

# Body image dissatisfaction is increased in inflammatory bowel disease compared to healthy matched controls but not diseased controls.



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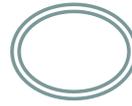
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# Body Image Dissatisfaction



- **Body image**
  - term introduced by psychiatrist Paul Schilder in 1935
  - “a person’s overall sense of their physical appearance and body function”
  - forms during childhood
  - develops substantially during puberty and young adulthood as a result of rapid physical and emotional changes.
  - remains fluid throughout adult life
  - may alter in response to media and advertising exposure, aging, and both positive and negative interpersonal experiences.

# Body Image Dissatisfaction



- Body image may be adversely affected by medical and surgical diseases.
  - tends to occur as patients adapt to functional disturbance or physical disfigurement
  - may lead to a perception of their body failing them
- Body image disturbance is not merely body image dissatisfaction.
  - Impact of dissatisfaction on actual day-to-day body image experiences and psychosocial functioning can range from minimal to extreme.
  - Requires a multidimensional definition of body image disturbance or disorder.
  - **“a persistent report of dissatisfaction, concern, and distress that is related to an aspect of appearance. . . . [and] some degree of impairment in social relations, social activities, or occupational functioning. . . .”**
  - Equates with “mental disorder” in the Diagnostic and Statistical Manual of Mental Disorders

# The case for body image dissatisfaction in IBD



- Disease symptoms and their severity can adversely influence body image in chronic disease states.
- IBD patients become ill during their teenage and early adult years when concerns relating to body shape, weight, physical function, self-esteem, and intimate relationships often develop
- Only 4 pre-existing studies of body image dissatisfaction in IBD

# The case for body image dissatisfaction in IBD



- 2009, Adelaide, Australia (Jane Andrews)
  - 347 patients, age 18–50 years, from a hospital- based IBD database were surveyed by post
  - 66.8% impaired body image
- 2015, Dublin, Ireland
  - 330 patients (median age, 36 yr, range, 18–83; 169 men).
  - 42 patients (13%) reporting no concern about any aspect of their body image
- 2015, Madison, Wisconsin
  - 274 participated in **longitudinal** study (145 CD, 129 UC/IBDU)
  - IBDQ scores were significantly associated with all BID scores
- 2017, Coimbra, Portugal
  - 96 non-operated female IBD patients
  - the factors that contribute to body image impairment and its impact on QoL

# The case for body image dissatisfaction in IBD



- **Factors associated with body image dissatisfaction**
  - Female gender
  - Younger age
  - Smokers
  - Higher body mass index
  - Lower psychological and physical QoL
  - Increased corticosteroid use
  - IBD symptomatology
  - Low self-esteem
  - Low sexual satisfaction
  - High levels of anxiety and depression



# Aims



- **Main clinical question: Is BID more prevalent in IBD compared to**
  - similar subjects (not normative data) with another chronic disease not associated with abdominal symptoms and surgery and
  - Similar subjects (not normative data) without chronic disease?
- **Secondary clinical questions:**
  - Are other disease or personal factors associated with BID?
  - Is BID associated with alterations in QOL, physical and mental wellbeing in IBD patients?

# Methods: 3 group case-control study



- **IBD Case Group**
  - Patients aged 16 years and over
  - at least 6 months of IBD diagnosis
- **Control Group**
  - Healthy community members aged 16 years and over
  - no diagnosed chronic physical or mental illness
- **Diabetes Group**
  - Patients diagnosed with Type 1 diabetes mellitus aged 16 years and over
  - do not have chronic gastrointestinal disease
- **Exclusions criteria**
  - IBD: recent (<4 weeks) intra-abdominal operation, pregnant, coexisting type 1 diabetes mellitus
  - Controls: significant other chronic medical conditions (other than diabetes in the chronic disease control group), pregnant

# Methods: 3 group case-control study



- Consecutive cases were matched 1:1:1 to normal and diabetes controls for age (stratified by decade) and gender
- Data collected:
  - Age, gender, ethnicity, comorbidities, medications, smoking, relationship status.
  - Height/weight for BMI.
  - **Cash Body Image Disturbance Questionnaire**
  - RAND 36-Item Quality of Life measure
  - Depression & anxiety – HADS
  - IBD patients: HBI (Crohn's), SCAI (UC)

# Methods: Sample size calculation



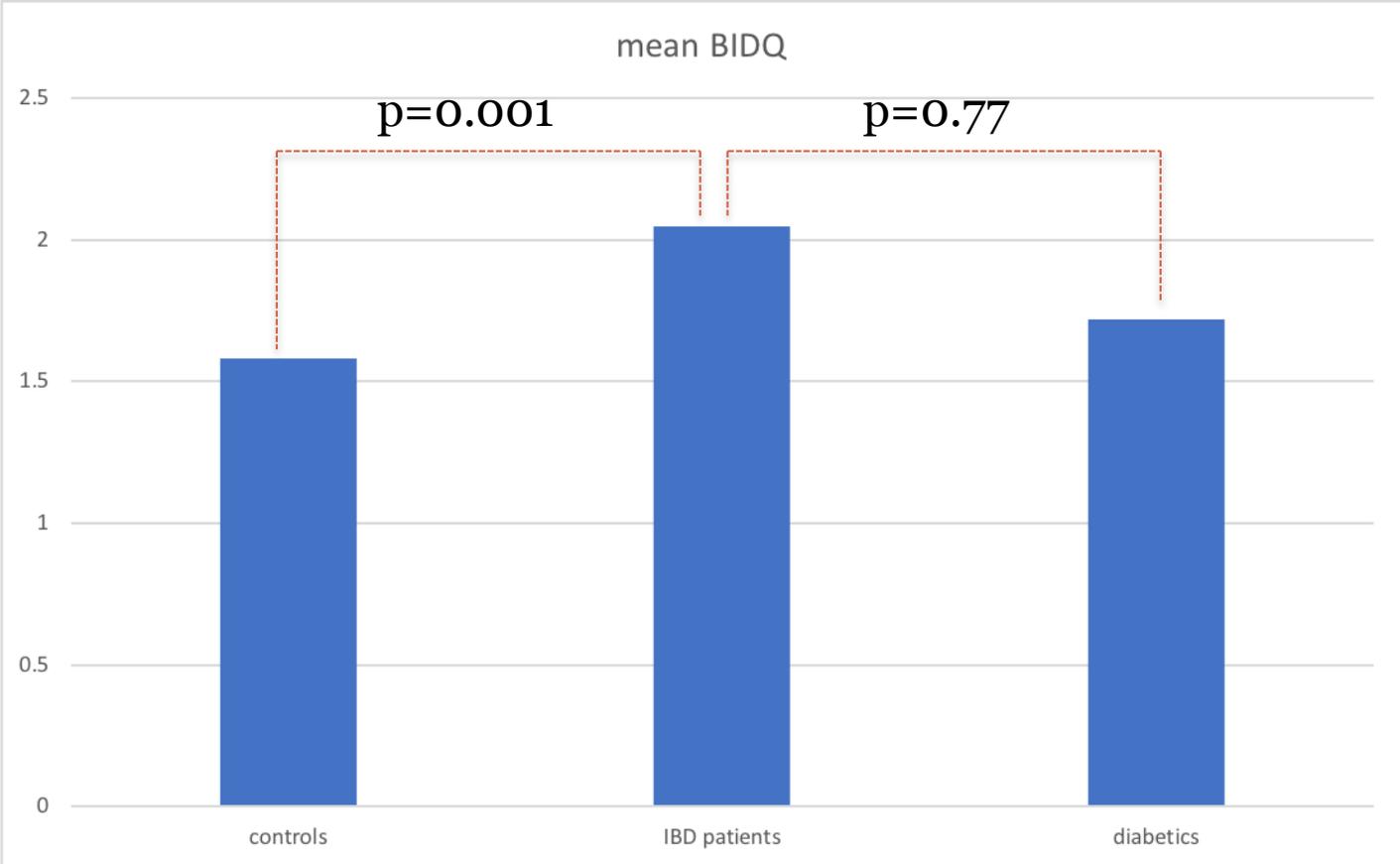
- **The Cash Body Image Disturbance Questionnaire**
  - mean score in healthy individuals 1.57 (sd .6, n=53) for men and 1.81 (sd .67, n=198) for women.
  - for IBD the mean score in one study was 2.2 for men and 2.4 for women.
  - powered study to show a difference of 0.6 with alpha 0.05 and beta 0.9.
  - gave a sample size of 19 in each of the three groups.
  - Planned to recruit at least 25–30 patients in each group to ensure that the matching is adequate.

# Results



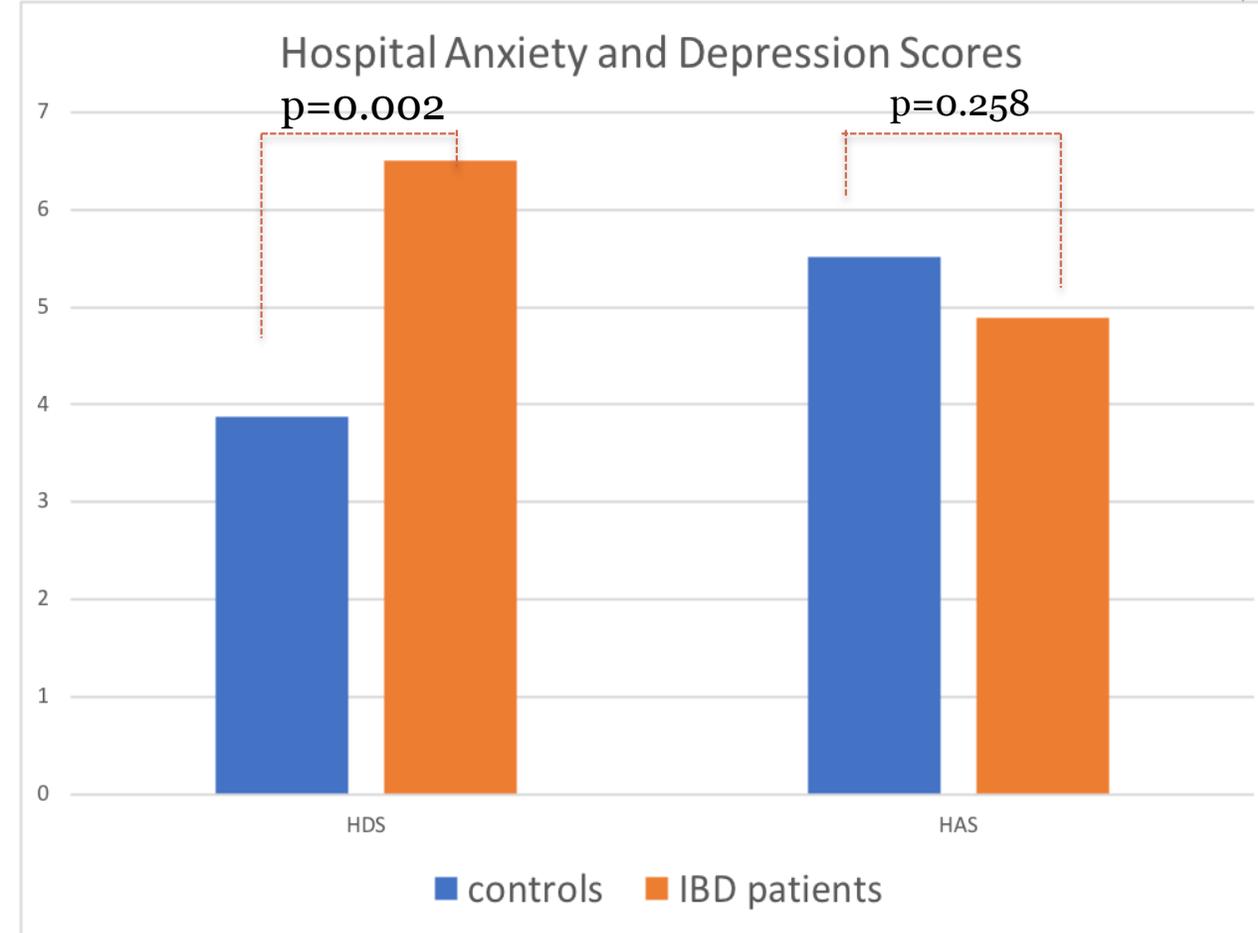
- age and gender matched pairs for comparison
  - 45 IBD and healthy controls
  - 38 for IBD and diabetes controls.
- no difference in mean BMI, smoking status, or relationship status between groups.
- 77% female

# Mean Body Image Dissatisfaction Between Groups

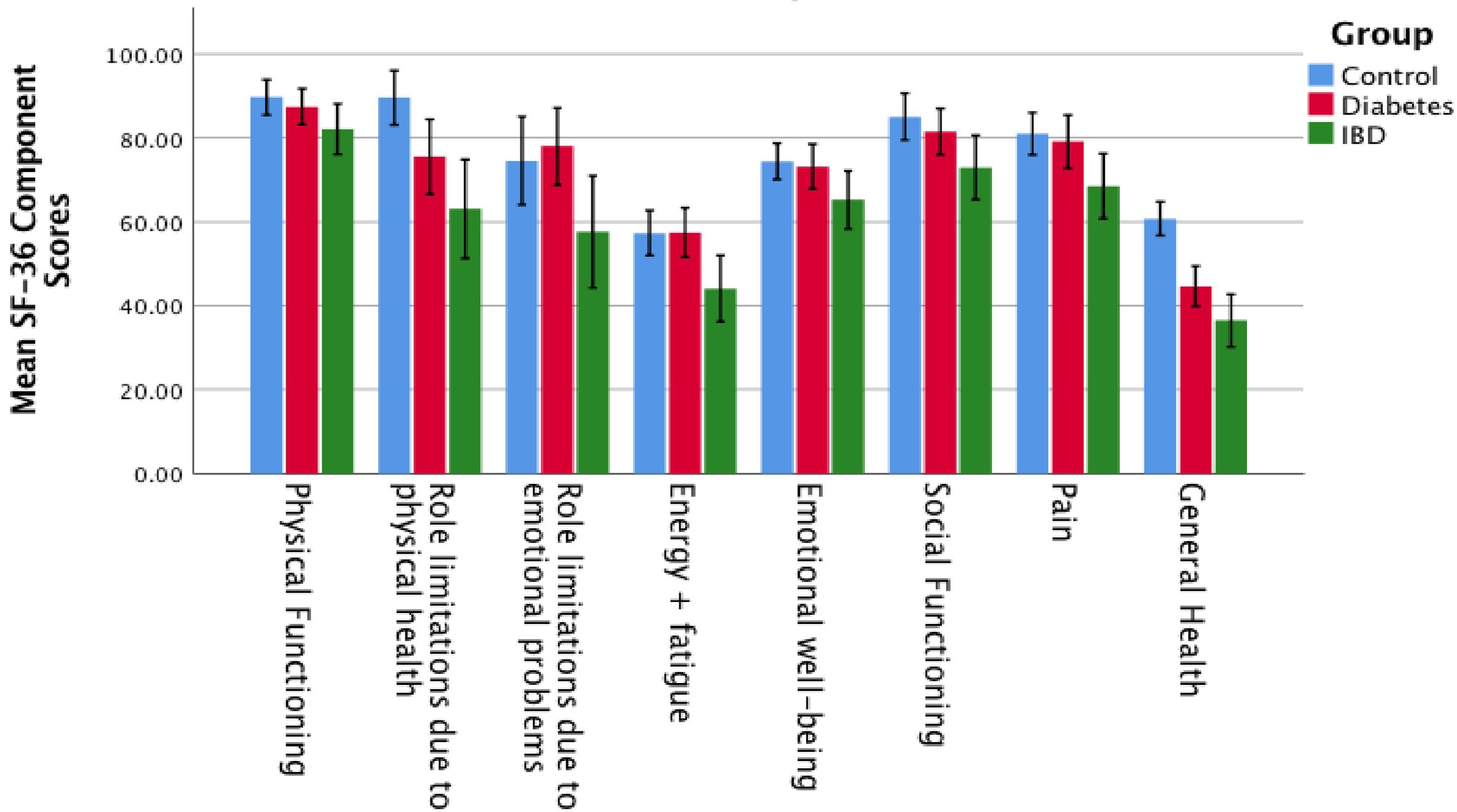


# Results

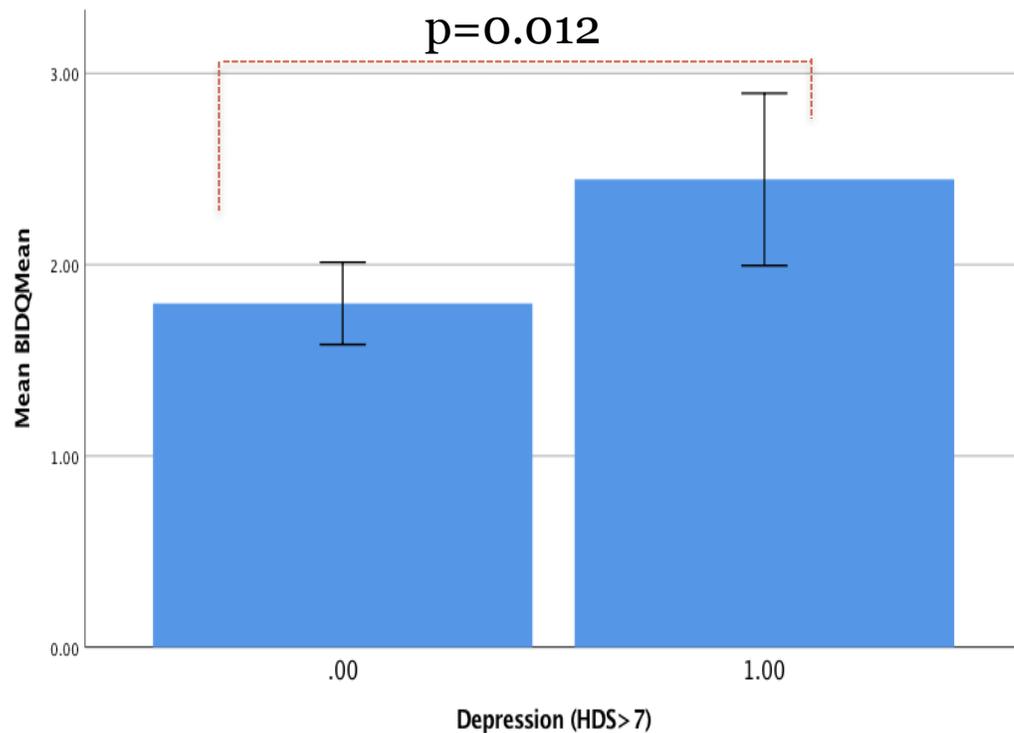
- IBD patients scored more highly than controls for depression
- No difference was seen between IBD and diabetes in either HADS domain.



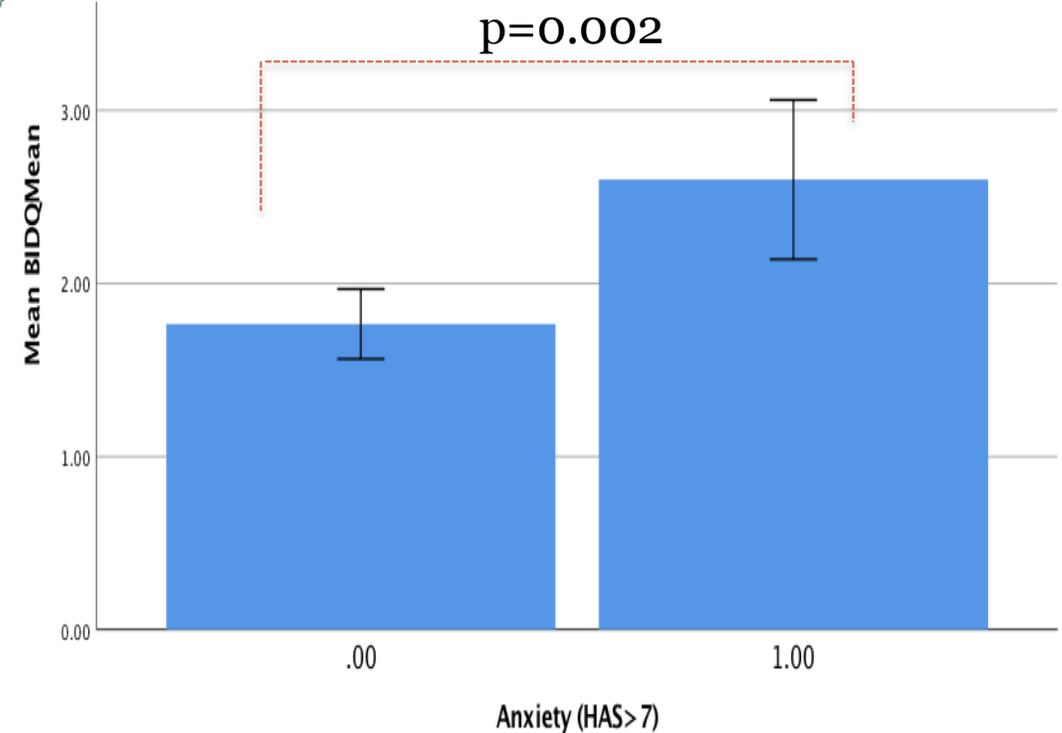
# RAND SF-36 Component Scores with 95% CI



# BIDQ affects anxiety and depression in IBD patients



Logistic regression showed a odds ratio of 4.6 for depression for every 1 point increase in BIDQ ( $p=.025$ ) after adjusting for clinical remission, gender, age, BMI and smoking status.



Logistic regression showed a odds ratio of 7.4 for anxiety for every 1 point increase in BIDQ ( $p=.015$ ) after adjusting for clinical remission, gender, age, BMI and smoking status.

# Conclusions



- Body image dissatisfaction is increased in IBD patients compared to age and gender matched controls, however:
  - may not relate directly to the effects of IBD itself
  - rather is a feature of chronic disease.
- Increased BID was associated with the presence of depression and anxiety in IBD patients
  - even when adjusted for clinical remission, gender, age, BMI or smoking status
- Suggests there may be a role for diagnosing and treating BID in IBD patients.