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Gender focus in addressing eating disorders in adolescents

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Objectives

Gender focus in addressing eating disorders (ED) in adolescents…

- **Acquisition of knowledge in detecting warning signs of ED in adolescents in general and by gender particularly**
- **To develop skills in addressing this disease by gender**

Definitions

Gender focus in addressing eating disorders in adolescents…

What do we mean by gender?

…and by sex?

Definitions

Gender focus in addressing eating disorders in adolescents…

Gender ≠ Sex

"***Gender*** *refers to the socially constructed roles, behaviours, activities, and attributes that a given society considers appropriate for men and women".*

*"**Sex** refers to the biological and physiological characteristics that define men and women".*

World Health Organization

http://www.who.int/gender/whatisgender/en/

European Region series

"Young people's health as a whole-of-society response"

- **Gender**
  - **Key determinant in adolescent health**
  - **Boys and girls differences and inequalities affect disease, health and well-being**
    - Includes emotional and social well-being, chronic conditions, adolescent pregnancy, HIV/AIDS and STI, overweight and obesity, violence, injuries and substance abuse

...What about ED?

http://www.euro.who.int/__data/assets/pdf_file/0005/158099/316637_WHO_brochure_226x226_4-ChronicCondition.pdf

Definitions

Gender focus in addressing eating disorders in adolescents…

Definition of eating disorders?

"*Severe disturbances in eating behavior*"

Anorexia Nervosa	Bulimia Nervosa	EDNOS	DSM IV-TR
Anorexia Nervosa	Bulimia Nervosa	EDNOS	Binge Eating Disorder
			DSM V

General epidemiology

- Prevalence of ED in general population
  - **AN 1%**
  - **BN 4%**
  - **EDNOS 10%**

- Gender differences in adults
  - ♀:♂ → **10:1**
  - ♂: **BN more frequent than AN**
  - **Age of onset of ED**

No differences for some authors
Others refer ♂ delayed age onset (18-26 yrs ♂, 15-18 yrs ♀)

Pediatric epidemiology

Which factors influence the prevalence of ED in pediatric population?

Pediatric epidemiology

- National Comorbidity Survey Replication Adolescent Supplement (NCS-A), 2011, US , n=10123 adolescents 13-18 yrs old (DSM IV)
  - Lifetime prevalence rates:

Table 1. Sex-Specific Lifetime and 12-Month Prevalences and 12-Month to Lifetime Prevalence Ratios of Eating Disorder Subtypes Among 10 123 Adolescents

	% (SE)				
Prevalence or Ratio	AN	BN	BED	SAN[a]	SBED
Lifetime prevalence					
Total	0.3 (0.06)	0.9 (0.16)	1.6 (0.22)	0.8 (0.09)	2.5 (0.26)
Male	0.3 (0.09)	0.5 (0.19)	0.8 (0.19)	0.1 (0.04)	2.6 (0.41)
Female	0.3 (0.10)	1.3 (0.22)	2.3 (0.40)	1.5 (0.20)	2.3 (0.36)

Swanson SA et al. Prevalence and Correlates of Eating Disorders in Adolescents – *Results From the National Comorbidity Survey Replication Adolescent Supplement. Arch Gen Psychiatry. 2011;68(7):714-723.*

Pediatric epidemiology

- In 491 adolescents aged 14-18 yrs old, normal BMI, 46,2% had disturbed eating behaviors
  - 16,3% similar to AN, of which 26% ♂ (♂ : ♀ 1:4)
  - 17,1% similar to BN, mainly in older adolescents (both gender), 34% ♂ (♂:♀ 1:3)

Rodriguez A et al. Eating disorders and altered eating behaviors in adolescents of normal weight in a Spanish city. J Adol Health 2001;28:338

- In our outpatient clinic, 68 adolescents (10♂), 12-16 yrs old (2005-2012)

ED	♂ %	♀ %	Total
AN	40	26	28
BN	0	9	7
EDNOS	60	65	65

Eating disorders in boys: What differences?Rita Moínho, Inês Dias, Alexandra Luz, Pascoal Moleiro

Pediatric epidemiology

- Changing patterns
  - ↑ **ED prevalence over the last decade**
    - ↑ Obesity and dieting
  - ↑ **Males and minority populations**
  - ↑ **ED at progressively younger ages**
  - **Younger patients (<13 yrs): less ♀ predominance**
    - AN (♂:♀) in prepubertal (6:14) and postpubertal patients (1:19)

Raise level of awareness of ED by healthcare professionals!

Pediatric epidemiology

EDNOS is the most representative group.

…Really?

Classification – DSM IV

- Anorexia Nervosa (AN)
  - Restricting type
  - Binge-eating/Purging type
- Bulimia Nervosa (BN)
  - Purging type
  - Nonpurging type
- Eating Disorder Not Otherwise Specified (EDNOS)

DSM V - Changes

- Anorexia Nervosa
  - **Amenorrhea not required for diagnosis**
  - **The word “refusal” was ommited → Focus on behavior**
  - **No reference to weight percentile for definition**
- Bulimia Nervosa
  - **Number of episodes reduced to at least once a week**
  - **No need to specify a subtype**
- Binge Eating Disorder
  - **Addition as a separate diagnosis**

http://bodymatters.com.au/wp-content/uploads/2010/11/DSM-VproposalsED.pdf

DSM V - Changes

- **Feeding and Eating Disorders Not Elsewhere Classified (FEDNEC)**
  - Previously called EDNOS
  - Includes: Atypical AN, Subthreshold BN, Subthreshold BED, Purging Disorders, Night Eating Syndrome

- **Avoidant/restrictive food intake disorder (ARFID)**
  - Includes diagnosis of Feeding Disorder of Infancy and Early Childhood

http://bodymatters.com.au/wp-content/uploads/2010/11/DSM-VproposalsED.pdf

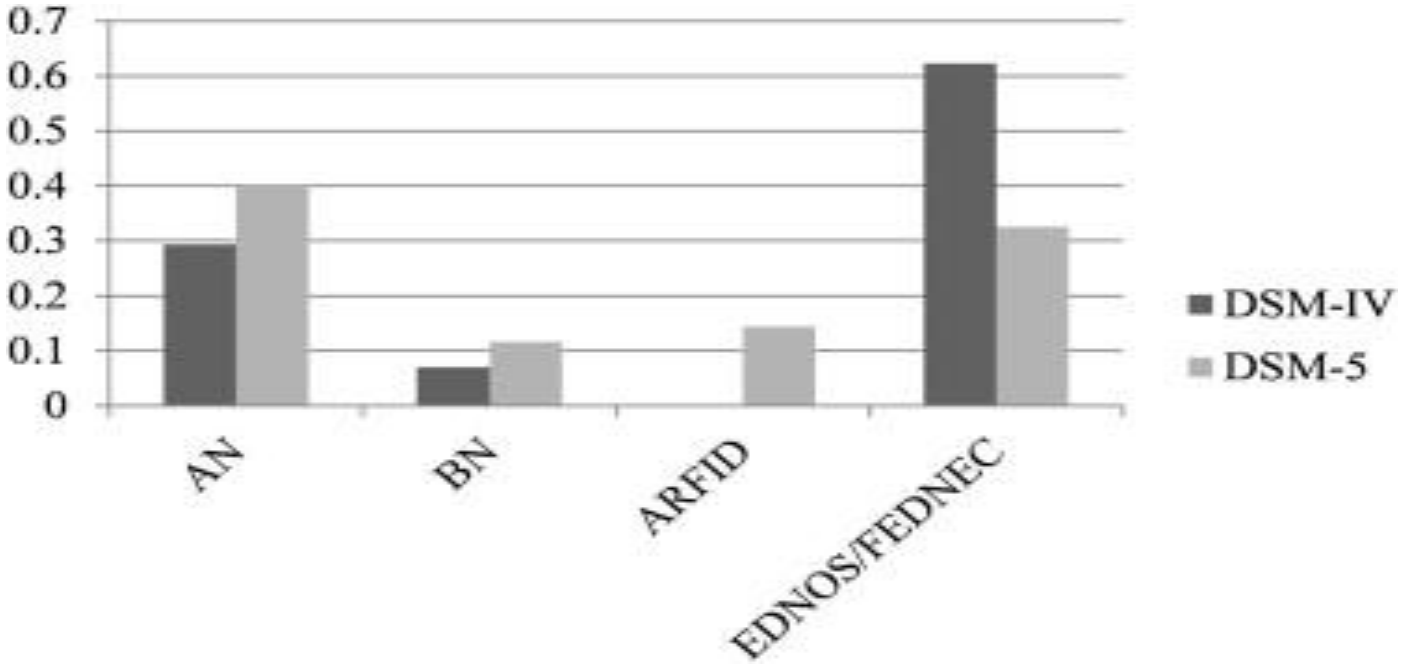
DSM V - Changes

- **More focused on psychological and behavioral criteria**
  - Avoiding food
  - Compensatory behaviors
  - Fail to grow and enter puberty
- **Criteria in correlation with fasting physiology and low caloric intake**
  - Australian study in children and adolescents 5-13 yrs old
    - Only 51% had ED criteria (DSM IV) but…
    - 61% had potencially mortal complications secondary to malnutrition

Bravender, T et al. Classification of eating disturbance in children and adolescents: Proposed changes for the DSM-V. Eur. Eat. Disorders Rev.,2010;18: 79–89.

DSM V - Impact

- Ornstein et al, 2013 (n=215)



- ↑ AN (29,3% → 40%)

- ↑ BN (7% → 11,6%)

- ↓ EDNOS (62,3% → 32,6%)

- 14% ARFID

Ornstein RM et al. Distribution of Eating Disorders in Children and Adolescents Using the Proposed DSM-5 Criteria for Feeding and Eating Disorders, http://dx.doi.org/10.1016/j.jadohealth.2013.03.025,

Pediatric epidemiology

Which factors influence the prevalence of ED?

Definitions and variables included

Assessment tools used

Clinical versus population samples

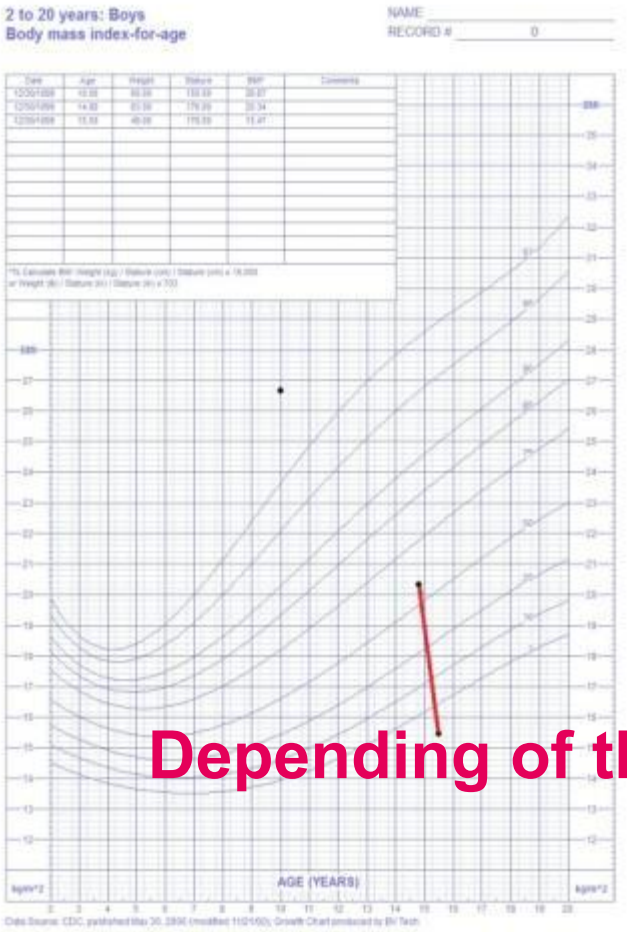
Cultural and social aspects

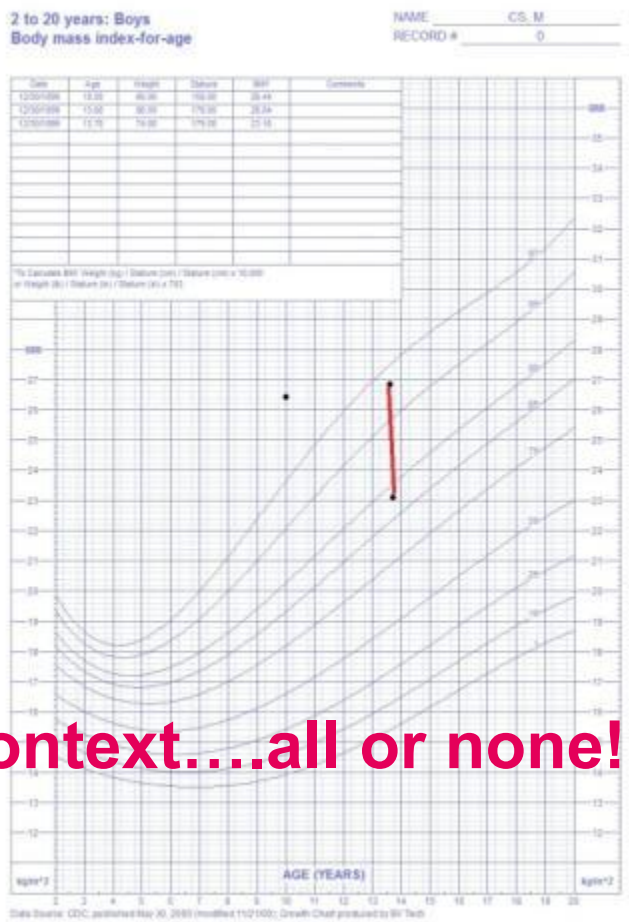
Male gender not included in most studies

No recognition of ED by health care (++♂)

Warning signs

- **Which of the following findings are warning signs in ED?**





Depending of the context….all or none!

Warning signs

- **Weight fluctuations, even with normal BMI**
- **Abnormal eating behavior**
  - Skipping meals, rituals, count calories, cooking, not eating in social contexts,…
- **Recent or exacerbated interest in physical exercise**
  - Compulsive exercising, standing up for long periods, …
- **Body dissatisfaction**
  - Focused in particular body parts, wear big or baggy clothes or dressing in layers...
- **Irregular menses/amenorrhea**
- **Multiple psychological and somatic complaints**
  - Sadness, social isolation, mood swings, headaches, abdominal pain…
- **Integrated frequently in a dysfunctional family context**

Warning signs

SYSTEMS	PHYSICAL SIGNS
Dermatologic	Cheilitis, acrocyanosis, carotenaemia, alopecia, xerosis, acne, lanugo, pallor, cachexia, abrasions/bruising over spine from excessive exercise, periorbital petechiae, Russell's sign, thin hair
Orofacial	Halitosis, palatal and posterior pharynx lesions, enamel erosion, cavities/tooth decay, parotid enlargment
Gastrointestinal	Constipation, rectal prolapse, excavated abdomen
Cardiovascular	Bradycardia, hypotension, arrhythmias, heart murmur / mitral valve prolapse

Warning signs

SYSTEMS	PHYSICAL SIGNS
Genitourinary and breast	Breast atrophy, atrophic vaginitis and atrophy of the external genitalia
Pulmonary	Pneumothorax secondary to vomiting or aspiration, pulmonary edema during refeeding
Endocrine and metabolic	Pubertal delay, slowing or stopping the growth, hypothermia
Neurologic	Neurocognitive impairment, muscular weakness, peripheral neuropathy
Skeletal	Fractures due to loss of bone mineralization

Gender approach

- **Clinical presentation can be similar in both gender**
  - Psychopathology
  - Age of onset
  - Premorbid conditions
  - Psychiatric comorbility
  - Parents and media influence

… but there are differences!

Gender approach

What do you think are these differences?

Gender approach

- Few studies focusing on male patients

- Assessment tools are normed for female gender
  - EDI-3 (*Eating Disorder Inventory 3*)
    - ♀: higher on *Drive for thinness* and *Body Dissatisfaction*
    - ♂: lower in *Perfectionism* and *Maturity Fears* subscales

  - EDE (Eating Disorder Exam
    - ♂: lower on *Empty Stomach, Social Eating, Eating in Secret, Flat stomach* and *Desire to Lose Weight* items

Darcy AM et al. The Eating Disorders Examination in Adolescent Males with Anorexia Nervosa: How Does It Compare to Adolescent Females? Int J Eat Disord. 2012 January ; 45(1): 110–114
Standford SC, Lemberg R. A Clinical Comparison of Men and Women on the Eating Disorder Inventory-3 (EDI-3) and the Eating Disorder Assessment for Men (EDAM), Eating Disorders: The Journal of Treatment & Prevention, 2012; 20(5): 379-394

Gender approach

- EDAM (Eating Disorder Assessment for Men)
  - New assessment tool specific for men
  - Measures:
    - ED symptoms
    - Body dissatisfaction
    - Weight concerns
    - Food and exercise specifics to males

"I'm preoccupied by the desire to be thinner"

"I'm terrified to gaining weight"

"I'm preoccupied by the desire to be lean and muscular"

"I'm concerned with the though of gaining fat"

Standford SC, Lemberg R. A Clinical Comparison of Men and Women on the Eating Disorder Inventory-3 (EDI-3) and the Eating Disorder Assessment for Men (EDAM), Eating Disorders: The Journal of Treatment & Prevention, 2012; 20(5): 379-394

Gender approach

The nature of body image disturbance is qualitatively different

Girls

- Desire to be thinner
- More concerned with precise weights and clothing sizes
- Focus mainly on the lower body

"I think that my thighs are too large"

"I think that my hips are too big"

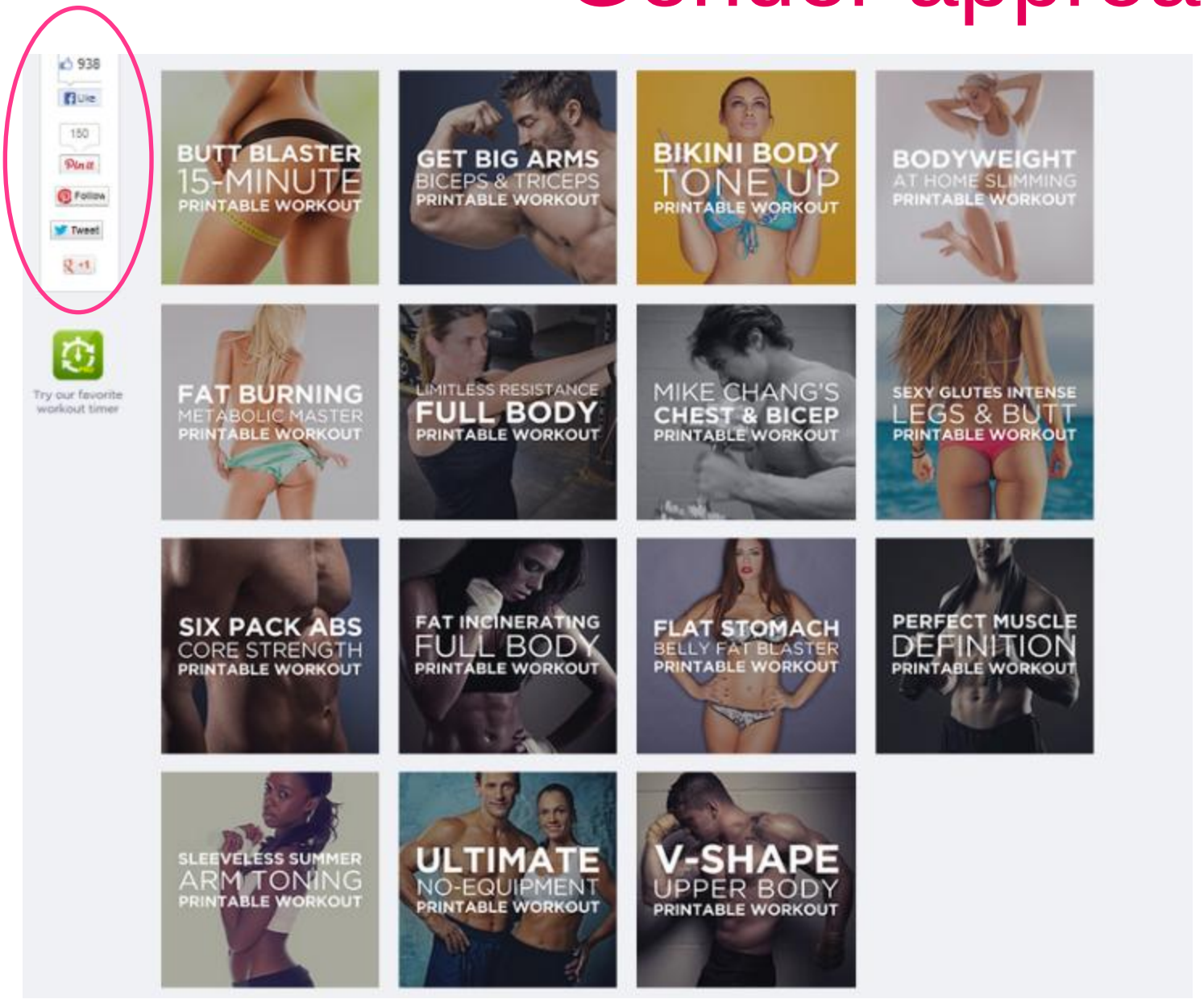
Boys

- Idealized masculine shape
- Desire to be bigger
- Focus on precise body areas (upper body)

"I think my abdominal muscles need to be more defined"

"I'd like bigger arms"

Gender approach



Gender approach

Girls

- Usually “felt fat” with a normal weight history
- ↑ Social pressure on eating habits and ideal weight
- More use of purging (laxatives, diuretics…) as compensatory behavior

Boys

- Frequently history of obesity (↑↑ risk if since childhood)
- Sports practice ↑ risk ED (++ competition sports)
- ↑ Pressure on attaining a perfect body
- More use of exercise as a compensatory behavior

Data on vomiting is contradictory

Gender approach

Girls

- Psychiatric co-morbidities, (anxiety disorders and OCD):
  - ↑ General population
  - < Boys
- More somatic symptoms
- Family based therapy

Boys

- ↑ Psychiatric co-morbidities
  - Substance abuse (steroides, alcohol, other drugs)
  - Depression and anxiety disorders
  - Suicidal ideation
- ↑ Tendency to declare as asexual or homosexual/bisexual
- More severe medical complications at presentation
  - Delay in seeking healthcare
  - Stigma
- Later age of onset
  - Biological aspects (later puberty)
- Behavioral-Cognitive therapy

Strother E et al. Eating disorders in men: underdiagnosed, undertreated, and misunderstood. Eat Disord, 2012;20(5):346-55.
Norris ML et al.
An examination of medical and psychological morbidity in adolescent males with eating disorders, Eat Disord, 2012;20:405-15

Outcomes

- Støving et al, 2011 (n=1015), 96% ♀
  - Global: 35% AN, 36% BN, 29% EDNOS
  - ♂: 5% AN, 1% BN, 5% EDNOS

	AN	EDNOS	BN	Global
Median time to remission	♂ 3 yrs ♀ 7 yrs	♂ 3 yrs ♀ 6 yrs	----- ♀ 13 yrs	♂ 4 yrs ♀ 8 yrs
Remission after 5 yrs of treatment	♂ 59% ♀ 39%	♂ 77% ♀ 45%	----- -----	----- -----

  - Drop out rates: 17,7% ♀, 41% ♂

- Gueguen J et al, 1988-2004, (n=1009), 96% ♀
  - Similar mortality
  - Precocious death post-hospitalization in males

Gender approach

- In our Outpatient Clinic
  - Lower prevalence of ED in males (♂: ♀ →1:7)
  - EDNOS responsible for 60% (both genders, DSM IV)

  - Male patients:
    - ↑ Delay in the first medical visit
    - ↑ Percentage of patients with < 85% ideal weight
    - ↑ Use of exercise as compensatory behavior
    - ↓ Incidence of somatic symptoms
    - ↑ Dropout rate

Case reports

Case 1

♀, 12 yrs old

Referenced by her Gastroenterologist to the Clinic for abdominal pain and weight loss (7kgs).

She has been having epigastralgias for 6 months now, has done a UGI endoscopy and has been treated with Omeprazole and has done erradication of H.pylori.

What do you want to know?

Clinical cases

Case 1

She denied “feeling fat”, but disliked her tighs.

She said she couldn’t eat because of her “stomachache”, but she wanted to… Sometimes she only felt better after vomiting. Denied other symptoms (GI, fever, …)

She denied being teased at school. She was an excellent student…Wanted to be a doctor!

She was a gymnast.

She was described by the mother as perfectionist. She was the youngest of 3 siblings.

Absent father (worked abroad), for 1 year .

Clinical cases

Case 1

Clinical examination:

Thin girl. Sad. Acrocyanosis.

HR 55 bpm; BP 90/48mmHg

Previous BMI P^{50th}

Body weight 37 kg, height 1,53m, BMI 15,8 kg/m^2 (P^{5th})

Tanner B2P2

Screening laboratory tests, EKG and abdominal ultrasonography were unremarkable

Is this an ED? What are the risk factors?

Organic condition as a confounding factor!

Clinical cases

Case 2

♂, 16 yrs old

Brought his mother to ER for food refusal for 2 days.

Had been dieting for 8 months and lost 15kgs. He says he wants to be “leaner” (very restrictive diet, intensive exercise, no vomiting or purging).

He was overweight prior to this problem (BMI P90th→ P50th).

Clinical cases

Case 2

Consumes marijuana for about a year, always with friends, daily frequency.

At school he performs above average, but lately he has been having some trouble with concentration…

Sleeping problems. No suicidal ideation.

No current relationships.

Her mother describes him as a good boy, but very shy. He always had trouble in making new friends, but now he was always out with friends.

Parents divorced for several years. Mother visibly depressed. Absent father.

Clinical cases

Case 2

Clinical examination:

Normal weight boy. Mood swings.

Striae in the abdomen and arms.

HR 66 bpm; BP 108/52mmHg

Previous BMI P^{90th}

Body weight 65 kg, height 1,80m, BMI 20,5 kg/m^2 (P^{50th})

Tanner G5P5

What are the differences from the previous case?
Can you identify specific gender factors?

Role play

- 15 yrs old adolescent
- Brought to the ER for lipotimia
- “Recent” history of acute weight loss

How would you approach this adolescent if he was a boy?

…and if she was a girl?

Messages to take home

1. **Don’t stigmatize ED as a female disease**
   - Males are also affected!

2. **Increase the level of suspicion**
   - Onset in childhood and adolescence (sometimes subclinical forms)
   - Continuity between different life stages till adulthood

3. **Be flexible when using diagnostic criteria**
   - Emphasize acute weight loss even with normal BMI
   - Be aware of eating and compensatory behaviors
   - Physiological consequences (fail to grow and enter puberty)

Messages to take home

4. **The nature of body image disturbance is qualitatively different by gender**

5. **Be aware of common and specific gender alarm signs**

6. **Look for specific co-morbidities, their severity and time-onset**

7. **Keep in mind the different outcomes**

8. **Take gender in account when choosing treatment**

Obrigado!

Teşekkür ederim!

Thank you!