



WILKES UNIVERSITY

Changing Obesity Management

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BACKGROUND

SIGNIFICANCE

- ▶ Obesity = Epidemic Proportions (35.7%)
 - ▶ (Overweight & Obesity 71.1%) .
- ▶ The costs have escalated into the BILLIONS of dollars
- ▶ Leading Cause of Preventable Death
 - ▶ (200,000 deaths annually)



SIGNIFICANCE

- ▶ 2/3 of Americans having tried to lose weight at least once in their lifetime.
- ▶ Weight-loss industry's sales reaching \$2.73 billions
- ▶ Obesity not driven by a lack of motivation or effort



Behavioral and Neurochemical Correlations

- Drug Dependence

- Compulsive Overeating
 - Binge Eating Disorder
 - “Food Addiction”

Avena, Rada & Hoebel, 2008; Blum, Oscar-Berman, Barh, Giordano & Gold, 2013; Gearhardt et al., 2011a; Gearhardt, White & Potenza, 2011b; Mathes, Brownley, Mo, & Bulik, 2009; Muele, 2011; Nair, Adams-Deutsch, Epstein & Shaham, 2009; Parylak, Koob & Zorilla, 2011; Volkow, Wang & Baler, 2011; Wang, Volkow, Panayotis, & Fowler, 2009)



Neural Correlations

▶ PET scans show

▶ Neural Adaptations

- ▶ Changes in dopamine and opioid receptor binding (DA D2)
- ▶ Enkephalin mRNA expression
- ▶ Dopamine & acetylcholine release
- ▶ Changes in response to food cues

▶ MRI scans show

- ▶ evidence of structural and functional changes associated with high BMI



Definition of Addiction

- ▶ Preoccupation, obsession and/or pursuit of a substance
- ▶ Use persists despite adverse consequences.
- ▶ The inability to consistently abstain



PURPOSE of PILOT STUDY

PICOT QUESTION

- ▶ P - In normal weight, overweight and obese individuals
- ▶ I - Using the Yale Food Addiction Scale (YFAS)
- ▶ O - what is the incidence and prevalence of eating pathologies,
 - ▶ Craving
 - ▶ binge eating
 - ▶ “food addiction” symptoms
 - ▶ diagnosis of “food addiction.”



DSM-IV TR and the YFAS

- ▶ Diagnostic and Statistical Manual of Mental Disorders (DSM IV-TR)
 - ▶ 7 diagnostic criteria for substance dependence
 - ▶ Clinically significant impairment

- ▶ The Yale Food Addiction Scale
 - ▶ 27 Questions
 - ▶ 1-16 Likert Scale
 - ▶ 17-25 Dichotomous

- ▶ Food Addiction” Diagnosis
 - ▶ Three or more symptoms are present with
 - ▶ Clinically significant impairment



DSM-IV-TR Substance Dependence Criteria.

- (1) Substance taken in larger amount and for longer period than intended
- (2) Persistent desire or repeated unsuccessful attempt to quit
- (3) Much time/activity to obtain, use, recover
- (4) Important social, occupational, or recreational activities given up or reduced
- (5) Use continues despite knowledge of adverse consequences (e.g., failure to fulfill role obligation, use when physically hazardous)
- (6) Tolerance (marked increase in amount; marked decrease in effect)
- (7) Characteristic withdrawal symptoms; substance taken to relieve withdrawal

YFAS Sample Questions

IN THE PAST 12 MONTHS:

1) I find that when I start eating certain foods, I end up eating much more than I had planned.

Never	Once a month or less	Two to four times a month	Two to three times a week	Four or more times per week or daily
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2) Not eating certain types of food or cutting down on certain types of food is something I worry about

Never	Once a month or less	Two to four times a month	Two to three times a week	Four or more times per week or daily
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3) My food consumption has caused significant psychological problems such as depression, anxiety, self-loathing, or guilt

YES	NO			
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4) I kept consuming the same types of food or the same amount of food even though I was having emotional or physical problems.

YES	NO			
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Methods

DESCRIPTIVE CORRELATIONAL STUDY

DATA COLLECTION

Sample

- ▶ A convenience sample
 - ▶ Over the age of 18
- ▶ Presenting for weight loss care
 - ▶ Central Texas



Methods

DATA COLLECTION QUESTIONNAIRE

- ▶ Yale Food Addiction Scale
 - ▶ Demographic Data
 - ▶ Biophysiological Data

- ▶ Data collected from Dec. 27th 2013 until Feb 1st 2014.
 - ▶ 118 participants



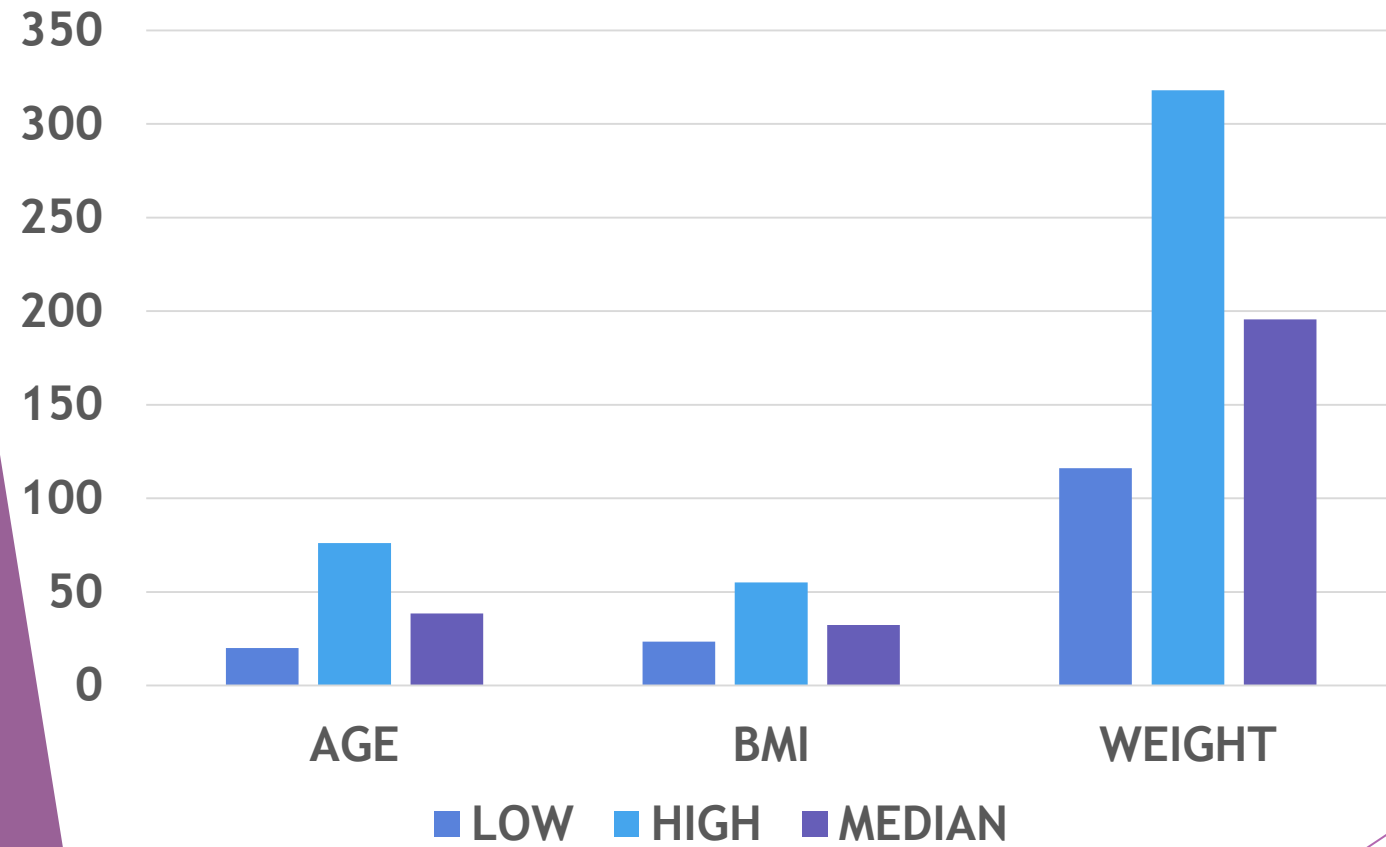
Methods

DATA ANALYSIS

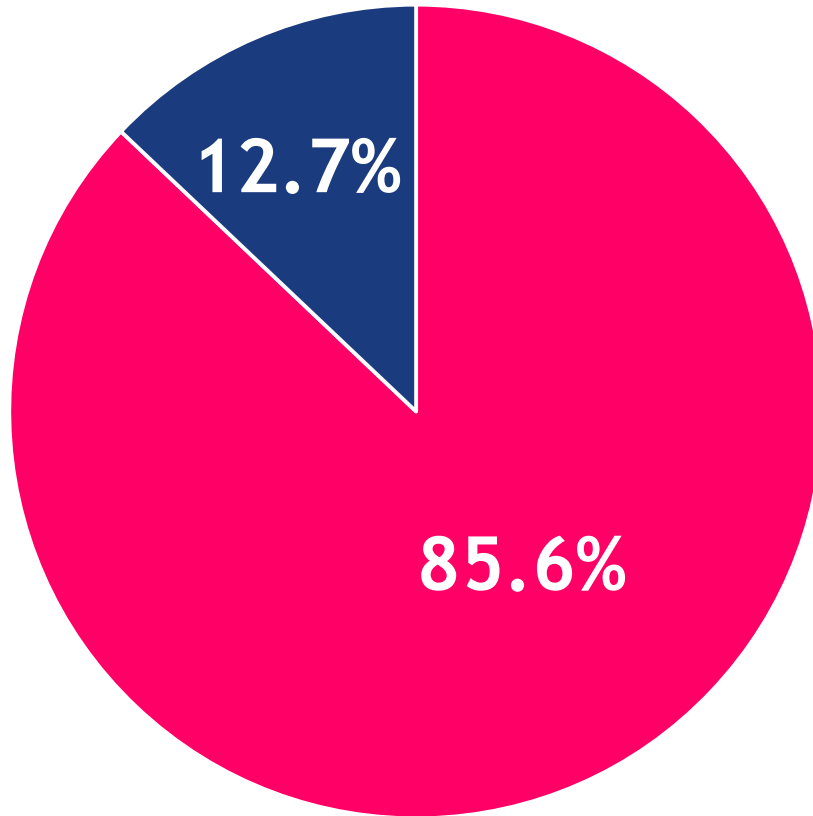
- ▶ SPSS 20 Statistical Graduate Pack
 - Frequencies

- ▶ Microsoft Excel
 - Correlations

DEMOGRAPHICS

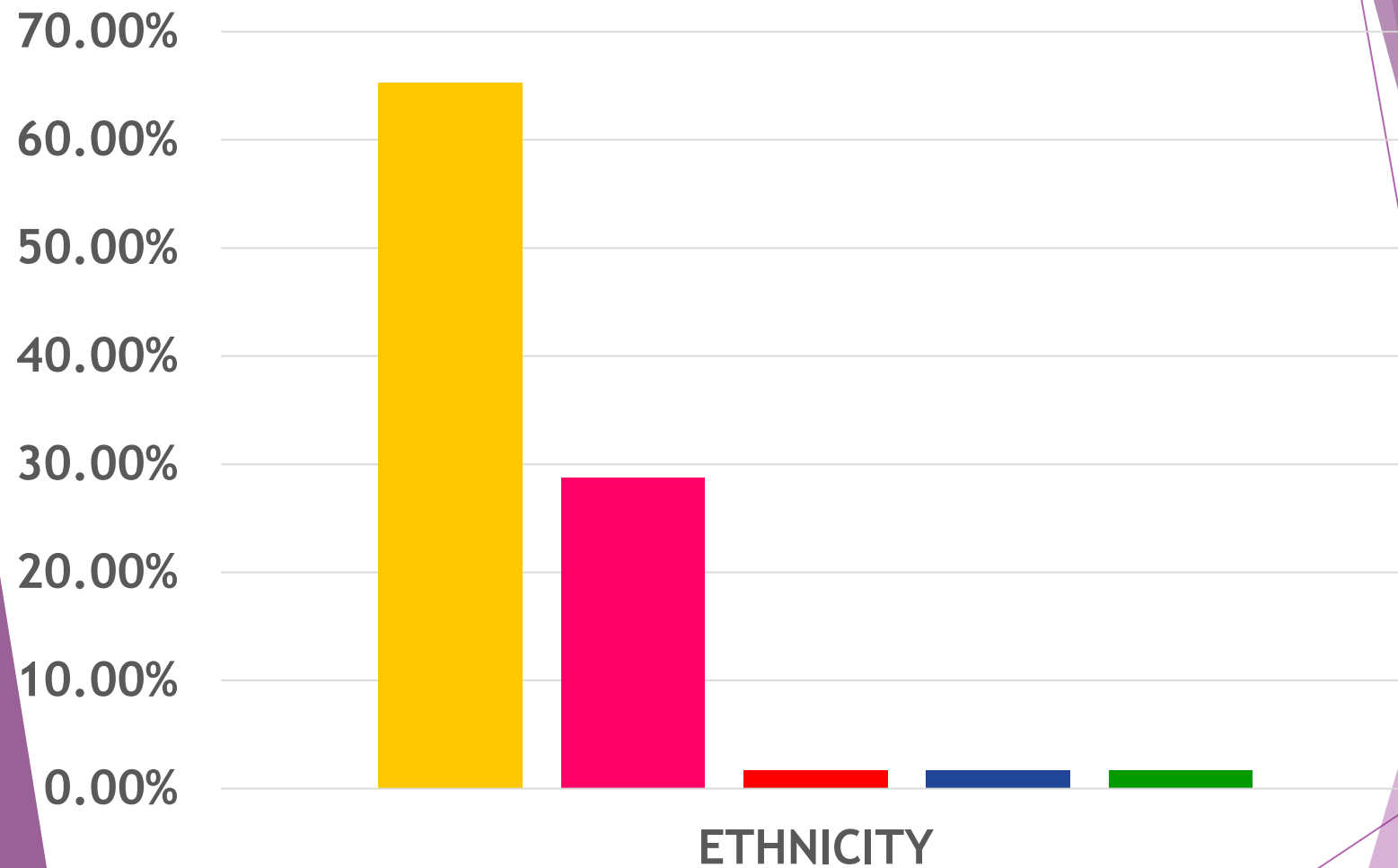


GENDER COMPARISON



■ FEMALE ■ MALE

ETHNICITY COMPARISON



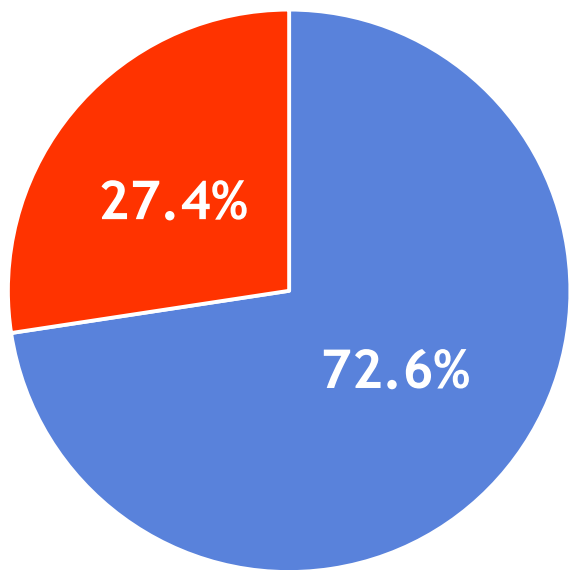
■ WHITE NON-HISPANIC ■ HISPANIC
■ ASIAN ■ OTHER

■ AFRICAN AMERICAN



CRAVINGS

Is there a certain time of day when you most often get cravings?



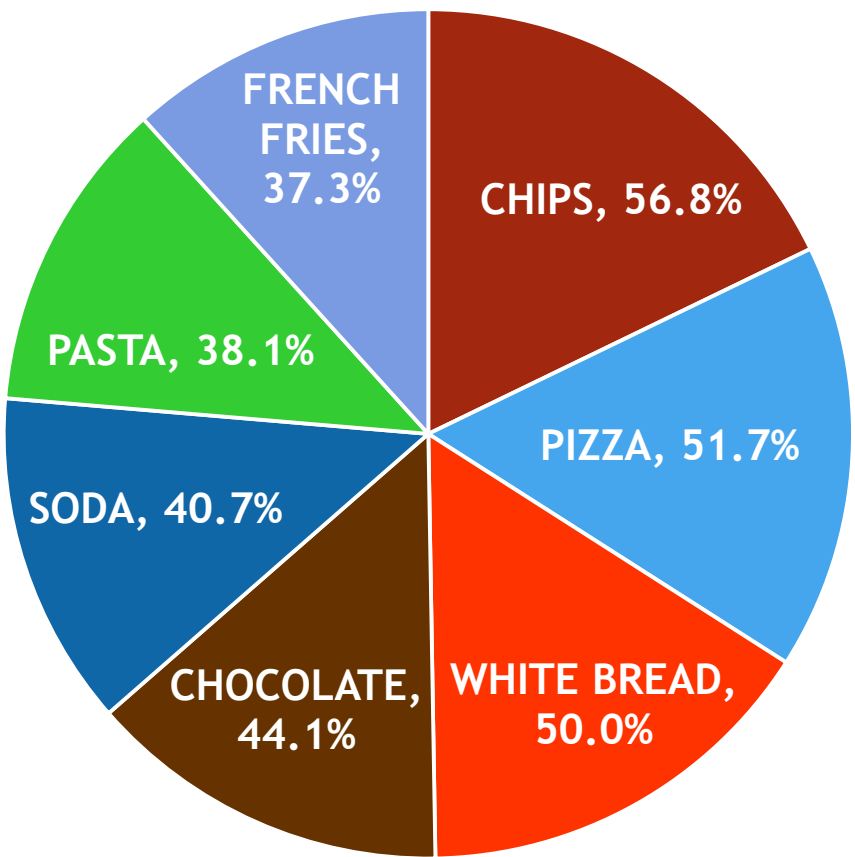
■ YES ■ NO

What time of Day do you most often get cravings?

- ▶ 1500-1800 = 30.5%
- ▶ 1900 - 2200 = 21.2%

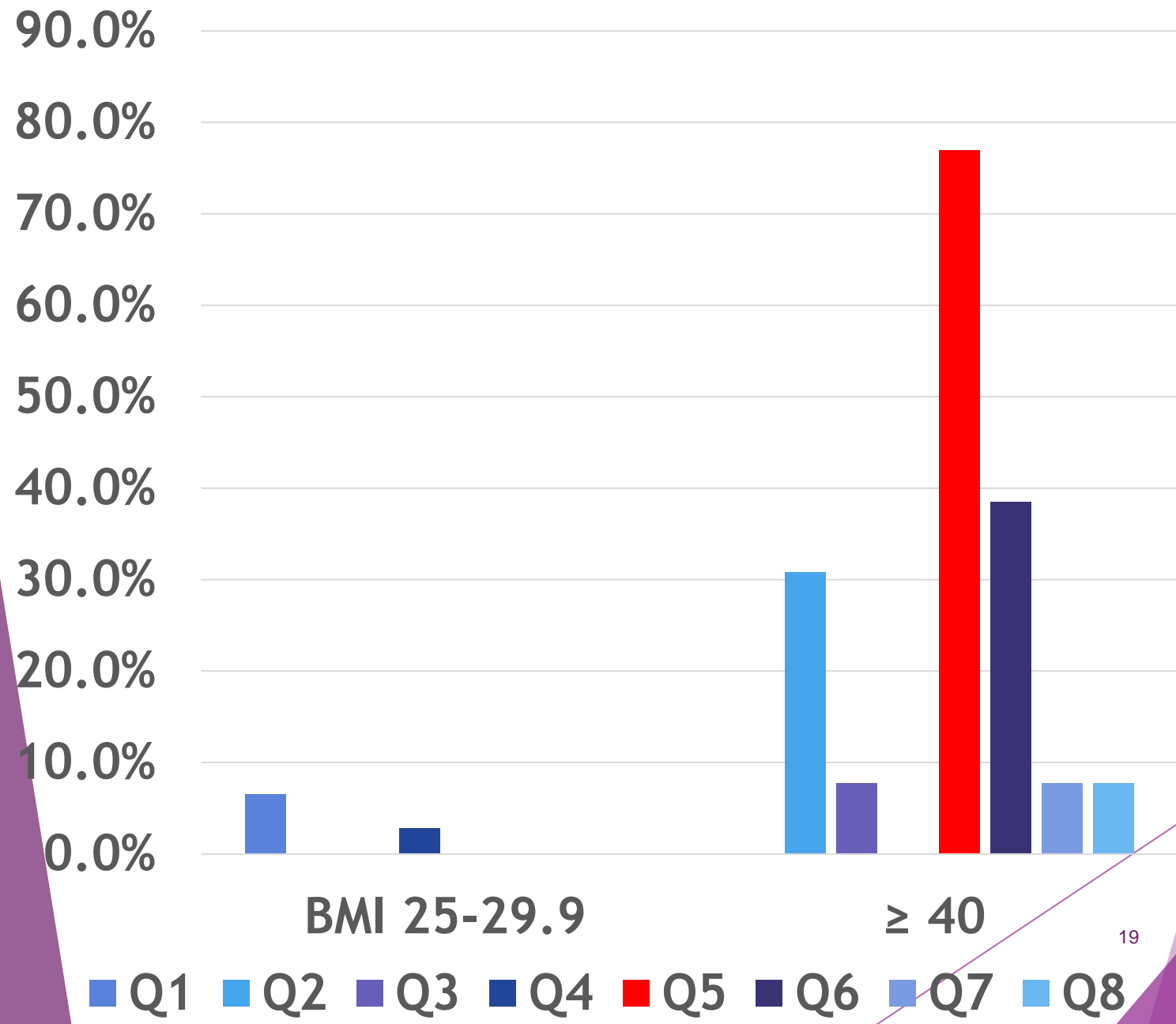


PROBLEM FOODS

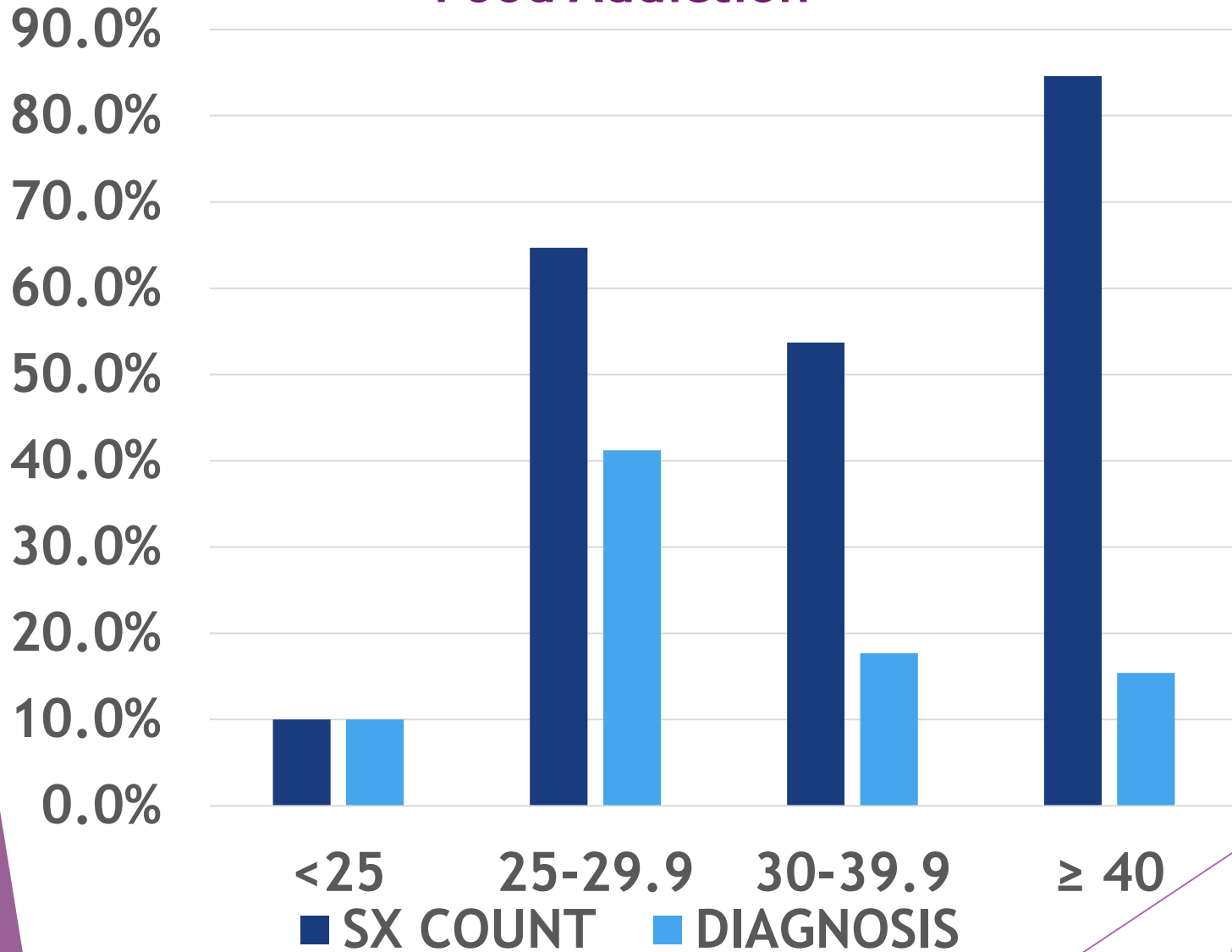


- CHIPS
- CHOCOLATE
- FRENCH FRIES
- PIZZA
- SODA
- WHITE BREAD
- PASTA

BMI to 7 Diagnostic Criteria



BMI to Symptom Count & Diagnosis of “Food Addiction”





Conclusions

- ▶ “Food Addiction” may explain why people continue to use despite negative consequences
- ▶ DA D2 receptor deficiency is implicated as one of the causes of obesity
- ▶ Supports - Increasing Symptom Count with increasing BMI



Implication for Practice

- ▶ Strong evidence of ‘food addiction’ in etiology of obesity.
- ▶ 1st step in any addiction is to acknowledge the problem - identify the problem
- ▶ Changes in “triggers” - advertising of unhealthy snacks. Snack food vending machines.
- ▶ Medical Treatment for DA receptor deficiency



Implications for Practice

- ▶ Individual Practice Change
- ▶ National Practice Change
 - ▶ obesity prevention
 - ▶ improvement of treatment
 - ▶ prevention of associated cardiovascular risk factors/illnesses associated with obesity

Crosswalk of Scholarly Project Outcomes

	DNP Essentials	Chapter <u>1</u> Intro & Overview	Chapter <u>2</u> Literature Review	Chapter <u>3</u> Methods	Chapter <u>4</u> Results	Chapter <u>5</u> Discussion & Conclusions
I	Scientific Underpinnings for Practice	1-19	20-40	41-50	51-56	57-64
II	Organizational & Systems Leadership for QI & Systems Thinking	1-19		41-50		57-64
III	Clinical Scholarship & Analytical Methods for Evidenced Based Practice	1-19	20-40	41-50	51-56	57-64
IV	Information Systems/Technology & Patient Care Technology for the Improvement & Transformation of Health Care			41-50	51-56	
V	Health Care Policy for Advocacy in Health Care	1-19	20-40			57-64
VI	Inter-Professional Collaboration for Improving	1-19	20-40	41-50		



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Questions?

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