

Pediatric Obesity Special Interest Group Newsletter

<u>Clinical Spotlight</u>: Texas Center for the Prevention and Treatment of Childhood Obesity

The Texas Center for the Prevention and Treatment of Childhood Obesity is located in Austin, Texas at Dell Children's Medical Center of Central Texas. The center was founded in 2009 by Drs. Stephen Pont (Medical Director), Jane Gray (Director of Behavioral Health), and Kimberly Avila Edwards. It has several programs targeted to meet the needs of a diverse range of youth with obesity and their families.

Activating Children, Empowering Success (ACES) Clinic

At the cornerstone is the ACES Clinic, which provides comprehensive evaluation, treatment, and support for children and adolescents with overweight and obesity. The ACES clinic serves patients ages 2 to 18 with Body Mass Index (BMI) \geq 99th percentile or with BMI \geq 95th percentile coupled with a comorbid condition. Patients are referred to the ACES clinic primarily through their pediatricians.

The ACES clinic offers comprehensive services and operates from an interprofessional team framework. Team members include pediatricians, a nurse practitioner, a registered nurse, dietitians, licensed clinical social workers, child psychologists, an athletic trainer, a recreation therapist, and a physical therapist. Services include medical management of obesity and related medical complications, nutrition assessment/counseling, physical activity assessment/counseling, and behavioral health services. Patients served at the ACES clinic typically return every 4 to 8 weeks for follow-up visits. Recognizing that some families require more intensive or targeted services, the center has developed three specialized programs for children and families in addition to offering supplemental counseling and consultation with a child psychologist, dietitian, and/or physical activity expert. Three programs within the ACES clinic that are highlighted below are the 1) Healthy Parenting Intervention for Early Childhood: Education and Skill-Building

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1) Healthy Parenting Intervention for Early Childhood: Education and Skill-Building (Healthy PIECES)

The Healthy PIECES program is a modification of Parent-Child Interaction Therapy (PCIT) designed to meet the needs of children ages 2-7 and their caregivers. Treatment focuses on modifying caregiver-child interactions in the context of food and physical activity while improving caregivers' ability to set limits, establish routines, and manage disruptive behavior. Developed by psychologist Dr. David Heckler in 2013, the Healthy PIECES program recruits patients from the ACES clinic, primary care, and daycares, targeting children whose BMI is $\geq 95^{\text{th}}$ percentile. The Healthy PIECES team includes a behavioral health specialist (psychologist or clinical social worker), dietitian, and physical activity expert.

How does treatment work in the Healthy PIECES program?

Treatment is completed in Modules and averages 6 to 12 one-hour sessions and is tailored to each family.

- 1) Families complete a Comprehensive Assessment
- 2) Child Directed Interaction (CDI) module of PCIT
 - Caregivers learn CDI Skills while playing with their child
 - Receive live coaching to learn to use positive attention to change child's behavior and improve the bond with their child
 - Skills taught include labeled praise, reflections, imitation of play

After CDI Module is complete, caregivers choose from 3 other modules for individual treatment.

- If child has challenging behavior: Caregivers complete the Parent-Directed Interaction (PDI) module, where they learn behavior management strategies (giving effective commands, time out, and limit setting)
- If child has nutritional concerns: Caregivers complete the Nutritional Module, Division of Responsibility, where they engage in a snack or meal observation and families receive feedback and practice skills in-vivo with dietitian and behavioral health specialist
- Final module is Physical Activity, which includes supporting families in incorporating engaging, unstructured active play into daily life while using CDI skills

Strengths, Challenges, and Future Directions.

The Healthy PIECES program is in its beginning phase of development but has a strong foundation for potential impact in the field. It incorporates a detailed, comprehensive assessment that can be used to track outcomes and inform future practice. The program also provides individualized treatment to an age group that can be difficult to engage in treatment, which may increase early intervention success. Identified challenges to date include recruitment and caregiver interest in the behavior management component of treatment. Healthy PIECES has begun to address these challenges by expanding recruitment to include primary care providers, daycares, and schools as referral sources. They also hope to increase bidirectional communication with pediatricians to assist in follow-up and maintenance of treatment gains. Finally, they have identified home visits as a possible future component to increase families' engagement. Research is a priority of the Healthy PIECES program, and they have active efforts underway to begin presenting and publishing on preliminary process and outcome data.

2) Healthy Living, Happy Living/Vida Sana, Vida Feliz (HLHL) Program

Incorporation of the whole family into treatment of childhood obesity has been identified as a critical component of care at the Texas Center for the Prevention and Treatment of Childhood Obesity. The second specialized program offered by the center is a 10-week, family-based treatment for children ages 8 to 12 with a BMI \geq 85th percentile. Healthy Living, Happy Living (HLHL) began in 2009 and is offered to children and families in a group format after school hours. It focuses on providing tools to families to help them make healthy changes in their overall family system. Services are additionally offered in Spanish for Spanish-speaking families.

3) The Teens Empowered for Exercise and Nutrition (TEEN) Program

The TEEN program delivers treatment in a group format for adolescents. Participants are adolescents ages 13 to 18 whose BMI is \geq 95th percentile and who may experience additional medical comorbidities. Caregivers participate in each visit to maintain the family-centered aspect of treatment, and treatment is offered for Spanish-speaking families. Families begin the process with a two-part intake that incorporates a modified Family Check Up (FCU). Recommendations may include group treatment, individual modules, or a combination of the two. In the group intervention, families choose to participate in either one 6-week program or two 6-week programs, with independent but complementary nutrition and physical activity information.

What does the TEEN treatment entail?

Both 6 week programs include the following:

- 1) Nutrition Education
 - Delivered by a Dietitian and includes mindful eating, finding/using recipes, meal planning, shopping effectively, portion control, energy density and fast food
- 2) Cooking Instruction and Practice
 - Designed to help teens and parents implement skills, including mindfulness and mindful eating, and the entire team assists with cooking
- 3) Physical Activity
 - Delivered by a Physical Therapist and includes education about elements of fitness and intensity levels, exposure to different types of exercise, and the mood benefits of exercise
- 4) Goal Setting and Review
 - Delivered by the Behavioral Health Team and includes mood monitoring
- 5) Individual Modules target emotion regulation skills such as emotion identification and coping, self-image promotion skills, identifying strengths and growth areas, family communication and problem solving

Strengths, Challenges, and Future Directions.

A cornerstone of the program is the use of SMART (Specific, Measurable, Achievable/Attainable, Resources/Rewards, Time-bound) goals with both teens and caregivers, completing goal check-ins on a weekly basis. The overall focus of the TEEN program is on the family rather than on the individual child, and parents have been highly responsive to this format

- Another strength of the program is the institution of an interprofessional team that operates in a truly integrated manner by discussing and agreeing on case conceptualization and plan for each family after intake. Dr. Gray notes that attrition has been a challenge, and the curriculum has been adjusted to attempt to maximize attendance and retention. Achieving and maintaining substantial reductions in BMI is also a challenge for adolescents, and the program does not have follow-up data to track BMI over time
- The TEEN program team plans to conduct a program evaluation, including chart reviews and focus groups, as a step toward program improvement. They also plan to expand their referral base by educating primary care teams about the program

Review

This center has quickly cultivated a comprehensive system of care for children and adolescents with overweight and obesity. The ACES Clinic serves children with severe obesity and medical complications and includes a team of professionals ranging across disciplines to serve individual needs of families. Three specialty programs are also available to children and adolescents by age range: Healthy PIECES (ages 2-7), HLHL (8-12), and TEEN (13+). These programs were all developed from the research base suggesting that family-based care is most effective in weight management and that individualized treatment is most beneficial to children and families. In the future, the center plans to expand to offer an inpatient consultation service for obesity-related concerns among inpatients on the medical floors. They also plan to begin an initiative to educate pediatricians in primary care to more effectively address obesity from a preventative perspective and to inform teams about the comprehensive obesity-related services and programs available in the hospital system.

<u>Research Brief</u>: The Relationship of the Built Environment and Health Behaviors among Overweight and Obese Youth



Bridget Armstrong, M.A.

I am currently completing my clinical internship at Kennedy Krieger Institute, and I will graduate from University of Florida in 2016. My research has mainly been conducted under the mentorship of Dr. David Janicke at the University of Florida. I hope to continue research in the field of pediatric obesity after completion of the internship year.

My research interests generally center on the relationship between parent and child health behaviors within pediatric populations. Operating from an ecological systems theory framework, the bulk of my research has focused on examining parenting variables (e.g., parenting style, parent BMI, parent concern, and encouragement to diet) and their impact on child health behaviors and attitudes. This research has expanded to include examining broader environmental relationships between the built environment and health behaviors among overweight and obese youth.

My research is constantly influenced by my clinical work with children and families. My thesis and dissertation projects were born out of clinical experiences working in rural counties where families reported limited access to healthy foods and designated recreation spaces. These anecdotes sparked my interest in the interaction between the environment and health behaviors especially in the context of families already enrolled in lifestyle interventions. Initial results of these analyses revealed a complicated relationship between the environment and health behaviors. I have presented and published on several aspects of this work. My most recent publication includes an article in the journal Behavioral Medicine (Special Issue on Health and Context) which details the finding that density of park spaces influences intervention outcomes among overweight treatment seeking youth.

Previous research has demonstrated that as little as 15 minutes of high-intensity activity a day has been associated with lower weight status in youth (Wittmeier, Mollard, & Kriellaars, 2008) and that one of the best predictors of high-intensity activity for youth is time spent outdoors (Sallis & Glanz, 2006). Children get 2-3 times more high-intensity activity outdoors compared to indoors and the majority of highintensity activity takes place in parks and open spaces (Coombes, van Sluijs, & Jones, 2013). Behavioral interventions to address obesity have shown empirical support (Janicke, 2014), however, only one study has examined the influence of the environment on obesity treatment. Epstein et al. (2012) found that, among an urban sample, aspects of the built environment were associated with poorer weight control among youth participating in family lifestyle interventions. Specifically, proximity to parkland was related to less weight regain over the course of an intervention and maintenance period.

The purpose of the study published in Behavioral Medicine was to determine the impact of park and recreational facility location density on changes in weight status of rural overweight and obese children participating in a family-based behavioral lifestyle intervention. Participants were 93 children from rural counties participating in a weight management randomized controlled trial. Families were randomized to receive either a behavioral treatment or a wait-list control condition. Multilevel modeling revealed that increased park density was a significant predictor of weight loss among the intervention group, but was unrelated to weight for the control group. The model explained 10%

of within person variance in BMI z-score.

Results of the study indicate that availability of park and recreational spaces may play a role in weight maintenance in pediatric obesity treatment for children living in rural communities. This may suggest that behavioral interventions should be tailored to highlight the importance of park utilization in child weight maintenance and encourage families to take advantage of existing community infrastructures. The generalizability of the study findings are limited by the sample of treatment-seeking overweight and obese children from rural communities. As the prevalence of childhood obesity increases, the translation and dissemination of effective health interventions to diverse community settings are critical. The effectiveness of behavioral treatments may be maximized by integrating positive influences of existing environmental infrastructures. Further research in this domain is essential and I hope to continue to contribute to this body of literature in the future. I plan to seek a research focused postdoctoral fellowship after internship in an effort to enhance research skills and better position myself for an academic career in pediatric psychology.

References

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We have a SIG meeting at SPPAC on Thursday, April 14th at 5:30PM. Please consider attending to learn more about the SIG, to get involved, to become a member or just network with those who attend!

We have an active email list with over 95 members. To be added to the listserv, contact Elizabeth Getzoff-Testa (Egetzoff@MWPH.org) or Mary Beth McCullough (marybeth.mccullough@gmail.com). For more information about the SIG, contact Marilyn Stern (mstern1@usf.edu)

<u>Research Brief</u>: Implications for Serving Size: Mother-to-Child Portion Size



Sarah Stromberg, M.A.

Currently, I am completing research, coursework, and clinical work as a doctoral student at the University of Florida in the Clinical and Health Psychology Department. I work under the mentorship of David Janicke, Ph.D., in his Pediatric Psychology Lab. During my first year as a graduate student, I led groups for a rural healthy lifestyle intervention program for overweight and obese children ages 3-7. Along with leading group sessions, I often conducted assessments and screenings for the project. Working with young children and their parents in this group setting solidified my interest in pediatric psychology and specifically in pediatric obesity.

Also during my first year as a graduate student, I conducted a study using primary data collection for my master's thesis. The primary goal of the study was to better understand the factors that impact the amount of calories mothers serve their children at a meal. I conceptualized the idea for this

project with the assistance of Dr. Janicke, and actively engaged in all necessary steps to bring this study to fruition. I submitted an IRB proposal and obtained approval to conduct this study in November 2013. After IRB approval, I conducted a mock session and began recruitment in December 2013. The mock session was crucial for the development of the project as it allowed us to make vital changes to the protocol before collecting data. Recruitment methods included an interview on a local TV news station, public service announcements on the local NPR station, and distribution of fliers to local preschools and daycares. I also worked with HealthStreet, a University of Florida community outreach program, to recruit additional participants. Throughout the data collection process, I managed three undergraduate research assistants who helped with data entry, organizational tasks, and food preparation. I personally handled all phone screens, scheduling, and study sessions with participants.

After five months of recruitment and data collection, this observational, cross-sectional study concluded with a community-based sample of 29 mother-child dyads. The study involved a one-hour session in which the mother-child dyad engaged in a play activity and shared a meal together. Before the mealtime, the mother rated her child's hunger and her personal hunger. At the mealtime, a buffet of food including apple slices, baby carrots, cheese cubes, Ritz crackers, chicken nuggets, vegetable lasagna, macaroni and cheese, Oreos, and chocolate chip cookies was provided. The mother was asked to serve her child and herself. The mealtime was observed and the amount of food served and consumed by the mother and child was recorded. I created a protocol based on a previous study performed by Harnack and colleagues (2012) to accurately observe and record the mother to child portion sizes. The main independent variables of interest included maternal BMI, child BMI z-score, and maternal perception of personal and child hunger. The primary dependent variable was the total calories the mother served her child.

Results indicated that mothers served their children an average of 573 calories at the mealtime. There was a strong positive relation between the amount of calories served and the calories consumed by the child. Further, the association between maternal BMI and the total mother to child calories served approached significance. Maternal perception of child hunger was also related to total calories served to the child. Additionally, maternal perception of child hunger mediated the

relationship between maternal perception of personal hunger and total calories served to the child for only obese mothers. In conclusion, results showed that mothers might be over serving their children based on their personal weight and their perception of their child's hunger. Implications include having obesity prevention and intervention programs and health care professionals address age appropriate serving sizes with parents. Furthermore, these programs should help mothers more objectively serve their children based on recommended serving sizes.

Research has not yet explored mother-to-child portion sizes and I hope to contribute to pediatric obesity research with the data collected from this pilot study. Most importantly, this study can help inform health care providers and parents about the importance of age-appropriate portion sizes as well as to make parents aware that personal weight and their perception of their child's hunger may cause them to over serve their children. The findings from this study were presented at the 2015 Society of Pediatric Psychology Annual Conference and my first-authored manuscript on the main outcomes of this pilot study was accepted to the Journal of Human Nutrition and Dietetics.

My future research plans involve utilizing the data set from this pilot study to further publish on the topic of mother to child portion sizes. Analyses will examine the relation between the mother's personal serving size and her serving size to her child. Moderations and mediations using variables such as maternal BMI, child BMI z-score, maternal perception of personal and child hunger will be explored. Further, I would like to examine the portion size and consumption of fruits and vegetables in relation to total portion size and consumption. Another important factor that may be influencing the mother to

child portion size is the interactions between the dyad. As each session was video recorded, I plan to use the Family Mealtime Coding System (Blisset & Haycraft, 2011) to code the positive and negative verbalizations between the mother and child. This data can then be used to determine if there is an association between child calorie consumption and the number of positive and/or negative verbalizations between the mother and child.

I have also written and published two other manuscripts during my graduate school career. One paper examined the relationship between child ADHD symptoms, body dissatisfaction, and disordered eating and another examined youth safety perception of weight control behaviors. I hope to continue writing manuscripts in the area of disordered eating as well as on mother-to-child portion sizes.





OBESITY-FOCUSED RESEARCH AT SPPAC

The Society for Pediatric Psychology annual conference will run from April 14th-April 16th in Atlanta, GA. This is a great opportunity to bring researchers in the field of pediatric obesity together and to highlight the diverse and innovative research occurring nationally in this area. Pediatric obesity-focused presentations are compiled below to make it easier for convention-goers to access this research. We look forward to seeing you there!

Thursday, April 14th

5:30 pm to 6:30 pm: SIG Meeting

Friday, April 15th

10:45 – 11:45 Symposia: Mobile Health Interventions in Pediatric Psychology

12:00 – 1:00 Keynote: Being different makes a difference: Eating disorders among minority youth (Gayle Brooks, Ph.D.)

Saturday, April 16th

2:00-4:00 Symposia: Psychological and Neurocognitive Correlates of Health Behaviors in Pediatric Obesity: Child and Caregiver Considerations

Accomplishments

- Carolyn Landis. Ph.D. is being promoted to full professor at Case Western Reserve University
- A review paper Amy Sato, PhD and Shana Wilson worked on together was recognized as the winner of *Stress and Health's* 2014 Paper of the Year
 - Wilson, S. M., & Sato, A. F. (20140. Stress and Pediatric Obesity: What we know and Where to Go. Stress and Health, 30, 91-102
 - o Link to the article and award
- Eleanor Mackey, Ph.D. received a grant from the National Institutes of Health/NIDDK (Mackey, E and Vaidya, C., co-PI: 1R56DK104644) to examine the effect of bariatric surgery in pediatric obesity on brain and cognition. The grant aims to examine the role of significant weight loss following bariatric surgery on adolescent cognitive functioning through behavioral tasks and fMRI

LOOK WHAT OUR SIG MEMBERS ARE DOING!

Recent Publications in the Field of Pediatric Obesity

- Banks, G. G., Berlin, K. S., Rybak, T. M., Kamody, R. C., & Cohen, R. (in press). Disentangling the longitudinal relations of race, sex, SES, for childhood Body Mass Index trajectories. *Journal of Pediatric Psychology.*
- Berlin, K. S., Kamody, R. C., Thurston, I. B., Banks, G. G., Rybak, T. M., & Ferry, R. J. (in press). Physical Activity, Sedentary Behaviors, and Nutritional Risk Profiles and Relations to Body Mass Index, Obesity, and Overweight in Eighth Grade. *Behavioral Medicine*.
- Buscemi, J. Berlin, K.S., Rybak, T. M., Schiffer, L. A., Kong, A., Stolley, M. R., Blumstein, L., Odoms-Young, A., Fitzgibbon, M. L. (in press). Health behavior and weight changes among racial and ethnic minority preschoolers and their parents: Associations across 1 year. *Journal of Pediatric Psychology*
- Cadieux, A., Getzoff Testa, E., Baughcum, A., Shaffer, L. A., Santos, M., Sallinen Gaffka, B. J., Gray, J., Burton, E. T., & Ward, W. L. (2015). Recommendations for Psychologists in Stage III Pediatric Obesity Program. *Children's Health Care*. doi:10.1080/02739615.2014.979919.
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- McCullough, M. B., Robson, S. M., & Stark, L. J. (in Press). Characterizing family meals: A systematic review. Advances in Nutrition.
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- Schweitzer, A., Ross, J., Klein, C.J, Lei, K.Y., & Mackey, E.R. (in press). An electronic wellness program to improve diet and exercise in college students: A pilot study. *JMIR Research Protocols*.
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