# Effect of Diet Quality on Emotional Intelligence and Pathological Eating Habits in Minority and White Populations

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## **Abstract**

This study examines how diet, exercise, emotional intelligence (EI), and disordered eating patterns interact across racial groups. An anonymous online survey of adults aged 18 and older assessed EI traits, eating behaviors, and demographics. Pearson's Correlation Analysis analyzed associations between diet, exercise, and EI, with an emphasis on racial differences.

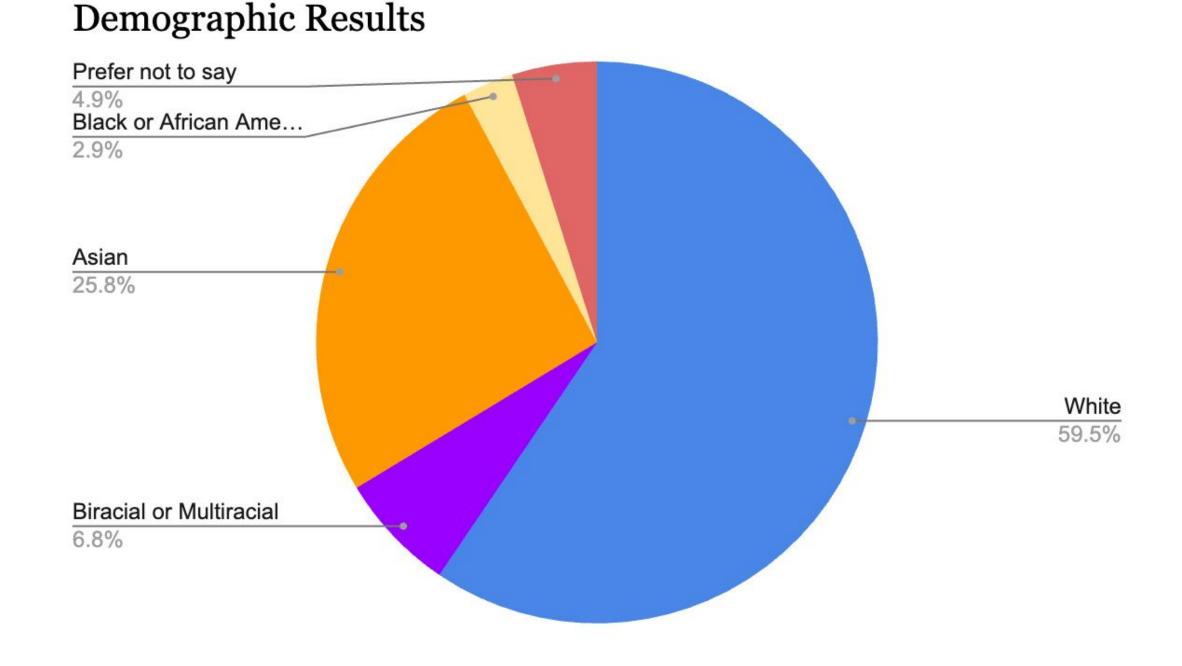
Among minority participants, exercise and nutrient-dense diets were positively correlated with EI traits such as motivation and stress management (p < 0.01). White participants showed similar correlations but displayed stronger associations between exercise and restrictive eating behaviors (p < 0.01). Additionally, fast food and caffeine intake were linked to disordered eating and body image concerns among White individuals (p < 0.01), while fast food consumption alone was associated with body dissatisfaction in minorities (p < 0.05). These findings suggest that diet and exercise affect emotional well-being and disordered eating in racially distinct ways, highlighting the need for culturally informed interventions.

## Introduction

- Nutrition plays a key role in both physical and physiological well-being, influencing cognitive function, emotional intelligence, and stress management (Gomez-Pinilla, 2008). Nutrient-dense diet support neurotransmitter production and brain health, which may enhance emotional resilience (Jacka et al., 2010; Berk et al., 2013)
- Pathological eating habits can be defined as disordered eating behaviors and thoughts that relate to food intake, weight control, and body image. Some of these habits include behaviors centered around restricting food intake, avoiding foods for shape control, strict eating rules for shape control, desire for a flat stomach, difficulty concentrating due to shape or weight, the emotional impact of weighing one's self, and the fear of gaining weight. These habits are strongly associated with body image concerns and can contribute to disordered eating patterns as well as long-term health consequences (Stice et al., 2002).
- Although research has examined links between physical activity, diet quality, and disordered eating, fewer studies have investigated their combined influence on pathological eating habits. Even fewer studies have explored the relationship between racially diverse populations, leaving a gap in understanding whether different groups experience different risk factors for pathological eating.
- Research shows that dietary habits are shaped by cultural and socioeconomic factors, meaning that the relationship between nutrition and emotional intelligence may differ between various racial and ethnic groups (Guglielmi et al., 2019).
- By analyzing how various dietary factors impact emotional intelligence in minority populations, this study aims to show the correlations between diet quality, exercise, and pathological eating habits in White and Minority individuals. While additionally investigating whether certain dietary components and lifestyle behaviors contribute more significantly to pathological eating habits in one group over the other.

#### Methods

- An anonymous online survey was distributed via social media platforms to participants aged 18 and older. The survey collected demographic data and assessed emotional intelligence (EI) traits, disordered eating behaviors, and dietary and exercise habits.
- Emotional intelligence was measured using standardized scales covering motivation, stress management, self-image, adaptability, and interpersonal skills.
- Pathological eating behaviors were assessed using questions related to food restriction, body image concerns, and disordered eating tendencies.
- Pearson's correlation coefficients were used to examine the relationships between diet, exercise, EI traits, and disordered eating behaviors
- The data was organized by race to identify any associations that differed based on ethnicity.



# Results

- 1,386 participants completed the survey across Minority and White groups.
- Exercise was linked to higher emotional intelligence (EI) and restrictive eating in both groups (p < 0.01).
- Minorities: Whole grains, leafy greens, fruits, and meat were associated with higher EI (p < 0.01).
- Whites: Breakfast and whole grains supported EI; fast food and caffeine were linked to emotional dysregulation and disordered eating (p < 0.01).
- Fast food was tied to body dissatisfaction in both groups; effects were stronger in Minorities (p < 0.01).
- Restrictive eating correlated with all other disordered behaviors, especially among Whites (p < 0.01).

# Table 1: Diet Quality and Emotional Intelligence: Comparison between Whites and Minorities

#### **Minorities** viewpoint 0.259\*\* 0.241\*\* 0.191\*\* 0.118\* Exercise Whole Grains 0.149\*\* 0.135\*\* 0.129\* 0.115\* 0.171\*\* Dark Leafy 0.124\* 0.138\*\* 0.145\*\* 0.133\*\* Meat 0.145\*\* 0.171\*\* 0.176\*\* 0.115\* 0.111\* 0.115\* Fruit 0.133\*\* 0.153\*\* 0.153\*\* 0.106\* 0.145\*\* 0.158\*\* 0.145\*\* 0.127\* 0.143\*\* 0.145\*\*

	Motivation	Effectively Dealing with People	Gloominess	Difficulty bonding even with close companions	Optimistic about life	Positive Self-Image and Qualities	Difficulty with Emotional Regulation
Exercise	.260**	.159**	136**	098**	.105**	.073*	128**
Breakfast	.229**	.104**	161**	064*	.142**	.126**	090**
Whole Grains	.068*	.068*	071*	-	-	-	-
Meat	.111**	.091**	156**	078*	.158**	.116**	075*
Dark Leafy Greens	.093**	.072*	099**	082*	.118**	.072*	-
Fast food	203**	092**	.164**	.182**	126**	128**	.162**

# Table 2: Diet Quality and Pathological Eating Habits: Comparison between Whites and Minorities

Whites

	Restricting Food Intake	Avoiding Foods For Shape Control	Strict Eating Rules For Shape	Desire For a Flat Stomach	Difficulty Concentrating Due to Shape/Weight	Fear of Gaining Weight	Emotional Impact of Weighing (Past 28 Days)
White	*	\$G - 8	,	***	38	3	#5.
Exercise	.098**	.163**	.117**	-	-	068*	137**
Whole Grain	069*	073*	.075*	103**	-	(6)	-
Caffeine	.184**	.166**	.126**	.168**	-	.097**	-
Dark Leafy Greens	70	-	.108**	-	-	.070*	170
Fast Food	103**	124**	-	-	.108**	.108**	.110**
Restrict Food	-	.690**	.558**	.451**	.368**	.449**	.210**
Minorities	<del>,</del>	49 49	I	- No	L		
Exercise	.120*	.157**	.186**	-	-	-	111*
Whole Grain	-	-	-	-	-	15=1	-
Caffeine	-	-	-	-	-	NE)	(=)
Dark Leafy Greens	-	-	.105*	-	-	-	3=3
Fast Food	-	115*	-	.127*	.110*		.144**
Restrict Food	-	.665**	.614**	.428**	.370**	.516**	.275**

\*P < 0.05 level (2-tailed). \*\* P < 0.01 level (2-tailed).

## Discussion

- Exercise was positively linked to emotional intelligence (EI) traits such as motivation, stress management, and adaptability in both Minority and White participants
- Among Minorities, exercise also correlated with life satisfaction and adaptability, while in Whites it was associated with optimism and better social functioning
- Despite these benefits, exercise was also associated with restrictive eating behaviors in both groups—suggesting it may also serve as a compensatory strategy for body image concerns (Young et al., 2010; Burgon et al., 2023).
- For Minorities, a nutrient-rich diet (whole grains, leafy greens, fruit, beans, meat) supported higher EI scores, possibly due to its role in neurotransmitter support and inflammation reduction (Gomez-Pinilla, 2008; Jacka et al., 2010; Berk et al., 2013).
- Whites also showed positive EI correlations with healthy foods like whole grains and breakfast, but effects were generally weaker compared to Minorities.
- Poor diet (e.g., fast food, caffeine) was linked to pathological eating in both groups.
- Among Whites, fast food and caffeine intake were tied to body dissatisfaction and emotional dysregulation
- Among Minorities, fast food was linked to body image concerns and emotional distress from weighing
- Restrictive eating behaviors were correlated with disordered eating across both groups but were stronger and more numerous in White individuals, possibly due to greater internalization of Western beauty ideals (Rodriguez et al., 2022).
- Racial disparities may be explained by socioeconomic challenges, food access, and differing cultural pressures. Minorities often face food insecurity and limited access to healthy foods (Darmon & Drewnowski, 2008)
- Cultural tensions between traditional norms and Western standards may increase body image stress (Guglielmi et al., 2019).

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# References

