

Research Paper

## A Study Compared Psychological Well-being and Self-efficacy between Vegetarian and Non-vegetarian Young Adults

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### ABSTRACT

The current study is a comparative design employing a quantitative approach to explore the relationship between dietary choices and psychological well-being and self-efficacy among young adults aged 18–25. The main aim is to investigate whether vegetarians versus non-vegetarians significantly impact psychological well-being and self-efficacy. Convenience sampling, a non-probability sampling method, was utilized to recruit 150 participants, evenly divided into two subgroups: 75 vegetarians and 75 non-vegetarians. The research methodology involved administering two standardized tools: Ryff's Psychological Well-Being Scale and the General Self-Efficacy Scale. Data collection and analysis were performed using descriptive and inferential statistical techniques. The study found that non-vegetarians scored higher than vegetarians on psychological well-being measures, including positive relations, autonomy, self-acceptance, and slightly higher levels of self-efficacy. These findings suggest that dietary choices may influence psychological health and resilience in young adults. Further research is needed to understand the underlying mechanisms and to generalize these results to broader populations, offering insights for interventions to enhance mental health.

**Keywords:** *Dietary habits, Vegetarianism, Non-Vegetarianism, Psychological well-being, Self-efficacy*

### PSYCHOLOGICAL WELL-BEING

A range of factors influence adolescent's psychological well-being, which is defined as a subjective feeling of contentment, happiness, satisfaction with life experiences, one's role in the workplace, a sense of accomplishment, usefulness, and inclusion as well as the lack of anxiety, discomfort, or division (Shek, 1997). Psychological well-being is a malleable concept that is the feeling of people's everyday life activities such feelings may range from a negative mental state or psychological strains such as anxiety, expression, frustration, emotional exhaustion, unhappiness, and dissatisfaction to a state that has been identified as positive mental health (Jahoda, 1958). By prioritizing psychological well-being, individuals can effectively navigate negative emotions, maintain emotional vitality, and experience better physical health.

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More recently, several studies (e.g., Baines Michalak, Zhang, and Jacobi 2012) have found that compared to semi-vegetarians, who were more likely to experience anxiety and depression than non-vegetarians (omnivores), vegetarians were more likely to have these symptoms. In support of this, Forestell and Nezlek (2018) discovered that omnivores had lower levels of neuroticism and depression compared to vegetarians and semi-vegetarians (those who occasionally eat fish or red meat). Furthermore, it has been discovered that, even after adjusting for individual variables like age and education, the disparities in the well-being of vegetarians and non-vegetarians remain (Michalak, Zhang, and Jacobi 2012).

### **SELF- EFFICACY**

The concept of Albert Bandura's self-efficacy relates to the judgment people make concerning their ability to execute behavior relevant to a specific task or situation. It refers to having faith in one's capacity to act in a particular manner or to achieve a desired result (Bandura, 1977). Self-efficacy is defined as self-evaluation of one's competence to successfully execute a course of action necessary to reach the desired outcome. It is a multifaceted architecture that changes based on the demands (Zimmerman, 2000), Consequently, it needs to be assessed at a level unique to the outcome area. (Bandura, 1986). However, the results of this research have been inconsistent, which could be caused by different operationalizations of well-being and small sample sizes. These findings raise a question that has not been addressed so far but will be examined in this study: Psychological Well-Being and Self-Efficacy: A Comparative Study Between Vegetarians and Non-Vegetarians among Young Adults.

### **REVIEW OF LITERATURE**

The Impact of Nutrition-Teaching Self-Efficacy on Daily Fruit and Vegetable Intake Leslie E. Rawls Hoglund, (2011). This study, which was grounded in the socio-ecological model and self-efficacy theory, sought to determine whether there was a relationship between an established school nutrition policy, training status in the USDA Fresh Fruit and Vegetable Program (FFVP), daily fruit and vegetable consumption, and nutrition-teaching self-efficacy (NTSE) among elementary school teachers who took part in the FFVP. According to this study, healthy, self-assured teachers create healthier learning environments in the classroom and catalyze a rise in FV consumption in the general population, lowering the risk of obesity and chronic illnesses. According to the findings, there is a strong correlation between NTSE and daily FV intake.

Effect of Non-Vegetarian Diet on Cardiovascular Reactivity to Mental Stress in Young Adults - V.P. Varshney, M. Bedi and B. Bhandari, (2005). In this study, they examined how vascular reactivity in response to mental stress was affected by vegetarian and non-vegetarian diets. 100 vegetarian and 100 non-vegetarian undergraduate medical students were compared. According to the reactivity hypothesis, this study found that vegetarians were better able to handle mental stress, while non-vegetarians were at higher risk of developing hypertension in the future.

In a random population sample, the health, knowledge, and attitudes of meat eaters and vegetarians differed (D Shickle PA Lewis, M Charny, S Farrow 1989). As part of the Community Medicine course, 150 medical students distributed and collected questionnaires. 5145 subjects were contacted. The findings imply that vegetarians lead healthier lives overall and are more cognizant of the elements that contribute to a better diet.

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Do vegetarians feel bad? Examining the association between eating vegetarian and subjective well-being in two representative samples - Tamara M. Pfeiler, Boris Egloff (2020). The current study sought to investigate this association in detail in two sizable representative groups from Australia (Study 2: N = 15,532, including 383 vegetarians) and Germany (Study 1: N = 12,905, including 665 vegetarians). According to t-test results, vegetarians reported higher negative affect ratings than meat eaters, but they also reported greater levels of life satisfaction and health satisfaction.

Brief self-efficacy interventions to increase healthy dietary behaviors: evidence from two randomized controlled trials - Emily P. Bouwman, Marleen C. Onwezen and Danny Taufik, (2020). The major goal is to examine how short-term self-efficacy interventions affect eating habits that promote health. The results show that a short self-efficacy intervention can increase vegetable intake and diet plan adherence directly and indirectly.

### **METHODOLOGY**

#### *Objectives*

- To compare the levels of psychological well-being between vegetarians and non-vegetarians among young adults.
- To compare the levels of self-efficacy between vegetarians and non-vegetarians among young adults.
- To examine if there is any correlation between psychological well-being and self-efficacy in vegetarians versus non-vegetarians.

#### *Hypotheses*

- H1- There is a significant difference in Psychological Well-Being (PWB) between individuals who follow a vegetarian diet and those who follow a non-vegetarian diet.
- H2 -There is a significant difference in General Self-Efficacy (GSE) between individuals who follow a vegetarian diet and those who follow a non-vegetarian diet.
- H3- There is a significant positive relationship between Psychological Well-Being (PWB) and General Self-Efficacy (GSE) among individuals.

#### *Sample*

A sample is a small subset or group selected from the population for the study using predefined methods. The study acquired Convenience sampling, a non-probability sampling method. Convenience sampling, often referred to as availability sampling, is a popular research technique because of its effectiveness and usefulness. This method entails picking the most accessible participants or data points.

- **Subgroups:** The sample is divided into two main subgroups based on dietary habits:
- **Vegetarians:** Individuals who have followed a vegetarian diet for at least two years.
- **Non-Vegetarians:** Individuals who have consistently consumed meat, fish, and other non-vegetarian products for at least two years.

#### *Sample size*

The study consisted of a sample size comprising 150 participants, evenly distributed with 75 vegetarians and 75 non-vegetarians. Each group contributed equally to the overall sample, ensuring a fair assessment of any potential trends. The sample size of 150 participants provides a sufficiently robust dataset for analysis and interpretation. This equal balanced

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approach enhances the study's validity and generalizability of findings across diverse populations.

### ***Sampling frame***

The sampling frame includes young adults ranging from the age of 18 -25 with equal participation of vegetarians and non-vegetarians. This includes individuals who have proper diet habits. Participants are drawn from major metropolitan areas such as Hyderabad, Bengaluru, Kerala, and other urban regions, with access to vegetarians and non-vegetarians of diverse socioeconomic backgrounds.

### ***Instruments***

- **Ryff's Psychological Well-Being scale (18 items):** Self-acceptance, autonomy, positive interpersonal relationships, environmental mastery, personal growth, and life purpose are the six dimensions of psychological well-being that are measured by the 18-item Ryff's Psychological Well-Being Scale (Ryff and Keyes, 1995). A 6-point Likert scale, with 1 denoting "strongly disagree" and 6 denoting "strongly agree," is used to rate the items.
- **The General Self-Efficacy Scale (10 items):** To predict coping and adaptability to a variety of stressful life situations, the General Self-Efficacy Scale (GSE; Schwarzer & Jerusalem, 1995) was developed to measure a general sense of perceived self-efficacy. In 1981, Jerusalem and Schwarzer created the German version of this scale. The Generalized Self-Efficacy Scale (GSES), which consists of ten items, was translated by Mary Wegner from the original German version developed by Jerusalem and Schwarzer (Schwarzer, 1992). It evaluates how strongly a person believes in his or her capacity to react to new or challenging circumstances and to overcome any related challenges or failures.

### ***Data Collection***

The data collection process utilized Google Forms to administer two distinct questionnaires. The first questionnaire employed was Ryff's Psychological Well-Being scale (18 items), as it provides a concise and reliable way to measure multiple dimensions of psychological well-being. The second questionnaire focused on measuring the Student General Self-Efficacy Scale. This questionnaire evaluates how strongly a person believes in their own capacity to handle challenging circumstances and overcome any related challenges.

By utilizing Google Forms, it can efficiently gather responses from participants in a digital format. This methodological approach enables a comprehensive understanding of the differences in psychological well-being and general self-efficacy between vegetarian and non-vegetarian young adults.

### ***Variables***

- Independent Variable - Dietary habit (Veg& Non-vegetarian)
- Dependent Variable - PWB and GSE (Psychological Well-being and General Self-Efficacy)

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**DATA ANALYSIS**

**Table 1 Descriptive Statistics for Psychological Well-Being (PWB) and General Self-Efficacy (GSE) by Diet Preference**

	Diet	N	Mean	SD	SE
PWB	1	75	92.2	12.30	1.42
	2	75	91.3	11.30	1.30
GSE	1	75	29.1	4.37	0.5
	2	75	28.5	4.29	0.4

As illustrated in Table 1, the results show that non-vegetarians reported slightly higher mean scores than Vegetarians for both Psychological Well-Being (M =92.2), and General Self-Efficacy (M = 29.1). However, the differences between the two groups were minimal, suggesting that diet preference has only a weak positive association with both PWB and GSE. This indicates that while non-vegetarians tend to report slightly higher levels of psychological well-being and general self-efficacy, the practical significance of this relationship is limited.

**Table 2 Mean difference between Psychological Well-Being and General Self-Efficacy using One-way ANOVA**

	F	df1	df2	p
PWB	0.227	1	147	0.63
GSE	0.719	1	148	0.39

As illustrated in Table 2, the results show no significant differences in Psychological Well-Being (PWB) and General Self-Efficacy (GSE) based on the One-way ANOVA tests. For PWB, the p-value is 0.63, and for GSE, the p-value of 0.39. Since both p-values are greater than the 0.05 significance level, the null hypotheses are accepted, suggesting that there is no significant effect of the group differences on PWB and GSE.

**Table 3 Mean, Median, Mode, SD based on Psychological Well-Being (PWB) and General Self-Efficacy (GSE)**

	N	Mean	Median	Mode	SD
PWB	150	91.7	88.0	84.0	11.8
GSE	150	28.8	29.0	27.0	4.33

As illustrated in Table 3, the results show the descriptive statistics for Psychological Well-Being (PWB) and General Self-Efficacy (GSE). For PWB, the mean score is 91.7, the median is 88.0, and the mode is 84.0, with a standard deviation of 11.8. For GSE, the mean score is 28.8, the median is 29.0, and the mode is 27.0, with a standard deviation of 4.33. These values suggest that the participants tend to have higher levels of psychological well-being and general self-efficacy on average, with some variability in both measures.

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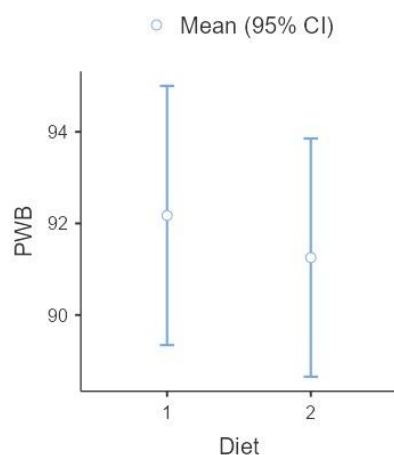
**Table 4 Correlation Matrix relationship between Psychological Well-Being (PWB), General Self-Efficacy (GSE) and Diet**

		GSE	PWB	Diet
GSE	Pearson's r	-		
	df	-		
	p-value	-		
PWB	Pearson's r	0.506	-	
	df	148	-	
	p-value	<.001	-	
Diet	Pearson's r	-0.07	-0.039	-
	df	148	148	-
	p-value	0.398	0.634	-

As illustrated in Table 4, A moderate positive association is observed between Psychological Well-Being and General Self-Efficacy ( $r = 0.506$ ,  $p < 0.001$ ,  $df = 148$ ), indicating a statistically significant correlation. There is a very weak negative association between Diet (vegetarian vs. non-vegetarian) and General Self-Efficacy ( $r = -0.07$ ,  $p = 0.398$ ,  $df = 148$ ). This indicates no statistically significant correlation between diet type and general self-efficacy. Similarly, the correlation between Diet and Psychological Well-Being is very weak and negative ( $r = -0.039$ ,  $p = 0.634$ ,  $df = 148$ ), suggesting no statistically significant correlation between diet type and psychological well-being.

**Figure 1**

PWB



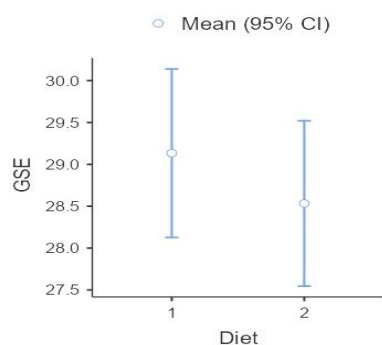
**Mean Psychological Well-Being Scores by Diet Group with 95% Confidence Intervals**

In figure 1, The mean PWB score for Non-Vegetarians (Diet = 1) is approximately 92, with a 95% confidence interval extending from about 90 to 94. For Vegetarians (Diet = 2), the mean PWB score is also around 92, with a similar confidence interval range. The overlapping confidence intervals suggest that there is no statistically significant difference in PWB between vegetarians and non-vegetarians.

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**Figure 2**

GSE



### *Mean General Self-Efficacy (GSE) Scores by Diet Group with 95% Confidence Intervals*

In Figure 2, The mean GSE score for non-vegetarians is approximately 29, with a 95% confidence interval ranging from about 28.5 to 30. For Vegetarians, the mean GSE score is also around 29, with a confidence interval that similarly overlaps with that of vegetarians. The overlapping confidence intervals indicate no significant difference in GSE between vegetarians and non-vegetarians.

## RESULTS

Based on the statistical analysis, several insights were derived from this study on diet, psychological well-being (PWB), and general self-efficacy (GSE). There was a moderate positive correlation between PWB and GSE, indicating that individuals with higher psychological well-being tended to have higher levels of self-efficacy ( $r = 0.506$ ,  $p < 0.001$ ). However, the association between diet (vegetarian vs. non-vegetarian) and PWB and GSE was weak and non-significant. Specifically, there was a very weak negative correlation between diet and GSE ( $r = -0.07$ ,  $p = 0.398$ ) and between diet and PWB ( $r = -0.039$ ,  $p = 0.634$ ), suggesting no meaningful impact of diet on either psychological well-being or self-efficacy. Additionally, an independent samples t-test indicated that non-vegetarians reported slightly higher mean scores for both PWB ( $M = 92.2$ ) and GSE ( $M = 29.1$ ) than vegetarians, but these differences were not statistically significant, indicating limited practical significance.

## DISCUSSION

The results of this study suggest that, within this sample, dietary preference (vegetarian or non-vegetarian) does not have a substantial impact on either psychological well-being or self-efficacy. This finding is consistent with previous literature indicating that diet alone may not be a strong predictor of psychological outcomes such as well-being or self-efficacy, as these factors are influenced by a combination of lifestyle, social, psychological, and environmental factors.

Interestingly, the moderate positive correlation between PWB and GSE supports the notion that these constructs are interrelated, as suggested by prior studies linking psychological well-being to a stronger sense of self-efficacy. Higher levels of self-efficacy may empower individuals to better manage stress and maintain positive mental health, thereby enhancing overall well-being.

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However, this relationship was not influenced by diet, indicating that factors beyond dietary habits may play a more significant role in shaping both self-efficacy and psychological well-being. The lack of significant associations between diet type and the two psychological variables may also reflect the diversity within dietary practices and lifestyles that do not strictly adhere to vegetarian or non-vegetarian labels. Furthermore, cultural, social, and environmental factors can influence both diet and mental well-being, potentially diluting any direct associations between these variables. This suggests that promoting well-being and self-efficacy among individuals may require a more comprehensive approach, incorporating factors beyond dietary habits alone.

### CONCLUSION

The findings of this study indicate that there is a moderate positive correlation between psychological well-being and general self-efficacy, highlighting the interrelation between these two constructs. However, dietary preference (vegetarian vs. non-vegetarian) was not significantly associated with either psychological well-being or self-efficacy, suggesting that diet alone does not play a substantial role in influencing these aspects of mental health.

Future research may benefit from a larger and more diverse sample to further explore the potential influences of diet on psychological outcomes, considering other lifestyle factors, cultural contexts, and individual differences. Additionally, interventions designed to improve well-being, and self-efficacy should consider a multifaceted approach that addresses broader psychological and lifestyle factors rather than focusing solely on diet.

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### **Conflict of Interest**

The author(s) declared no conflict of interest.

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