INTEGRATION: SCHOOL, FAMILY, SOCIAL SERVICES

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Keywords: Eating disorders, Integration, Multidimensional, Interdisciplinary, Complex

Introduction: Eating and nutrition disorders are very complex diseases with symptoms that are caused by a range of factors and several levels (psychological, biological, social, relational). Therefore it is necessary to use a multidimensional and interdisciplinary approach to build treatment paths that are personalized, individualized, complex, articulated, with different intensity.

Aim: In our service, the multidisciplinary team is composed by an equipe for minors (pediatrician, neuropsychiatrist, psychologist, dietician, psychiatric rehabilitation technician TERP, nurse) and by an equipe for adults (psychiatrist, dietician, psychologist, psychiatric rehabilitation technician TERP, nurse). The two equipes meet separately on a weekly basis for the evaluation, design, updating and verification of the care pathway for incoming, outgoing, management of patients. The two equipes take care of all the aspects of the relationship with all the family members/caregivers of the patients (adults or minors). The team can open up to a network, which can be conceived as a path that allows the patient and his/her family members and/or caregivers to face developmental tasks in adequate conditions.

Discussion and conclusions: Among the factors that help a positive outcome of the treatment, there is the school and the education system that has to be personalized and resocializing, to support parenthood, in collaboration with the Social Service.

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BODY IMAGE IN NUTRITION AND EATING DISORDERS: A REHABILITATION GROUP WITHIN THE DAY CARE CENTRE OF AUSL OF MODENA

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Keywords: Body image, Psychiatric rehabilitation, Eating disorders, Cognitive restructuring, Psycho-education

Introduction: Nutrition and Eating Disorders are complex pathologies; their psychopathological core consists of an alteration of the body image, which is a complex construct that integrates behavioural, affective, perceptive and cognitive phenomena and represents a precipitating, worsening and maintenance factor for eating disorders (1) (2) (3) (4). A group focused on the rehabilitation of this aspect has been structured in the Day Care Center (third level service) of the AUSL of Modena.

Aim: The group aims to allow the participants to discover the strengths and vulnerabilities of their body image, and then guide them in the creation of new experiences of awareness and acceptance of their own body, through psycho-educational elements, elaborations and cognitive-behavioural and cognitive restructuring activities.

Methods: The group, which is an open group, consists of 10 weekly meetings involving 8 young-adult participants. The activities were inspired by the approach used in Thomas F. Cash’s “The Body Image Workbook” (5). The participants are given an initial insight into the body image construct and the historical evolution of the ideal of beauty. In addition to this, they get to explore their significant experiences regarding their own body image, throughout activities about assumptions, cognitive distortions, and avoidances regarding body image. In conclusion, the goal is to develop any potential or probable strategies towards change, according to each one’s motivation.

Discussion and conclusions: The project collected positive feedbacks from the participants whom reported that they had conquered useful insights for their recovery path, underlining their intense emotional load. The characteristics of the open group made it necessary to constantly remark the proposed contents but, thanks to specific comparative activities and thanks to the creation of a non-judgmental setting, participation, sharing and discussion were guaranteed. Some
The relationship between social (pragmatic) communication disorder and eating disorders: A case report

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Keywords: Eating disorders, Social pragmatic communication disorder, Neurodevelopmental disorder, Psychological assessment

Introduction: Several studies have shown an association between eating disorders (Anorexia nervosa, AN, avoidant/restrictive food intake disorder, ARFID, pica, Binge Eating Disorders, BED) and major neurodevelopmental disorders like Autism Spectrum Disorder (ASD) and Attention Deficit/Hyperactivity Disorder (ADHD) (1). Recently, a novel neurodevelopmental disorder was included within the DSM-5 (Diagnostic and Statistical Manual of Mental Disorders-5), namely the Social Pragmatic communication disorder (SPCD). This disorder is mainly characterized by a deficit in the use of verbal and non-verbal communication for social purposes, inability to change communication to adapt to the context and inability to use the common conversational rules (2).

The connection linking neurodevelopmental disorders and eating disorders (EDs) has not been thoroughly understood yet due to clinical and etiological overlaps.

Aim: We present a clinical case concerning a 28-year-old woman with SPCD associated with an ED. In the past (6 years before the admission in our ward) the patient had an episode of psychosis and for this reason she received the following medical therapy: Aripiprazole 400 mg intramuscular injection per month, Haloperidol 10 mg p.o. per day, Gabapentin 100 mg p.o. per day.

The patient was admitted to our outpatient clinic for EDs referred by a Psychiatric Institute in Rome, due to the onset of weight gain, low physical functioning, and body dysmorphism.

The patient underwent an assessment of the nutritional and psychological status and received a multidisciplinary nutritional counselling.

Methods:

- Examinations conducted: indirect calorimetry, Single Frequency Bioelectrical Impedance Analysis (BIA), handgrip strength test (3), sit to stand test (4) and 6-min walk test (6MWT) (5–6), assessment of the psychological status through the EDE Interview (Eating Disorder Examination - 17.0D) (7–8);
- Questionnaires administered: Short Form Health Survey 36 (SF-36) (9) (Table 2), Epworth Sleepiness Scale (10), International Physical Activity Questionnaire (IPAQ) (11), symptoms checklist-90 Revised Version (SCL-90-R) (12-13), and Eating Disorder Examination - Questionnaire Version (EDE-Q) (14).

Anthropometric parameters: body weight, height, waist circumference. The body mass index was calculated.

Laboratory parameters.

Results: The dietary anamnesis showed the presence of a Binge Eating Disorders (binge eating thrice a week) without any compensatory attitude. The nutritional status confirmed the presence of obesity (FM > 35%) with impaired functional parameters (6MWT and Sit-to-Stand test) and quality of life (energy/fatigue, emotional wellbeing in particular). Routine blood tests were within normal limits, except moderate hypertransaminasemia.

The psychometric evaluation revealed that, based on the SCL-90-R, the woman displayed pathological symptoms pertaining to the interpersonal relationships and paranoid areas. The EDE 17.0D showed that the patient experienced concerns related to the fear of losing control over food consumption as well as guilt about eating. In addition, a marked dissatisfaction with body weight, supported by an expressed desire to lose it, was observed; these frequent thoughts resulted in dissatisfaction with her body image and low self-esteem. All results provided by the EDE 17.0D interview were consistent with scores obtained at the EDE-Q. Binge eating was accompanied by a feeling of loss of control; in this regard, these episodes of binge eating are attributed to anxious experiences of social relationships with peers. On the other hand, exploring feelings of loss of control, the patient describes her excessive eating behaviors as limited episodes, adding, however, that in daily life she has trouble controlling the amount of food ingested, sometimes needing the control of a third person (e.g., her mother).

Discussion and conclusions: The case described is consistent with previous findings supporting comorbidity between eating disorders and neurodevelopmental disorders. In particular, similarly to ASD and ADHD, we may hypothesize a pathophysiological link between SPCD and ED. The impaired neurocognitive functioning and set shifting, the weak central coherence, the executive dysfunction and the difficulties in theory of mind tasks are present in neurodevelopmental disorders like SPCD and have been considered the pathophysiological base of the link with ED. Moreover depression, anxiety, and low self-esteem are frequently present in both EDs (as in our patient) and neurodevelopmental dysfunction (e.g. ADHD) (1).

An additional challenge is the presence of a picture of psychosis that required the use of Aripiprazole. It is well known from the extant evidence that the use of Aripiprazole in patients with autism and schizophrenia may lead to a moderate increase in BMI (approximately 10.3%). There are currently no studies describing how the use of such medication could favor the onset of eating disorders resulting from an altered food consumption.

Finally we do not assume that Aripiprazole could have caused an eating disorder and severe obesity such as the one described. Although it cannot be ruled out entirely and further research is appropriate in this field (15).

Social (Pragmatic) Communication disorder was recently included in the DSM-5 and it is a new topic in the medical literature. As other
neurodevelopmental disorders, it is reason-able to assume that SPCD could be associated with EDs. Eating disorders may thus either exacerbate or be a consequence of the neurodevelopmental disorder or of their pharmaco- logical treatment. Further research should be prompted from both the nutritional and psychological perspectives to explore the incidence and prevalence of EDs in this population, as well as to investigate the potential mechanisms underpinning the connection described here.

Table 1: Results of multidimensional assessment

|                  | Patient Values | Reference Values |
|------------------|----------------|------------------|
| Body Weight (kg) | 113.1          |                  |
| Height (m)       | 1.67           |                  |
| Waist Circumference (cm) | 99         | < 88             |
| BMI (kg/m²)      | 40.55          | 18.5-25          |
| REE (Kcal/day)   | 2204           | 108% of predicted according to Mifflin eq |

Table 2: Results of SF-36 Questionnaire

|                  | Patient Values | Reference Values |
|------------------|----------------|------------------|
| Sit to Stand Test (seconds) | 14.39         | < 11.19          |
| 6MWT (m)         | 276.4          | expected distance 552.8 m |
| Epworth Sleepiness Scale (score) | 6             | < 10             |
| IPAQ (MET min/week) | 1386          | moderate 600-3000 |
| ALT (U/l)        | 46             | 0-32 for women   |

Legend: 6MWT: six-minute walk test; ALT: Alanine Aminotransferase; BMI: Body Mass Index; FFM: fat free mass; FM: fat mass; IPAQ: InternationalPhysical Activity Questionnaire; MET: Metabolic Equivalent of Task; PhA: phase angle; REE: Rest-ing Energy Expenditure; TBW: total body water.

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AN INTEGRATED ONLINE 10-SESSION GROUP INTERVENTION FOR BINGE EATING: PRELIMINARY RESULTS.

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2 Springer
Keywords: Online treatment, Binge eating, Group intervention, Eating behavior, Emotion regulation

Introduction: Binge Eating Disorder (BED) and Bulimia Nervosa (BN) are characterized by recurrent episodes of binge eating (BE) associated with marked loss of control, guilt, embarrassment or disgust, and severe psychological distress [1]. BE is associated with poor emotion regulation [2] and in BED with obesity [3, 4]. Several treatments have proven to be effective both face-to-face and online [5, 6, 7, 8, 9]. However, there is the need for increasing accessibility to care, especially after COVID-19 pandemic.

Aim: The aim of the study is to evaluate effectiveness of a group online intervention adapted from Safer and colleagues’ protocol [5].

Methods: The protocol consists of 9 sessions conducted by two licensed psychotherapists, targeting the regulation of eating behaviour and emotions for reducing BE and the other related symptoms. One session of healthy eating education conducted by a physician trained in clinical nutrition is also included. The clinical sample is being recruited within a university hospital service. Participants are enrolled in the study after a large medical and psychological evaluation. They are then assigned to the experimental group or to the waiting list control group (CG) and are asked to complete self-report questionnaires at pre-intervention (T0), post-intervention (T1) and a 1 month-follow-up (T2) (Fig. 1 summarize the procedure).

Results: A sample of 24 patients (MSEX = 37.04, SD = 14.30; 75% females) with a mean BMI of 37.64 (SD = 12.48) completed T0 and T1. Only 17 participants completed the follow-up. Data of the CG are not included here due to the small sample size. Preliminary results show that from pre to post intervention all symptoms (i.e., binge eating, disordered eating, emotional eating and psychopathological symptoms) as well as BMI decreased significantly, while eating self-efficacy and self-esteem increased (see Table 1). Figure 2 describes the changes in BE across the three assessment points.

Discussion and conclusions: Preliminary results show that the program is effective in reducing eating disorders-related psychopathology and BMI and in increasing eating self-efficacy and self-esteem in patients reporting BED, BE or BN. Its main characteristics, i.e. being short (10 sessions), accessible (being online) and cost saving (being conducted in small groups), indicate it may be effectively implemented in clinical and public services (such as hospitals or university clinics).

Table 1. Paired t-tests. Pre-to-post intervention. Abbreviations: GSI, Global Score Index of the Symptom Checklist-90; SLEEP, Sleep difficulties component of the Symptom Checklist-90; EESR, Depression subscale of the Emotional Eating Scale; EERS, Anger subscale of Emotional Eating Scale; EESD, Anxiety subscale of the Emotional Eating Scale; BES, Binge Eating Scale; SE, Self-Esteem; ESEBS, Eating Self-Efficacy Brief Scale; BMI, body mass index.

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increased proteins. Longer latencies before admission were correlated to low daily caloric (carbohydrates and lipids) intake, with nutritional parameters here documented eating behaviors oriented toward low daily caloric intake. Previous evidence analyzing diet and eating behavior in AAN. Our analysis of the current literature presents scarce evidence regarding the comparison between the start of symptomatology and first evaluation, presented a worse outcome (r = -0.551, p = 0.033).

Discussion and conclusions: The current literature presents scarce evidence analyzing diet and eating behavior in AAN. Our analysis of the current literature presents scarce evidence regarding the comparison between the start of symptomatology and first evaluation, presented a worse outcome (r = -0.551, p = 0.033).

Table 1: Characteristics of the sample.

| Variables | Value |
|-----------|-------|
| Demographics |       |
| Age (years) | 15,84 ± 1,23 |
| Gender | F=19 (100%) |
| Clinical variables |       |
| Duration of untreated illness (months) | 12,9 ± 8,0 |
| Admission BMI (kg/m2) | 20,2 ± 2,2 |
| %BMI | 86,5 ± 9,7 |
| Weight loss between premorbid and presentation (kg) | 5,0 ± 5,9 |
| Anorexia | 4 (21%) |
| Sleep disorders |       |
| Difficulty falling asleep | 5 (26%) |
| Insomnia | 3 (17%) |
| Comorbidity |       |
| Mood disorders |       |
| MDD=7 (37%) |
| Neurotic disorders |       |
| Anxiety Disorders=10 (52%) |
| Self-injury=5 (26%) |
| Family history |       |
| FED=10 (53%) |
| Non-FED psychopathology=11 (58%) |
| Mean caloric intake (calories/day) | 1135 ± 178 |
| Macronutrients percentage |       |
| Protein=23,3 ± 5 |
| Lipids=20 ± 5 |
| Carbohydrates=46,3 ± 6 |
| Treatment variables |       |
| Pharmacological treatment at first access |       |
| Fluoxetine=6 |
| Sertraline=1 |
| Quetiapine=1 |

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AN INNOVATIVE DIGITAL THERAPY TO PROMOTE WEIGHT LOSS IN OBESE ADULTS: QUANTITATIVE AND QUALITATIVE EVALUATION OF PATIENT PERCEPTIONS USING FOCUS GROUPS

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ATYPIcal anorexia nervosa in the developmental age: the experience of Emilia Romagna’s Centre for feeding and eating disorders in children and adolescents

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Keywords: Atypical Anorexia Nervosa, Feeding and Eating Disorders, Children and Adolescents, Weight, Dietary intake

Introduction: Atypical anorexia nervosa (AAN) is a Feeding and Eating Disorder (FED) included among Other Specified Feeding or Eating Disorders (OSFED). AAN patients present all the features of AN, but weight loss and disordered eating do not result in being underweight [2]. Scarce evidence regarding AAN and related prognostic factors in developmental age are available.

Aim: To investigate clinical and nutritional characteristics of a group of children and adolescents with AAN.

Methods: Case series involving 20 children and adolescents diagnosed with AAN, accessed as outpatients to the study center (01/01/22–31/07/22). We analyzed clinical reports and 24-hour dietary recall (24HR) at our first consultation (T0) and at the first outpatient follow-up (T1). DSM-5 criteria for AAN were adopted, using a percentage Body Mass Index (%BMI) superior to 85% at the moment of admission as the weight criterion. Demographic, clinical, nutritional, and treatment variables were reported. T1-T0%BMI difference was considered as an outcome measure. Potential correlations between outcome and predictors were searched.

Results: We included 19 adolescents (15,8 ± 1,2 years, F = 100%). At T0, the mean duration of untreated illness was 14,9 (± 8,0) months, and the weight loss between premorbid and presentation was 5,0 (± 5,9) kg. The mean caloric intake was 1135 ± 178 calories/day. Despite family history, cooccurring psychopathology, and different clinical presentations (restriction, binge/purging) were not associated with specific outcomes, subjects with a longer latency between the start of symptomatology and first evaluation, presented a worse outcome (r = -0.551, p = 0.033).

Discussion and conclusions: The current literature presents scarce evidence analyzing diet and eating behavior in AAN. Our analysis of nutritional parameters here documented eating behaviors oriented toward low daily caloric (carbohydrates and lipids) intake, with increased proteins. Longer latencies before admission were correlated with worse T1-T0 outcomes. Case-control confirmation studies are required.
Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity (2022) 27:2957–2983

**Introduction**

Despite the increasing use of pharmacological and bariatric surgery to treat obesity, to date, weight-loss lifestyle intervention remains the first-line treatment. Digital therapy is coming to meet individual needs and shows the potential benefits of mobile self-monitoring methods for diet and physical activity associated with behavioral counselling.

**Aim:** This work aims to evaluate the usability of a Digital Therapy for Obesity (DTxO), an App for diet and exercise monitoring for obese and overweight patients exposed to an experimental non-pharmacological treatment program.

**Methods:** Two focus groups of 8 adult obese patients were conducted across a 1-week period to collect quantitative and qualitative data. Activities involved were simulated use, questionnaires, and open-ended questions during interviews. The Net Promoter Score (NPS), an index ranging from -100 to 100 that measures the willingness of customers to recommend a company’s products or services to others, was calculated.

**Results:** Patients were 26% males and 74% females, aged 52 [42-55] years, with BMI 36.6 [2] kg/m². 75% of them were already used general apps to monitor weight or physical exercise. They reported the dietary section as the most useful part in the DTxO, especially the shopping list and videorecipes. Patients have evaluated exercises as well described, motivational phrases useful and spontaneous activities easy to insert. Concerning psycho-behavioural activity, they reported that mindfulness exercises were a bit long, questionnaires were too long, and, in general, language in this section was complex. Lastly, they reported that graphs were sometimes perceived as burdensome (perception of guilt). The calculated NPS was 38.

**Discussion and conclusion:** DTxO received general positive comments on all functionalities and dieting, exercising and behavioural activities were considered a support to self-tracking. Pop-ups and notifications were approved, and more were requested as nudges. Activities were considered a support to self-tracking. Pop-ups and notifications were approved, and more were requested as nudges.

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THE PSYCHO-NUTRITIONAL TREATMENT (PNT) IN PATIENTS WITH EATING DISORDER (ED): THE ED OUTPATIENT PROTOCOL OF THE NUTRITION TEAM OF AUSL BOLOGNA

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Keywords: ED, TPN, AN, BN

Introduction: The “Quaderni del Ministero della Salute” of 2017 provide guidelines for the nutritional rehabilitation of ED. They integrate the nutritional intervention with the medical and psychological one and with techniques of psycho-nutritional education; they also establish subsequent goals of treatment.

Aim: In line with the regional goal of structuring dedicated settings of care, since 2021 the Nutrition Team of AUSL Bologna (physicians and dietitians) has standardized the management of the ED treatment, drawing up a shared outpatient protocol.

Methods: The “Quaderni del Ministero della Salute” and the Emilia Romagna Regional Guidelines have been taken as reference to provide a PNT protocol parallel to psychotherapy, in terms of multidisciplinarity.

Results: The outpatient PNT has been protocolled and it addresses patients with Anorexia Nervosa (AN) and Bulimia Nervosa (BN) residing in AUSL Bologna.

It has been defined in subsequent steps as follows:

| 1 | AN/BN: Engagement and regular eating |
|---|----------------------------------|
| 2 | BN: Engagement and dietary restriction |
| 3 | 1 joint consultation (physician + dietitian) |
| 4 | 1 joint consultation (physician + dietitian) |
| 5 | 1 joint consultation (physician + dietitian) |
| 6 | 1 joint consultation (physician + dietitian) |

In addition to the structuring of a step-by-step protocol of contents and practical tools, the activity of dietitians concerned the review of the outpatient material previously in use.

Discussion and conclusions: At each joint consultation (physician + dietitian), contents of previous sessions are summarized; “steps” carried out throughout dietitians consultations are also evaluated to set the next goals. The activity of dietitians among joint consultations is central; next to a classical nutritional intervention, they use procedures and tools typical of each phase. A standard and shared protocol helps to overcome inhomogeneity in treatment. A future aim is to create an outpatient protocol for Binge Eating Disorder (BED).

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SURVEILLANCE AND PREVENTIVE PROGRAM FOR REDUCE THE RISKS OF EATING DISORDERS IN SCHOOL DANCERS FROM CHILDHOOD TO ADOLESCENTS: THE ROLE OF EXPERT PEDIATRICIAN IN EATING DISORDERS

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Keywords: dancers, lifestyle, anorexia, body images, binge eating.

Introduction: The school academic dancers have more risks to develop the eating disorders and related issues to body images during the growth. High levels of competition, aesthetic parameters, athletic expensive, physical and mental stress involved many dancers in a pursuit of thinness and at the same time in an unhealthy lifestyle, with consequences on health, athletic performance and physical resilience.

Aim: The aim of project is to realize a surveillance and preventive program dedicated to risks of eating disorders in school dancers, in physical and mental development.

Methods: The program Future in Pediatrics observed 2 cohorts of dancers, in a pre-professional and professional academic dance school, 1 of children, 7–10 age, 2 of pre-adolescents and adolescents, 11–17 age. After a preliminary pediatric visit and personalised questionnaire, the study based on surveillance of evidenced risks' factors (underweight, hypovitaminosis, behavior issues, unhealthy lifestyle) and on promotion of healthy habits, mental health counselling, motivational coaching and nutrition education.

Results: In every group, the dancers with more risks, reduced the children and adolescents with behavior and eating issues. The questionnaire evidenced the 12% of children (more female) with issued related to body images, involved in competitive challenge about thinness, and 15% of underweight, and 4 cases to decreases growth. In the second group, 18% of adolescents (male and female, declared a stress related to body images, physical fatigue and nutritional habit.

Discussion and conclusions: The pediatrician, dedicated to health promotion and surveillance of eating disorders in school dancers, is fundamental for change the vision of dancers, as health athlete in growth.

Declaration of competing interest: The authors have no conflict to declare.

EXPLORING NEGATIVE ATTITUDES TOWARDS BODY IMAGE AND MALADAPTIVE EATING BEHAVIORS IN BARIATRIC SURGERY CANDIDATES

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Keywords: Bariatric Surgery (BS); Body image; Eating behaviours

Introduction: Maladaptive eating-related behaviors and body uneasiness deserve attention in the preoperative assessment of BS candidates. Several studies have focused primarily on the link between emotional eating and body image dissatisfaction in preoperative candidates. However, less is known about the preoperative associations among other maladaptive eating-related behaviors such as external eating, i.e. eating-related behavior triggered by food smell and test, and restrained eating, as well as different attitudinal, i.e. negative evaluations of the body, behavioral, i.e. avoidance and compulsive self-monitoring, and clinical, i.e. depersonalization, dimensions of body uneasiness.

Aim: The present study aimed to explore the associations among body uneasiness-related dimensions and maladaptive eating behaviors in preoperative BS candidates.

Methods: The BS candidates were 71 (42 women) who were interviewed between 2021 and 2022; they self-reported on the following measures: the Dutch Eating Behaviors Questionnaire Emotional, External, and Restrained eating scales, the Eating Disorders Inventory-3 Body Dissatisfaction scale, and the Body Uneasiness Test.

Results: Results from stepwise regression analysis showed that Emotional Eating was uniquely associated with Avoidance, while External Eating was associated with Body Image Concerns, after controlling for actual BMI, age, and gender. No associations were found for Restrained Eating.

Discussion and conclusions: Our findings contribute to understanding that preoperative body uneasiness-related dimensions such as body image concerns and avoidance behaviors might be differentially associated with emotional and external eating. Examining preoperative maladaptive eating-related behaviors and their associations with body uneasiness has clinical implications in terms of appropriate referral to medical or other health services to improve healthy body image and eating habits in preoperative patients.

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EXTEROCEPTIVE AND INTEROCEPTIVE BODILY SELF IN ANOREXIA NERVOSA

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Keywords: Body representation; Virtual Reality; Interpersonal Multisensory Stimulation; Interception; Anorexia Nervosa

Introduction: A stable and coherent representation of the bodily-self results from the integration of multisensory signals coming from inside (interoception) and outside (exteroception) the body. The aim of the current project is to investigate the role of multisensory cues in shaping the body representation in Anorexia Nervosa (AN).

Aim: By using Immersive Virtual Reality and Interpersonal Multisensory Stimulation (IMS) over avatars’ different body dimensions, we tested if it is possible to alter the sense of bodily self and reduce body overestimation and dissatisfaction in Anorexia Nervosa (AN).

Methods: Specifically, before/after IMS, AN participants and healthy controls (HC) had to estimate their hips width with closed eyes; adjust the aperture of a virtual door until it reached the minimum width necessary to walk through it; and feel a series of questionnaires measuring the strength of the illusion and the emotional state. Finally, we also measured participants’ awareness of their bodily sensations, i.e. interception.
Results: Results show that both AN and HC reported a stronger embodiment illusion after being exposed to the normal weight avatar compared to the underweight avatar. AN considered the normal weight avatar as the most similar to their real body, the least attractive and the most disgusting. Moreover, AN patients report body schema distortion after the illusion, suggesting higher body image plasticity in this population. Finally, AN participants report feeling less their internal bodily signals.

Discussion and conclusions: Overall, the findings suggest that it is possible to modulate body image distortion in AN by taking advantage of the multisensory integrative processes through which the brain recognizes the body as belonging to the self. These results also suggest that virtual reality offers a great possibility to help individualize a healthy weight and manage emotional distress caused by weight increase during recovery.

Considering the important role of interoception in shaping self-consciousness and body image, we are currently investigating the relationship between interoception and dissociation tendencies in people with eating disorders.

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EFFECTIVENESS AND EFFICACY OF A SHORT VIDEOCONFERENCING-BASED GROUP TREATMENT PROGRAM FOR BINGE EATING DISORDER

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Keywords: Binge Eating Disorder, videoconference group treatment, cognitive behavioral therapy, dialectical behavioral therapy

Introduction: BED is an Eating Disorder (ED) associated with increased psychiatric comorbidity, overweight and obesity, and increased healthcare costs. The current COVID-19 health emergency is increasing the number of these diagnoses and the length of wait time for intake into the Public Health System.

Aim: In order to prevent further psychopathological exacerbations, medical complications and respond as soon as possible to the largest number of people in need of treatment, in this pilot study we want to evaluate the efficacy and effectiveness of online treatment groups for the management of binge eating (BE), implemented in our multidisciplinary service for EDs.

Methods: In the group treatment were included patients, sent by Dietology and EDs Center of the Ravenna Hospital, who after assessment had a diagnosis of BED (DSM-5) and were available for online setting. Eight 2-hour weekly group sessions were held in videoconference using CBT-E and DBT techniques for BED. The program includes the use of self-observational materials to help patients become more conscious of their dysfunctional vicious cycles. In addition, mindfulness and various cognitive behavioral coping strategies are taught and practiced to be able to manage eating behavior, thoughts, emotions and stress in a more functional way, reducing the risk of BE and preventing relapse. Pre and post treatment were administered self-report tests and at the end feedbacks were collected from participants and healthcare professionals.

Results: The outcomes of this study demonstrate how post this treatment the majority of patients reduced/eliminated BE to the point of no longer meeting the BED diagnosis. They also became more aware of their vicious cycles and improved in regulating the emotions and stresses of daily life underlying dysfunctional eating behavior, preventing risk of relapse.

Discussion and conclusions: From a clinical and social point of view, it is important to test and implement in public services for EDs videoconferencing-based group treatments to be able to treat more people with BED in a shorter period of time.

Further studies need to be carried out to provide guidance to clinicians to improve short videoconferencing-based group treatments for BED patients, adapting evidence-based BED group treatments also to the online setting.

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THE IMPACT OF INTERNALIZED WEIGHT STIGMA ON MENTAL HEALTH AND PERCEIVED STRESS IN A SAMPLE OF ITALIAN WOMEN

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Keywords: weight stigma; mental health; perceived stress; overweight; weight bias.

Introduction: Overweight and obesity are pervasive clinical conditions resulting from several factors (i.e., biological, psychological, and socio-economic) that interact with behavior and lifestyle [1]. Nevertheless, the false idea that individuals can totally control their bodies through dietary choices and physical activity is widespread [2]. Unfortunately, those beliefs are also reinforced by health professionals and social media [3]. This oversimplification increases self-related overweight stigma, defined as the internalization of negative stereotypes about overweight [4, 5], with a noticeable impact on general quality of life [6, 7].

Aim: The purpose of the present study was to examine the negative impact of the internalized overweight stigma on mental health and perceived stress, controlling for body mass index (BMI) and other variables potentially related.

Methods: Participants filled out three self-reported questionnaires including: the Weight Bias Internalization Scale (WBIS) [8] assessing internalized weight stigma and negative stereotypes about overweight; the Perceived Stress Scale (PSS) [9] measuring the degree to which situations in one’s life are appraised as stressful; the Mental Component Summary index (MCS) of the 36-Item Short Form Health Survey (SF-36) [10]. Data about self-reported height and weight, hypertension and type 2 diabetes therapies were also collected.

Results: A convenience sample of 3672 Italian women (M_age = 34.11, SD = 9.67) with a mean BMI of 28.89 (SD = 5.99) was recruited via social network. Two hierarchical linear regressions were conducted separately for MCS and PSS. The accounted variance is approximately 26% and 25%, respectively. BMI, hypertension and type 2 diabetes therapies were entered at the first step as control variables. Internalized weight stigma entered at the second step.
Discussion and conclusions: Results show that internalized weight stigma may predict lower mental health and higher level of perceived stress, even after controlling for BMI and other confounders. This may have several implications for clinical practice (i.e., promoting specific strategies to reduce patients’ negative attitudes and beliefs about their own weight) and for the development of prevention programs to reduce weight stigma among the general public.

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BODY IMAGE AND ALEXITHYMIA,
A CORRELATIONAL STUDY ON A SAMPLE OF HOSPITALIZED ADOLESCENT PATIENTS
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Keywords: Eating and Feeding Disorders, Body Image, Alexithymia, Rehabilitation.

Introduction: Studies have shown that 11 to 16 percent of women have eating problems during adolescence.

The disorder is often characterized by a dysfunctional self-assessment pattern that leads to self-assessment only on the basis of the control they can have over food and weight, which they wish to keep low. Many authors have observed how these people often experience intense negative emotions, and use food as a strategy to regulate, inhibit, avoid or divert attention from them. In particular, girls with anorexia nervosa over-control them. These behaviors are often linked to the presence of alexithymia.

Aim: Aim of this study is to assess the prevalence of alexithymia, interoceptive deficit, hypercontrol and bodily misperception in our sample of hospitalized adolescent patients, studying the relationship between these constructs.

Methods: The selected subjects are 45 adolescents (14–20 y.o.) suffering from anorexia nervosa and hospitalized at the Rehabilitation Center for Feeding and Nutrition Disorders in Pietra Ligure. The tools used in the present research were the following: Eating Disorder Inventory – 3, for the interoceptive deficit (ID) and overcontrol (OD) subscales, the Body Uneasiness Test, and the Toronto Alexithymia Scale.

Results: In our sample there is a high percentage of Alexithymia (62.2%), Interoceptive Deficit (84.4%) and overcontrol (60%), but the most widely represented symptom, among those investigated, is the body image alteration (93.3%). Our results show a correlation between alexithymia and interoceptive deficits and between alexithymia and overcontrol, but no correlation with the alteration of the body image.

Discussion and conclusions: The research results are discussed and compared with literature data on Eating and Feeding Disorders.

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GROUP TREATMENT PROGRAM ON EMOTIONAL REGULATION, STRESS TOLERANCE, BODY IMAGE, INTERPERSONAL RELATIONSHIPS, SELF-ESTEEM FOR YOUNG ADULTS WITH ANOREXIA AND BULIMIA NERVOSA

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Keywords: Eating Disorders, group treatment, young adults, maintenance factors, CBT

Introduction: Eating Disorders (EDs), particularly AN and BN, require on average multidisciplinary team and quite long individual psychotherapeutic treatment. In the literature, several group treatments based on CBT-E and DBT techniques specific for EDs have been found to be effective. The current COVID-19 health emergency has increased the number of these diagnoses in young adults, putting public EDs services in a difficult position.

Aim: The aim of this pilot study is to evaluate the effectiveness and the efficacy of group interventions on these disorders’ specific maintenance factors, to accelerate and strengthen the recovery process, even in the most difficult cases.

Methods: Diagnosis of AN and BN (DSM-5). The group intervention was structured by integrating CBT-E and DBT evidence-based techniques specific for EDs and divided into 4 modules of weekly sessions of 90 minutes each.

Table: Module Weekly sessions Hours

| Module                                 | Weekly sessions | Hours |
|----------------------------------------|-----------------|-------|
| 1) Regulation of thoughts, emotions and stress tolerance | 10              | 15    |
| 2) Body image                          | 6               | 9     |
| 3) Interpersonal relationships         | 6               | 9     |
| 4) Self-esteem                         | 6               | 9     |
| TOT                                    | 28              | 42    |

These modules include skills and coping strategies that are difficult to exercise exhaustively in the individual setting. The group is cyclical-open and new participants can be added at the beginning of each module. Self-report tests are administered pre- and post-treatment (at the end of each module). Observations and feedbacks were also collected from participants and individual therapists.

Results: After treatment, most participants showed improvements in emotional and stress regulation, interpersonal skills, perception of body image and self-esteem. In particular, most patients reported that the group setting helped them a lot not to feel alone and very different from everyone else and have expanded their points of view. Individual therapists also reported rapid improvements compared to patients not participating in the group setting.

Discussion and conclusions: From a clinical and social perspective, it is important to implement specific group treatments in outpatient EDs to speed up the recovery process and help participants feel less alone in this “journey”.

Further studies are needed to test and implement standardized group ED treatments that can speed up and reinforce individual treatments of more difficult cases or replace individual treatment in less severe cases of EDs.

Declaration of competing interest: The authors have no conflict to declare.

THE EXPERIENCE OF CAREGIVERS IN FEEDING AND EATING DISORDERS. AN OBSERVATIONAL STUDY

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Keywords: feeding and eating disorders, caregiver, psychological well-being, developmental age.

Introduction: Few studies have analyzed the connection between caregivers’ well-being and the clinical course of children and adolescents hospitalized for Feeding and Eating Disorders (FED). Guidelines recommend parental involvement in the treatment of developmental FED.
**Aim:** To assess the psychological well-being of parents and its relationship to the clinical and psychopathological variables of their children with FED, in a multidisciplinary hospital treatment setting.

**Methods:** Thirty-six patients (mean age 15 ± 2.17 years), admitted to inpatient treatment in a third-level center for children and adolescents with FED (2017–2022), were included in the study. Psychological Well-Being (PWB) test was administered to 61 parents at both admission and discharge of their child.

**Results:** Patients treated with nasogastric tube (18/36) had maternal lower scores on the autonomy (p = 0.044) and purpose in life (p = 0.003) PWB dimensions; while patients treated with antipsychotics (32/36) had parental lower scores on purpose in life (p = 0.046).

Higher paternal personal growth scores were associated with longer duration of untreated illness (p = 0.008), and higher scores on paternal personal growth (p = 0.018) and purpose in life (p = 0.028) and maternal autonomy scores (p = 0.027) were associated with higher age at admission.

The comparison between PWB scores on discharge and admission showed a gender difference, with significant changes in mothers (personal growth p = 0.004, positive relationships p = 0.016 and purpose in life p = 0.015), not detected in fathers. Only in the mothers’ group a clinical threshold was reached on PWB score (low levels of self-acceptance).

As regard psychopathology, higher body dissatisfaction on EDI-3 positively correlates with higher scores on positive relationships in mothers, while greater drive for thinness on EDI-3 with higher scores on purpose in life in mothers and environmental mastery in fathers.

**Discussion and conclusions:** This is the first study to evaluate the psychological well-being of parents of patients affected by FED and to analyze its changes with a hospital intervention. Further longitudinal studies are needed.

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**THE PHENOMENON OF BODY SHAMING: PRELIMINARY RESULTS OF A STUDY ON A GROUP OF ITALIAN ADOLESCENTS**

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**Keywords:** weight-related stigma; mental health; body shaming; overweight; weight bias.

**Introduction:** Body Shaming (BS) is defined as the act of bullying or insulting people by expressing negative opinions about their physical/body image1. BS is reinforced by weight stigma—the discrimination based on a person’s weight2—and is particularly prevalent in the school contexts3, especially among students with overweight/obesity4. Nonetheless, the study of factors associated to weight victimizations in youth is limited; mixed evidence is also available on efficacy of interventions aimed at its reduction5.

**Aim:** A pilot study was conducted with the aim of evaluating relationships between relevant factors associated to BS and assessing feasibility of an educational and experiential weight-related teasing prevention program conducted on a group of Italian high-schoolers.

**Methods:** A group of questionnaires was administered at T0 and after four sessions (T1) of intervention to all the students recruited. The preliminary analysis presented here are focused on the Weight Bias Internalization Scale—Modified (WBIS)6, the Disordered Eating Questionnaire (DEQ)7, the Attitudes Toward Obese Persons (ATOP)8 and a questionnaire on Weight-Based Victimization9.

**Results:** A sample of 86 students completed the T0 assessment (Mage = 17.22 ± 1.82; 64% M) and 39 participants completed the T1 (Mage = 17.02 ± 1.73; 82% M). History of weight victimizations by peer and family at T0 significantly correlated with DEQ (r = 0.473 and r = 0.331, ps < 0.01, respectively), WBIS (r = 0.541 and r = 0.375, ps < 0.01, respectively) and partially with ATOP (r = 0.284, p < 0.01 and r = 0.200, p = 0.863, respectively). Also, WBI (r = 0.681, p < 0.001) and ATOP (r = 0.197, p = 0.080) were significantly and marginally associated with DEQ, respectively. The paired t-tests assessing mean differences between pre-to-post intervention on the experimental group5 revealed a decreasing trend in some aspects, although not statistically significant, probably due to low statistical power (see Table 1).

**Discussion and conclusions:** Findings showed that the more adolescents experienced weight stigma and victimizations, the more they reported disordered eating symptoms. The preliminary results on the intervention are encouraging in supporting the reduction of BS-related factors after this pilot program, supporting feasibility and the implementation of the program on a larger sample size.

**Table 1.** Paired t-tests. Pre-to-post intervention. Abbreviations: ATOP, Attitudes Toward Obese Persons; WBIS, Weight Bias Internalization Scale; DEQ, Disordered Eating Questionnaire.

| Variables | Mean difference | t-statistic (df) | p-value | Cohen’s D |
|-----------|-----------------|-----------------|---------|-----------|
| ATOP      | -2.810          | 1.342 (36)      | 0.188   | 0.22      |
| WBIS      | 0.685           | 0.384 (34)      | 0.703   | 0.07      |
| DEQ       | 2.228           | 0.696 (34)      | 0.491   | 0.12      |

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THE EXPERIENCE OF AFFECTIVE TOUCH IN ANOREXIA NERVOSA AND OBESITY

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Keywords: anorexia nervosa; obesity; affective touch; interpersonal relationships.

Introduction: Since infancy affective touch informs about others’ emotions and intentions, sustaining intimacy and protecting from loneliness and psychological distress. Altered experiences of affective touch have been reported in clinical populations featured by interpersonal difficulties, including anorexia nervosa. Nevertheless, this topic has never been investigated in obesity: despite the negative affective-relational experiences often reported in this clinical condition. Furthermore, affective touch is traditionally investigated by reproducing with a brush a caress-like touch but none attempted to investigate affective touch considering the (more ecological) touch of another human being.

Aim: We aimed to probe the experience of affective touch in anorexia nervosa and obesity in two independent investigations, including the experience of the touch of the experimenter’s hand as novelty.

Methods: We recruited fourteen women with anorexia nervosa (study I) and fourteen women with obesity (study 2), compared with fourteen healthy-weight women. The pleasantness of both imagined and real touches of a brush, the experimenter’s hand, and a stick (as control) was recorded. The lifespan experiences of affective touch and pleasure experienced in social contexts were assessed through self-report questionnaires.

Results: Overall, our results showed the preserved experience of affective touch in all experimental conditions, in both anorexia nervosa and obesity. However, a reduced experience of affective interpersonal contact in childhood and adolescence was observed in both groups, relative to healthy-weight controls; also, women with anorexia nervosa reported a reduced interpersonal pleasure.

Discussion and conclusions: In contrast with the previous evidence, our results may suggest that dismissing early affective interactions might not have affected the adult experience of affective touch in our samples. Nevertheless, it should be considered that the touch of the experimenter may still not resemble real-life affective interactions, which occur with familiar and meaningful people. How imagery processes may overcome this issue is discussed, together with possible clinical implications.

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ARFID OR NOT? A COMPLEX CLINICAL CASE

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Keywords: Aorto-mesenteric compass syndrome, malnutrition, ARFID, Anorexia Nervosa.

Introduction: This is the case of a young patient with extreme malnutrition evaluated at our Centre, a multidisciplinary nutritional, gastroenterological, psychiatric and psychological assessment is necessary in order to determine the organic and/or psychopathological cause (-effect) in the differential diagnosis of the state of malnutrition. Aorto-mesenteric compass syndrome is a rare but potentially life-threatening gastrointestinal condition determined by duodenal compression exerted by the superior mesenteric artery passing between the horizontal and ascending duodenal portions. Common symptoms associated with this syndrome include intermittent postprandial abdominal pain, nausea, and bilious vomiting. This syndrome can be congenital or acquired. Clinically, there is an impairment of dietary behavior characterized by a persistent inability to meet adequate nutritional needs to severe malnutrition.

Methods: A complex clinical case that came to our observation will be discussed.

Results: Clinically significant consequences may include: weight loss or inability to achieve expected weight gain, significant nutritional deficiencies, need for enteral or oral nutritional support, impairment of psychosocial functioning.

Discussion and conclusions: In this case, the dietary restriction is not related to the concern for weight or body forms nor to a specific psychopathology distinguishing ARFID (Avoidant/Restrictive Food Intake Disorder) from Anorexia Nervosa. Results: Conservative measures and correction of the state of malnutrition constitute a first line of therapy. When the eating disorder occurs in the context of another condition or disorder, the severity of the eating disorder must exceed that usually associated with the condition or disorder and is sufficiently severe to warrant additional clinical attention.

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TASTE PERCEPTION AND EATING DISORDERS IN OBESITY: A POSSIBLE NEW APPROACH FOR DIET THERAPY?

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Keywords: Taste; Obesity; Food addiction; Binge eating.

Introduction: Obesity is a multifactorial disease, where metabolic, functional and socio-environmental components contribute to the development of the disease. However, the emotional component and the relationship with food remain an important component and the link between obesity and various eating disorders is becoming increasingly clear. It is estimated that the incidence of a diagnosis of Binge Eating Disorder (BED) among obese individuals varies between 15.7% and 40% and that 25–42% of obese patients present with Food Addiction (FA) symptoms. This is surprising as the perception of food plays a central role in choosing what we eat and could be of relevance in the maintenance of disordered eating behaviours in obese patients. To address this knowledge gap, we tested the hypothesis that taste response profiles are differentially linked to nutritional status and eating disorder types (BED and FA). In addition, a range of eating behavioural attitudes associated with overconsumption were also evaluated to assess their importance in driving abnormal eating.

Methods: 122 obese patients were studied (37 obese; 43 obese with food addiction; 42 obese with co-occurring food addiction and binge eating). Forty-three subjects were recruited as the control group. Sweet and salty taste thresholds (target stimuli associated with binge/compulsive eating) were measured with the 3-Alternative-Forced-Choice method and eating habits (external, emotional and restrained eating) were assessed by the Dutch Eating Behaviour Questionnaire. BED and FA were assessed with two different questionnaires.

Results: Data generally showed that obese presented a significantly (p < 0.001) lower acuity to sweet and salty tastes compared to
controls, with obese with mixed eating (BED + FA) showing higher salty threshold. Moreover, this group had significantly (p < 0.001) higher scores in emotional and external eating compared to the others.

**Discussion and conclusion:** These data show that BED + FA obese have a different taste threshold. That finding regarding interindividual differences in taste perception will contribute to increase the knowledge on role of taste in eating behavior and targeting might be a novel approach toward personalized dietary intervention for weight loss in obese patients affected by eating disorders.

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**BODY IMAGE SATISFACTION IN ELDERLY: AN EVALUATION STUDY ON A NON-CLINICAL MALE SAMPLE**

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**Keywords:** Body Image, Eating Disorder, male dissatisfaction, older adults

**Introduction:** Eating Disorders (EDs) in adulthood and in the elderly have, for a long time, been little explored, especially in male gender, since EDs are historically believed as related to the female gender. Nevertheless, literature has recently revealed that EDs can occur also in old male people. The typical changes in physical form connected to aging can bring in men consequent Body Dissatisfaction (BD), which is itself an important risk factor for EDs among elderly men. Otherwise, the presence of EDs in this age can be due to the occurrence of late onset EDs or to enduring EDs.

**Aim:** The goal of our study is to evaluate the presence of body dissatisfaction in a male non clinical sample aged 65 years old and over.

**Methods:** Our sample was formed by 121 males (aged ≥ 65 years old) and characterized by different BMI. The men in our sample were asked to complete the following questionnaire: Body Uneasiness Test, Body Appreciation Scale -2, Figure Rating Scales, Geriatric Depression Scale Short Form and Geriatric Anxiety Scale Short Form. We also created ad hoc a self-report questionnaire to investigate aspects such as life weight trend, health status, psychological features and some personal characteristics.

**Results:** Body dissatisfaction correlates positively with Body Mass Index and with anxious and depressive symptoms; it correlates inversely with physical activity. Physical activity correlates inversely with anxiety (GAS-10) and depression (GDS).

**Discussion & conclusions:** The results highlight the importance of body dissatisfaction also in the elderly male population.

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**SUCCESS PREDICTIVE FACTORS IN WEIGHT LOSS AND MAINTENANCE. STUDY IN A CLINICAL SAMPLE OF PATIENTS IN EXCESS WEIGHT**

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**Introduction:** Clinical practice shows that weight maintenance is more complex than loss. Excess weight and difficulty in losing weight have always been associated with lack of willpower and self-control, however this stigma and this stereotyping of overweight in recent decades has been questioned by the discovery of a myriad of factors involved in the onset and maintenance of overweight and obesity.

**Aim:** The objective of the longitudinal retrospective study is to assess the predictive factors of success in the loss and maintenance of weight of a clinical sample of patients in excess of weight.

**Methods:** The sample consists of 32 patients who have carried out a multidisciplinary outpatient diagnostic-therapeutic path, of which 22 in obesity and 10 in obesity complicated by ED. Through the folders compiled by the dietitian and internist during the first visit, anthropometric data, presence of ED, dietary habits, lifestyle, dietary behavior and drug therapy were investigated. The data were processed taking into account the subgroup of patients with follow-up at 4 months and 12 months or more.

**Results:** Psycho-nutritional rehabilitation led to an average weight reduction in the sample both after 4 (n = 9; -11%) and after 12 months (n = 6; -13%) and to an increase in physical activity both after 4 (+ 53%) and after 12 months (+ 50%). Physical activity to follow-up was associated with better results in weight loss and maintenance compared to those who did not practice it (77.8% vs 50% respectively at 4 months and 83.3% vs 33% at 12 months). The drug therapy with Mysimba® was associated with a better weight maintenance at 12 months compared to those who did not perform it (respectively 83.3% vs 25%). After 12 months, those who had an orderly distribution of meals kept the weight lost more than those who had a disorderly distribution of meals (respectively 60% vs 33%); those who regularly consumed breakfast kept the weight lost more than those who did not consume breakfast regularly (did not consume it (60% vs 40%).

**Discussion and conclusions:** In conclusion, within our sample we can state that structured physical activity, drug therapy, an orderly distribution of meals and regular breakfast consumption behaved as predictive factors of weight loss and maintenance, as opposed to low/abstent levels of physical activity and the presence of eating disorders that acted as predictive factors of treatment failure. Our study is consistent with what is stated in the literature regarding the predictive factors of reduction and weight retention.

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EXPLORING MEANINGS AND EXPRESSIONS OF BODY UNEASESS IN EATING DISORDERS AND GENDER INCONGRUENCE

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Keywords: eating disorders; gender incongruence; body uneasiness; body image; personality patterns

Introduction: Body uneasiness is a core aspect Eating Disorders (ED) as well as Gender Incongruence (GI) (Becker et al., 2016; McLean & Paxton, 2019) and research evidenced a co-occurrence between the two diagnoses (Bandini et al., 2013).

Aim: The purpose of this study was to explore the different ways in which body uneasiness is expressed in subjects with ED vs subjects with GI.

Methods: 40 subjects with an ED (AN = 27; BN = 10; BNG = 2; NOS = 1) evaluated at treatment onset and 40 transgender participants (35 AFAB; 5 AMAB) at stage T0 of hormonal treatment, completed the Eating Disorder Inventory-3 (EDI-3) to assess eating symptoms, the Body Uneasiness Test (BUT) to investigate body discomfort and the Shedler-Westen Assessment Procedure-200 (SWAP-200) to measure personality patterns.

Results: General severity of body uneasiness was higher in ED subjects, but GI individuals reported higher body image concerns and body avoidance. Different associations between the severity of eating symptomatology and personality features emerged among the two samples.

Discussion and conclusions: Evaluating expressions and meanings of body uneasiness in subjects with ED and GI is fundamental in order to promote more accurate and clinical useful diagnostic formulations, as well as "tailored" multidisciplinary therapeutic interventions focused on individuals’ specific features.

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SHORT-TERM EFFECTS OF A MULTIDISCIPLINARY RESIDENTIAL INTENSIVE REHABILITATION TREATMENT ON THE PSYCHOLOGICAL WELLBEING AND PSYCHOPATHOLOGY FOR ANOREXIA NERVOSA

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Introduction: Residential treatment for anorexia nervosa (AN) proved to be effective for observing changes in weight gains and reductions of the eating pathology1,2. However, the data on this topic is not so clear-cut3, especially when psychological wellbeing is considered4.

Aim: In this quasi-experimental pre-post design without the control group, we verify the efficacy of a multidisciplinary residential intensive rehabilitation treatment focused on the psychological wellbeing and the eating pathology for AN. During the treatment, participants undertake a variety of activities, such as individual psychological consultation, psychoeducational groups, low and high-intensity physical activities, nutritional counselling, and physiotherapy.

Methods: Ninety-four participants with AN (91 females; age: 24.10 (SD 11.23); disease onset: 16.3 (SD 5.9); BMI at the admission: 14.23 (SD 1.57)) were recruited. The treatment was long between 3 to 8 weeks (average: 37 days (SD 10 days)). Participants were asked to complete at admission (T0) and at discharge from the rehabilitation program (T1) a questionnaire to evaluate their psychological wellbeing, the PGWBI5; also, other questionnaires evaluating the psychopathological symptoms (SCL-90)6, eating habits (EDI-3)7, body image (BUT)8, and tendency to perfectionism (FMPS)9 (Fig. 1).

Results: At the end of the multidisciplinary residential intensive rehabilitation treatment, the psychological wellbeing of patients improved (significant higher scores (p < 0.05) at PGWBI). Moreover, their eating pathology decreased (significant lower scores (p < 0.05) at the majority of the subscales of EDI-3, BUT, SCL-90, and FMPS; p < 0.05).

Discussion and conclusions: Our study highlights the positive short-term effect of the residential intensive rehabilitative context on the psychological wellbeing of patients suffering from AN. Moreover, it shows how the short-term multidisciplinary residential intensive rehabilitation treatment helps in reducing eating pathology on different levels (e.g. eating disorder symptoms, body image symptoms, and general psychopathology). Future studies should investigate the long-term effect (i.e. 3–6 months) of the treatment.

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**ACCULTURATIVE STRESS AND MIGRATION STATUS IN A GROUP OF CHILDREN AND ADOLESCENTS WITH FEEDING AND EATING DISORDERS**

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**Introduction:** Acculturative stress is a modification of health status (medical, mental, social) occurred during adaptation to a new cultural system. Previous research documented the occurrence of acculturative stress in subjects with Feeding and Eating Disorders (FED) 1.

**Aim:** To investigate the levels of acculturative stress in a sample of young patients with FED, in an Italian third-level center for FED in developmental age.

**Methods:** Prospective study enrolling first-generation (patients born abroad, FGI) and second-generation (patients born in Italy from a foreign parent, SGI) young immigrants with FED. Acculturative stress was assessed with the Social, Attitudinal, Familial, and Environmental Acculturative Stress-Scale (SAFE) (> 12 years and parents) and Acculturative Stress Inventory for Children (ASIC) (8–12 years). FED symptoms, treatment intensity (hospitalizations, emergency accesses, nasogastric tube feeding, NGT), and outcomes (FED symptoms and BMI at 3 months follow-up) were recorded. Potential relationships between migration status (FGI, SGI), acculturative stress, and clinical, treatment, and outcome variables were evaluated with linear regressions and ANCOVA.

**Results:** The study included 50 patients (F = 68%; FGI = 54%, SGI = 46%; 13.3 ± 3.0 years). No significant differences emerged between FGI and SGI on treatment intensity and outcomes. A higher acculturative stress (SAFE-Aittalitudinal) showed a positive correlation with higher treatment intensity (hospitalization frequency, p = 0.033; emergency accesses, p = 0.029; duration of hospitalizations, p = 0.018). Significant differences in interfamily comparisons were detected: parents reported greater acculturative stress than their children do (SAFE Total: p < 0.001). No significant difference for outcome emerged.

**Discussion and conclusions:** Comparisons between FGI and SGI did not evidence significant differences on treatment intensity and outcomes. However, a higher acculturative stress correlated with treatment intensity, and intra-familiar discrepancies on acculturative stress were detected. The effect of acculturative stress on ED-specific psychopathology should be investigated.

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Declaration of competing interest: The authors have no conflict to declare.

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**REFEEDING SYNDROME AND REHOSPITALIZATION RATES IN CHILDREN AND ADOLESCENT WITH ANOREXIA NERVOSA**

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**Keywords:** Anorexia Nervosa, Children and Adolescents, Refeeding Syndrome, Hypophosphatemia, Hypokalemia.

**Introduction:** Despite Refeeding Syndrome (RS) represents a severe and potentially fatal consequence on nutritional interventions in subjects with AN, no study so far has assessed the impact of RS on the risk of rehospitalizations in this population 1.

**Aim:** This study, using the American Society for Parenteral and Enteral Nutrition (ASPN) criteria, aims to estimate the incidence of RS, its risk factors and consequences in a sample of children and adolescents hospitalized for AN in a third-level Italian Center for Feeding and Eating Disorders (FED).

**Methods:** Observational, retrospective study, considering patients with a diagnosis of AN and at least one hospitalization for FED. Patients were included in the Refeeding group according to the ASPEN criteria:

- A decrease of serum phosphorus, potassium and/or magnesium levels by 10%-20 (mild RS); by 20%-30% (moderate RS), or of more than 30% and/or organ dysfunction (severe RS);
- Alterations occurred within 5 days of restored nutrition.

Demographics, clinical and treatment variables were considered, as well as rehospitalizations rates with Kaplan–Meier analysis.

**Results:** Among 205 patients, 78 developed RS (RS group), with mild (87.2%), moderate (9.0%) or severe (3.8%) features. No statistically significant difference concerning body-mass index (BMI) or
nutritional interventions was identified between the RS group and the control group. Setraline was administered more frequently to group with no RS (X² = 7.383, p = 0.007). The mean energy intake in patients with RS was 1476.2 kcal/day. A more rapid length of hospital treatment was documented in subjects experiencing mild RS (U = 2.502, p = 0.013). Subjects who presented a RS due to an altered balance of potassium showed a significantly lower survival rate from rehospitalization than those who did not (hazard ration, 0.370; Log-rank test: p = 0.011).

Discussion and conclusions: This study underlines the relevance of evaluating multiple factors when considering RS and nutritional rehabilitation in young patients with AN.

Figure 2: Rehospitalization rates of patients with RS, compared to those without an occurrence of RS.

Results: From 29 March to 15 July 2022, 10 people accessed the space:

| Subject N. | Age | Male/Female | BMI | Test EAT-26 Score | Test SCOFF Score | Healthcare services first contact |
|------------|-----|-------------|-----|------------------|-----------------|-------------------------------|
| 1          | 18  | M           | 16.9| 46/71            | 4/5             | X                             |
| 2          | 49  | F           | 38.1| 14/71            | 3/3             | X                             |
| 3          | 52  | F           | 19.8| 32/71            | 4/5             | X                             |
| 4          | 17  | F           | 14.8| 39/71            | 3/3             | X                             |
| 5          | 42  | F           | 33.6| 6/71             | 1/3             | X                             |
| 6          | 55  | F           | 36.4| 6/71             | 3/3             | X                             |
| 7          | 16  | F           | 16.2| 3/71             | 3/3             | X                             |
| 8          | 24  | F           | 24.7| 25/71            | 3/3             | X                             |
| 9          | 32  | F           | 15.5| 21/71            | 3/3             | X                             |
| 10         | 20  | F           | 26.8| 48/71            | 4/5             | X                             |

Discussion and conclusions: Subjects 1–4 had Russell’s sign, subjects 3–9 were previously diagnosed with AN, 5 subjects reported an EAT-26 score ≥ 20, the same 5 and other 3 a SCOFF score ≥ 2. Based on the clinical/psychometric data and the interview, 8 out of 10 subjects were oriented to a healthcare service (see table). The space seems to be an effective first reception point that can direct possible cases of EDs to proper healthcare services. In subjects with obesity, it will be reassessed whether the tests used are appropriate for selecting possible cases of BED.

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CREATION OF A LISTENING SPACE FOR EATING DISORDERS AND OBESITY IN FIEMME VALLEY IN TRENTINO-ALTO ADIGE

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Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity (2022) 27:2957–2983 2975

EVALUATING POST-TRAUMATIC STRESS DISORDER IN BULIMIA NERVOSA: POSSIBLE IMPLICATIONS OR REFUGEE AND IMMIGRANT POPULATIONS

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Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity (2022) 27:2957–2983 2975

Introduction: Disordered eating emerge in refugee and immigrant populations and those who have positive PTSD screen are almost three times more likely to have also positive screen for EDs(1). Disruption of food supply, unstructured eating habits and even sometimes forced dieting may lead to discontrol in eating behavior. Furthermore traumatic events and Post-Traumatic Stress Disorder (PTSD) occur pre-, peri- and post migration (2–3). ED research puts the focus on Traumatherapy during the multidisciplinary treatment (Psycho-Nutritional Rehabilitation (PNR) and Cognitive and Cognitive-Behavioural Psychotherapy (CT/CBT)) especially for Bulimia

Keywords: Eating and weight disorders, Free listening space, EDs screening tests, Healthcare services map

Introduction: When Nutrition and Eating Disorders (EDs) affect an individual, they inevitably involve his or her family. This leads to a series of questions that require answers and a prompt treatment through a multidisciplinary approach. Recently, the lowering of the age of onset for anorexia (AN) and bulimia (BN) has increased the risk of permanent damages secondary to malnutrition. Moreover, COVID-19-related restrictions have had a negative impact on the psychopathology of individuals with an ED.

Aim: The project’s aim is to provide a listening space in the area of Fiemme Valley (approx. 20,000 inhabitants) where patients and their families can be supported. During the interview, an initial screening for EDs is administered and orientation on useful healthcare services is given. The goal is to assess the take-up of healthcare services after the first contact.

Methods: The project lasts six months.

Firstly, weight/height is measured and BMI calculated. Secondly, 2 self-assessment tests (EAT- 26 and SCOFF) are administered and a map of healthcare services is provided to subjects.

Figure 2: Rehospitalization rates of patients with RS, compared to those without an occurrence of RS.
nervosa (BN) in comorbidity with PTSD. Can we combine findings in the two areas to structure treatment for refugees with EDs and PTSD?

**Aim:** Integrating a 12 session Traumatherapy may reduce drop-out rate and lower ED's symptomatology in Bulimia Nervosa (BN) with PTSD?

Encourage to set up a preliminary study to examine the prevalence of positive screening for eating disorders (EDs) and PTSD and to encourage/stim integrated treatment research for refugees living in Lesbo.

**Methods:** 296 female BN patients undergoing an integrated multidisciplinary ED outpatient treatment composed by PNR, CT/CBT including a module of Trauma Therapy (Cognitive Processing Therapy, CPT) were assessed using EDI-3, EAT, STAI, MCQ and SCID-I/II at intake (t0), after 3 month (t1) and at the end of treatment (t2). Both groups received PNR and CT-CBT sessions for the ED symptoms and for the BN-PTSD group the treatment includes 12 sessions of CPT.

**Results:** 22.3% had PTSD and 95.6% of these reported the first traumatic event before the onset of BN. 25.6% reported physical abuse and death as the traumatic event of their PTSD. The BN-PTSD patients showed significantly (p < 0.05) higher ED related symptoms, binging and vomiting, interoceptive deficits, affective problems (EDI-3), body and food preoccupation (p < 0.05) (EAT), state anxiety (p < 0.05) (STAI) and general negative beliefs (p < 0.05) (including responsibility, superstition and punishment) (MCQ) compared to BN without PTSD. The drop-out rate between the two groups was significantly different (BN-PTSD drop-out: 3.8%; BN 12.2%; p < 0.05).

**Discussion and conclusion:** Trauma experience can complicate EDs and the integration of traumatherapy seems to lower drop out. In absence of specific research of the impact of PTSD on EDs in refugees, these results may encourage the early detection and may help to identify refugees and structure short integrate treatments. Even in this population the ED symptoms can downregulate the PTSD symptoms, act as a maintaining factor and worsen already difficult mental health conditions.

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**AN EXPLORATORY ANALYSIS OF EXPOSURE TO MUSIC DURING MEALS IN PATIENTS WITH AN EATING DISORDER**

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**Introduction:** Individuals with an Eating Disorder (ED) have shown positive effects of music exposure and treatments regarding their emotional states, thoughts, and behaviors. One of the most challenging elements of a rehabilitation protocol for ED is mealtime, when patients have to cope with dysfunctional behaviors and concerns. Music might be a functional strategy to permit coping with thoughts and promote concentration and awareness of physical needs and states.

**Aim:** The study investigates whether exposure to background music may increase comfort at mealtimes, facilitate food intake and reduce dysfunctional modes in the dining room.

**Methods:** The partial sample used for a pilot evaluation consists of 28 female patients admitted to the specialized Eating Disorders Unit of Villa Margherita with a DSM-5 diagnosis of ED. Participants are subjected to 3 types of randomized exposure: silence, a predetermined playlist of pop music, or a background focus music. They filled out a battery of self-report questionnaires to assess feelings of hunger, satiety, fullness, emotions, the desire to eat, perceived stress, the subjective difficulty of the meal, and some specific characteristics of the background to which they were exposed (speed, volume, palatability). Trained dieticians record caloric intake, presence of rituals, and adherence to timing.

**Results:** The results are preliminary as the study is still in progress. We estimate that the enrolled sample will be doubled at the end of the study. The preliminary data shows the preference for the presence of background music, with small effects on the improvement of emotions and perceived stress. The small sample size at the time does not allow for finding effects on the caloric intake or the rituals.

**Discussion and conclusions:** Meal time is considered a trigger exposure for patients with EDs and our data show a positive effect of background focus music on patients’ emotional and cognitive states. This study might help inpatients and day-hospital services to improve their procedures, with plausible positive effects for patients. These preliminary data need corroboration with a larger sample that will be enrolled for the Conference.

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EATING DISORDERS MEAL SUPPORT: DIETITIAN INTERVENTION IN ASSISTANCE TO PATIENTS’ FAMILIES OF PROGRAMMA DCA AUSL OF MODENA

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Keywords: eating disorders, meal support, family, psycho-education, dietitian intervention

Introduction: Nutrition and Eating Disorders are complex pathologies defined by abnormal eating behaviours that negatively affect physical and mental health, with emotional and social implications for the individual and his/her family. The mealtime is often a very stressful situation (1).

Meal support is a way to providing emotional support during meal times, focused on helping patient to complete the meal and to normalize eating behaviour which affect nutritional recovery.

It is important to educate family members in order to provide this help (2) A project focused on the dietitian intervention in the psycho-education of family members has been structured in the Programma DCA AUSL of Modena.

Aim: The project aims to deepen the interaction between the dietitian and the patients’ families, to encourage collaboration and provide tools to support meals at home.

Materials and methods: A brochure with practical indications was created, regarding the management of meal preparation, meal consumption and time after meal, inspired by New Maudsley Model approach (3) (4).

The booklet was explained to 14 families in individual or group meetings. At the meetings parents were often alarmed and discouraged. During the interviews, the family members were involved, willing to receive practical advice.

Discussion and conclusions: The project collected positive feedbacks from the participants whom reported that they had conquered useful insights and strategies to support their children, underlining their intense emotional load. The participants could share and discuss their thoughts thanks to the creation of a non-judgemental setting. The brochure was proved to be an useful tool and its value was recognized by parents and multidisciplinary team members.

The brochure has become common use material in Programma DCA AUSL of Modena (www.ausl.mo.it/dca).

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INDIVIDUAL THERAPEUTIC MEAL FOR PATIENTS WITH FEEDING AND EATING DISORDER: A QUALITATIVE RESEARCH ON THERAPEUTIC INTERVENTIONS UTILIZED

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Introduction: Feeding and Eating Disorders (FED) are complex pathologies that require an integrated and multidisciplinary approach articulated in specific settings with increasing intensity (outpatient, day hospital and inpatient) due to the level of symptomatic severity (APA 2006, NICE 2017). One of the key interventions in intensive settings (DH and inpatient), is the individual therapeutic meal (ITM). ITM is designed for the treatment of patients with FED long term and / or with multiple psychiatric comorbidity. Is indicated for patients that experiment difficulties with meals at home and who need (for serious health risks) weight recovery or interruption of binging and vomiting.

Aim: To evaluate which therapeutic interventions are used during the individual and personalized ATMs for patients with Anorexia Nervosa (AN) and Bulimia Nervosa (BN) in a FED specialized outpatient treatment center.

Methods: 30 textual reports of conversational interactions in ITM sessions lasting two hours (total: 60 h) of 6 female patients (3 AN (age: 25.3 ± 1.5 years, duration of the illness: 9.6 ± 5.5, BMI: 14.3 ± 1.4) and 3 BN (age: 26 ± 2.6; duration of the illness 11.3 ± 2.5 BMI: 19.7 ± 3.2)) with psychiatric comorbidity. They have been cataloged the following interventions: validation and interventions aimed to establish a cooperative relationship, mentalization, self-monitoring, emotional regulation, psychoeducation, paraphrase and cognitive restructuring, internal reformulation on the meaning of the symptom, anamnetic elements, pertubative or integrative questions, imaginative techniques and traumatherapy, exposure with prevention of the response, paradox, problem solving, motivational, humor, body techniques of relaxation and breathing and finally self-disclosure.

Results: A total of 1006 interventions were cataloged (459 in the AN group and 547 in the BN group). The most represented interventions in the AN group are: validation, interventions aimed to establish a cooperative relationship 21.35% (98/459) and 20% self-monitoring (92/459). In the BN group: self-monitoring 28.31% (155/547), validation and interventions aimed to establish a cooperative relationship 16.63% (91/547). During the presentation other research and clinical results will be exposed.

Discussion and conclusions: From the results it is possible to deduce that relational tuning is a component always present in the ITM. In addition, ITM is a procedure that acts at different levels of metacognitive coping and is therefore an intervention with high complexity and articulation of clinical skills.

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THE RELATIONSHIPS BETWEEN BODY SURVEILLANCE AND EATING DISORDERS: THE MEDIATING ROLE OF SELF-COMPASSION AND BODY SHAME

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Key words: body surveillance, self-compassion, eating disorders, body shame.

Introduction: Consistent findings suggest that body surveillance (BSU), self-compassion (SC), and body shame (BSH) are relevant for the onset of eating disorders (ED; Schaefer et al., 2018; Turk & Waller, 2020). Furthermore, research showed that both BSU issues and an impaired SC may be relevant markers for eating disorders symptomatology (Wallast et al., 2020).

Aim: The present study aimed to test the hypothesis that an association between body surveillance and eating disorders symptoms would be mediated by self-compassion, examining also the relations with body-shame.

Methods: 249 individuals aged between 18 and 35 years old (M = 26.55; SD = 4.67) were asked to fill a protocol examining body surveillance, self-compassion, and body shame, and eating disorders symptoms.

Results: A structural equation modelling (SEM) with latent variables was used to test a model with body surveillance as predictor variable, self-compassion as first mediator, body shame as second mediator, and eating disorders as outcome. The model showed good fit indices: $\chi^2(48) = 71.55; p = 0.02$, CFI = 0.99, RMSEA = 0.04 (90% CI = 0.02 – 0.07), SRMR = 0.03. Significant paths were found from body surveillance to self-compassion ($\beta = -0.44$) and body shame ($\beta = 0.75$), from self-compassion to body shame ($\beta = -0.15$), and from body shame to eating disorders ($\beta = 0.61$). In addition, indirect effects were found from body surveillance to body shame by self-compassion ($\beta = 0.07$), from body surveillance to eating disorders by body shame ($\beta = 0.46$), and from self-compassion to eating disorders by body shame ($\beta = -0.09$).

Discussion and conclusions: Individuals who have difficulties in interpreting and integrating signals originating from their own body may find difficult being kind and understanding toward themselves. Moreover, the perception of a body as not conforming to shared sociocultural standards could be linked to feelings of shame, thus fostering compensatory strategies aimed at managing such maladaptive emotional states like problematic eating behaviors. Understanding the predisposing and maintaining factors of ED and the relationship between these factors may have important implications in the prevention and treatment of these disorders.

Table 1 – Descriptive Analysis and Correlations

|                  | $\alpha$ | M    | SD    | Skew | Kurt | 1  | 2  | 3  |
|------------------|----------|------|-------|------|------|----|----|----|
| 1. Body Surveillance | .76      | 4.00 | 1.11  | .06  | .42  | -  |    |    |
| 2. Self-Compassion  | .92      | 2.82 | .73   | -.12 | -.20 | -.36** | -  |    |    |
| 3. Body Shame       | .89      | 3.58 | 1.54  | .27  | -.59 | .65** | -.44** | -  |
| 4. Eating Disorders  | .88      | .47  | .44   | 1.29 | 1.47 | .43** | -.27** | .58** |

Note: N = 249; ** p < .01; * p < .05

Table 2. Path Estimates, SIs and 95% CIs

|                  | $\beta$ | p   | SE  | Lower Bound [BC] | Upper Bound [BC] |
|------------------|---------|-----|-----|-----------------|-----------------|
|                  |         |     |     | 95% CI           | 95% CI           |
| Direct Effect    |         |     |     |                 |                 |
| Body Surveillance → Self-Compassion | -.44  | <.001 | .08  | -.45           | -.19           |
| Body Surveillance → Body Shame        | .75    | <.001  | .21  | 1.1            | 1.91          |
| Body Surveillance → Eating Disorders  | .09    | .65  | .09  | -.13           | -.22           |
| Self-Compassion → Body Shame          | -.15   | .04  | .19  | -.75           | -.02           |
| Self-Compassion → Eating Disorders    | .03    | .68  | .05  | -.07           | -.11           |
| Body Shame → Eating Disorders         | .61    | <.001  | .04  | .09            | .26           |

Indirect effect via Self-Compassion

|                  | $\beta$ | p   | SE  | Lower Bound [BC] | Upper Bound [BC] |
|------------------|---------|-----|-----|-----------------|-----------------|
|                  |         |     |     | 95% CI           | 95% CI           |
| Body Surveillance → Body Shame        | .07    | .66  | .07  | .03            | .28           |
| Body Surveillance → Eating Disorders  | .01    | .70  | .02  | -.04           | .02           |

Indirect effect via Body Shame

|                  | $\beta$ | p   | SE  | Lower Bound [BC] | Upper Bound [BC] |
|------------------|---------|-----|-----|-----------------|-----------------|
|                  |         |     |     | 95% CI           | 95% CI           |
| Body Surveillance → Eating Disorders  | .46    | <.001  | .07  | .13            | .39           |
| Self-Compassion → Eating Disorders    | -.09   | .67  | .04  | -.14           | -.002          |

Note: SE = Standard errors; BC 95% CI = Bias Corrected-Confidence Interval; p = level of significance.

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PROFILING FOOD ADDICTION AMONG DIFFERENT DIAGNOSTIC CLUSTERS OF EATING DISORDERS: A COMPARATIVE STUDY.

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**Keywords:** Food addiction; Eating Disorders; Anorexia Nervosa; Bulimia Nervosa; Binge Eating Disorder.

**Introduction:** Food addiction (FA) has become popular in the field of eating disorders (ED) [1–4]. Moreover, FA is associated with markedly different clinical diagnoses such as Anorexia Nervosa (AN; ≈ 70%), Bulimia Nervosa (BN; ≈ 95%), and Binge Eating Disorder (BED; ≈ 80%) [4]. These prevalence rates suggest that FA should be considered as an underlying construct of ED conditions [5, 6]. However, literature has not yet explored the differences between individuals with FA and individuals without FA – within the main EDs diagnoses.

**Aim:** Using a profile analysis, the present study aims to identify and highlight differences in the main psychological variables related to eating disorders – within the main diagnostic clusters of eating disorders (i.e. AN, BN, and BED) – between subjects with and without FA.

**Methods:** A sample of 146 patients with a diagnosis of ED was enrolled at ‘Rete DCA, USL Umbria 1’, Italy: 53 patients with AN, 40 patients with BN, and 53 patients with BED. Participants were diagnosed for FA with the Yale Food Addiction Scale 2.0 (YFAS2.0) [1, 7, 8]. Moreover, patients were surveyed by the Eating Disorder Inventory – 3 (EDI-3) [9]: five composite scales were computed: Eating Concerns (ECC), Ineffectiveness (IC), Interpersonal Problems (IP), Affective Problems (APC), and Overcontrol (OC).

**Results:** Six different profiles were analysed: (1) AN vs. (2) AN&FA vs. (3) BN vs. (4) BN&FA vs. (5) BED vs. (6) BED&FA. Findings suggest distinct patterns of symptom presentation between the six samples across all the EDI-3 composite scales: Wilks’ $\Lambda = 0.687$, $F = 2.728$, $p < 0.001$, $\eta^2_p = 0.090$ (moderate effect size) – Fig. 1. Specifically, patients with FA registered a lower score on the ECC scale compared with their counterparts without FA.

**Discussion and conclusions:** These results suggest that the presence of an additional diagnosis of FA – at the eating disorder diagnosis – could be one of the possible causes co-occurring with resistance to change and treatment failure in some types of patients. This study for the first time compares patients with FA and without FA – across main EDs diagnostic clusters – on main ED psychological features. This might inform classification approaches and could have important implications for the development intervention protocols for patients with eating disorders.

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**The Impact of SARS-Cov2 Pandemic on Feeding and Eating Disorders in the Developmental Age: The Experience of Emilia Romagna’s Centre**

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**Keywords:** COVID, feeding and eating disorders, pandemic, children and adolescents, hyperactivity, comorbidity.

**Introduction:** Isolation and restrictive measures following the Covid-19 pandemic had a great impact on Feeding and Eating Disorders (FED) as well as several other psychiatric conditions.1. Studies on children and adolescents in large cohorts are lacking.

**Aim:** To investigate the effects of the COVID-19 pandemic on a population of patients in developmental age that accessed to the Emilia Romagna’s Center for FED of developmental age from 2018 to 2021.

**Methods:** This single-center observational study, comparing two historical cohorts of children and adolescents with FED, with their first access before (01/03/18—31/10/19) and during (01/03/20—31/
Results: We enrolled 479 patients (F = 398, 83.1%), with 205 subjects (F = 161, 78.5%) belonging to the first historical cohort and 274 (F = 237, 86.5%) accessed during the second period (+33.7%), with an increased mean number of accesses/month (p = 0.042) and frequency of females (p = 0.042). During the pandemic, an increased number of patients accessed with physical hyperactivity (p = 0.022) and risky behaviors (p = 0.030), with more patients presenting a FED non-associated with psychiatric conditions (p < 0.001) and requiring a hospitalization after the first assessment (p = 0.013).

Discussion and conclusions: Results of this study highlight a substantial increase in the number of accesses of children and adolescents for FED, with females being the most affected. Patients accessing our Center during the pandemic showed FED symptoms connected with more frequent physical hyperactivity and risky behaviors, an increased need for hospitalization, and fewer psychiatric comorbidities. Further longitudinal studies are required in order to confirm our results.

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MULTILEVEL MODELS FOR EXPLORING WITHIN-PERSON VARIATION IN BODY IMAGE-RELATED FACTORS AND COVARIATION WITH PERSONALITY VARIABLES

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Introduction: Body image, Personality, Longitudinal study, Multilevel models

Aim: The present 5-wave longitudinal study aimed to investigate how intra-individual changes in BI-related components and personality variables covary over time in non-clinical adolescents.

Methods: A previous study of ours on non-clinical adolescents supported a two-dimensional model underlying BI attitudinal, i.e. the Body Uneasiness Test scales, and perceptual measures, i.e. the Contour Drawing Rating Scales and the discrepancy indices for the ideal body mass index. In the present study, regression factor scores were used as indicators for BI-related factors. Participants were teenagers aged 14 to 18 years (N = 97, 63.9% boys) who took part at baseline and were followed up 6-month apart, over 2 years. They completed self-report measures on the Eating Disorder Inventory-2 Ineffectiveness and Perfectionism scales, the Minnesota Multiphasic Personality Inventory for Adolescence Obsessiveness and Depression scales, and the Rosenberg Self-Esteem Scale.

Results: Multilevel modelling results showed that both attitudinal and perceptual BI did not change over time. When examining covariations with personality variables, the results showed that intra-individual changes in attitudinal component positively covaried with perfectionism and Depression, while no predictors emerged for the perceptual domain.

Discussion and conclusions: Our findings contribute to extend previous studies on perfectionism and depression as correlates of negative attitudes towards the body by showing that they also covary intra-individually over 2 years in adolescents. Understanding the construct of BI and the factors that might influence its domains has clinical implications for prevention programs.

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THE “BRADIPO ROOM”: NUTRITIONAL REHABILITATION IN PEDIATRICS

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Aim: The health emergency caused by the pandemic had a strong negative impact on cases incidence with eating disorder (ED). In the Romagna AUSL, a Diagnostic Therapeutic and Assistance Pathway (PDTA) has been structured for EDs which has different purposes; one of these is to improve cooperation between different areas of care (hospital and territorial). In the Pediatric department of the Ravenna hospital, assisted meals have always been performed for individual cases of hospitalized EDs. Starting from March a dedicated room has been made available for assisted meals done in groups.

Aim: Verify the creation and performance of a specific environment for assisted meals for cases with ED, with an integrated vision between the hospital and outpatient settings.

Methods: For hospitalized cases, all meals are followed and assisted by the nursing staff and/or by suitably trained psychologists. The dietary service performs assisted meals for patients admitted or followed in day hospital (DH) or outpatient regime, 2 to 5 times a week, as needed. Patients choose the menu based on the dietary plan and consume the meal together in the “Bradipo Room” (Figure). Recreational activities are also held in the dedicated room.

Results: In these 4 months, 11 patients have been followed with the assisted meal done in group: 6 hospitalized, 2 followed in DH (3–4 assisted meals per week) and 3 on outpatient basis (2 meals per week). By using this method it has been possible to carry out assistance up to 6 patients at the same time. The satisfaction degree of patients, parents, and operators themselves was very high.

Discussion and conclusions: The assisted meal is a therapeutic-nutritional rehabilitation methodology that involves the presence of a...
trained operator who applies specific methodologies to help patients face the fear of food by decreasing common ritual practices. This method can also be implemented in the settings of a Pediatric Department, with an integrated vision of assistance with cases that are followed up on a DH or outpatient basis. The future targets are to extend the time spent on DH cases by increasing the number of assisted meals.

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DECLUTTERING, BED, HOARDING DISORDER

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Keywords: BED, Hoarding disorder, Decluttering, obesity.

Introduction: As part of the rehabilitation treatment of the Obesity and Clinical Nutrition Center Private Hospital Forlì, an experimental project was activated which tests the use of decluttering, the removal of superfluous objects and accumulations; this project, the first in Italy, was realized in collaboration with Studio ArchiBenessere. The accumulations affect both the psychological state, creating states of anxiety, confusion, indecision, distraction and insecurity, and the practicality of the house, limiting the usability and freedom of movement, thus aggravating the situation of psychological distress.

Aim: The aims of the study is evaluate the effectiveness of the meetings on decluttering and the correlation between BED and Accumulation Disorder.

Methods: 102 subjects of mean age 53.89 ± 10.99, mean weight 137.1 ± 36.23 kg and mean BMI 49.75 ± 11.82 kg/m2, who were administered a battery of tests including Hoarding Rating Scale, PGWBI, BES, DBI, STAI in order to assess the correlation between BED and Hoarding Disorder. Patients participated in psychological groups where psychotherapists focus on emotional and psychological components while the experts focus on the technical part, providing a definition of decluttering and the causes that lead to accumulation, resistance to letting go of objects and solutions to overcome them. During the psychological follow-up interviews emerge that patients return home and begin to put into practice the techniques they have learned.

Results: 27.54% of subjects showed altered values in the questionnaires (PGWBI, BDI, BES, STAI) and 13.26% also in Hoarding Disorder. There is a relationship between BED and dysfunctional eating and storage disorder (p < 0.05).

Conclusions: A strong link seems to emerge between the use of decluttering techniques, weight loss and greater psycho-emotional well-being.

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COVID-19: A SPRINGBOARD FOR ANOREXIA NERVOSA

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Keywords: Anorexia nervosa, Covid-19.

Introduction: The COVID-19 pandemic has had broad mental health consequences, especially for adolescents. The negative psychological effect of the quarantine and social restrictions has been well documented, with youth particularly at risk of mental health disorder (1). Lack of social contact and school closure to reduce the spread of COVID-19 increased the number of adolescents with anorexia nervosa (AN) requiring admission to hospital (2). In 2020, after the COVID-19 pandemic outbreak, pediatric emergency department admissions have significantly fallen around the world (3). However, from April 2020 to April 2021, in correspondence with the COVID-19 pandemic in North Italy, we observed a 115% increase (28 vs 13) in admission to our hospital of adolescents with AN requiring medical intervention compared with the previous year. Patients were all females (median age 15.7 years).

AN is characterized by body image distortion, significant calorie restriction, and compensatory behaviors such as post-prandial vomiting, over-exercising, or laxative use (2). Often adolescents with AN have comorbid mental health issues, such as depression and anxiety, so social isolation and lack of the school routine in the last years have created the perfect base for eating disorders. The increased stress caused by the COVID-19 pandemic with the infection fears, the lack of personal control, and uncertainty around the duration of restrictions hit hardest adolescents with AN, contributing to anxiety and depression in this vulnerable group (3–5). The inability to escape the “watching eyes” of parents at meal and be distracted by school routine as a result of lockdown may negatively impact their ability to recover from AN (5).

However, for children with AN telemedicine is not an option, and ensuring physical and mental health safety remains a priority. Furthermore, management of the high rates of medical and neuropsychiatric complications associated with AN requires regular face-to-face contact and clinical assessment. It is essential to balance the protective effect of no clinical attendances, with the risk of unrecognized medical deterioration. For this reason in our department we provided long hospitalizations (from 2 to 8 months: median duration 4.9 months) that allowed patients with AN to improve from a learned.

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Aim: In our Pediatric Department during the COVID-19 pandemic, a novel protocol was followed in patients with AN to reduce the risk of infection allowing at the same time short homecomings (Table 1).

Methods: School attendance through distance learning using Zoom was maintained throughout the hospitalization during the first months of the pandemic. During the hospitalization, patients were allowed to follow art and music therapy in small groups.

Results: Despite the COVID-19 pandemic with this homeleave program, we found no new case of asymptomatic infection in 28 patients with AN in the last year. Infection rates in youth are generally low accounting for 1–2% of reported cases, with only 2.5% aged under 19 years presenting with severe disease (5). Recent evidence suggests increased risks of infection in individuals with lowered immunity or decreased bone marrow function secondary to persistent food restriction in patients with AN (2,3).

Discussion and conclusions: This report highlighted an increase in admissions for girls with AN during the COVID-19 outbreak. Long hospitalizations with home leave the program and return to hospital was safe and not associated with an increased risk of COVID-19 infections. Overall, further research is needed for an evidence-based approach for the management of AN during the current COVID-19 pandemic.

Table 1. Protocol for inpatients with AN during COVID-19 pandemic

|   |   |
|---|---|
| 1. | A molecular swab for Covid-19 was performed once a week in all patients with AN |
| 2. | Parents were allowed to provide assistance after a negative molecular swab for Covid-19 that was repeated every 2 weeks |
| 3. | Infection prevention by the use of personal protective equipment (face-mask) were followed. |
| 4. | Once patients with AN have improved from a nutritional point of view, free outings at home for 2-3 days are granted allowing patients to re-enter their routine with their family. |
| 5. | Upon returning to the hospital, a “third generation” swab for Covid-19 was always repeated to identify any new cases. |

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OXYTOCIN AS A BIOMARKER OF EMOTIONAL DYSREGULATION AND A PREDICTOR OF WEIGHT LOSS IN A POPULATION OF OBESE SUBJECTS

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Keywords:....

Introduction: Oxytocin (OXT) is a neurohypophyseal hormone that plays a role in regulating energy balance by acting both centrally and peripherally, improving glucose absorption and lipid utilization in adipose tissue and skeletal muscle. Recent studies highlighted its important role in pro-social behaviors and body image awareness.

Aim: The primary objective of the study was to evaluate the relationships between OXT and anthropometric, metabolic, body composition and psychometric parameters in patients with obesity. The secondary objective was to examine whether weight loss and the induction of ketosis were related to a change in OXT levels.

Methods: The study was conducted at the High Specialization Center for the Treatment of Obesity (CASCO) Umberto I Polyclinic, “Sapienza” University of Rome. We enrolled 47 obese patients (28 females and 19 males), with mean age of 55.46 ± 7.33 and mean BMI of 35.88 ± 4.37 kg / m2 who underwent dietary intervention with VLCKD lasting 45 days. At t0 the patients were given three different psychometric tests: BUT, TAS-20, RAADS-R. At t0 and after six weeks (t1), patients underwent clinical evaluation, routine biochemical tests, body composition study, measurement of serum OXT.

Results: At t0 OXT was 1163.7 ± 410.08 pg / mL, with no difference between sexes, and correlated positively with BMI (r = 0.40; p < 0.05), the hip circumference (r = 0.40; p < 0.05), plasma ketone bodies (r = 0.35; p < 0.017) and with most items of BUT (r = 0.42, p < 0.05). Following VLCKD there was a significant reduction in circulating levels of OXT (734.35 ± 203.35), an average weight loss of 8.8 kg, with an average BMI of 32.76 kg / m2. There was a strong
direct correlation between OXT at \( t_0 \) and weight loss both in terms of weight (\( p < 0.005 \)) and BMI (\( p < 0.005 \)). Furthermore, there was a linear and significant correlation between reduction in OXT (\( t_0-t_1 \)) and reduction in BMI. OXT at \( t_0 \) was the only independent predictor of weight reduction with respect to OXT levels at \( t_1 \), plasma ketone concentration, sex and age (beta = 0.36, \( p = 0.02 \)).

**Discussion and conclusion:** The results obtained show that higher concentrations of OXT are associated with loss of body appearance perception, greater weight loss and better response in the induction of ketosis after VLCKD. OXT levels at \( t_0 \) are independent predictors of VLCKD-induced weight loss.

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