



The Association Between Fast Food/Sugary Drink Consumption and Anxiety/Depression Symptoms

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Introduction

- It is widely accepted knowledge that an unhealthy diet containing large amounts of fast food and sugary drinks increases the risk of developing certain diseases such as Cardiovascular Disease and Diabetes, but the relationship between unhealthy eating habits and developing mental health disorders is still being debated.
 - Gender has been shown to affect whether anxiety symptoms will occur together with fast food consumption.
 - A significant relationship has previously been shown between anxiety and fast food consumption in females only, while the relationship between fast food consumption and depression is significant in both genders.
 - Consumption of sugary drinks containing artificial sweeteners have been associated with depressive symptoms while sugary drinks containing regular sugar or honey have not.
 - This study will focus on the relationship between consuming fast food, sugary drinks, and diet drinks and anxiety/depression symptoms. The relationship between anxiety/depression and gender will be considered as well.
- ### Objectives
- Is there a relationship between sugar sweetened drinks (diet/non-diet) and depression symptoms?
 - Is there a relationship between both fast food consumption and sugar sweetened drink consumption and anxiety?
 - Is there a relationship between the frequency of fast food consumption and depression symptoms?

Methods

Study Sample

- Data was collected from the ADDHEALTH Wave IV data set
- Participants were selected if they reported to all variables completely

Statistical Methods

- Multivariate Linear regression was used to build models
- Depression, anxiety, and gender were modeled to determine their effects on fast food consumption, sugary drink consumption, and diet drink consumption
- Analysis conducted with SPSS version 25

Methods

Variables Used in Study

Gender of Participants

Diet Variables

- Fast Food Consumption in Past Week (Frequency)
- Sugary Drink Consumption in Past Week (Frequency)
- Diet Drink Consumption in Past Week (Frequency)

Depression Variables (Recoded into scale Variable CESD)

- Bothered by things that don't usually bother you in past week
- Could not shake off blues in past week
- Had trouble focusing in past week
- Feelings of depression in last 7 days
- Felt sad in past week

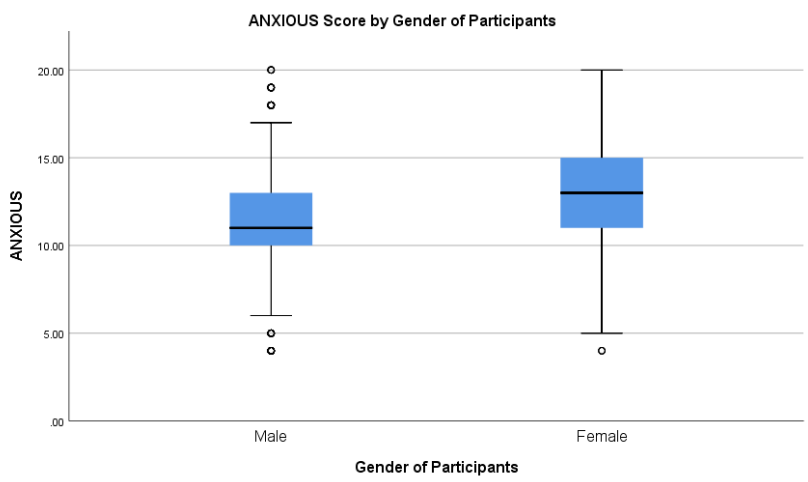
Anxiety Variables (Recoded into scale Variable ANXIOUS)Those with asterisk were reverse coded

- I worry about things*
- I am not easily bothered by things
- I get stressed out easily*
- I don't worry about things that have already happened

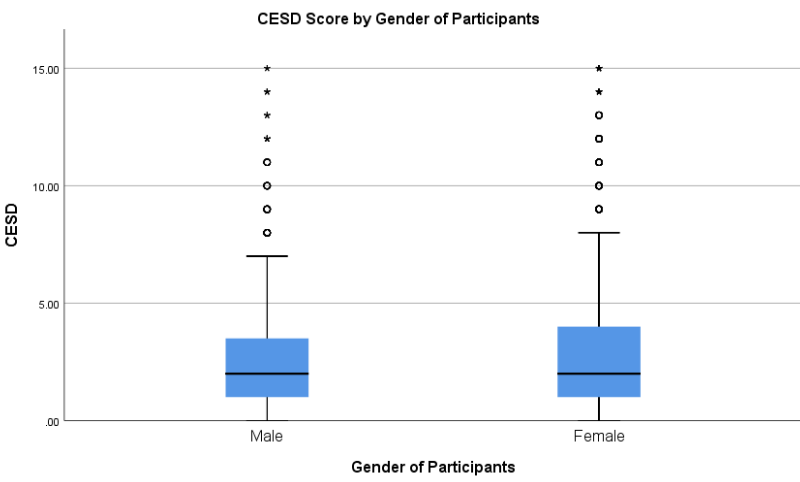
Results

Univariate Variables n=6,504

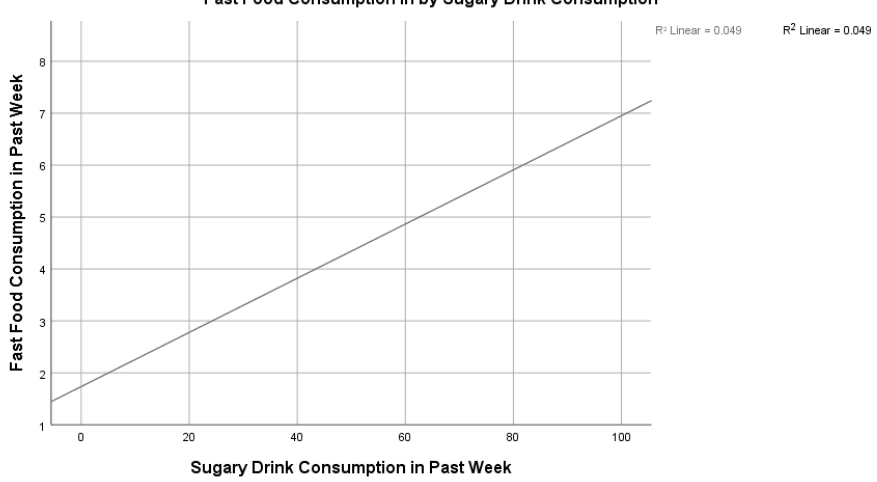
Gender	ANXIOUS	CESD	Fast Food Consumption	Sugary Drink Consumption	Diet Drink Consumption
Male: 48.4%	M=12.33	M=2.61	M=2.34	M=11.32	M=4.43
Female: 51.6%	SD=3.00	SD=2.55	SD=2.85	SD=11.99	SD=8.43



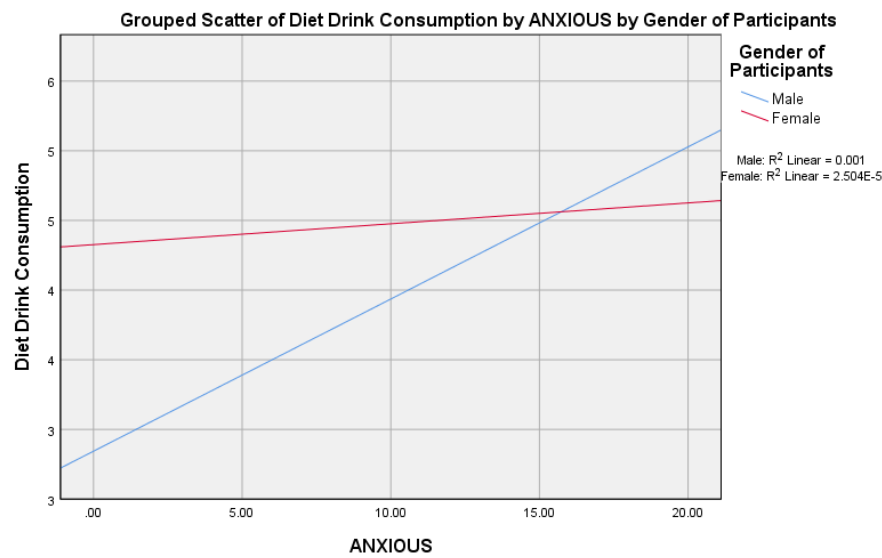
- Females had a significantly higher ANXIOUS score (M=13.12, SD=2.85) compared to Males (M=11.42, SD=2.87)(p<.001), analyzed with an independent samples t-test.



- Females had a significantly higher CESD score (M=2.84, SD=2.87) compared to Males (M=2.33, SD=2.33)(p<.001), analyzed with an independent samples t-test.



- A one unit increase in fast food consumption increases sugary drink consumption by .932 units (p<.001).



- Though males have a stronger relationship between diet drink composition and anxiety compared to female, there is no significance between the interaction term (gender and ANXIOUS) and Diet drink consumption.

Table 1. Results of Linear Regression

Variable	Model 1				Model 2			Model 3		
	Fast Food Consumption		Sugary Drink Consumption		Diet Drink Consumption					
	B	CI	p	B	CI	p	B	CI	p	
CESD	.111	.078, .145	<.001	.493	.352, .635	<.001	-.158	-.258, -.058	.002	
ANXIOUS	-.026	-.056, .004	.086	.024	-.101, .149	.703	.116	.027, .204	.011	
GENDER	-.785	-.947, -.623	<.001	-3.55	-4.23, 2.87	<.001	.314	-.171, .80	.205	

- A one unit increase in CESD score increased .111 units (p<.001) in fast food consumption and .493 unit (p<.001) in sugary drink consumption while a decreased .158 units (p=.001) in diet drink consumption after controlling for anxiety and gender. A one unit increase in ANXIOUS score increased .116 units (p=.011) in diet drink consumption after controlling for CESD and gender. Females consumed .785 units less fast food (p<.001), and 3.55 units less of sugary drinks (p<.001) compared to males after controlling for CESD and ANXIOUS.

Conclusion

- Women significantly reported experiencing more anxiety and depression compared to males which aligns with other studies investigating anxiety and gender (2).
- A one unit increase fast food meal consumption increased sugary drink consumption by .932 units and this was significant.
- A one unit increase in CESD score increased .111 units in fast food consumption and .493 unit in sugary drink consumption while it decreased .158 units in diet drink consumption after controlling for anxiety and gender. Other studies have found a positive relationship between depression and fast food consumption and a diet drink consumption (1,2,3).
- Anxiety was only found to be significantly associated with Diet drink composition after controlling for CESD and gender.
- Though anxiety significantly differed among the genders, this interaction term did not significantly effect diet. Other studies have found that anxiety only affects female dietary habits not males (2, 4). The interaction term between gender and depression also did not significantly effect diet.
- Females consumed .785 units less of fast food and 3.55 unit less of sugary drinks compared to men after controlling for Anxiety and gender (p<.001).
- There was no significant relationship between Anxiety and fast food consumption and sugary drink consumption. There was no significant relationship between gender and diet drink consumption.
- There is obviously a relationship between diet and mental health even though mental health differs among gender,

References

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