validated coaching approach to promote RIF. METHODS/STUDY POPULATION: Guided by the Obesity-Related Behavioral Intervention Trials (ORBIT) model, this proof-of-concept study tests the feasibility and fidelity of the LEIFc intervention in mother-infant dyads (N=25). Study visits from the 3rd trimester of pregnancy to 4 months postpartum (PP) are conducted in family homes. Use of RIF via subjective (survey) and objective (video) measures is collected at 1 and 4 months PP. Prenatally written and video material on infant feeding and infant hunger/satiety cues is provided. At 2 and 3 months PP, coaching during a feeding session is provided by a trained interventionist using the SS-OO-PP-RR (super, Setting the Stage, Observation & Opportunities, Problem Solving & Planning, Reflection & Review) approach. Qualitative data on LEIFc are provided by the interventionist and participants. RESULTS/ANTICIPATED RESULTS: To date 25 dyads have been enrolled and 4 have completed all study visits. Preliminary analyses showed that subjective measure of awareness of infant cues increased post intervention (pre, M=4.38 vs post, M=4.63). LEIFc has been well accepted by participants including use of the SS-OO-PP-RR approach. Data suggests refinement to LEIFc is needed to include breastfeeding and mental health support as well as a longer duration of intervention through at least 6 months PP. An experienced interventionist is key to success of the research. All lost to follow-up (n=7) have occurred before the first PP visit suggesting that at study visit closer to birth is needed. Enrollment will continue through December 2022 and data collection through April 2023. DISCUSSION/SIGNIFICANCE: After refinement, the LEIFc intervention will be tested in a pilot RCT. The long-term goal is to implement LEIFc in the curricula of federally funded maternal-child home visiting programs who serve vulnerable populations; those that often have infant feeding practices that do not align with recommendations and are less likely to use RIF.

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Development of an mHealth Functionality Focused Body Image Intervention for Latinx Women

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OBJECTIVES/GOALS: Over 50 million people in the U.S. have an eating disorder (EDs), and body dissatisfaction is a key precursor to EDs. The current study seeks to culturally adapt an evidence-based positive body image program administered through a mobile-phone application for use with Latinx women. METHODS/STUDY POPULATION: The positive body image program centers around body functionality, which in contrast to appearance-based body image, emphasizes the body's capabilities, including physical capacities, health and internal processes, senses, creative endeavors, self-care, and communication with others. Latinx women aged 18-25 years-old (n =15) will be recruited to participate in focus groups and individual qualitative interviews. Interviews will examine how Latinx women relate to the concepts of positive body image and body functionality. Participants will also provide feedback on the application design and program content. RESULTS/ANTICIPATED RESULTS: Results will elucidate how Latinx women relate to their body and can be used to inform our understanding of Latinx women's positive body image. Results will also inform what components of the intervention need to be tailored to be more relevant for use in this population. Information from the interviews will be used to explore adaptations to create a more acceptable and effective intervention prior to testing the efficacy of the program. DISCUSSION/SIGNIFICANCE: Most evidence-based body image programs are not developed with culturally sensitive programming in mind. Thus, culturally adapting an evidence-based positive body image program that could be widely disseminated through a mobile-application could address body image concerns in Latinx women.

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DiscoverU: A feasibility study of an afterschool mentoring program for adolescents that integrates social emotional learning, physical activity, and mindful eating

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OBJECTIVES/GOALS: Rising rates of youth obesity, diabetes, depression, and anxiety necessitate programs that address physical and mental health concurrently. We describe a feasibility study for DiscoverU, an afterschool mentoring program that integrates multiple aspects of health including social emotional learning, physical activity, and mindful eating. METHODS/STUDY POPULATION: Trained college students mentored middle and high school students in a Midwestern school district. DiscoverU was delivered 2 hours, 2 days/week for 8 weeks. Based on self-determination theory, DiscoverU was designed to meet National Afterschool Association healthy eating and physical activity and social emotional learning standards. We assessed feasibility with participant attendance (middle, high school, and college students) and acceptability through qualitative data from participants and relevant stakeholders regarding facilitators/barriers to program implementation. We observed indicators of mentoring, lesson fidelity, and assessed physical activity using accelerometry. Pre-post surveys measured self-realization, self-regulation, mindful eating, and physical activity self-efficacy. RESULTS/ANTICIPATED RESULTS: We expect DiscoverU to be feasible and well accepted. We anticipate attendance will be similar or higher than that of other afterschool programs in the district. From focus groups we expect to hear a variety of factors that facilitate/prevent program engagement and learn about the acceptability of specific lessons. We expect to gain insight on processes and procedures from school stakeholders that will inform the sustainability of DiscoverU. We expect program fidelity to be high and mentoring skills to improve over the course of the program. We anticipate the majority of participants will meet National Afterschool Alliance physical activity guidelines. Preliminary outcomes of self-determination, self-regulation, mindful eating, and physical activity self-efficacy are expected to improve over the program. DISCUSSION/SIGNIFICANCE: Findings will help determine the readiness of DiscoverU to be scaled to other schools. A subsequent randomized effectiveness study will evaluate DiscoverU's impact on intervention mechanisms (e.g., self-determination, self-efficacy) as well as on physical activity, diet, weight, and depression/anxiety symptomology.

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Education and Its Effects on Barriers to Clinical Trial Participation in Alzheimer's Disease Studies by Underrepresented Communities

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OBJECTIVES/GOALS: Minoritized populations experience a large burden of Alzheimer's Disease; interventions are often delayed

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and underrepresented communities' participation in clinical trial research is low. Lack of information has been proposed as a barrier to clinical research enrollment of minoritized populations. METHODS/STUDY POPULATION: Brain Train, a cluster randomization trial, evaluated the role of education in increasing willingness to participate in research. A 3 segment program was developed whereas segment 3 had two versions: clinical trial education or healthy brain aging video. Brain Train was presented to multicultural communities with participants of at least 50 y/o throughout WNY. The primary outcome measure is evaluating the percent change in responding yes to would you be interested in participating in a clinical trial? before and after segment 3. The secondary outcome measure and exploration of barriers are measured by a Research Attitude Questionnaire. Demographic information such as age, race, gender, socioeconomic status, and educational attainment is collected. The statistical model is a generalized linear mixed model. RESULTS/ANTICIPATED RESULTS: Sixteen sessions with 281 participants were completed to generate the pilot dataset. We see 59.29 % of individuals answered yes before segment 3 and 46.02% answered yes after the educational intervention. Our data shows there is a 13.3% decrease in clinical trial participation interest after the educational intervention. Through our RAQ responses, our data shows significance when it comes to our participants'answers to questions regarding society needing to devote more resources to medical research (p=0.04). Trust emerged as the most significant barrier when it comes to one's willingness to participate in medical research and clinical trials (p=0.03). DISCUSSION/SIGNIFICANCE: Our preliminary results from the first sixteen events suggest that the power of education is not sufficient to overcome barriers to clinical trial participation for underrepresented communities. Instead, trust appears to be the most significant barrier. Trust building strategies should be explored to answer this research question.

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Effects of institutional racism on social determinants of heath and increased rates of mortality and morbidity amongst premature infants born to Black mothers

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OBJECTIVES/GOALS: Premature birth and its complications are among the largest contributions to infant death within the US. The rates of premature birth and infant death are significantly higher among African Americans. Therefore, there is an urgent need to understand the biological and social drivers of this health disparities to improve birth outcomes. METHODS/STUDY POPULATION: This is a retrospective cohort study of premature infants (< 28 weeks estimated gestational age, birth weight < 1500g) born within 2018 and 2021 to mothers who identify as either African American, or White/Caucasian Non-Hispanic and are cared for at Saint Louis Children's Hospital Neonatal Intensive Care Unit. EPIC collected data will include maternal and fetal factors and social determinants of health (SDOH). ICD-9, ICD-10 codes for primary outcomes include grade 3-4 Interventricular Hemorrhage, moderate-severe Bronchopulmonary Dysplasia, Stage 2+ Necrotizing Enterocolitis, and moderate-severe Retinopathy of Prematurity. Will develop a composite variable score using the SDOH for risk/no risk using that for each disease outcome and mortality. Will use Chi-square test or T-test to compare groups. RESULTS/ANTICIPATED RESULTS: We are currently in the data collection phase of the study, but we anticipate seeing an increase in risk of all-cause morbidity as well as all-cause mortality for infants born to Black mothers compared to infants born to White mothers. We anticipate higher levels of disadvantage (increased area deprivation scores) and lower access to the goods and services deemed necessary for appropriate care of Black mothers and subsequent relation to outcomes for their infants. DISCUSSION/SIGNIFICANCE: Following analysis and assessment of that analysis we will discuss these findings and the impact on the general population and the needs for improvement and implementation of interventions upstream in the care of the vulnerable and special mother-baby-dyad population.

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Enhancing Engagement of Nursing Home Staff and Leaders in Intervention Development

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OBJECTIVES/GOALS: Recruiting under-resourced, rural nursing home (NH) staff to clinical research has proven especially difficult during COVID-19. The goal for this study was to leverage an existing group of NH providers to seek their opinions on the development of a novel person-centered risk management intervention for residents with dementia. METHODS/STUDY POPULATION: This study used community engagement studios (CES) to connect and engage with community experts (NH staff and leaders) attending, or in close vicinity to, a NH provider conference in Denver, Colorado July 25-30, 2022. Led by an experienced moderator and an assistant moderator using a semi-structured discussion guide, two CES were completed with 14 community experts. Community experts took part in a 90-minute facilitated and recorded discussion to gain their perspectives on the DIGNITY (Decision-making in aging and dementia for autonomy) study procedures and instruments along with recommendations for how to improve the acceptability, feasibility, and likelihood of intervention success. The local IRB determined this study to not be human research. RESULTS/ANTICIPATED RESULTS: Community experts most often identified as white/Caucasian (64%) females (93%) holding jobs in NHs as direct-care nurse/nursing aide (n=5), nurse supervisor/director (n=4), other NH leadership (n=3), nursing aide union organizers (n=2), and state surveyor (n=1). The primary outcomes of the CES were suggestions that could be used to adapt the elements of the study design. Following CESs, transcripts were reviewed and summarized on a rapid feedback table. The study team made changes to five of the six intervention elements based on expert feedback. Most experts (79%) agreed that the DIGNITY intervention was acceptable, appropriate, and feasible to implement in the NH community. DISCUSSION/SIGNIFICANCE: This study highlighted the voices of NH staff and leaders that is often underrepresented in research development and provides critical information for how to adapt a novel intervention for future testing in rural NH communities. Results also support the usefulness of CES as a method to develop practical interventions in NH communities.

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