

Oral Scientific Paper Session II

Thursday, May 2, 2013

4:45 – 6:15 p.m.

Children & Adolescents

Do Maternal Body Dissatisfaction and Eating Concerns Contribute to Child Weight Gain?

Rachel Rodgers, PhD, Northeastern University, Boston, MA, USA; Susan Paxton, PhD, FAED, La Trobe University, Melbourne, Australia; Siân McLean, BSc, La Trobe University, Melbourne, Australia; Karen Campbell, MPH, PhD, Deakin University, Melbourne, Australia; Eleanor Wertheim, PhD, La Trobe University, Melbourne, Australia; Helen Skouteris, PhD, Deakin University, Melbourne, Australia; Kay Gibbons, RD, Royal Children's Hospital Melbourne, Melbourne, Australia

Objective: Restrictive parental feeding practices due to concerns regarding children's weight could be paradoxically related to weight gain in young children. However, the mechanisms by which mother's own body image and weight concerns contribute to this process are unclear. The aim of the present study was to test a model in which mother's body dissatisfaction, dietary restraint and concerns about their child's weight were related to restrictive feeding practices and child weight gain. **Methods:** A sample of 202 mothers of 2-year-old children, mean (SD) age = 2.03 (0.37) years, completed a survey assessing concerns regarding their own and their child's weight as well as dietary restraint and restrictive feeding practices at baseline and 1-year later. Height and weight were obtained for mothers and children. **Results:** After the addition of a pathway between maternal dietary restraint and child BMIz change, the model proved a good fit to the data, $\chi^2(8) = 5.593$, $p = .693$, GFI = .991, CFI = 1.000, RMSEA = .000. Maternal dietary restraint was a direct predictor of child weight gain. Furthermore maternal dietary restraint and to a lesser extent concern regarding their child's weight were mediators of the relationship between maternal body dissatisfaction and the use of weight-focused restrictive feeding practices. However the direct pathway from maternal restrictive feeding to change in child BMIz was not significant. **Conclusions:** Findings suggest that mothers' own body dissatisfaction and disordered eating may contribute directly to weight gain in their children. Interventions targeting maternal body and eating concerns and providing information regarding effective feeding strategies may help prevent increases in child BMIz.

Learning Objectives:

- Review the role maternal feeding practices in child weight gain.
- Assess the relationship between maternal body dissatisfaction and dietary restraint and child BMI change.
- Discuss the usefulness of interventions aiming to decrease body image and eating concerns in mothers of young children.

Predictors of Loss of Control Eating at Age 14 or 16

Kendrin R Sonnevile, ScD, RD, Boston Children's Hospital, Boston, MA, USA; Nicholas J Horton, ScD, Department of Mathematics and Statistics, Smith College, Northampton, MA, USA; Alison E Field, ScD, Boston Children's Hospital, Boston, MA, USA; Ross D Crosby, PhD, FAED, Neuropsychiatric Research Institute, Fargo, MN, USA; Francesca Solmi, MA, UCL Institute of Child Health, London, United Kingdom; Nadia Micali, MD, PhD, UCL Institute of Child Health, London, USA

Identifying childhood predictors of loss of control (LOC) eating could help improve prevention and detection efforts and could enhance understanding of the development of these behaviors. We studied risk factors for the development of LOC eating at age 14 or 16 among 3066 males and females from the Avon Longitudinal Study of Parents and Children (ALSPAC), a cohort study of children in the United Kingdom, using structural equation modeling. Four risk factors were selected for study: parental report of overeating at age 7 (BMI-adjusted), teacher reported hyperactivity at age 11, child report of overeating at age 11, and parental report of the child acting like he or she is addicted to food ('food addiction') at age 13. Results from models controlling for maternal education showed that the association between overeating at age 7 and LOC eating at 14 or 16 was fully-mediated by 'food addiction' at age 13, whereas 'food addiction' at age 13 partially-mediated the association between

overeating at age 11 and LOC eating at 14 or 16 (odds ratio [OR]=2.47, 95% confidence interval [CI]=1.41, 4.34)). The best-fitting model also included direct paths from hyperactivity at age 11 to both overeating at age 11 (OR=1.12, 95% CI=1.05, 1.19]) and 'food addiction' at age 13 (OR=1.08, 95% CI=1.02, 1.13]). Maternal education modified the association between overeating at age 11 and 'food addiction' at age 13 ($p=0.077$), such that higher risk of 'food addiction' at age 13 was seen among children of mothers with low education who overeat at age 11 (OR=4.65, 95%CI=2.17, 9.98]), and not among children of mothers with high education (OR=1.78, 95% CI=0.89, 3.53]). Our results suggest a contribution of hyperactivity in the development of loss of control eating and provide support for the persistence of eating pathology throughout childhood and adolescence.

Learning Objectives:

- Understand how structural equation models can be used to explain the development of LOC eating in childhood.
- Identify possible predictors of LOC eating in childhood.
- Assess the role of maternal education in LOC eating in childhood.

An Ecological Momentary Assessment Study of Loss of Control (LOC) Eating in Adolescent Girls
Lisa, M. Ranzenhofer, MS, Uniformed Services University of the Health Sciences, Bethesda, MD, USA; Scott, G. Engel, PhD, Neuropsychiatric Research Institute, Fargo, ND, USA; Micheline, R. Anderson, BA, Uniformed Services University of the Health Sciences, Bethesda, MD, USA; Ross D. Crosby, PhD, FAED, Neuropsychiatric Research Institute, Fargo, ND, USA; Marian Tanofsky-Kraff, PhD, FAED, Uniformed Services University of the Health Sciences, Bethesda, MD, USA

Despite the adverse outcomes associated with LOC eating, little is known about its etiology in adolescents. In particular, there are limited data on the moment-to-moment processes that surround LOC episodes. We used ecological momentary assessment (EMA) to examine interpersonal and affective momentary predictors of LOC eating episodes in the naturalistic environment. Participants were 23 overweight (body mass index, BMI, kg/m^2 , ≥ 85 th percentile) adolescent girls (14.93 ± 1.58 y, 34.7% Caucasian; BMI 35.69 ± 6.76) with reported LOC as assessed by the Eating Disorder Examination. Body composition was assessed by air displacement plethysmography ("bod pod"). Girls completed two weeks of EMA using electronic digital devices at random assessments and before and after eating. Questions adapted from the Social Adjustment Scale—Self-report, the Positive and Negative Affect Scale, and the Eating Disorder Examination were used to assess interpersonal problems, mood, and LOC eating, respectively. Level of control over eating was rated on a 5-point Likert scale ranging from 'Not at all' through 'A lot.' Linear mixed models were used to examine impact of interpersonal problems, and negative and positive affect (Time 1), on subsequent negative and positive affect, and LOC eating (Time 2), respectively. Overall compliance with random recordings was $70.5 \pm 14.9\%$. Over an average 12.5-day monitoring period, girls completed 1.4 ± 0.8 before-meal and 1.2 ± 0.7 after-meal ratings per day. Controlling for age, race, adiposity, and height, interpersonal problems were positively associated with negative affect ($p=0.02$) and inversely associated with positive affect ($p=0.001$). Negative ($p=0.03$), but not positive ($p=0.5$) affect was associated with LOC eating. These data support links between interpersonal problems, affective states, and LOC eating. Additional research is needed to examine fluctuations in interpersonal problems, negative, and positive affect before and after LOC episodes.

Learning Objectives:

- Assess role of interpersonal and affective factors in LOC eating.
- Cite differences between negative and positive affect in predicting LOC.
- Infer potential future directions for use of EMA among adolescent girls with LOC.

Purging Behaviours at Age 16 Among Girls: Prevalence in Three Community-Based International Cohorts

Francesca Solmi, MSc, Institute of Child Health - University College London, London, United Kingdom; Kendrin Sonneville, ScD, RD, Children's Hospital, Boston, MA, USA; Abigail Easter, PhD, Institute of Child Health - University College London, London, United Kingdom; Nicholas Horton, ScD, Smith College, Northampton, MA, USA; Ross Crosby, PhD, FAED, Neuropsychiatric Research Institute, Fargo, ND, USA; A.R Rodriguez; M-R Jarvelin; Alison Field, ScD, FAED, Boston Children's Hospital, Boston, MA, USA; Nadia Micali, MD, MRCPsych, PhD, Institute of Child Health - University College London, London, United Kingdom

Purging has been studied primarily in adult samples and few studies have focused on adolescents. This study examines prevalence of purging behaviours (i.e. vomiting, laxative use and use of other medications) among 16 years old girls in three population-based cohorts in different countries: GUTS (Growing Up Today Study) USA; ALSPAC (Avon Longitudinal Study of Parents and Children) UK, and NFBC85/86 (North Finland Birth Cohort 1985/86) Finland). Within each cohort we investigated the cross-sectional association of purging with use of alcohol, cigarettes, and drugs, as well as with psychological comorbidity. Logistic regression was employed to quantify the association between purging and selected outcomes. Adjusted analyses included bingeing status, socio-demographic variables and specific covariates for each outcome analysed. In ALSPAC, 9.3% of girls reported any purging in the 3-months prior to assessment, and 3.5% in NFBC. In GUTS, 5.5% of adolescent girls

reported any purging in the previous year. In all cohorts, purging was associated with alcohol use (ALSPAC OR=4.5 [95%CI=2.4-8.6]; NFBC OR=4.01[95%CI=0.6-10.5]; GUTS OR=4.08 [95%CI=3.0, 5.6]), drug use (ALSPAC OR=2.2 [95%CI=1.4-3.4]; NFBC OR=2.6 [95%CI=1.5-4.3]; GUTS OR=5.37 [3.6, 8.1]), and depression (ALSPAC OR=1.9 [95%CI=1.3-2.8]; GUTS OR=4.6 [95%CI=3.1-6.9]). Purging was associated with cigarette smoking in NFBC (OR=2.7 [95%CI=1.7-4.6]) and GUTS (OR=1.6 [95%CI=1.1, 2.1]). We observed higher prevalence of purging behaviours in the UK compared to north Finland and the US suggesting that purging behaviours might be influenced by socio-cultural factors. Moreover, our findings lend support to the evidence highlighting negative outcomes of purging, independent of bingeing and frequency criteria.

Learning Objectives:

- Describe the prevalence of purging behaviours and type of purging behaviours among 16 years old girl in three different population-based samples.
- Study the prevalence of adverse co-morbid outcomes among adolescents who engage in purging behaviours.
- Investigate whether prevalence of purging behaviours and co-morbid outcomes varies across countries and whether differences can be attributed to culture-specific factors.

Is Parental Health Literacy Associated with Parent Selection of Safe and Unsafe Weight Loss Strategies for Children?

Janet Liechty, PhD, MSW, LCSW-C, University of Illinois, Urbana, IL, USA; Jaclyn Saltzman, BA, University of Illinois, Urbana, IL, USA

The purpose of this study was to describe parents' beliefs about weight loss strategies for young children and adults, and to examine relationships between these beliefs, health literacy and parent weight concern for their child. Health literacy is one's ability to obtain, understand, communicate, and apply health information to improve health. Parents of preschoolers (n=497; 90% female; 36% receiving public assistance) in the STRONG Kids Panel Study were surveyed. Measures included: health literacy (Newest Vital Signs), parent weight concern (Child Feeding Questionnaire, subscale), a checklist including safe and unsafe weight loss strategies, and Body Mass Index (BMI for parent and BMIz for children based on measured child height and weight). Nearly a third (29%) of parents had limited health literacy; 19% of children were overweight or obese and 9% of parents were concerned about their child's weight. Few parents (2%) endorsed any of the 10 unsafe weight loss methods for preschool children; however, those who did selected an average of 3.5 unsafe strategies such as the use of laxatives, diuretics, and skipping meals; and 28% of parents endorsed these and other unsafe strategies for adults. Most parents (83%) endorsed one or more of the 10 dietary restraint strategies to help children lose weight; and two-thirds endorsed 3 or more. Recommended strategies for children (increasing fruits and vegetables and physical activity) were endorsed by 65% of parents. Linear regressions revealed that higher health literacy was associated with fewer unsafe child weight loss strategies ($\beta = -.162$, $R^2 = .053$, $p = .002$), more recommended strategies ($\beta = .196$, $R^2 = .152$, $p = .000$), and more child dietary restraint strategies ($\beta = .210$, $R^2 = .028$, $p = .000$) after controlling for age, education, and race/ethnicity. Parents are concerned about obesity but may hold misconceptions about safe weight management strategies, suggesting the need for parent education.

Learning Objectives:

- Define health literacy in the context of weight management and weight-related health among children.
- Evaluate parent beliefs about weight loss strategies for children and adults.
- Identify parent education needs regarding safe ways to assist a child who is overweight.

The Prevalence and Clinical Implications of Premorbid Overweight and Obesity in Adolescents Presenting for Eating Disorder Treatment

Jocelyn Lebow, PhD, Mayo Clinic, Rochester, MN, USA; Leslie Sim, PhD, LP, Mayo Clinic, Rochester, MN, USA; Kristi Luenzmann, MA, LP, Mayo Clinic, Rochester, MN, USA

The much publicized "obesity epidemic" has motivated health care providers to emphasize prevention with their pediatric patients. Although reduced caloric intake and increased exercise have become standard recommendations for the at-risk population, this well-intentioned advice may inadvertently provide a catalyst for compulsive dieting and overexercise, which can culminate in an eating disorder. For overweight teens, weight loss that might otherwise be a red flag in an average-weight patient may be seen favorably by providers. This study examined the prevalence and the characteristics of adolescents with eating disorders with a history of premorbid overweight or obesity (PO) (BMI > 85th percentile). A chart review was conducted of all intakes seen in the Mayo Clinic Adolescent Eating Disorder Program during the past year. Out of a total of 60 adolescents (Age M = 16.4), 27 (45%) were found to have a history of PO. After excluding patients with incomplete data, t-tests were conducted on a sample of 23 PO and 23 adolescents with premorbid average weight (PA). At intake, adolescents with PO presented with a significantly larger decrease in BMI (M=5.9; SD=2.7) than adolescents with PA (M=3.6; SD=2.7); $t(44)=3.4$; $p=.001$. In addition, the length of illness from onset to intake appointment was greater for adolescents with adolescents with PO (M= 810.6 days) as compared to those with PA (M=500.3

days); $t(44)=2.2$; $p=.04$. These findings suggest that eating disorders in adolescents who have a history of overweight or obesity may escape notice until the illness has progressed further, and may consequently have a poorer prognosis as compared to those without this history. This suggests a need to reevaluate obesity prevention for adolescents in the primary care setting. Overweight and obese adolescents must be seen as at-risk for developing an eating disorder. Patients' efforts to change health behaviors must be monitored closely for indications of pathology.

Learning Objectives:

- Describe the relationship between obesity and eating disorders.
- Assess for the presence of an eating disorder in an overweight adolescent.
- Monitor health behavior change in overweight adolescents to prevent eating disorder development.

Diagnosis Classification & Measurement

Does Anorexia Nervosa Need an Insight Specifier? Lessons Learned from a Comparison with Body Dysmorphic Disorder

Anne Wilson, BA, Massachusetts General Hospital/Harvard Medical School, Boston, MA, USA; Andrea Hartmann, PhD, FAED, Harvard Medical School/Massachusetts General Hospital, Boston, MA, USA; Jennifer Thomas, PhD, Massachusetts General Hospital/Harvard Medical School, Boston, MA, USA; Sabine Wilhelm, PhD, Massachusetts General Hospital/Harvard Medical School, Boston, MA, USA

The new DSM-5 criteria propose an insight specifier for body dysmorphic disorder (BDD). Preliminary studies have also identified delusional appearance beliefs in anorexia nervosa (AN). This study aimed to compare the delusional appearance beliefs in AN versus BDD to evaluate the utility of an insight specifier in AN. We interviewed participants (AN: $N = 19$; BDD: $N = 22$) with the Brown Assessment of Beliefs Scale (BABS; inter-rater reliability ICC = 0.85) to measure delusional appearance beliefs. Furthermore, we assessed disorder-specific psychopathology using the Eating Disorder Examination (EDE) and Eating Disorder Inventory (EDI) in AN and the Yale-Brown Obsessive-Compulsive Scale adapted for BDD in BDD. The BDD group exhibited significantly greater delusional appearance beliefs on the BABS ($t(39) = -3.45$, $p < .01$, $d = 1.07$) but comparable scores on a single item evaluating delusions of reference ($t(39) = 0.42$, $p = .68$, $d = 0.14$). While groups did not differ in the number of members with poor insight (Chi Sq(1) = 0.71; $p = .79$, $\Phi = 0.13$), there were more delusional members in the BDD group (Chi Sq(1) = 5.31, $p < .05$, $\Phi = 0.36$). In AN, delusional appearance beliefs were significantly associated with EDE shape concerns and EDI drive for thinness, while in BDD, delusional appearance beliefs were related to BDD-YBOCS symptom severity (all $p < .05$). Results indicate that delusional appearance beliefs are present in individuals with AN, but might be less pronounced than in BDD. There might be different subgroups with and without insight or with poor insight in AN. Due to the association of delusional appearance beliefs with specific psychopathology and its reported prediction of treatment response, more research in this area is encouraged to provide recommendations on the utility of an insight specifier for AN.

Learning Objectives:

- Describe insight/delusional appearance beliefs in AN.
- Draw comparisons to insight/delusional appearance beliefs in BDD to form a hypothesis about the usefulness of an insight specifier in AN.
- Describe the role/the interaction of delusional appearance beliefs with clinical variables in AN.

Low Prevalence of DSM-5 Avoidant/Restrictive Food Intake Disorder Among Youth Seeking Treatment Through Specialty Pediatric Gastrointestinal Clinics

Kamryn Eddy, PhD, Massachusetts General Hospital / Harvard Medical School, Boston, MA, USA; Jennifer Thomas, PhD, Massachusetts General Hospital / Harvard Medical School, Boston, MA, USA; Evan Lamont, BA, Massachusetts General Hospital, Boston, MA, USA; Rachel Bryant-Waugh, DPhil, FAED, Great Ormond Street Hospital for Children NHS Trust, London, United Kingdom; Anne Becker, MD, PhD, FAED, Massachusetts General Hospital / Harvard Medical School, Boston, MA, USA

The DSM-5 Eating Disorders Work Group has proposed avoidant/restrictive food intake disorder (ARFID) to capture eating/feeding problems characterized by 'persistent failure to meet nutritional and/or energy needs' in the absence of cognitive eating disorder pathology and not better explained by a concurrent medical disorder. No published data evaluate the clinical utility of this disorder. The objective of this study was to examine prevalence of ARFID in all consecutive referrals ages 8-18y ($N=2234$; 53% female; M age=12.9y, SD=2.9y) initially evaluated in 2008 within 19 Boston-area Pediatric Gastrointestinal Clinics. Longitudinal medical records were coded for DSM-5 eating/feeding disorder criteria. Twenty two (1.0%) cases of ARFID were identified; 16 (73%) were male. Most were characterized by not eating enough/showing little interest in feeding ($n=11$) or accepting a limited diet in relation to sensory features ($n=7$). An additional 127 cases (5.7%) met one or more ARFID criteria and there was insufficient information available to confer or exclude a diagnosis. Common diagnostic challenges were (1) differential diagnosis between ARFID and anorexia nervosa or anxiety disorders;

(2) ascertainment of nutritional deficiency; (3) determination of whether eating/feeding disturbance warranted diagnosis in the presence of another medical or psychiatric disorder (e.g., Crohn's disease, autism spectrum disorders); (4) determination of whether an eating/feeding problem was responsible for failure to meet nutritional and/or energy needs; and (5) assessment of psychosocial impairment related to eating/feeding behaviors. In a pediatric sample seeking treatment for gastrointestinal concerns, whereas ARFID features were common, cases meeting full criteria were rare, suggesting the diagnosis is not over-inclusive even in a population where eating/feeding difficulties are expected. Guidance addressing identified diagnostic issues could improve clinical utility of these criteria.

Learning Objectives:

- Describe avoidant/restrictive food intake disorder (ARFID), a new diagnosis that the Eating Disorders Work Group has proposed for inclusion in DSM-5 to replace the DSM-IV Feeding Disorders of Infancy or Early Childhood.
- Discuss clinical utility of this novel diagnosis by understanding low prevalence of bona fide ARFID cases in a specialty sample of children and adolescents seeking treatment for gastrointestinal complaints.
- Appreciate challenges in applying DSM-5 ARFID criteria and consider suggestions to improve reliability and validity of diagnosis.

Avoidant/Restrictive Food Intake Disorder in Young Eating Disordered Patients in Day Treatment: Prevalence and Characteristics of a Proposed DSM-5 Diagnosis

Terri Nicely, BS, Penn State College of Medicine, Hershey, PA, USA; Rollyn Ornstein, MD, Penn State Hershey Children's Hospital, Hershey, PA, USA; Susan Lane-Loney, PhD, Penn State Hershey Children's Hospital, Hershey, PA, USA; Emily Masciulli, LCSW-C, Penn State Hershey Children's Hospital, Hershey, PA, USA; Christopher Hollenbeak, PhD, Penn State College of Medicine, Hershey, PA, USA

The proposed DSM-5 diagnosis Avoidant/Restrictive Food Intake Disorder (ARFID) would include children who present with restricted nutrition leading to low body weight, but without body image distortion and fear of weight gain. We sought to compare the prevalence and clinical presentation in a cohort of patients with ARFID to that of patients with anorexia nervosa (AN), bulimia nervosa (BN) and Feeding or Eating Disorder Not Elsewhere Classified (FEDNEC). A retrospective chart review of 177 (93% female) patients 7-16 (13.5 ± 2) yrs old admitted to an eating disorders (ED) day program from 2008-2012 was performed. Patients were classified using the proposed DSM-5 criteria. Of the 173 included patients, 22.5% met criteria for ARFID, 53.8% for AN, 11.6% for BN, and 12.1% for FEDNEC. The ARFID group was younger than the non-ARFID group (11.1 vs 14.2 yrs, $p < 0.0001$) and had a greater proportion of males (20.5 vs 4.5%, $p = 0.001$). Similar degrees of weight loss and malnutrition were found between groups. Patients with ARFID reported greater fears of vomiting and/or choking (43.6%) and food texture issues (25.6%) than those with other EDs (<1%, $p < 0.0001$), as well as greater dependency on nutritional supplements at intake (46.2 vs 14.2%, $p < 0.0001$). Children's Eating Attitudes Test scores were lower for children with than without ARFID ($p < 0.0001$). A higher comorbidity of anxiety disorders ($p < 0.0001$), pervasive developmental disorder ($p = 0.001$), and learning disorders ($p < 0.0001$) and a lower comorbidity of depression ($p < 0.0001$) were found in those with ARFID. This is the first study to describe and compare children and adolescents with the newly articulated diagnosis of ARFID to those with other EDs undergoing day treatment. This study demonstrates that there are significant demographic and clinical characteristics that differentiate children with ARFID from those with other EDs, and helps substantiate the recognition of ARFID as a distinct ED diagnosis in the DSM-5.

Learning Objectives:

- Describe the eating disorder diagnosis, Avoidant/Restrictive Food Intake Disorder (ARFID).
- Identify clinical and historical characteristics of patients with ARFID.
- Discuss differences between patients with ARFID and other eating disorders, e.g. anorexia nervosa.

Avoidant/Restrictive Food Intake Disorder: A Proposed Diagnosis in DSM-5

Debra Katzman, MD, FAED, Hospital for Sick Children & University of Toronto, Toronto, Canada; Martin Fisher, MD, FAED, Cohen's Children's Medical Center of New York, New Hyde Park, NY, USA; David S. Rosen, MD, MPH, University of Michigan Medical School, Ann Arbor, MI, USA; Rollyn Ornstein, MD, Pennsylvania State Hershey Medical Center, Hershey, PA, USA; Kathleen Mammel, MD, Beaumont Children's Hospital, Royal Oak, MI, USA; Ellen Rome, MD, MPH, Cleveland Clinic Children's Hospital, Cleveland, OH, USA; S. Todd Callahan, MD, MPH, Vanderbilt University Medical Center, Nashville, TN, USA; Joan Malizio, RN, Cohen Children's Medical Center of New York, New Hyde Park, NY, USA Sarah Kearney, MD, Hospital for Sick Children & University of Toronto, Toronto, Canada; B. Timothy Walsh, MD, FAED, Columbia University/NYSPI, New York, NY, USA

Avoidant/Restrictive Food Intake Disorder (ARFID) is characterized by restriction or avoidance of food resulting in considerable weight loss or lack of appropriate weight gain not associated with body image concerns. This retrospective case-control study compared all cases 8-18 years of age presenting to 7 pediatric eating disorders programs in North America in 2010 with ARFID to randomly selected controls with anorexia nervosa (AN) and

bulimia nervosa (BN). Demographic and clinical information on cases and controls were recorded. Statistical analyses included chi-squared and ANOVA. 98/719 (13.6%) patients met the diagnostic criteria for ARFID. Patients with ARFID were younger than those with AN (n=98) or BN (n=66), (12.9 vs. 15.6 vs. 16.5 years; $p < 0.001$), had a longer duration of illness (30.5 vs. 14.5 vs. 23.5 months; $p < 0.001$), and a % median BMI that was intermediate between those with AN and BN (86.5 vs. 81.0 and 107.5; $p < 0.001$). Female gender preponderance was less for ARFID than AN or BN (71% vs. 87% vs. 94%; $p < 0.01$). The clinical profile at presentation of patients with ARFID included 28 (28.7%) picky eaters; 21 (21.4%) with generalized anxiety; 19 (19.4%) with gastrointestinal symptoms; 13 (13.2%) with a history of vomiting/choking; 4 (4.1%) with food allergies; and 13 (13.2%) "other". Patients with ARFID had an increased prevalence of co-morbid medical conditions (55% vs. 10% vs. 11%; $p < 0.001$) and anxiety disorders (58% vs. 36% vs. 32%; $p < 0.01$) and were less likely to have a mood disorder (19% vs. 31% vs. 58%; $p < 0.001$). Patients with ARFID were demographically and clinically distinct from those with AN or BN, had a longer duration of illness, and were more likely to have a co-morbid medical illness and anxiety disorder. The clinical profile consisted of common physical and mental health problems. The data supports the inclusion of ARFID as a distinct eating disorder in the DSM-5.

Learning Objectives:

- To become familiar with the diagnostic criteria of ARFID.
- To describe the clinical presentation of children and adolescents with ARFID.
- To understand the medical and psychiatric comorbidity associated with children and adolescents with ARFID.

Is Non-Fat-Phobic Anorexia Nervosa an Artifact of Purposeful Symptom Denial?

Jennifer J. Thomas, PhD, Massachusetts General Hospital/McLean Hospital/Harvard Medical School, Boston, MA, USA; Rebecca M. Patterson, BA, Massachusetts General Hospital, Boston, MA, USA; Andrea S. Hartmann, PhD, Massachusetts General Hospital/McLean Hospital/Harvard Medical School, Boston, MA, USA; Kamryn T. Eddy, PhD, Massachusetts General Hospital/Harvard Medical School, Boston, MA, USA

Many individuals with low-weight eating disorders do not endorse the intense fear of weight gain that DSM-IV cites as the sine qua non of anorexia nervosa (AN). We tested the hypothesis that the apparent lack of fat phobia in non-fat-phobic (NFP) AN is at least partly an artifact of socially desirable responding. Female patients aged 13-27 (N = 144; 92% of consecutive admissions) from a residential ED treatment facility completed the Eating Disorder Examination (EDE) interview, the Eating Disorder Inventory Drive for Thinness subscale (EDI-DFT), and the Paulhus Deception Scale (PDS; which measures respondents' tendency to provide socially desirable responses on interview and self-report measures). To establish low weight, we included only those patients (n = 64) who weighed less than 85% of age- and gender-matched norms. We classified patients as fat-phobic (n = 47) if they scored > 7 on EDI-DFT and > 4 on EDE Fear of Weight Gain, and non-fat-phobic (n = 17) if they scored < 7 and/or < 4, respectively. As predicted, non-fat-phobic patients scored significantly higher on the PDS Impression Management subscale (measuring the tendency to give socially desirable responses to others) ($d = .69$, $t = 2.50$, $p = .02$) and PDS total ($d = .81$, $t = 2.82$, $p = .006$) compared to fat-phobic patients. In contrast, the groups did not differ significantly on PDS Self-Deceptive Enhancement (measuring the tendency to minimize potential problems even to oneself) ($d = .26$, $t = 1.01$, $p = ns$). Our findings suggest that the apparent lack of fat phobia in NFP-AN may be partly an artifact of purposeful symptom denial. Use of deception scales in research and clinical work may promote the detection of covert AN and facilitate its differential diagnosis from other low-weight presentations (e.g., avoidant/restrictive food intake disorder). Results also highlight the exploration of previously undisclosed weight concerns as a potentially important therapeutic goal in NFP-AN.

Learning Objectives:

- Differentiate between fat-phobic and non-fat-phobic presentations of anorexia nervosa.
- Appreciate the possibility for socially desirable responding in the assessment of disordered eating attitudes, such as fat phobia, in both research and clinical settings.
- Discover a new assessment tool (i.e., the Paulhus Deception Scale) for identifying purposeful symptom denial in individuals with low-weight eating disorders.

Examining Associations between Retrospective versus Ecological Momentary Assessment Measures of Affect and Eating Disorder Symptoms in Anorexia Nervosa

Jason Lavender, PhD, Neuropsychiatric Research Institute, Fargo, ND, USA; Kyle De Young, PhD, University of North Dakota, Grand Forks, ND, USA; Michael Anestis, PhD, University of Southern Mississippi, Hattiesburg, MS, USA; Stephen Wonderlich, PhD, FAED, Neuropsychiatric Research Institute, Fargo, ND, USA; Ross Crosby, PhD, FAED, Neuropsychiatric Research Institute, Fargo, ND, USA; Scott Engel, PhD, Neuropsychiatric Research Institute, Fargo, ND, USA; James Mitchell, MD, FAED, Neuropsychiatric Research Institute, Fargo, ND, USA; Scott Crow, MD, FAED, University of Minnesota, Minneapolis, MN, USA; Carol Peterson, PhD, FAED, University of Minnesota, Minneapolis, MN, USA; Daniel Le Grange, PhD, FAED, University of Chicago, Chicago, IL, USA

This study examined the unique associations between eating disorder (ED) symptoms and two emotion constructs (affective lability and anxiousness) theoretically relevant to anorexia nervosa (AN). Women (N=116) with full or partial AN completed baseline retrospective emotion and ED assessments, followed by 2 weeks of ecological momentary assessment (EMA). A series of hierarchical regression analyses were used to examine the unique contributions of baseline and EMA measures of affective lability and anxiousness in predicting baseline ED symptoms and EMA dietary restriction, controlling for age, body mass index, and depression. The first two analyses examined the two affective lability measures (EMA versus baseline/retrospective) as unique predictors of (a) baseline ED symptoms and (b) EMA dietary restriction. Results from the analysis predicting baseline ED symptoms ($R^2=.48$) indicated that only EMA affective lability ($\beta=.34, p<.001$) contributed unique variance. Similarly, results from the second analysis ($R^2=.14$) indicated that only EMA affective lability ($\beta=.24, p=.013$) was uniquely associated with EMA dietary restriction. The second set of analyses examined the two anxiousness measures (EMA versus baseline/retrospective) as unique predictors of (a) baseline ED symptoms and (b) EMA dietary restriction. Results from the analysis predicting baseline ED symptoms ($R^2=.47$) indicated that both the EMA ($\beta=.20, p=.012$) and baseline/retrospective ($\beta=.30, p<.001$) anxiousness measures contributed unique variance. In contrast, results from the analysis predicting EMA dietary restriction ($R^2=.10$) indicated that neither the EMA ($\beta=.07, p=.53$) nor baseline/retrospective ($\beta=.04, p=.75$) anxiousness measures contributed unique variance. These findings indicate that affective lability and anxiousness contribute to the prediction of ED symptomatology in AN, suggesting the possible utility of AN treatments that target these emotion constructs.

Learning Objectives:

- To describe the theoretical role of affective lability and anxiety in anorexia nervosa.
- To discuss the potential utility of using ecological momentary assessment to examine emotion constructs in eating disorders.
- To characterize the differential unique associations between eating disorder symptoms and the emotion constructs of anxiety and affective lability.

Gender Ethnicity & Culture

Let's Talk About Pecs, Baby: Can Appearance Conversations Explain Differences between Gay and Straight Men's Body Image and Associated Risk Factors?

Phillippa Diedrichs, PhD, BSc, Centre for Appearance Research, University of the West of England, Bristol, United Kingdom; Glen Jankowski, MPsych, Centre for Appearance Research, University of the West of England, Bristol, United Kingdom; Emma Halliwell, PhD, Centre for Appearance Research, University of the West of England, Bristol, United Kingdom

Men's body dissatisfaction is prevalent and a serious health concern as it is associated with disordered eating, steroid abuse and depression. Gay men are particularly vulnerable to body dissatisfaction and eating concerns. It has been proposed that this is due to heightened sociocultural appearance pressures experienced in gay subculture. Appearance conversations represent an under-researched, but potentially potent, mechanism of appearance pressures. Research has found that brief exposure to "fat talk", one form of appearance conversation employed by girls and women that is specific to weight and shape, predicts body dissatisfaction among young women. However, research into appearance conversations and associated effects among men is lacking. The current study explored whether differences in the frequency of appearance conversations accounted for differences in body image and associated risk factors among gay and straight men. A community sample of 186 gay and straight men completed an online questionnaire assessing appearance conversations, body dissatisfaction, appearance orientation, and internalization of appearance ideals. Gay men reported more frequent positive and negative appearance conversations and greater body dissatisfaction, appearance orientation and general-internalization than straight men. Moreover, bootstrapping mediational analyses indicated that frequency of appearance conversations explained the differences between gay and straight men's reported body dissatisfaction and the majority of the other study variables. These findings suggest that appearance conversations are an important sociocultural influence on male body image and they appear key to understanding the differences between gay and straight men's body image and associated risk factors. They also suggest that targeting appearance conversations in interventions may be an effective strategy to improve body image among men.

Learning Objectives:

- Describe differences in body image, eating concerns and associated risk factors among gay and straight men observed in prior research.
- Summarise current knowledge on the prevalence and impact of appearance conversations on body image.
- Assess the importance of appearance conversations in explaining the differences between gay and straight men's body image, appearance orientation and internalisation of appearance ideals.

Peer Socialization, Exposure to Sexual Minority Social Contexts, and the Development of Heterosexual and Sexual Minority Adolescent Males' Body Image Concerns and Behaviors

Jerel Calzo, PhD, Boston Children's Hospital, Boston, MA, USA; Kendrin Sonnevile, ScD, Boston Children's Hospital, Boston, MA, USA; Heather Corliss, PhD, Boston Children's Hospital, Boston, MA, USA; Emily Blood, PhD, Boston Children's Hospital, Boston, MA, USA; Katherine Masy, PhD, Harvard Graduate School of Education, Cambridge, MA, USA; S. Bryn Austin, ScD, FAED, Boston Children's Hospital, Boston, MA, USA

This study examined how exposure to gay and bisexual (GB)-oriented social contexts (e.g., cafes, clubs) and male peers' body image concerns shape heterosexual and GB males' body image and disordered weight-related behaviors (DWRB). Participants were 5,925 males in the 2001-2005 waves of the US Growing Up Today Study (spanning ages 15-20 years). All participants reported past-year exposure to GB social contexts and perceptions of male peers' discussions about losing weight, importance of being muscular, and importance of not being fat. Three latent classes of body image and DWRB identified at ages 15-16, 17-18, and 19-20 served as the outcome: Healthy (low body image concern and DWRB; approximately 65% of observations per age period), Muscle-Concerned (high muscularity concern and supplement use; 25%), and Lean-Concerned (high weight concern and dieting; 10%). Peer discussions about losing weight and peer importance of muscularity and not being fat increased across adolescence. Relative to heterosexuals, GBs were more likely to report peer discussions about losing weight (OR=2.44, 95% CI=1.65,3.22) and peer importance of muscularity (OR=1.74, 95% CI=1.11,2.70) and not being fat (OR=3.32, 95% CI=2.14,5.16). Regardless of participants' sexual orientation, exposure to GB social contexts 6+ times/year (relative to no exposure) doubled the odds of reporting peer importance of not being fat. After adjusting for weight status, peer discussion about weight loss, peer importance of muscularity and not being fat, and exposure to GB social contexts predicted being in the Lean-Concerned class in each age period. Peers play a significant role in shaping heterosexual and sexual minority males' body image concerns and DWRB. Although GB social contexts may be important outlets for social support, results indicate that these contexts may socialize negative body image and DWRB as early as age 15. Prevention efforts should focus on improving body image norms in such contexts.

Learning Objectives:

- Describe the influence of male peers on adolescent and young adult men's expression of body image concerns and behaviors.
- Discuss how sexual orientation may modify peer socialization processes around body image ideals and subsequent risk for negative body image and disordered weight and shape related behaviors.
- Think critically about the challenges of providing contexts of support for sexual minority males that do not also expose them to negative health behavior norms.

Prevalence of Eating Disorder Psychopathology Among Community-Based Adult Males in Alberta

Sarah M. Farstad, BA, University of Calgary, Calgary, Canada; Kristin M. von Ranson, PhD, FAED, University of Calgary, Calgary, Canada; David C. Hodgins, PhD, University of Calgary, Calgary, Canada

The purpose of this study was to assess the prevalence of self-reported eating disorder (ED) psychopathology among 4 age groups of adult males. The sample included 404 men from 4 age cohorts (emerging adult 21-24 yrs; young adult 25-30 yrs; middle-aged adult 46-56 yrs; older adult 65-71 yrs) recruited through random digit dialing in Alberta, Canada. Using an empirically derived Global score threshold of 2.3 or higher on the Eating Disorder Examination-Questionnaire (EDE-Q), 5.2% of men reported current eating disturbances. In general, ED psychopathology was highest among middle-aged men. Weight and shape concerns were significantly higher among middle-aged men compared to young adults and older adults (Weight Concern 1.12 vs 0.64 and 0.69, $p < .05$; Shape Concern 1.22 vs .74 and .73, $p < .05$). A higher percentage of middle-aged men reported engaging in objective binge episodes (13.2% vs 5.4%-9.1%) and purging behaviors (2.5% vs 0%-1.1%) relative to the other age cohorts. Exercising in a "driven or compulsive way" was most common among emerging adults (14.3%) and middle-aged adults (14%). Our findings generally replicate previous research using a representative sample of German men which found a peak in ED psychopathology, particularly increased weight and shape concerns, among men between the ages of 55 to 64, suggesting commonalities across these western countries.

Learning Objectives:

- Describe the prevalence of eating disorder psychopathology among adult men.
- Describe which eating disorder behaviours are most common among men.
- Discuss how eating disorder psychopathology among men varies across age cohorts.

Eating Disorder Examination-Questionnaire: Psychometric Properties in a Community Sample of Adult Men

Sarah M. Farstad, BA, University of Calgary, Calgary, Canada; Kristin M. von Ranson, PhD, FAED, University of Calgary, Calgary, Canada; David C. Hodgins, PhD, University of Calgary, Calgary, Canada

Few studies have examined the psychometric properties of the Eating Disorder Examination-Questionnaire (EDE-Q) in men. The purpose of this study was to examine the reliability and convergent validity of the EDE-Q in a community sample of adult men. The sample included 404 men (21 to 71 years old) recruited through random digit dialing in Alberta, Canada. Internal consistency of each EDE-Q scale was examined: Cronbach's alphas ranged from .73 for Eating Concerns to .86 for Shape Concerns in the overall sample. The internal consistency of the Eating Concerns scale was problematic among young males (21-30 yrs; $\alpha = .50-.63$) and older males (65+ yrs; $\alpha = .55$). To examine convergent validity, we compared EDE-Q scores among men who were ($n = 11$) and were not ($n = 395$) "at-risk" for ED psychopathology as indicated by their score on the SCOFF, a 5-item eating disorder screening measure. As expected, scores on all EDE-Q scales were higher among men with "at risk" SCOFF scores than those who were not "at-risk" (all $p < .05$). In the past 28 days, a higher percentage of "at risk" men reported engaging in objective binge episodes (63.6% vs 7.9%) and exercising in a "driven or compulsive" manner to control their weight or shape (54.5% vs 9.2%) relative to those who were not "at-risk" (all $p < .01$). Overall, these findings support the reliability and convergent validity of the EDE-Q in adult men; however, the Eating Concerns subscale appears to be unreliable for men.

Learning Objectives:

- Discuss the importance of having reliable and valid assessment instruments for identifying eating disturbances among men.
- Describe evidence for the reliability and convergent validity of the EDE-Q with men of varying ages.
- Describe the frequency of eating disorder behaviours among men "at-risk" for eating disorders.

Prevalence and Correlates of Eating Disorders Among Male Adolescents and Young Adults

Alison Field, ScD, FAED, Boston Children's Hospital & Harvard Medical School, Boston, MA, USA; Kendrin Sonneville, ScD, RD, Boston Children's Hospital & Harvard Medical School, Boston, MA, USA; Ross Crosby, PhD, FAED, Neuropsychiatric Research Institute, Fargo, ND, USA; Sonja Swanson, MA, Harvard School of Public Health, Boston, MA, USA; Kamryn Eddy, PhD, Massachusetts General Hospital, Boston, MA, USA; Nicholas Horton, ScD, Smith College, Northampton, MA, USA; Nadia Micali, PhD, MD, University College London, London, United Kingdom

At present, most eating disorder research has been conducted among females. Relatively little is known about the prevalence and correlates of eating disorders among males. We investigated these associations among 7844 males, aged 9-15 in 1996, who are participants in the ongoing Growing Up Today Study (GUTS). Participants were assessed every 12-24 months. Boys who reported that they engaged in binge eating at least once per month and did not engage in purging or purged less than monthly were classified as having full or partial criteria binge eating disorder (BED). Boys who reported at least monthly use of vomiting or laxatives to control weight and did not binge eat or binged less than monthly were classified as having full or partial criteria purging disorder (PD) and boys who engaged at least monthly in both binge eating and purging were classified as having bulimia nervosa (BN). Boys who engaged in overeating episodes but did not experience a loss of control were classified as having EDNOS. Between 1996 and 2005, 0.4% had full or partial BN, 1.5% had full or partial PD, and 2.7% had full or partial BED in at least 1 year. Independent of age, boys with eating disorders were more likely than their peers to be overweight (Odds ratios (OR)=2.7-3.4, $p < 0.01$). Moreover, boys with partial or full BN or PD were more likely to use drugs (OR=5.9, 95% confidence interval (CI) 2.8-12.7) and more likely to binge drink frequently (OR=4.1, 95% CI 2.0-8.3). Boys with partial or full BED were more likely than their peers to use drugs (OR=1.9, $p < 0.01$) and boys with partial or full BN or PD (OR=3.5, 95% CI 1.9-6.7) and BED (OR=3.0, 95% CI 2.0-4.5) were more likely to report high depressive symptoms. The associations were similar when contemporary weight status was included in the model. Our results show that although eating disorders are less common among males, they are associated with high rates of comorbidity.

Learning Objectives:

- Describe the prevalence of eating disorders among males.
- Explain the association of eating disorders with impulsive behaviors among adolescent and young adult males.
- Describe the association of overweight and binge eating disorders among adolescent and young adult males.

Bullying Victimization Prospectively Predicts Body Image in Male but Not Female U.S. Adolescents

Patricia van den Berg, PhD, MPH, Dept. of Ob/Gyn, University of Texas Medical Branch, Galveston, TX, USA; Jeff Temple, PhD, Dept. of Ob/Gyn, University of Texas Medical Branch, Galveston, TX, USA; Vi Le, MPH, Dept. of Ob/Gyn, University of Texas Medical Branch, Galveston, TX, USA

Peer victimization among children and adolescents has been found in prior research to be associated with later body image, although associations have been found to differ by gender. Studies examining teasing have also found associations with weight- and appearance-related constructs. However, questions asking about "teasing" may not capture the sense of malevolence associated with the term "bullying," a term which has become more

commonly used in recent years due to anti-bullying campaigns and media coverage in the U.S. The current study sought to examine the prospective association between adolescents' report of having been bullied and their body dissatisfaction 1 year later, controlling for baseline body dissatisfaction. Concurrent bullying (occurring in the year prior to follow-up) was also controlled, to more closely model the relationship between body dissatisfaction and a history of having been bullied. A diverse sample of 980 adolescents from the U.S. south, the majority of whom were between 14 and 16 years old at baseline, completed a survey of health risk behaviors and mental health variables in their classroom at baseline and 1 year follow-up. At baseline and follow-up, single items assessed bullying victimization in the 12 months prior to the survey, and a 5 item brief version of a body dissatisfaction scale assessed body dissatisfaction. Results indicated that in males, but not females, bullying victimization was associated with later body dissatisfaction, above and beyond baseline body dissatisfaction and bullying at follow-up (males: $F=3.14$, $p=.025$; females: $F=.22$, $p=.883$). These results suggest that among boys, bullying may have a lasting impact on body image. Further studies should use multiple-item measures of bullying, and examine the focus of the bullying (appearance-related or other types).

Learning Objectives:

- Assess the association between self-reported bullying victimization and later body dissatisfaction among male and female U.S. adolescents.
- Describe the prevalence of self-reported bullying victimization among U.S. adolescents.
- Describe the change in body dissatisfaction over 1 year in among male and female U.S. adolescents.

Personality & Cognition

Cognitive Rigidity and Attention to Detail in Adolescent Eating Disorders: Cause or Consequence?

Melissa Stone, MA, Massachusetts School of Professional Psychology, Newton, MA, USA; Kamryn T. Eddy, PhD, Massachusetts General Hospital/Harvard Medical School, Boston, MA, USA; Phillip Levendusky, PhD, McLean Hospital/Harvard Medical School, Belmont, MA, USA; Jennifer J. Thomas, PhD, Massachusetts General Hospital/McLean Hospital/Harvard Medical School, Boston, MA, USA

Individuals with anorexia nervosa exhibit deficits in cognitive flexibility and central coherence compared to healthy controls. Although these neuropsychological deficits are candidate endophenotypes that may confer risk for eating disorders, few studies have examined these neurocognitive features in adolescents. Preliminary evidence demonstrates more pronounced effects in older versus younger patients and raises the alternative hypothesis that such deficits are scars of the illness resulting from chronic exposure to starvation. Therefore, the purpose of this study was to investigate the relationship between neurocognitive deficits and eating disorder chronicity in an adolescent sample. Female patients aged 13-27 ($N = 144$, 92% of consecutive admissions) from a residential eating disorder treatment facility completed a battery of interview and self-report instruments including the Detail and Flexibility Questionnaire (DFLEX), a self-report measure which assesses cognitive rigidity and attention to detail. Length of illness was significantly positively correlated with DFLEX total ($r = .20$, $p = .02$) and DFLEX cognitive rigidity ($r = .23$, $p = .007$); and correlated at trend-level with DFLEX attention to detail ($r = .15$, $p = .08$). These findings add to the growing body of literature examining cognitive flexibility and central coherence in adolescents with eating disorders. Though cross-sectional, our results call into question the hypothesis that these neurocognitive deficits represent a general endophenotype for eating disorders. Instead, our findings suggest that higher cognitive rigidity and weaker coherence may be either a premorbid predictor of eating disorder chronicity, or a consequence of prolonged starvation. Prospective longitudinal studies are necessary to disentangle these effects.

Learning Objectives:

- Describe the neurocognitive deficits typically associated with eating disorders, including cognitive rigidity and attention to detail.
- Appreciate competing hypotheses that posit such deficits as either causes or consequences of disordered eating.
- Understand how these neurocognitive deficits relate to the chronicity and symptomology of eating disorders in an adolescent population.

Rethinking the Role of CRT in Treatment for Anorexia Nervosa: An Investigation of Neuropsychological Functioning Across Stages of Recovery

Amy Talbot, BA, University of Sydney, Sydney, Australia; Stephen Touyz, PhD, FAED, University of Sydney, Sydney, Australia; Phillipa Hay, DPhil, MD, University of Western Sydney, Penrith, Australia; Geoff Buckett, MD, University of Western Sydney, Penrith, Australia

Preliminary research has supported the proposal that introducing Cognitive Remediation Therapy (CRT), which is designed to ameliorate cognitive deficits, as an adjunct to treatment as usual, may improve outcomes for patients with Anorexia Nervosa (AN). This proposal is based on a neuropsychological model of the development

and maintenance of AN in which cognitive deficits are hypothesised to be trait characteristics for patients with AN, a hypothesis that has not yet been tested. The current study aims to examine this hypothesis by investigating the cognitive performance of individuals who have achieved full psychiatric recovery from AN. Patients with acute AN (n = 24), in weight recovery (n = 10), in full recovery (n = 15) and healthy controls (n = 43) completed cognitive tasks measuring flexibility and local and global processing. Participants in the recovered groups demonstrated poorer set shifting ability than healthy controls as evidenced by a greater number of perseverative errors on the Wisconsin Card Sorting Test, however, no evidence of a set shifting impairment was found for patients with acute AN. There were also no significant differences between the four groups on measures of local and global processing and no relationship was found between the specific symptoms of AN, and cognitive performance. The findings indicate that patients fully recovered from AN can continue to demonstrate cognitive impairment despite good functioning in a number of other domains. Implications for CRT in AN will be discussed.

Learning Objectives:

- Describe assessment of cognitive flexibility in anorexia nervosa.
- Describe neuropsychological function in recovered compared to acute anorexia nervosa.
- Describe the neuropsychological model of the development and maintenance of anorexia nervosa.

Self-Focused Attention in Anorexia Nervosa: Relationship to Symptomatology and Deficits in Executive Attention

Nancy Zucker, PhD, Duke University Medical Center, Durham, NC, USA; Ashley Moskovich, MA, Duke University, Durham, NC, USA; Rhonda Merwin, PhD, Duke University Medical Center, Durham, NC, USA; Cynthia Bulik, PhD, FAED, University of North Carolina, Chapel Hill, Chapel Hill, NC, USA; H. Ryan Wagner, PhD, Duke University Medical Center, Durham, NC, USA

We investigate the association of self-focused attention to body image disturbance, comorbid psychopathology, and deficits in executive attention in adult women with anorexia nervosa (AN). Body image disturbance (BID) is a complex and largely intractable feature. Cognitive components of BID, such as preoccupation with shape, share conceptual overlap with the construct of pathological self-focus, a well-documented feature of depression and social anxiety – disorders frequently comorbid in AN. Constructs connoting preoccupation could also be related to deficits in cognitive flexibility, a well-documented feature in AN. We investigate these relationships in a sample of 67 adult female women (24 with AN; 19 with AN but weight-restored, AN-WR; and 24 healthy controls, HC). We administered measures of self-focused attention (Self-Absorption Scale-Public and Private), BID (Eating Disorder Examination), comorbid psychopathology (Fear of Negative Evaluation, Brief Symptom Index), and cognitive flexibility (Wisconsin Card Sort). Contrary to hypotheses, AN-WR endorsed higher levels of Private and Public Self-Absorption relative to healthy controls although AN did not differ from controls. Public Self-Absorption, preoccupation with what others are thinking of me, was higher in AN-WR than AN. In regression models, executive attention, specifically perseverative errors, had a significant influence on the association between public self-absorption and diagnostic condition: increasing levels of perseverative errors were associated with significantly decreasing levels of self-absorption in AN subjects relative to both AN-WR and HC. Self-focused attention was significantly associated with symptoms of depression and social anxiety across groups, but not cognitive facets of BID. Findings are presented in the context of a model of symptom maintenance in AN whereby changes in executive attention exacerbated by the ill state may help reduce pathological self-focus.

Learning Objectives:

- Participants will be able to define self-focused attention and its role in the maintenance of psychiatric symptoms.
- Participants will be able to explain a classic model of eating disorder symptom maintenance proposed by Heatherton and Baumeister's (1991), Escape from Self-Awareness, and the relevance of this model for symptom maintenance in anorexia nervosa.
- Participants will be able to discuss how cognitive adaptations of the state of starvation may be experienced as reinforcing for individuals with anorexia nervosa.

Central Coherence Among Adolescents with Bulimia Nervosa

Alison Darcy, PhD, Stanford University, Stanford, CA, USA; Kathleen Fitzpatrick, PhD, Stanford University, Stanford, CA, USA; Danielle Colborn, PhD, Stanford University, Stanford, CA, USA; Daniel Le Grange, PhD, FAED, The University of Chicago, Chicago, IL, USA; James Lock, MD, PhD, Stanford University, Stanford, CA, USA

Problematic central coherence is comprised of superior detail focus and weak global integration. Both have been observed in adults with eating disorder (ED) though data on bulimia nervosa (BN) are mixed. The purpose of the study was to explore central coherence among adolescents with BN. The Rey-Osterrieth Complex Figure (RCFT) task was administered to 26 adolescents with BN, 36 with BN-type ED not otherwise specified (EDNOS-BN) and 20 healthy controls (HC). Performance was compared across the three groups. We failed to find evidence of

significant differences between the groups on the Style, Order or Central Coherence Indexes. However, those with BN and EDNOS-BN demonstrated significantly worse accuracy scores compared to HCs in the Delayed Recall condition ($F(2, 72) = 4.30$, $p = .017$) with a moderate effect size. In addition, worse performance was related to BN symptoms. For example, there were significant relationships between % median body weight (MBW) and Accuracy score in the copy ($r(58) = -.385$; $p = .001$) and delay ($r(58) = -.360$; $p = .003$) conditions; and between self-induced vomiting and Accuracy in the copy ($r(58) = -.258$; $p = .025$) condition such that higher %MBW and more self-induced vomiting were related to poorer accuracy. Objective binge eating was significantly positively related to Accuracy score in the copy condition ($r(58) = .237$; $p = .036$). The findings are the first pertaining to adolescents with shorter illness duration and suggest that difficulty in global integration may be an early biomarker of BN-spectrum disorders. The findings may also have implications for how individuals with BN engage in current choice therapies such as cognitive behavioral therapy, that rely on the ability to coherently integrate and efficiently recall information over time. A better understanding of the neurocognitive profiles of adolescents with BN may eventually lead to improvements in treatment response, and prevention of chronicity.

Learning Objectives:

- Describe current knowledge of the neurocognitive profile of individual with bulimia nervosa.
- Distinguish the two distinct elements of central coherence and how they relate to the eating disorders.
- Describe the implications that central coherence difficulty has for treatment of BN.

Interplay Between Attention, Working Memory Performance, and Disordered Eating Cognitions in Overweight Children

June Liang, PhD, University of California, San Diego, La Jolla, CA, USA; Brittany Matheson, BS, University of California, San Diego, La Jolla, CA, USA; Kay Rhee, MD, University of California, San Diego, La Jolla, CA, USA; Nicole Phan, BA, University of California, San Diego, La Jolla, CA, USA; Tran Tran, BA, University of California, San Diego, La Jolla, CA, USA; Kerri Boutelle, PhD, University of California, San Diego, La Jolla, CA, USA

Current research suggests a link between obesity and poorer neurocognitive functioning in children. Disordered eating cognitions may be one of the underlying mechanisms explaining this relationship, since these cognitions are more likely to be present in overweight children. Yet, little is known about how disordered eating cognitions may be related to neurocognitive functioning in overweight children. To address this gap, we decided to examine the association between disordered eating cognitions and neurocognitive functioning in a sample of overweight children and expected that they would be negatively correlated. Ninety overweight children (9.86 ± 1.26 y; 64.4% female; 50.0% Caucasian; $BMI: 26.06 \pm 3.57$) completed measures at a baseline assessment for a behavioral weight loss study. Children were administered the Wisconsin Card Sort Test (WCST) to assess problem-solving ability, Digit Span subtest from the Wechsler Intelligence Scale for Children-IV to assess attention and working memory, and the Eating Disorder Examination Questionnaire (EDE-Q) to obtain disordered eating cognitions. Age, sex, and BMI were considered as covariates in all analyses, based on the theoretical notion that they could be related to disordered eating cognitions. Multiple regression analyses showed that better attention (Digit Span Forward) was associated with less restriction ($B = -.665$, $p < .01$) and eating concern ($B = -.452$, $p < .05$) on the EDE-Q. Higher working memory performance (Digit Span Backward) was related to lower eating concern ($B = -.400$, $p < .05$). WCST (problem solving) performance did not predict disordered eating cognitions. Attention and working memory ability may be important factors to consider in treatment for overweight children with disordered eating cognitions. Future research should explore mechanisms underlying these relationships.

Learning Objectives:

- Discuss the significance of examining the relationship between disordered eating cognitions and neurocognitive functioning in overweight children.
- Describe the association between attention, working memory, and problems solving ability and disordered eating cognitions in this sample of overweight children.
- Highlight the intervention implications of this observed association between neurocognitive functioning and disordered eating for overweight, treatment-seeking children.

Neural Mechanisms of Value and Social Processing in Anorexia Nervosa

Amy Winecoff, MA, Duke University, Durham, NC, USA; Karli Watson, PhD, Duke University, Durham, NC, USA; Katie Gaddis, BA, Duke University, Durham, NC, USA; Michael Platt, PhD, Duke University, Durham, NC, USA; Scott Huettel, PhD, Duke University, Durham, NC, USA; Nancy Zucker, PhD, Duke University, Durham, NC, USA

A hallmark of anorexia nervosa (AN) is reduced drive to pursue primary reinforcements (e.g., food); however, women with AN also demonstrate poorer interpersonal functioning and biases in social information processing. These findings suggest that women with AN may respond to social stimuli differently than healthy women. We probed for differences between women with a history of AN and healthy controls in the neural circuitry

responsible for processing social and affective information. 13 women with a history of AN but who have been weight-restored and symptom-free for at least one year and 15 healthy female control participants underwent functional magnetic resonance imaging (fMRI) while viewing images of whole bodies, faces, and scrambled images. Social stimuli were normed across a continuum of physical attractiveness and body weight. Participants also completed surveys and behavioral tasks to index eating disorder severity as well as social and cognitive functioning. Across all participants, viewing images of faces and bodies evoked activation in regions of the brain associated with affect as well as visual object processing. When viewing faces as compared to scrambled images, women with AN demonstrated greater activation in the superior temporal gyrus, a region implicated in social processes such as theory of mind. When viewing bodies as compared to scrambled images, healthy controls showed greater activation in the dorsal striatum, a region known to be involved in reward processing. Additionally, a model including participants' ratings of the attractiveness and weight of the body depicted in each image indicated that for participants with AN compared to healthy controls, activation in a region of the right lateral occipital cortex previously associated with body processing tracked higher attractiveness ratings. Findings are summarized in the context of a social model of AN whereby those with AN find social stimuli to be highly salient, but differentially valued.

Learning Objectives:

- Describe neural differences in social information processing in anorexia nervosa.
- Describe the association between the subjective value of individual stimuli and neural activation in anorexia nervosa.
- Discuss the relevance of differential value processing in anorexia nervosa.

Treatment of Eating Disorders II

Reducing Relapse in Eating Disorders: An Investigation to Understand Rapid Response to Treatment

Danielle MacDonald, MA, Ryerson University, Toronto, Canada; Traci McFarlane, PhD, University Health Network, Toronto General Hospital, Toronto, Canada; Sarah Royal, MA, Ryerson University, Toronto, Canada; Marion Olmsted, PhD, FAED, University Health Network, Toronto General Hospital, Toronto, Canada

Speed of response to eating disorder treatment is a reliable predictor of relapse, with rapid response to treatment predicting improved outcomes. This study investigated whether rapid, slow, and non-responders could be differentiated on a variety of clinically relevant variables. These variables included age, pre-treatment symptom frequencies, BMI, weight-related self-esteem, body checking, body avoidance, eating disorder psychopathology (i.e., EDI), motivation to change, depression, anxiety, perfectionism, and maladaptive cognitive schemas related to personality disorders (i.e., YSQ). It was predicted that rapid responders would be healthier and/or be more motivated to recover, or have higher anxiety/perfectionism driving their quick response. Female patients (N = 184) were classified as rapid, slow or non-responders based on the speed and magnitude with which they interrupted their bingeing and/or vomiting symptoms once admitted to an intensive day hospital treatment environment. Rapid responders were defined as patients who had a total frequency of bingeing and/or vomiting episodes of two or fewer during the first four weeks of treatment. A series of one-way ANOVAs and MANOVAs were conducted. Surprisingly, rapid responders, slow responders and non-responders were not significantly different on any variable, indicating that none of these variables were responsible for rapid response. One encouraging interpretation for these results is that any patient starting treatment could potentially engage quickly, respond rapidly and increase their chances of staying well. It may be that engaging in pro-recovery behaviour quickly and successfully, in and of itself, creates a new reality that builds momentum, increases confidence and leads to more lasting change. Clinicians could educate patients about the importance of a rapid response in terms of protecting against relapse, and more resources could be directed to facilitating patients to respond rapidly.

Learning Objectives:

- Participants will learn about relapse in eating disorders. Rates and predictors of relapse will be reviewed and discussed. One predictor of better treatment outcome, rapid response to treatment, will be defined and reviewed in detail.
- Differences between rapid and slow responders will be reviewed, and new data will be presented showing that the two groups do not differ on any clinically relevant variables.
- Participants will be taught clinical strategies to facilitate a rapid response to treatment.

Outcomes of an Intensive DBT Outpatient Program for Complex and Multidiagnostic Eating Disorders: A Case Series Analysis

Anita Federici, PhD, Credit Valley Hospital, Mississauga, Canada; Lucene Wisniewski, PhD, FAED, Cleveland Center for Eating Disorders, Cleveland, OH, USA; Mark Warren, MD, FAED, Cleveland Center for Eating Disorders, Cleveland, OH, USA

The purpose of this study was to evaluate the effectiveness and acceptability of novel DBT outpatient program for patients with complex and multidagnostic eating disorder (ED) presentations. Treatment involved a six month commitment to an intensive outpatient program (e.g., 3-6 hours up to 5 days per week) that blends standard ED treatment components (e.g., therapeutic meals, weight monitoring, cognitive modification) with dialectical behavior therapy (DBT), an empirically supported treatment for working with “hard to treat” cases (e.g., DBT individual therapy, skills training, telephone skills coaching, therapist consultation team). Seven consecutively admitted adult women with an ED and significant comorbid axis I and/or II pathology, multiple treatment failures, difficulties with emotion regulation, and/or recurrent therapy interfering behaviours have been enrolled in the study to date. Pre/post data evaluating the frequency of ED symptoms (EDE-Q, EAT), self-injurious behaviours (DSHI), emotion regulation (DERS), and general symptomatology (SCL-90-R) were collected. Qualitative data evaluating the experiences of the patient and treatment team were also collected. Results show that patients in the DBT program demonstrated fewer episodes of ED symptoms, self-injurious behaviors, therapy interfering behaviors, and psychiatric and medical hospitalizations from pre to post treatment. Patients rated the program positively and identified contingency management, goal setting, skills training, and the non-judgmental stance as particularly helpful. Clinicians also reported feeling less burnt out. These preliminary data contribute to our developing understanding of how DBT may best be applied for the treatment of complex ED presentations.

Learning Objectives:

- Describe the rationale for using DBT for the treatment of patients with complex and multidagnostic eating disorder presentations.
- Identify which patients might be suitable for an intensive DBT-based outpatient program.
- Describe current knowledge regarding how DBT may be applied for complex cases.

Does a Good Therapeutic Relationship Drive Symptom Change in Cognitive-Behaviour Therapy for the Anorexia Nervosa?

Glenn Waller, DPhil, FAED, University of Sheffield, Sheffield, United Kingdom; Amy Brown, DCLinPsy, Institute of Psychiatry, King's College London, London, United Kingdom; Victoria Mountford, DCLinPsy, Institute of Psychiatry, King's College London, London, United Kingdom

It is commonly assumed that a positive therapeutic relationship is a key factor in positive outcomes of treatment for the eating disorders. However, that relationship is more complicated in cognitive behaviour therapy (CBT) for other disorders. This study explored whether the therapeutic relationship precedes or follows behavioural change in CBT for anorexia nervosa, focusing on the primary outcome variable of weight gain. Sixty seven women with anorexia nervosa undertook a course of outpatient CBT for their eating disorder, with symptoms measured throughout. They also completed a standardised measure of the working alliance at the sixth session and at the end of treatment. Levels of therapeutic alliance were satisfactory overall at both time points. However, that alliance did not predict weight gain. In contrast, early weight gain led to a more positive overall alliance by session 6 of treatment, and weight gain in the later part of CBT (session 6 to end of treatment) was positively associated with therapeutic alliance at the endpoint of treatment (over and above the association of early and late therapeutic alliance). The therapeutic alliance does not appear to be a driving factor behind weight gain in CBT for anorexia nervosa. Instead, as with other disorders, changes in the key symptom appear to drive a better working alliance. This finding has implications for the structure of CBT, and needs to be tested out in other therapies for the eating disorders.

Learning Objectives:

- Understand the level of therapeutic alliance in the eating disorders.
- Determine the causal link between therapeutic alliance and weight gain in CBT for anorexia nervosa.
- Understand the links between early and late levels of working alliance in CBT for anorexia nervosa.

Randomized Double-Blind Placebo-Controlled Treatment Trial for Binge Eating Disorder in Ethnically Diverse Obese Patients in Primary Care

Carlos Grilo, PhD, Yale University School of Medicine, New Haven, CT, USA; Marney White, PhD, Yale University School of Medicine, New Haven, CT, USA; Rachel Barnes, PhD, Yale University School of Medicine, New Haven, CT, USA; Robin Masheb, PhD, Yale University School of Medicine, New Haven, CT, USA

The aim was to determine whether treatments with demonstrated efficacy for binge eating disorder (BED) in specialist clinics can be delivered effectively in primary care to ethnically/racially-diverse obese patients. We compared the effectiveness of self-help CBT (shCBT) and anti-obesity medication (sibutramine), alone and in combination. 104 consecutive obese patients with BED (73% female, 55% non-white) were randomly assigned to one of four 16-week treatments (balanced 2-by-2 factorial design): sibutramine (N=26), placebo (N=27), shCBT+sibutramine (N=26), or shCBT+placebo (N=25). Medications were given double-blind and blind was maintained until after 12-month follow-up. Independent assessments were performed during treatment, post-treatment, and 6- and 12-month follow-ups. Mixed-models analyses (intent-to-treat) revealed significant time

($p < 0.001$) and sibutramine-by-time interaction ($p = 0.0009$) effects for percent BMI loss, which was significant over time for sibutramine ($p < 0.001$) but not for placebo ($p = 0.98$). Percent BMI loss differed significantly between sibutramine and placebo by the third month of treatment and at post-treatment. Soon after the (double-blinded) medication was discontinued at post-treatment, weight re-gain occurred in sibutramine groups and percent BMI loss no longer differed between treatment groups at 6- and 12-month follow-ups. For binge-eating, mixed-models revealed significant time ($p < 0.001$) and sibutramine-by-time interaction effects ($p = 0.05$); binge-eating frequency did not differ significantly between groups during or at post-treatment; shCBT had significantly lower binge-eating at 6-month ($p = 0.04$) but not 12-month follow-up. This study demonstrated feasibility and effectiveness for generalist clinicians in primary care to deliver low-intensity CBT and medication treatments for BED. Implications of treating ethnically-diverse obese patients, who have been vastly under-represented in research, with these methods will be addressed.

Learning Objectives:

- Describe effectiveness of existing treatments for binge eating disorder.
- Assess utility of combining CBT and medication treatments for reducing both binge eating and weight in obese patients.
- Apply findings regarding CBT and medication treatments for BED to more diverse patient groups and clinical settings.

Enhancing Treatment for Binge Eating: A Randomized Controlled Trial of CBT, Schema Therapy, and Appetite-Focused CBT

Virginia McIntosh, PhD, BA, DCLinPsy, University of Otago, Christchurch, Christchurch, New Zealand; Jenny Jordan, PhD, BA, DiplPsych, University of Otago, Christchurch, Christchurch, New Zealand; Janet Carter, PhD, BA, DCLinPsy, Canterbury University, Christchurch, New Zealand; Peter Joyce, MD, PhD, MBBS, University of Otago, Christchurch, Christchurch, New Zealand

Bulimia nervosa (BN) and binge eating disorder (BED) are eating disorders that share a pattern of binge eating or overeating within discrete short time periods. Cognitive behaviour therapy (CBT) is the most effective treatment for BN and BED, and uses both cognitive (challenging dysfunctional thoughts) and behavioural (education and advice) strategies. However, in spite of CBT being the most effective treatment for binge eating, fewer than half of individuals fully recover. The current study describes ways the effectiveness of standard CBT may be enhanced in two different ways. Schema therapy enhances the cognitive component of CBT by focusing on changing deeper level beliefs or schemas. Appetite focused CBT (AFCBT) enhances the behavioural component of CBT by focusing on hunger and satiety. The presentation will describe the therapies, and report preliminary results from an RCT comparing the therapies for binge eating. One hundred twelve women with current BN or BED were randomized to one of the therapies. Participants completed baseline assessment prior to beginning treatment, including clinician ratings, SCID-I&II for DSM-IV diagnoses, the EDE and Hamilton Depression Rating Scale; self-report questionnaires included the EDI, Young Schema Questionnaire, Parental Bonding Inventory, TCI, Body Shape Questionnaire and Body Image Avoidance Questionnaire; neuroendocrine and neuropsychological assessment, and physical assessment, including height, weight, body fat percentage, heart rate and ECG. Outcome measures for the study included frequency of binge eating, and abstinence from binge eating. Secondary measures include psychological measures of eating disorders, body dissatisfaction, drive for thinness, preoccupation with body shape, weight, food and eating. Important differences among the three treatments will be presented, and the usefulness of broadening the scope of treatments offered for individuals with binge eating problems will be debated.

Learning Objectives:

- Describe existing research on treatment outcome for binge eating disorders (BN and BED).
- Compare CBT, Schema Therapy and Appetite-focused CBT.
- Compare treatment outcome for CBT, Schema Therapy, and Appetite-focused CBT.

Does Rapid Response Predict Outcome in Complex Patients with Bulimia Nervosa Receiving Enhanced Cognitive Behavior Therapy (CBT-E)?

Heather Thompson-Brenner, PhD, Boston University, Boston, MA, USA; Elizabeth Pratt, PhD, Boston University, Boston, MA, USA; Rebecca Shingleton, MA, Boston University, Boston, MA, USA; Shannon Sauer, PhD, Boston University, Boston, MA, USA; Jamie Elchert, BA, Oberlin College, Oberlin, OH, USA; Emily Nauman, BA, Oberlin College, Oberlin, OH, USA

Data from prior trials of cognitive behavior therapy for bulimia nervosa suggest that rapid response, defined by percentage reduction in purging by the fourth week of treatment, predicts binge/purge remission at termination (Agras et al., 2000; Fairburn et al., 2004). However, the strength of this relationship has not been tested in enhanced cognitive behavior therapy (CBT-E), or with complex patients with co-occurring affective and interpersonal problems. The current study investigated whether rapid response in purging predicted outcome at termination in a clinical trial of CBT-E for patients with bulimia nervosa (BN) and co-occurring clinical levels of affective and interpersonal problems (Diagnostic Interview for Borderlines; Zanarini et al., 1989). N=50 female

patients were randomly assigned to 20 weeks of CBT-E “focused” or CBT-E “broad.” Baseline and outcome eating disorder pathology was assessed via the Eating Disorder Examination by reliable raters blind to treatment condition. Of the n=36 female patients who completed treatment and all assessments, 33.3% (n=12) achieved BN remission by termination. Percentage reduction in purging at week four was significantly associated with remission of BN at termination. The two suggested cut-points of 50% and 70% reduction in purging both significantly differentiated remitters from non-remitters. For example, of the n=19 who did not achieve 70% reduction in purging by week four, only three achieved remission by termination (15.8%), whereas out of the n=17 who did achieve 70% reduction, nine achieved remission (52.9%). Similar results were observed in intent-to-treat analyses and for the 50% cut-off. Study results suggest that even among complex, multi-problem patients receiving CBT-E, early response strongly predicts outcome.

Learning Objectives:

- define rapid response as a variable that predicts outcome in bulimia nervosa.
- describe the literature and current data suggesting rapid response predicts outcome in bulimia nervosa.
- describe possible approaches to patient care (stepped care, treatment intensification) for patients who do not show rapid response.