Multidimensional Anxiety Scale for Children (MASC), Pediatric Quality of Life Enjoyment and Satisfaction Questionnaire (PQ-LES-Q), and Physical Health Questionnaire (PHQ-9) were collected. Data were analyzed using descriptive and paired t-tests.

**Results:** A total of 43 adolescents enrolled in this program over 8 cycles. Mean age of the sample was 15.9 + 1.0 years; 69.8% female; 58.5% White, and 14.6% Hispanic. Mean BMI (mg/kg2) pre- and post-intervention (37.6 + 5.5 and 38.2 + 6.2, respectively) did increase significantly (t=-2.5, df = 27, p=.02). Mean diastolic blood pressure (DBP) decreased from pre- and post-intervention (71.3 + 11.7 and 67.3 + 8.6, respectively) but not significantly. Number of MASC items > 65th percentile remained unchanged after participation. Mean quality of life improved but not significantly (55.5% + 13 and 57.7% + 16.4, respectively). Severity of depression decreased (6.3 + 5.4 and 5.1 + 4.5; t = 1.96, df = 30, p = .06).

**Conclusions:** Although BMI increased; 20% of the participant's BMI decreased or remained the same. DBP improved with participation, anxiety and quality of life remained unchanged after participation. On average, the sample described mild depression and depressive scores improved (close to significance) after the intervention. Along with elevated BMI, numerous physical and psychosocial comorbidities can occur with obesity. This inter-disciplinary intervention has the potential to improve related co-morbidities of this seemingly intractable epidemic. Future analyses will examine results in relation to participation and retention levels.

**Sources of Support:** We would like to acknowledge the following sources of support: HRSA; T71MC24210 (Walker-Harding); and Leadership Education in Adolescent Health (LEAH).

### 122.

# IDENTIFICATION OF CORRECT BODY SILHOUETTE DOES NOT EQUATE WITH PERCEIVED WEIGHT CATEGORY

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**Purpose:** At least 2.8 million people die each year as a result of being overweight and obese. This study sought to determine if parents and adolescents could identify their correct body image using silhouettes, and if parents correctly perceived their adolescents' and their own weight category (normal weight, overweight, obese).

**Methods:** Parents and their adolescents were from the Pediatric General and Subspecialty clinics at Rush University Medical Center. Parents/guardians completed a questionnaire regarding their adolescents' and their own weight category. Stunkard's and Pulvers' silhouettes were employed, and parents and adolescents chose the image that most clearly resembled themselves. Nursing staff obtained heights, weights, and waist circumferences on all participants.

**Results:** One-hundred and one adolescents (age  $15.68\pm1.79$ , BMI  $25.13\pm5.82$ ) and 144 parents/guardians (age  $42.01\pm8.61$ , BMI  $32.59\pm6.92$ ) were recruited. The adolescents consisted of 53 females and 48 males, whose self-identified race was 52 African Americans, 28 Hispanics, 8 Caucasians, 3 Asian, and 10 Multiracial. Adolescents correctly identified their silhouettes by BMI category as follows using Stunkard's silhouettes: 89.5% (34/38) normal weight, 38.8% (7/18) overweight, and 18.8% (6/32) obese. Employing Pulvers' silhouettes, adolescents correctly identified 92.1% (35/38) normal weight, 27.8% (5/18) overweight, and 37.5% (12/32) obese. Thirteen adolescents had missing silhouette data. In

comparison, parents/guardians using Stunkard's silhouettes correctly identified themselves as 80% (12/15) normal weight, 68.2% (30/44) overweight, and 47.6% (40/84) obese. In contrast, employing Pulvers' silhouettes, they correctly identified 66.7% (10/15) normal weight, 50% (22/44) overweight, and 89.3% (75/84) obese. Parents/guardians did not correctly identify their adolescents' weight category accurately compared to BMI (33/101 =33.6%) or their own (49/143=34.2%).

**Conclusions:** Pulvers' silhouettes, when employed by adults for self identification of body image, were superior to Stunkard's in identifying individuals in the obese category, but not with adolescents. Correct self-identification of body image did not reflect an accurate perception of weight category. Yet, previous research has shown that parents can correctly identify obese silhouettes when not associated with their adolescents. Parents need to be instructed how to correlate body image, perceived weight, and actual BMI to become motivated to lose weight, both for themselves and their children and adolescents.

**Sources of Support:** Study funded by RUMC, Department of Pediatrics.

#### 123.

#### IS BEING OVERWEIGHT OR OBESE REALLY A PROBLEM?

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**Purpose:** To assess whether there are individual, familial, academic or social differences between youths being overweight, obese or normal weight.

**Methods:** Data were drawn from the GenerationFRee study, a cross-sectional survey including 5179 youths aged 15-24. Using Cole's cut-off points of body mass index (BMI), individuals were divided into normal weight (NW; N=4291), overweight (OW; N=646), and obese (OB, N=242). Groups were compared on age, gender, emotional wellbeing, self-reported health status, family structure, relationship with father and with mother, life satisfaction, socioeconomic status, pubertal timing, popularity among peers, easiness to make friends, at risk for eating disorders, parents nationality, own nationality, and academic track. All variables at the bivariate level were included in multinomial logistic regression using NW as the reference category. Results are given as Relative Risk Ratios (RRR) with 95% confidence interval.

**Results:** At the bivariate level, both OW and OB were more likely to be male, older, have lower life satisfaction, poorer health, higher risk of eating disorder, and advanced puberty. They were also more likely to be foreigners, to have foreign parents and to be an apprentice. OW and obese youths reported significantly less easiness to make friends. At the multivariate level, and compared to NW, OW were more likely to be male (RRR: 2.23 [1.81:2.74]), older (RRR: 1.07 [1.00:1.14]), apprentice (RRR: 1.69 [1.35:2.11]), with advanced pubertal timing (RRR: 1.55 [1.26:1.91]), and at higher risk of eating disorder (RRR: 2.02 [1.59:2.57]). Obese youths were also more likely to be male (RRR: 1.41 [1.03:1.92]), older (RRR: 1.17 [1.08:1.28]), apprentice (RRR: 1.72 [1.21:2.43]), at higher risk of eating disorder (RRR: 2.02 [1.39:2.92]) and with less easiness to make friends (RRR: 0.57 [0.34:0.95]).

**Conclusions:** Our results show that the main risk related to not having a normal weight is having an eating disorder, but no differences are observed regarding emotional wellbeing, life satisfaction, family structure or socioeconomic status when controlling

for covariates. Nevertheless, OW youths are more likely to report starting their puberty earlier than their peers and obese youths have more difficulties making friends. Health professionals dealing with these youths need to do a thorough anamnesis to discard an eating disorder and to make sure that they have no issues regarding their social life, especially the higher their BMI.

**Sources of Support:** This survey was financed by the Programme Intercantonal de Lutte contre la Dépendance au Jeu (PILDJ) and the canton of Fribourg.

## **POSTER SESSION I: CHRONIC ILLNESS**

124.

MORE IMPORTANT THAN YOU THOUGHT: SOME CHRONICALLY ILL ADOLESCENTS RELY A LOT ON THEIR HEALTH PROFESSIONAL

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**Purpose:** To assess who do chronically ill adolescents rely on in their entourage.

**Methods:** Data were drawn from the GenerationFRee study, a cross-sectional survey including 5149 youths aged 15-24 divided into 3 groups: healthy controls (HC; N=4529), chronically ill without limitations (CI; N=517) and chronically ill with limitations (CIWL; N=103). Groups were compared on perceived health status, socio-demographic variables and whether they could rely a lot on their father, their mother, their girl/boyfriend, their best friend or their health professional in case of difficulty. All variables significant at the bivariate level were included in a multinomial logistic regression using HC as the reference category. Results are given as Relative Risk Ratios (RRR) with 95% CI.

**Results:** At the bivariate level there were significantly more females in the CI and CIWL groups but no differences in age. Perceived health, emotional wellbeing, relationship with father and with mother and socioeconomic status decreased as the level of limitation increased. Relying on their father or their mother for difficulties also decreased as the level of limitation increased, while it increased for health professionals. At the multivariate level, compared to HC, CI had a poorer relationship with their mother (RRR: 0.93 [0.88:0.99] and a poorer health status (RRR:3.84 [2.61:5.69], while CIWL reported poorer emotional wellbeing (RRR: 1.83 [1.08:3.10] and health status (RRR: 17.80 [10.33:30.64] but were more likely to rely on their health provider in case of difficulty (RRR: 1.26 [1.04:1.51].

**Conclusions:** The only difference between youths living with a non-limiting CI and their healthy peers is that the former report a poorer relationship with their mother and rate their health status lower. However, those with limiting conditions not only rate their health as poor but are almost twice more likely to have a poor emotional wellbeing. While they show no difference in relying on their parents, they seem to have a better relationship with their health provider. Chronically ill adolescents have more contact with health services and should have a privileged relationship with their providers. However, this only seems to be the case for those whose condition limits their daily activities. Health professionals should be aware of the important role they can play in the life of these youths.

**Sources of Support:** This survey was financed by the Programme Intercantonal de Lutte contre la Dépendance au Jeu (PILDJ) and the canton of Fribourg.

125.

A RANDOMIZED PILOT STUDY OF AN ADAPTED MINDFULNESS-BASED INTERVENTION FOR ADOLESCENTS WITH CHRONIC PAIN Nicholas Chadi, MD <sup>1</sup>, Audrey McMahon, MD <sup>2</sup>, Thuy Mai Luu, MD <sup>3</sup>, Nancy Haley, MD <sup>3</sup>.

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**Purpose:** Chronic pain in children and adolescents is a common condition that results in significant impairments in quality of life. Mindfulness is an approach that takes roots in ancient Buddhist meditative practices. It has been used with promising results in various adult and adolescent populations to address such conditions as depression, anxiety and chronic pain. The primary objective of this study was to determine the feasibility, validity and acceptability of a randomized pilot trial measuring the impact of an adapted mindfulness-based intervention in adolescents with chronic pain. This study also aimed to gather pilot data exploring changes in health-related quality of life, perceived pain intensity, mood and anxiety symptoms, psychological distress, as well as salivary cortisol levels among participants.

Methods: This study was single-center, single-blinded, prospective, experimental, longitudinal trial conducted in a pediatric tertiary care center. All participants had a reported history of chronic pain of more than three months. Participants were randomized into an intervention group and a wait -list control group. Both groups successively followed an adapted 8-week mindfulness curriculum designed specifically for adolescents with chronic pain. Participants were required to keep a personal log book, provide saliva samples and fill-in series of questionnaire packages during the 4-month study period for measurement of quality of life, pain perception, anxiety, depression, psychological distress and cortisol levels. Five pre-determined criteria were established by a panel of experts to assess the feasibility, validity and acceptability of the study model. These criteria were: enrollment and attrition rates, compliance to study protocol, adequate monitoring of outcomes and quality control of the intervention.

**Results:** Nineteen participants completed the study and had a mean age of 15.8 years (range 13.9 -17.8). Attrition rates were low (17%). Attendance to mindfulness sessions (84%) and compliance to study protocol (100%) were high. Curriculum review by an external reviewer showed complete observance (100%) of curriculum objectives. All participants reported a positive change in the way they coped with pain. The majority of participants stated that they would recommend the program to a friend (89%) and most reported a positive effect on sleep quality (68%). No changes in quality of life, depression, anxiety, pain perception, and psychological distress were detected. Significant reductions in pre-post mindfulness session salivary cortisol levels were observed (p<0.001).

**Conclusions:** Mindfulness is a promising therapeutic avenue for which limited data exists in adolescents with chronic pain. Our study indicates the feasibility of conducting such interventions in teenagers. More research is needed to demonstrate the efficacy and bio-physiological impacts of mindfulness-based interventions in teenagers with chronic pain.