

Associations Between Diet and Post-Traumatic Stress Disorder Symptomology

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1.

INTRODUCTION

Post-traumatic stress disorder (PTSD) can develop following exposure to a severely distressing event perceived as life-threatening (Sherin, 2011).

Symptoms of PTSD encompass:

- intrusive thoughts
- hyper-arousal
- irritability
- anger
- avoidance
- confusion
- depression
- dissociation

A clinical diagnosis of PTSD necessitates that these symptoms persist for more than one month (Sherin, 2011). Furthermore, PTSD has been linked to various health issues such as cardiovascular diseases, cardiometabolic diseases, and eating disorders, affecting approximately 7 out of every 100 military veterans in the United States, and significantly impacting both physical and mental well-being (Escarfulleri et al., 2021).

Previous research has highlighted the potential impact of dietary elements on PTSD symptoms. The objective of the present study was to investigate the dietary intake of Veterans diagnosed with PTSD and to see how dietary intake correlates with daily PTSD symptoms.

2.

METHODS

Participants: N = 6; 1 female and 5 male Veterans from different war eras, who self-reported a PTSD diagnosis and were aged 18 years or above. Participants were recruited at the Fargo, ND Vet Center, through local support groups, posters, and social media postings.

Procedure: Participants were given instructions on how to log into a personalized account on MyFitnessPal. Also, they were shown how to track food using MyFitnessPal which breaks down dietary intake into their macronutrient components. Participants completed two days of tracking all dietary intake on the MyFitnessPal application along with completing a battery of daily diary surveys that include the PCL-5, CES-D, PSS, STAI, and PSS-SR.

Table 1.1: Correlations among Day 1 Intake to Day 1 Diary Surveys

Variables	1	2	3	4	5	6	7	8
1. D1calories								
2. D1carbs	.759							
3. D1fat	.840^	.304						
4. D1protein	.516	-.101	.784					
5. D1cholesterol	-.092	-.589	.338	.75				
6. D1sodium	.189	-.373	.54	.556	.293			
7. D1sugar	.475	.887^	-.003	-.367	-.624	-.676		
8. D1fiber	.796	.907^	.483	.098	-.278	-.379	.774	
9. PSS_SR5_Day_1	.241	.124	.264	-.128	-.391	.388	.168	-.06
10. PCL_5_Day_1	.39	.307	.36	-.107	-.381	.203	.378	.19
11. PSS_Day_1	.421	-.136	.783^	.709	.66	.402	-.202	.152
12. STAI_Day_1	.483	.119	.694	.25	-.058	.654	-.158	.22
13. CESD_Day_1	.176	-.097	.295	.083	-.246	.734^	-.204	-.316

^ Correlation is significant at the 0.10 level (2-tailed).

** Correlation is significant at the 0.05 level (2-tailed).

Table 1.3: Correlations among Day 1 Intake to Day 2 Diary Surveys

Variable	1	2	3	4	5	6	7	8
1. D1calories								
2. D1carbs	.759							
3. D1fat	.840^	.304						
4. D1protein	.516	-.101	.784					
5. D1cholesterol	-.092	-.589	.338	.75				
6. D1sodium	.189	-.373	.54	.556	.293			
7. D1sugar	.475	.887^	-.003	-.367	-.624	-.676		
8. D1fiber	.796	.907^	.483	.098	-.278	-.379	.774	
9. PSS_SR5_Day_2	.605	.766^	.356	-.228	-.509	-.308	.802^	.771^
10. PCL_5_Day_2	.766^	.707	.611	.093	-.288	-.078	.683	.737^
11. PSS_Day_2	.621	.589	.55	.005	-.204	-.156	.592	.73^
12. STAI_Day_2	.688	.486	.718	.143	-.211	.273	.3	.599
13. CESD_Day_2	.484	-.032	.634	.682	.242	.753^	-.237	-.129

^ Correlation is significant at the 0.10 level (2-tailed).

** Correlation is significant at the 0.05 level (2-tailed).

Table 1.2: Correlations among Day 2 Intake to Day 2 Diary Surveys

Variables	1	2	3	4	5	6	7	8
1. D2calories								
2. D2carbs	.860^							
3. D2fat	.958**	.753						
4. D2protein	.836^	.671	.947**					
5. D2cholesterol	.65	.439	.832^	.953**				
6. D2sodium	.54	.361	.744	.903^	.956**			
7. D2sugar	.881^	.824^	.713	.482	.216	.101		
8. D2fiber	.860^	.727	.817^	.748	.614	.481	.753	
9. PSS_SR5_Day_2	.139	.187	-.003	-.074	-.207	-.165	.36	.473
10. PCL_5_Day_2	.327	.205	.211	.087	-.052	-.031	.504	.587
11. PSS_Day_2	-.026	-.109	-.116	-.182	-.249	-.175	.178	.308
12. STAI_Day_2	.025	-.188	.026	.023	.057	.05	.06	.458
13. CESD_Day_2	.72	.291	.748^	.587	.54	.375	.595	.617

^ Correlation is significant at the 0.10 level (2-tailed).

** Correlation is significant at the 0.05 level (2-tailed).

Table 1.4: Correlations among Day 2 Intake to Day 1 Diary Surveys

Variables	1	2	3	4	5	6	7	8
1. D2calories								
2. D2carbs	.860**							
3. D2fat	.958**	.753^						
4. D2protein	.836**	.671	.947**					
5. D2cholesterol	.65	.439	.832**	.953**				
6. D2sodium	.54	.361	.744^	.903**	.956**			
7. D2sugar	.881**	.824**	.713	.482	.216	.101		
8. D2fiber	.860**	.727	.817**	.748^	.614	.481	.753^	
9. PSS_SR5_Day_1	.339	.184	.173	-.046	-.152	-.368	.564	.561
10. PCL_5_Day_1	.316	.179	.132	-.091	-.228	-.376	.59	.561
11. PSS_Day_1	-.042	-.473	-.001	-.123	-.084	-.034	.023	-.021
12. STAI_Day_1	-.061	-.374	.018	.054	.195	.109	-.145	.357
13. CESD_Day_1	.439	.184	.377	.219	.198	-.076	.462	.588

^ Correlation is significant at the 0.10 level (2-tailed).

** Correlation is significant at the 0.05 level (2-tailed).

3. MEASURES

PTSD Checklist

(PCL-5; Wortmann et al., 2016) Measures symptoms of PTSD over a 24-hour period.

Post-Traumatic Diagnostic Scale

(PSS-SR; Foa et al., 1997) Measures symptoms of PTSD over a 24-hour period.

The Center for Epidemiological Studies Depression

(CES-D; Radloff, 1977) Measures symptoms of depression, such as restless sleep, poor appetite, and feeling lonely.

The Perceived Stress Scale

(PSS; Cohen & Mermelstein, 1983) A standardized measure of stress.

State-Trait Anxiety Inventory

(STAI; Spielberger, 1985) Anxiety symptoms were assessed

5. DISCUSSION

This pilot study aims to deepen our understanding of how specific dietary factors may influence the intensity of post-traumatic stress disorder symptoms, thus contributing to the broader comprehension of dietary interventions in managing PTSD. Through more thorough research, dietary interventions may compliment psychotherapy sessions and replace psychotropics in some instances, becoming another modality in PTSD treatment.

SAME DAY NUTRITION AND SYMPTOMS

(TABLES 1.1 AND 1.2)

There were three marginally significant positive correlations between fat intake and PSS, between fat and CES-D, and between sodium intake and CES-D.

DAY ONE NUTRITION AND DAY TWO

SYMPTOMS (TABLE 1.3)

Total calories were positively marginally correlated with PTSD symptoms the following day. There were marginally positive correlations between carbohydrates, fiber, and sugar intake on day one and PTSD symptoms the following day. There was also a marginally positive significant correlation between fiber intake and PSS. Once again sodium intake was positively associated with CES-D.

DAY TWO NUTRITION AND DAY ONE

SYMPTOMS (TABLE 1.4)

There were no significant or marginally significant correlations among these variables.