Hypothesis or Exploratory Question	Covariate	AEI Experience		AEI Ability	
		F	p	F	p
H1 – Fasting	Gender	F(1, 785) = 14.7	< .001	F(1, 784) = 19.4	< .001
	Age	F(1, 788) = 16.7	< .001	F(1, 787) = 19.3	< .001
	Nationality	F(1, 797) = 14.2	< .001	F(1, 787) = 17.9	< .001
	Highest Educational Qualification	F(1, 797) = 17.8	< .001	F(1, 796) = 20.9	< .001
	Consumption of Wholefoods	F(1, 796) = 12.4	< .001	F(1, 795) = 16.1	< .001
	Consumption of Added Sugars	F(1, 797) = 14.5	< .001	F(1, 796) = 16.6	< .001
	Consumption of Alcohol	F(1, 797) = 16.1	< .001	F(1, 796) = 19.6	< .001
e1 – History Practising Fasting	Gender	F(1, 151) = 4.1	.045	-	-
	Age	F(1, 150) = 3.4	.067^	-	-
	Nationality	F(1, 151) = 3.0	.086^	-	-
	Highest Educational Qualification	F(1, 151) = 3.9	.049	-	-
	Consumption of Wholefoods	F(1, 151) = 2.8	.096^	-	-
	Consumption of Added Sugars	F(1, 151) = 3.7	.058^	-	-
	Consumption of Alcohol	F(1, 151) = 4.4	.038	-	-
e2 – Duration of Maximum Fast	Gender	F(1, 150) = 6.0	.015	F(1, 150) = 9.1	.003
	Age	F(1, 150) = 4.4	.038	F(1, 150) = 7.8	.006
	Nationality	F(1, 150) = 4.8	.029	F(1, 150) = 8.7	.004
	Highest Educational Qualification	F(1, 150) = 6.1	.015	F(1, 150) = 9.2	.003
	Consumption of Wholefoods	F(1, 150) = 6.8	.010	F(1, 150) = 10.0	.002
	Consumption of Added Sugars	F(1, 150) = 6.0	.016	F(1, 150) = 9.6	.002
	Consumption of Alcohol	F(1, 150) = 4.6	.034	F(1, 150) = 7.9	.006

H2 – Veg*an and Meat-Eating Diets	Gender	F(1, 151) = 5.6	.019	F(1, 151) = 7.1	.009
	Age	F(1, 150) = 5.0	.027	F(1, 150) = 6.6	.011
	Nationality	F(1, 151) = 4.7	.032	F(1, 150) = 6.6	.011
	Highest Educational Qualification	F(1, 151) = 4.9	.028	F(1, 151) = 6.2	.014
	Consumption of Wholefoods	F(1, 151) = 3.2	.074^	F(1, 151) = 4.5	.035
	Consumption of Added Sugars	F(1, 151) = 5.4	.022	F(1, 151) = 6.3	.013
	Consumption of Alcohol	F(1, 151) = 4.2	.042	F(1, 151) = 6.1	.015
H3 – Vegan versus Vegetarian Diets	Gender	-	-	F(1, 784) = 4.9	.027
	Age	-	-	F(1, 787) = 3.7	.055^
	Age (with imputation)	-	-	F(1, 796) = 4.0	.046
	Nationality	-	-	F(1, 796) = 5.3	.021
	Highest Educational Qualification	-	-	F(1, 796) = 5.8	.016
	Consumption of Wholefoods	-	-	F(1, 795) = 4.5	.034
	Consumption of Added Sugars	-	-	F(1, 796) = 5.7	.018
	Consumption of Alcohol	-	-	F(1, 796) = 5.4	.020
H3 - Duration Being Vegan	Gender	F(1, 620) = 14.0	< .001	F(1, 619) = 9.9	.002
	Age	F(1, 623) = 8.7	.003	F(1, 622) = 5.3	.022
	Nationality	F(1, 628) = 12.7	< .001	F(1, 627) = 9.3	.002
	Highest Educational Qualification	F(1, 628) = 14.1	< .001	F(1, 627) = 9.8	.002
	Consumption of Wholefoods	F(1, 627) = 11.3	.001	F(1, 626) = 8.2	.004
	Consumption of Added Sugars	F(1, 628) = 12.7	< .001	F(1, 627) = 9.2	.003
	Consumption of Alcohol	F(1, 628) = 12.2	.001	F(1, 627) = 8.7	.003

Note. F = test statistic for Quade's nonparametric ANCOVA. - = not applicable. ^ = p-value between .05 and .1 (all other values of p are significant at levels $p < .05$ or $p < .01$).