



Exploring Correlations of Disordered Eating, Adverse Childhood Experiences, and Weight Bias in College Nutrition Students

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INTRODUCTION

Orthorexia Nervosa (ON) has been reported as high as 70% in nutrition students.¹ ON is characterized by obsession with food, self-punishment regarding food and exercise, restrictive eating behaviors, and a belief that one's morals and self-validity is based on their dietary choices.²

Weight bias such as fatphobia and negative attitudes towards obese people have also been reported at high rates among nutrition students, potentially impacting treatment.³

Adverse Childhood Experiences (ACEs) are traumatic events that occur under the age of 18 years, causing a plethora of health complications mentally, emotionally, and physically that follow into adulthood.⁴ ACEs are linked with eating disorders,⁴ but there is little understanding of their relationship with orthorexia and weight bias.

OBJECTIVE

Due to the implications these factors have on health and professional practice, **the aim of this study** was to explore the correlations between orthorexia, ACE's, and weight bias among college nutrition students.

METHODS

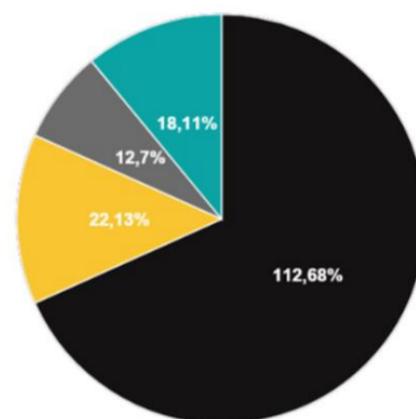
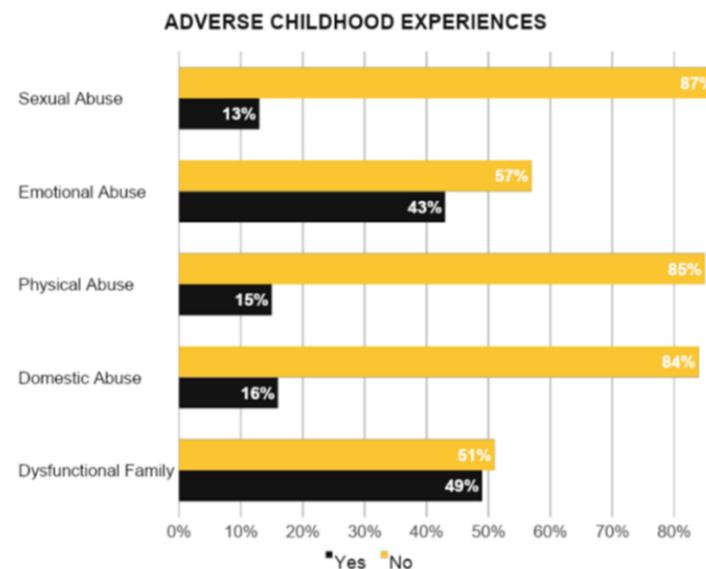
Students enrolled in undergraduate and graduate nutrition programs in twelve mid-southeast states (NC, SC, GA, MS, TN, AL, AR, FL, VA, WV, MD, and PA) were recruited to participate in an anonymous survey.

A modified version of the ORTO-R was used to measure orthorexia tendencies, ACE questionnaire to measure ACE's, and the Weight Attitude Implicit Association Test (IAT) to measure weight bias. The ORTO-R contains six questions from the ORTO-15, which have been identified as the best indicators of orthorexia and have been used as a validated measure in several studies.⁵ The ACE questionnaire and IAT are both validated measures that have been used in various studies.^{4,6,7}

Data were analyzed using descriptive statistics, regression analysis, and raw correlations, with a significance level of $p < 0.05$.

RESULTS

Of the 164 students who completed the survey, 92% were female, 82% were white, 65% were seniors (25%) or graduate (40%) level, 78% were dietetics. Around 50% identified as being from a dysfunctional family, more than 43% experienced emotional abuse (Figure 1). Orthorexia tendencies (measured by each of the 6 items on the ORTO-R scale) were associated with several ACEs such as domestic abuse ($p = 0.02$), divorce ($p = 0.03$) and incarceration ($p = 0.04$). For weight bias, sexual abuse was the only ACE that had a statistically significant relationship ($p = 0.01$). No significant relationships were found between orthorexia tendencies and weight bias. 54% had a moderate/strong weight bias (Figure 2).



*Slight/Moderate/Strong automatic preference for Thin people over Fat people
 *No automatic preference between Fat people and Thin people
 *Slight/Moderate/Strong automatic preference for Fat people over Thin people
 *Uncategorized

ORTHOREXIA TENDENCIES QUESTIONNAIRE

Question and Response Choices	n	%
Are your dietary choices rigid and restrictive? (because of health, not medically necessary dietary restrictions.)		
Never:	57	34.76%
Sometimes:	83	50.61%
Often:	18	10.98%
Always:	6	3.66%
Do you believe that eating healthy food increases your self-esteem?		
Never:	5	3.05%
Sometimes:	49	29.88%
Often:	52	31.71%
Always:	58	35.37%
Do you believe that strictly consuming only healthy food may improve your appearance?		
Never:	44	26.83%
Sometimes:	66	40.24%
Often:	39	23.78%
Always:	15	9.15%
In the last three months, did thoughts of food make you feel guilt, ashamed, and/or anxious?		
Never:	46	28.05%
Sometimes:	59	35.98%
Often:	42	25.61%
Always:	17	10.37%
Does thinking about food excessively worry you daily?		
Never:	73	44.51%
Sometimes:	49	29.88%
Often:	21	12.8%
Always:	21	12.8%
Does eating healthy food change your lifestyle (frequency of eating out, friends, ...)		
Never:	43	26.22%
Sometimes:	62	37.8%
Often:	39	23.78%
Always:	20	12.2%

CONCLUSIONS

In this study, weight bias is strongly present among nutrition students, with over half having a moderate or strong bias. The presence of orthorexia tendencies and ACEs is consistent with previous research.

Changes in nutrition curriculum such as the inclusion of "Health at Every Size", stigma-reduction interventions, and activities that dispel weight-based stereotypes should be implemented to bring awareness and prevent weight bias among nutrition students. Since orthorexia tendencies are present without a significant relationship to weight bias, changes in nutrition curriculum such as the inclusion of non-diet and intuitive eating approaches are needed to bring awareness and prevent the presence of orthorexia among nutrition students.

Further research is needed to identify what curriculum strategies would be effective at reducing weight bias and orthorexia among nutrition students.

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