SEPTEMBER 29 – OCTOBER 1, 2022
St. Louis, Missouri, USA
Toward a Holistic Developmental Science:
Catalyzing Transdisciplinary Multi-Sector Collaborations
to Understand and Support Human Development

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Poster Session Abstracts

(Listed in Alpha Order by Presentation Title)

Presentation Title: *"They assumed we didn't speak English": Latinx Youths' Cultural Stressors, Coping, and Emotional Reactions in the Family Context*

Presentation Abstract:

Background: Many studies have documented Latinx youths' experiences with cultural stressors (e.g., perceived discrimination) and how these stressors relate with their emotional (e.g., higher depressive symptoms; Perreira et al., 2019), behavioral (e.g., more cigarette smoking; Perreira et al., 2019), and academic (e.g., lower school engagement; Martinez-Fuentes et al., 2021) well-being. Studies have also highlighted how Latinx youth cope with cultural stressors (e.g., Brittian et al., 2013). However, prior studies have generally framed cultural stressors, coping, emotional reactions to cultural stressors, and coping as individual youth experiences, paying less attention to how they unfold within the family context. This study seeks to extend scholarship on cultural stressors, coping, and emotional reactions by gaining a deeper understanding of Latinx students' perspectives on how they experience, cope with and react emotionally to cultural stressors within the family context.

Methods: Latinx youth (N = 45; Mage = 15.26, SD = 0.79; Male = 51.1%) from six high schools within a large and diverse Central Texas school district participated in a focus groups (one focus group/school; n= 4-10/group) to discuss their thoughts on and experiences with cultural stressors. Focus group language was determined based on students' preferred language and resulted in four focus groups conducted in English, one in Spanish, and one in English and Spanish. Latinx youth were predominantly of Mexican-descent (82.2%), and were either in the 9th (46.7%) or 10th (53.3%) grade. Focus groups were audio-recorded and transcribed verbatim. Four bilingual researchers (one professor, one post-doctoral students, one graduate student, and one undergraduate student) implemented an abductive analysis of focus group transcripts (Timmermans & Tavory, 2012). From this analytical approach, researchers fitted significant statements in preexisting concepts around cultural stressors, coping, and emotional reactions. Additionally, researchers identified new concepts that surrounded cultural stressors, coping, and emotional reactions within statements about cultural stressors and coping.

Results: The researchers identified three themes of how youth experienced cultural stressors within the family context: 1. Cultural Stress Youth Experienced Together with Family Members; 2. Cultural Stressors Experienced as a result of Family Members; 3. Vicariously Observing a Family Member Experience Cultural Stress. Researchers also identified four themes of coping within the family: 1. Coping Together with Family Members; 2. Vicariously Observing Family Members Cope; 3. Coping to Vicarious Cultural Stress, and 4. Coping Socialization. Lastly, researchers identified ten emotional reactions Latinx youth weaved into their narratives over cultural stress experiences and coping within the family context: Anger, Anxiety, Bothered, Depression, Embarrassment, Feeling Bad, Feeling Good, Feeling Hurt, Guilt, Uncomfortable, and Upset.

Discussion: Latinx youth experience and cope with cultural stressors within the family context in a variety of ways (i.e., together, as a result of family, and vicariously). While previous work has identified several cultural stressors Latinx youth experience and the coping strategies implemented in response to cultural stressors, this qualitative study highlights the role of family in experiences with cultural stressors and students' coping. Furthermore, this study highlights Latinx youth's array of emotional reactions to cultural stressors and coping within the family context.

Presentation Title: *A Critical and Culturally Sustaining Examination of Immigrant Parents' Engagement in Their Children's Education*

Presentation Abstract:

In this qualitative study, the author uses phenomenological research methods to examine how culturally and linguistically diverse immigrant parents define and experience their role in home- and school-based activities that promote their children's educational processes. For this purpose, she examines Hoover-Dempsey and Sandler's (1997) model of the parental involvement (PI) process through critical race theory (Delgado & Stefancic, 2017), culturally responsive and sustaining practices (Ladson-Billings, 1995; Paris, 2012), the familial capital concept of funds of knowledge (Moll et al., 1992), and the framework of the bridging culture (Trumbull et al., 2001). This study provides space in scholarly discourse for parents from historically minoritized and underrepresented cultural groups to shed light on the factors that underlie their experience in their linguistic and socio-cultural contexts.

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Presentation Title: *A Review Of Theory and Research on White Racial Identity Development*

Presentation Abstract:
As more white people engage in anti-racism, it is important that they not only understand and value the perspectives and experiences of others, but also confront their own whiteness, as this is the source of racism. Psychology can help us understand how white people process and make sense of their own racial identity, and a developmental lens can help us understand how these processes unfold across the lifespan. This knowledge can in turn provide important insight for researchers, policy-makers, educators, and parents in promoting social justice and equity.

In this review, I focus on theoretical conceptualizations and empirical evidence on white racial identity development (WRID), organized by three ways in which we can define development. First, in development as process, I review Helms' (1990) model of WRID that outlines a series cognitive schema that white people go through as their racial identity develops, moving from internalized racism toward a positive, non-racist identity. In this process model, development is not always linear – people move forward, backward, or remain still. This model was developed with adults, but more recent research shows its applicability for understanding children and adolescent racial identity as well (see Moffitt et al., 2021).

Movement throughout the process is not age-dependent, but driven by experiences regarding race. In development as experiences, I review empirical literature on experiences that white people do (and do not) have that drive movement or stagnation in the WRID process. These include the frequency, content, and approaches of parental racial socialization. White parents talk considerably less about race, talk less in-depth, adopt passive and indirect approaches, and often prefer to frame racial discussions in terms of values or social class, (Abaied & Perry, 2021; Lloyd & Gaither, 2018; Zucker & Patterson, 2018). Even amidst historic social events and movements, many white parents still talk little with their children about race, and even less about whiteness (Sullivan et al., 2021).

Lastly, development as age refers to age-related maturation in socio-cognitive abilities that allow for more complex conceptions of identity (Umaña-Taylor et al., 2014; Williams et al., 2020). Little is known about how age-related maturation influences WRID. Though many white parents consider their children too young to understand or process racial discussions (Vittrup, 2018), their practices remain much the same even as their children grow.

Considering process, experiences, and age together, two trends are clear. First, white people are missing many key experiences that help people understand and make meaning of race, even when such experiences are considered age-appropriate. Second, most experiences teach that race is something other people have, reinforcing white-normativity and leading to little reflection on one's own racial identity. These trends explain why many white adults, despite their advanced socio-cognitive abilities, are in similar racial identity schemas as white children.

Studying WRID can help further our progress toward a holistic developmental science. This topic can provide valuable information to educators, parents, and individuals. It also promotes marginalized voices in research by challenging of the conceptions we have about what constitutes "normative" development.

Presentation Title: *Assessing and Improving the Content Validity of the Executives Functions Observation Tool: a Delphi Study*

Presentation Abstract:
Executive functions [EFs] in children aged 3 to 6 are linked to a range of developmental outcomes and school success (Blair & Razza, 2016). EFs are interdependent higher-order cognitive processes (inhibition, working memory, cognitive flexibility and planification) that allow individuals to override automatic thoughts and behaviors in favor of goal-directed responses. Gold standard measures of children EFs skills (e.g., performance-based tasks and questionnaires) were shown to assess discrete EFs skills but provide few information on children's ability to deploy EFs in everyday life (Zelazo, 2015). Hence, little is known about real-life manifestations of EFs skills in preschool context, which makes the transfer from research to practice highly abstract for both researchers and educators. The EFs Observation Tool (Duval & Montminy, 2018) was created to assess children's EFs in preschool context. This study, which is the first part of a larger validation project (Duval & al., 2020-2023), aims to assess and improve content validity of the tool. To do so, a three-round Delphi study was conducted. The Delphi method is a research methodology used to systematically seek consensus among experts and make decisions using the gathered data (Hohmann & al.,2018). Each round, the expert panel (N= 5 researchers having published in the field of cognitive development and executive functions) was asked a twofold task when reviewing the tool : 1) to consider the overall theoretical relevance and structure by commenting on the coding manual, 2) to rate each, subscales and their behavioral markers of the EFs observation tool on a five-point Likert scale from 1 (does not represent the concept at all) to 5 (perfectly represents the concept). The qualitative analysis consisted of content analysis of the experts' comments on each section of the coding manual following the Delphi methodology (distinction between

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disagreement and consensus). The quantitative analysis included calculation of the level of agreement for each subscale of EFs and their behavioral markers. An agreement index 0.80 or more was required to be considered as a consensus. Disagreement on a section or a subscale led to a modification. Experts' comments were taken in consideration for each modification. At the end of each round, a report explaining each modification was produced. From both a qualitative and quantitative standpoint, there was an increase in agreements observed over the three rounds as shown by a decrease in the number of comments and an increase of the agreement index. Agreement index ranged from .48 to 1 (9 subscales on 27 under .80.) at round 1, from .72 to 1 (2 subscales on 22 under .80.) at round 2 and from .80 to 1 at round 3 thereby showing consensus on all the 22 subscales and their behavioral markers. The refinement and improvement of the EFs observation tool are important to generate valid and reliable data on how children deploy EFs in preschool context in which EFs could be observed and supported by educators. Further studies using the tool on a large sample of preschool-aged children are needed to gather psychometrics information.

Presentation Title: *Child Poverty, Brain Development, and Academic Achievement: The Effects of Public Housing Programs in Wisconsin*

Presentation Abstract:

Background: The associations between child poverty and adverse outcomes are well documented. However, very little is currently understood about specific post-natal mechanisms driving these deleterious sequelae that could be targeted by focused intervention and policy efforts. Through expertise across the fields of Health Economics, Child Development, and Neuroscience, we combine measures of children's socio-economic environment with measures of brain functioning and real-life behavior. This project aims to understand the influence of growing up in a low-income family on areas of the brain that control the development of the critical adaptive abilities of judgment, decision-making, and impulse control. We seek to determine whether creating stable housing for children through a means-tested public program can reduce some of the adverse effects of poverty.

Methods: Our sample will consist of 300 Wisconsin-based adolescents aged 12-15 years old. In partnership with the Department of Housing and Urban Development, we are recruiting two samples of adolescents who spent their childhoods living in poverty. One group has received housing assistance, and the other group has applied for housing but remained on the waitlist. A third comparison group consists of nonpoor children attending the same high schools as children in the other two groups, matched on age, sex, and race. Potential mechanisms are tested through three different windows into related processes. Decision-making and reward processing is measured using a Monetary Incentive Delay Task. Risk-taking is measured using the Yellow Light Task. The Cambridge Gambling Task provides us with well-normed behavioral measures of the quality of adolescents' decision-making, decision time, and impulsivity. In addition to completing neuroimaging tasks, children are given subsections of the Wechsler Abbreviated Scale of Intelligence test and the Youth Risk Behavior Survey. Caregivers complete the Health and Behavior Questionnaire. We link study data to the child's school record as maintained by the Wisconsin Department of Public Instruction and the family's history of safety net program benefits available in the State of Wisconsin Administrative Data.

Results: Preliminary data analyses have indicated that poverty is negatively associated with activation in the posterior insula when participants made a decision that resulted in loss during the Monetary Incentive Delay Task (N=29). In contrast, participants who are not living in childhood poverty showed more activation of this region ($R^2 = .62$, FDR-corrected $p = .05$, 106 voxels). Pilot data support the feasibility of this proposed project's primary experimental tasks and scientific promise. Data collection and analyses are ongoing.

Implications: This project moves beyond characterizing the correlates of child poverty to assess the efficacy of existing interventions that may help at-risk youth. We view this focus on the means-tested benefit of housing as a test of whether an approach using fMRI might be a way to determine whether a program directed at reducing the adverse effects of poverty actually works, especially in concert with other public benefit programs. This project can generate truly novel data bridging neural systems, child poverty, educational and behavioral outcomes, and public policy.

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Presentation Title: *Consensual Qualitative Research Analysis as a Tool to Understand Change in Academic Engagement Among Immigrant-Origin Youth*

Presentation Abstract:

Academic engagement is a key component of in-school achievement and has been shown to be related to individual characteristics as well as ecological contextual factors. Studies have also found that engagement varies longitudinally throughout school, especially in high school when adolescents are determining post-graduation goals. Qualitative investigations have revealed key insights into the reasons behind variations in engagement across academic years, and this project introduces a new analytical framework for tracking longitudinal changes within this paradigm: consensual qualitative research (CQR).

The researchers analyzed data from a three-wave longitudinal study on the factors involved in changes of academic engagement for urban adolescents in high school. Semi-structured interviews (N = 18) were conducted annually from 10th grade and until their senior year just prior to graduating. The participants were primarily first- and second-generation immigrants living in New York City, and the majority were also ethnic / racial minority youth. In the interviews, participants were asked about their personal experiences in school, key influences in their lives (ie. parents, friends), and their goals for the future after high school.

Using the CQR framework, the interviews were analyzed by assessing the factors that participants identified as having an impact on their academic engagement. A group of researchers were split into two separate teams which collaborated to analyze the interviews before returning to the larger group, allowing for a highly collaborative analysis. Beginning with large-scale conceptual factors, these contexts were first organized into macro-level domains and then subdivided into multiple core ideas, establishing further specificity of their impact on engagement. Afterwards, these core ideas were compared across participants to develop key relationships across participants in line with CQR methodology. Throughout the process, an external auditor was recruited to assess the consistency and clarity of the organization of data into the domains and core ideas, as well as the cross-participant comparison.

Through this analytical framework, researchers were able to continually refine the coding schemes and collectively determine how the key factors influenced academic engagement. Researchers were able to assess the frequency of each contextual factor across all and compare these between participants. Furthermore, by subdividing the data into specific core ideas, researchers were able to establish an additional layer of analysis. The longitudinal design also enabled an assessment of change in frequency of domains throughout the three waves of interviews.

This project represents a novel methodological approach: few studies have used CQR to analyze academic experiences, and none have examined academic engagement amongst immigrant-origin youth. Additionally, few studies have used CQR as a method to assess longitudinal change within participants, thereby representing a novel analytical tool for understanding academic engagement within a qualitative paradigm. The researchers hope that these findings will enable future studies to use CQR to assess longitudinal change in ways that will uniquely contribute in the field.

Presentation Title: *Development of a Holistic Mindful Eating Curriculum for Preschoolers, Parents, and Caregivers*

Presentation Abstract:

Comprehensive interventions that include parents and caregivers and are implemented early in life are critical in supporting the development of healthy eating patterns (Fisher et al., 2021; Hoelscher et al., 2022; Kirk et al., 2022). Our interdisciplinary research team is developing a holistic mindful eating curriculum that includes child, parent, and childcare provider components, to support preschool children in their development of healthy eating habits.

This mindful eating curriculum includes 10 lessons, to be implemented in weekly twenty-minute classroom sessions and is supported by parent materials to reinforce content learned. This parent inclusion is critical as limited parental engagement in nutrition interventions has been cited as a concern in other studies (van de Kolk et al., 2019). The mindful eating curriculum was developed alongside an existing yoga curriculum for preschoolers and topics were matched to support self-regulation.

In order to examine acceptability and feasibility of the mindful eating curriculum, data are being collected from childcare providers through the use of survey assessment and follow-up focus groups. Feedback from childcare providers will allow for modifications to the lessons to enhance usability within childcare settings. Additionally, parent and caregiver lessons are being developed to support mindful movement and feeding practices in these settings. Parents and caregivers will learn how to incorporate these practices for themselves and how to include

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them within the home and childcare settings. Similar testing of these lessons will take place following development to ensure acceptability and feasibility with parents and caregivers. Once all curriculum components are tested and refined, an intervention study will be conducted to examine the impact of the intervention on the self-regulation and eating behaviors of participants

The collaborative interdisciplinary and novel nature of this study is evident in multiple areas. First, a holistic approach to eating behaviors is taken by targeting not only the child but also the childcare providers and families for intervention, recognizing the importance of considering the individual and their contexts independently as well as their interactions. The lessons cover a range of interrelated, yet often siloed topics related to health and wellness by incorporating lessons on nutrition, mindfulness, yoga, and food sources. The participatory nature of this study is also evident in our approach to curriculum development, by not only having an interdisciplinary team of researchers engaged in creating the curriculum, but by also soliciting and incorporating feedback from parents and childcare providers on the lessons. This work will support the development of healthier eating habits among preschool children.

Presentation Title: *Development, Parent Stress, and Parent Coping in Children with Atopy*

Presentation Abstract:

Childhood atopy – including asthma, allergies, and eczema – is associated with developmental vulnerability across a range of domains (social, emotional, cognitive, and behavioral) and the occurrence of neurodevelopmental disorders (Buske-Kirschbaum et al., 2013; Jackson-Cowan et al., 2021; Lee et al., 2016). Chronic illness, including atopic diseases, also increases risk for pediatric psychopathology and parent stress related to symptom uncertainty and treatment management (Bell et al., 2016; Cortese et al., 2018; Waters et al., 2017). Positive parent coping strategies have been shown to decrease parent stress and improve family health and psychological outcomes (Sales et al., 2007). The purpose of the current study is to further explore the relationship between early-emerging atopy and its impact on child development and parent stress and coping.

Parents of young children (ages 1-7) will be recruited to complete an online risk assessment examining parent concern for their child's development across six developmental domains, including behavioral concerns, emotion regulation/affect, repetitive behaviors, language development, social concerns, and cognitive development/quality of play. This risk assessment also captures parent report on their child's developmental assets, or valuable skills and qualities that act as protective factors as a child grows and develops. Demographic data and child and family medical/social history will also be collected.

Groups will be selected based on parent report of child medical history. The atopy group will include children with a history of wheezing, asthma, eczema, food allergies, or other allergies, and the healthy control group will include children with no history of medical concerns. Parent stress will be measured using the Perceived Stress Scale-10 (PSS-10; Cohen & Williams, 1988), which is a ten-item measure that assesses perception of stress in different situations. Parent coping will be measured using the Brief-COPE questionnaire (Carver, 1997), which is a 28-item abridged version of the COPE inventory (Carver, 1989), and contains 14 scales that describe different adaptive and maladaptive coping strategies for responding to stress.

The connection between child illness, health, and development is an important but often overlooked area in early childhood. The current research study focuses on identifying patterns in developmental vulnerability and parent stress and coping among children with a particular group of health concerns. Transdisciplinary collaboration on this project could expand assessed outcomes to incorporate physical health and explore the relationship between developmental vulnerability and illness symptoms. For example, this project could include pulmonary function or allergy skin testing among children with asthma or allergies, to compare developmental vulnerability with severity of atopic symptoms. Developmental vulnerability among children with additional health concerns could also be addressed.

Increased knowledge and awareness of developmental risk among young children with common health concerns and chronic illness would benefit early childhood practitioners across domains, beginning in the health arena. Risk assessment and referral for developmental concerns could improve greatly among pediatric health practitioners, which would allow families to access early intervention services. For a group of parents with existing elevated stress levels with managing their child's chronic illness, this could also alleviate parent stress related to their child's development.

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Presentation Title: *Developmentally Framed Psychoeducation for Child Anxiety Disorders: Transdisciplinary Considerations in a Medical Academic Clinic*

Presentation Abstract:

A variety of anxiety disorders share features of fear, anxiety, and related behavioral difficulties that are typically more persistent and excessive than what is considered normal at a particular developmental period (Diagnostic and Statistical Manual of Mental Disorders 5th ed.; DSM–5; American Psychiatric Association, 2013). One in five children globally were identified with clinically significant symptoms of anxiety during the first year of the COVID-19 pandemic compared to 11.6% of youth prior to the pandemic (Racine et al., 2021). Longitudinal studies will inform how children and adolescents may be impacted during pandemic recovery; however, an increase in the need for mental health treatment for anxiety disorders is apparent at this time.

Cognitive-behavioral therapy (CBT) has been recognized as a first-line, evidence-based intervention for the treatment of anxiety and trauma-related disorders in children and adolescents (Wergeland, Riise et al., 2021; Higa-McMillan, 2015). Psychoeducation within the CBT context has been deemed an important component to this intervention and involves teaching children and their caregivers about the rationale for CBT, providing information about their anxiety symptoms, and normalizing anxiety symptoms (Alvarez et al., 2022). How CBT is implemented, including the amount of family involvement, is frequently influenced by developmental factors (Banneyer et al., 2018).

Within medical academic settings, the teaching of how to effectively provide psychoeducation to patients and their families has been deemed a valuable tool for residents and fellows as they are continuing to learn and apply knowledge in authentic clinical experiences (Motlova et al., 2017). To enhance learning outcomes for all stakeholders (e.g., medical students, fellows, patients and their families), curriculum taught in a psychoeducation modality should be relevant, useful, and sensitive to the normative developmental changes that occur over time. Comprehensive literature reviews, which are attentive to construct validity, serve as an important step in this curricular design process (Dellinger, 2005).

Another important consideration in development of psychoeducation curriculum for childhood anxiety is knowledge and application of developmental models, such as the bioecological model of human development (Bronfenbrenner, 2005). Within this Process-Person-Context-Time Model (PPCT), he addressed how a person and environments change over time. He also placed emphasis on the role of the biological person on processes occurring within interrelated systems identified as the microsystem, mesosystem, exosystem, macrosystem, and chronosystem. A model such as this could serve as a foundational lens for the organization of psychoeducational information and be instrumental in guiding future research designs.

Of particular interest is how a collaborative team in a medical academic clinic might best utilize developmental research to create a systematic, measurable, psychoeducation curriculum designed to treat anxiety and trauma related disorders in children and adolescents. Therefore, the purpose of this presentation will be to 1) synthesize research findings relevant to developmental influences on child and adolescent anxiety and trauma-related disorders; 2) provide a framework for organizing psychoeducation curriculum that is based upon knowledge and application of a bioecological developmental model; and finally, 3) stimulate collaborative conversations across specialties to guide future developmental research relevant to this important mental health topic.

Presentation Title: *Differential Associations Between Prenatal Glucose Regulation and Birth Weight Among Women in Pakistan and Kenya*

Presentation Abstract:

Infants born in low- and middle-income countries are at greater risk of negative birth outcomes compared to higher-income countries, which is associated with poorer health and developmental problems in childhood and adulthood. Despite the apparent health disparities, much of what is known about the risk factors is based on research conducted in high-income countries. One such risk factor in need of further exploration is maternal glucose regulation, as it is linked with negative birth outcomes such as high birth weight. This study aimed to investigate whether maternal glucose regulation (assessed via HbA1c) was associated with birth weight and if this association was moderated by fetal sex, as there is evidence which suggests that maternal glucose regulation may vary by fetal sex. It was hypothesized that as maternal prenatal HbA1c levels increased, so would birth weight and that these associations would be strongest for women carrying a male as opposed to a female fetus. In two parallel pilot studies conducted at Aga Khan University Hospitals, adult pregnant women were recruited during normal prenatal visits in Pakistan (N

= 111) and Kenya (N = 34). Maternal prenatal glucose regulation (HbA1c) from whole blood was assessed at 12–19 and 22–29 weeks' gestational age, and birth weight was self-reported by women following delivery. Because there was not a significant difference in HbA1c levels between the two assessments, an average composite measure for HbA1c was used in all analyses. These analyses were also stratified by country, as there were significant differences in the variables of interest between the two samples. Findings from separate adjusted multiple linear regressions indicated that there was an association between maternal prenatal HbA1c and birth weight, but the direction of these associations were opposite in the Pakistan and Kenya samples. More specifically, in the Pakistan sample, higher maternal HbA1c was associated with higher weight at birth (t[101] = 2.6, p = .01), but in the Kenya sample, higher maternal HbA1c was associated with lower weight at birth (t[26] = -2.4, p = .02). Notably, these findings only emerged after adjusting for relevant covariates, that is– pregnancy weight (assessed at 12–19 weeks' gestational age), maternal ethnicity, fetal sex, and weeks of gestational age at birth. Fetal sex did not moderate these associations in either country. These findings are limited by the small sample size in the Kenya sample. To further probe significant findings and explain opposing results, future research should examine various psychosocial, cultural, and contextual factors. Moreover, examining pregnancy outcomes in low- and middle-income countries is an important next step in outlining global health disparities and in understanding factors, such as birth weight, that set the stage for health and developmental trajectories during early-life and beyond.

Presentation Title: *Equitable Access to Early Care and Education*

Presentation Abstract:

ISSUE: Supply, cost, quality, hours of operation, and equity remain intractable challenges to the U.S. childcare system. Although 65% of young children need care because their parent(s) work (Bureau of Labor Statistics, 2019), half of US census tracts are childcare deserts with three or more children competing for each childcare seat (Malik et al., 2018). Inequities in childcare availability, affordability, and enrollment rates are associated with family income, ethnicity, single parenthood, and rural vs. urban location (Child Care Aware of America, 2018; Davis, Lee & Sojourner, 2019; Malik et al.; National Academies, 2018).

Equitable deployment of early care and education (ECE) resources requires accurate data on where needs are greatest. We have developed methodology to measure multiple dimensions of ECE access, using a family-centered, spatial approach. Metrics based on a radius around a family's home provide an authentic estimate of resource availability from a family perspective (Davis, Lee & Sojourner). Such data can also support informed community advocacy and planning/deployment of ECE resources.

METHODS & EARLY RESULTS: We used a two-step floating catchment area method to measure three aspects of ECE access within a set commute from a prototypical family home. Three catchment areas were used: 5-mile drive, 10-mile drive, and 30-minute public transit ride. We approximated residential location using a dasymetric mapping technique involving residential housing unit and child population data. Spatial access was the sum of the capacity-to-population ratios (seats per child) of all ECE providers within the catchment boundary of a family home. Cost burden was the average availability-weighted tuition of a childcare seat, expressed as a percentage of the median family income in this same catchment area. Quality was the availability-weighted likelihood that a seat was in a high-quality program. These accessibility indices were measured at the micro-level (i.e. residential lot) and can be summarized at different user-defined geographic levels.

Statewide, 67% of children lived in childcare deserts; only 14% lived in communities where care was affordable (7% or less of median family income); but 40% of nearby seats were high quality. We used random intercept spatial regression to predict access at the census tract level. As expected, areas that were wealthy and had a higher share of advantaged ethnic groups tended to have better access. However, the strategic placement of ECE resources resulted in better spatial access and higher quality in many low-income and predominantly Native Hawaiian communities. However, gap-group, under-served areas remain. Since there are different routes through which communities may become well- or poorly-resourced, we also plan to use a latent class approach to identify different community types.

PARTNERSHIPS: We are eager to find collaborators who can apply these methods to developmental issues and policy reforms that better support equitable access to nearby, high-quality, and affordable ECE. These measures would be especially useful when child-level data is also available, to predict how ECE resource access affects well-being. The methods can also be applied to other resources such as health care, green space, and healthy food sources.

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Presentation Title: *Ethnic-Racial Socialization and Coping in African American Emerging Adults*

Presentation Abstract:

Learning how to cope with stressful life experiences is necessary for achieving adaptive functioning for African American emerging adults (Clark et al., 1999; Pascoe & Smart Richman, 2009). Ethnic-racial socialization (ERS), defined as how children about the realities of their racial status and position in the social hierarchy, is a way parents teach their children how to cope with stressors in support of normative development (Hughes et al., 2006). Coping, or the cognitive and behavioral efforts individuals take to manage stressors, can either buffer or exacerbate the adverse consequences of these stressors (Compas et al., 2003; Lazarus & Folkman, 1984). Theories of adaptive functioning in African American families (Anderson & Stevenson, 2019; Murry at el., 2018) suggest the importance of culturally relevant protective factors, like ERS and coping, which support psychosocial wellbeing despite stressful life experiences. While ERS messages are grounded in increasing awareness of oppression and pride in one's racial heritage, emerging research describes that the potential buffering impact of these messages have may expand beyond only experiences of racial stressors (Anderson et al., 2019; Womack & Sloan, 2017). Framed in a theory of adaptive functioning in response to stress (Anderson & Stevenson, 2019), the present investigation examined the association between ERS and coping strategies for African American emerging adults. The current study examined the association between three ERS messages (racial pride, racial barrier, and egalitarian messages) and engagement (active, planning, and positive reframing) and disengagement (self-blame, venting, behavioral disengagement) coping strategies utilized in response to participants' reported general life stressors. It was hypothesized that more frequent ERS messages would positively predict engagement coping strategy utilization and be negatively associated with disengagement coping strategies. A sample of 234 Black college students from a large, racially diverse research institution participated in the study (Mage = 19.86, 78% female). To examine these relationships, hierarchical regression analyses were conducted. For engagement coping strategies, findings indicated that racial pride messages positively predicted active coping strategy utilization ($\beta = 0.20$, $p = .01$). Racial pride ($\beta = 0.16$, $p = .04$) and egalitarian messages ($\beta = 0.18$, $p < .01$) were positive associated with positive reframing coping strategy utilization, whereas racial barrier messages was negatively associated with the coping strategy ($\beta = -0.16$, $p = .03$). In terms of disengagement coping strategies, racial barrier messages were positively associated with self-blame coping ($\beta = 0.29$, $p < .01$), whereas egalitarian messages were negatively associated with behavioral disengagement coping ($\beta = -0.17$, $p = .02$). Results suggest that, though racial barrier messages are considered to include coping socialization, they were not associated with adaptive coping strategy utilization, for the current sample. Conversely, racial pride and egalitarian messages were found to support engagement and dissuade disengagement coping strategy utilization. This study emphasizes and will discuss the importance of further clarification of ERS and coping as district but related constructs and the way in which ERS promotes coping beyond racial contexts.

Presentation Title: *Examining the effects of classroom format transitions on teacher well-being, self-efficacy, and instruction among a group of preschools*

Presentation Abstract:

Introduction: While previous research focused on the transition to remote instruction in March of 2020, less is known about additional transitions due to school or classroom COVID-19 outbreaks. Thus, the purpose of this study was to better understand preschool teachers' experiences when transitioning between remote instruction and in-person instruction during the 2020-2021 school year. Specifically, we examine how these transitions affect teacher well-being, self-efficacy, and instruction.
Methods: The sample used in this study is group of preschool teachers who were part of a pilot phase of a randomized control trial study evaluating the impact of two components of a preschool curriculum. The 32 teachers participated during the school year 2020-2021. Measuring transitions and teacher outcomes was a part of the pilot study.

To better understand teachers' experiences during these transitions, we conducted semi-structured interviews (n=32) with preschool teachers (both lead and assistant teachers) from three school districts in Southeast Michigan. At the time of the study, remote instruction, in-person instruction, and hybrid instruction was reported by participating teachers. Additionally, survey data was also collected to examine teacher's self-efficacy (Teacher Sense of Efficacy Scale), burnout (Maslach Burnout Inventory), thrive (Brief Psychological Well-Being Scale) and stress (Perceived Stress Scale) during transitions. We also inquired about the frequency of transitions between remote and in-person instruction. Descriptive preliminary analyses were conducting comparing subscale scores among three groups of teachers based on number of transitions (High -more than 3-, Medium -3-, and Low transitions -less than 3).

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Results: Preliminary results from interviews suggest that while teachers' experiences varied during transitions, many felt some level of stress during the transitions. Additionally, teachers shared how remote instruction affected family relationships and their instruction. The preliminary results also showed that teachers experiencing more transitions were more likely to express burnout as feeling more emotionally exhausted and more cynical. Interestingly, teachers with medium levels of transitions were more likely to be more efficient in managing classrooms and have more instructional strategies.

Implications: Because preschool teachers were often the first to transition back to in-person instruction during the pandemic, and the nature of preschool required arguably the most adjustments to return to in-person instruction, findings have implications for stakeholders planning for future transitions. While the pandemic will continue to cause transitions between instruction modalities, the study contributes to research to improve early childhood transitions due to other emergencies. The study also offers insight into innovations spurred by transitions to remote instruction based on teacher perceptions. Further qualitative and quantitative analyses will to be conducted to expand these preliminary findings.

Presentation Title: *From Community Violence Exposure to Bullying Victimization of Urban African American Adolescents in Chicago's Southside*

Presentation Abstract:

Urban African American youth in Chicago's Southside have high rates of exposure to community violence, due to exposure to violent crimes, institutional discrimination, limited job opportunities, poor infrastructure, racial profiling, and social isolation. These structural barriers are likely to contribute to feelings of oppression and marginalization, which can negatively impact their relationships with their peers. The relationship between exposure to community violence and bullying has been well researched and is theoretically supported. Much of the research literature has examined how community violence exposure might be associated with bullying and aggressive behaviors. In contrast, relatively fewer studies have examined how community violence exposure might be linked to bullying victimization, although recent literature shows that exposure to one type of violence victimization can increase the risk of exposure to other forms of victimization. The present study examined how urban African American adolescents who are exposed to community violence might be at risk of bullying victimization and whether this relationship can be explained by depressive symptoms, exposure to peer deviance, and drug use.

Data were collected between August 2013 and January 2014, and the participants consisted of 639 African American adolescents (ages 13-21) from four communities in Chicago's Southside. An age range of 13 to 20 was chosen for this study as it represents early to late adolescence. The descriptive statistics indicate that among the participants, 45.5% were males, 54.2% were females, and 74.6% received government assistance. A cross-sectional research design was used. Analyses included descriptive statistics, correlational analyses, and structural equation modeling (SEM). Controlling for biological sex, age, and government assistance, the following hypotheses are proposed: (a) exposure to community violence is associated with an increase in the risk of bullying victimization, and (b) depressive symptoms, exposure to peer deviance, and drug use might explain the association between exposure to community violence and bullying victimization.

The study found that African American adolescents who were exposed to community violence were likely to experience bullying victimization, have high levels of depressive symptoms, be exposed to peer deviance, and use drugs. We also found that exposure to community violence is positively associated with depressive symptoms, which in turn are positively related to bullying victimization ($\beta = .068$, CI = .016-.120). Urban African American adolescents who are exposed to community violence have a higher level of depressive symptoms, which in turn can heighten their risk of bullying victimization. This is especially important for adolescents who are living in structurally disadvantaged communities where exposure to violence is highly prevalent. Depressive symptoms can increase their vulnerability to bullying victimization as adolescents who show signs of depression have difficulty defending themselves. Thus, practitioners need to closely assess adolescents' internalizing symptoms and how depressive symptoms are likely to adversely impact their socialization and relationships with others.

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Presentation Title: *Getting out of the Silo: Creating a Holistic Early Childhood Education Multilingual Teaching Pathway for Dual Language Learners*

Presentation Abstract:
In the United States, 32% of children ages birth through age five come from a home where a language other than English is spoken (Holtby, Lordi, Park, & Ponce, 2017). These children, known as Dual Language Learners (DLLs), are learning their home language while also learning English (ECLKS, 2021). The majority (58%) of DLLs live in low-income households (MPI, 2017). Teachers are key in helping DLLs; therefore, the purpose of this project is to transform and enhance research- and competency-based, child development (CD)/early childhood education (ECE) programs that would provide ECE educators with the competencies to work with DLL children and increase the number of well-prepared racially, ethnically, and linguistically diverse candidates for Lead Teacher licensure. Research highlights that most assessments are designed for English monolingual children; hence, there is a need for comprehensive assessment tools for DLLs (Oliva-Olson, Estrada, & Edyburn, 2017). Research also underscores that it is crucial to utilize more than one assessment tool when working with DLLs. Rather than relying on standardized assessments that do not address the sociocultural background of children, these assessment tools need to include other methods such as observation and interviews with families (National Academies of Sciences, 2017). To outline essential knowledge and skills for ECE educators, California Commission on Teacher Credentialing (CTC) created Teaching Performance Expectations (TPEs) in 2019. However, there is no observation tool to measure the competencies of ECE educators for their preparedness and effectiveness to work with multilingual children and families. In this project, we are developing and will pilot a transformative observation-based growth and development tool focused on high-impact educator competencies for dual language learner (DLL) instruction. This tool will (a) align with California's newly created teacher performance expectations TPEs and (b) provide institutions of higher education (IHEs) (2- and 4-years), Early Learning sites, and other ECE stakeholders with a common language. This common language will be used to (a) assess the development of early educator DLL competencies, (b) support continuous growth and development of educator competencies across settings (practicum settings and various IHE settings), and (c) provide formative feedback based on review and analysis of observation results to candidates regarding their progress, to IHE programs, and Early Learning sites. The methodology involved participatory research where a community college, 4-year university, and local school district partnered to create 8 DLL teacher competencies. As a collective we created a matrix to demonstrate where each competency could be introduced, developed, or mastered in coursework (at both 2-year and 4-yeard IHEs) and classroom settings in the school district. This transformative work has allowed us to get out of our respective silos to work collaboratively on a pathway to DLL teacher preparation. With the increase in dual immersion classrooms across the US, there is a growing need to better prepare a workforce in ECE for DLLs. Upon completion of this pilot study, we aim to further professionalize the ECE workforce by working with state policy efforts that will link the preparation, performance assessment, and ongoing professional development of the ECE workforce.

Presentation Title: *How Parents of Young Children Discussed George Floyd and the Black Lives Matter Movement*

Presentation Abstract:
Background
By age 3 children begin developing color consciousness and identifying people by racial characteristics (Derman-Sparks, 2012). Copenhaver-Johnson (2006) has suggested an urgent need to understand how white families racially socialize their children. Two recent studies, focused on school-aged children, have investigated how white parents approach discussions of race and racial injustice with their children, but investigations with parents of younger children remain limited (Hagerman, 2017; Perry et al., 2019).

Critical race theorists (Delgado, 2017) contend race is socially constructed and has historical roots resulting from both systemic racism and individual level discriminations. Given ongoing high-profile incidences of racial injustice, such as the murder of George Floyd in 2020, the current investigation aimed to: (1) Explore whether and how parents of young children, learned about, understood, and discussed issues of race and racism in the aftermath of the death of George Floyd, (2) Examine factors that may influence parents to (dis)engage their children in such conversations, and (3) Unpack the complexities of parents' reflections on local reactions to racial injustice.
Methods

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The current study drew from a longitudinal investigation of how parents of young children (ages 3-6) discuss challenging social issues, including race and racism. Twenty-four parents who participated in wave 1 interviews in 2019 were invited to participate in a second wave focused on racism and racial injustice in the aftermath of George Floyd's death in 2020. Twenty parents participated in wave 2 interviews via Zoom or phone calls . In semi-structured interviews, parents were asked whether and how they had discussed George Floyd's death and the Black Lives Matter movement, or how they would explain what happened to their child if it came up (if they had not yet discussed it).

Analysis and Results
Data were analyzed using a grounded theory approach (Corbin & Strauss, 2015). Each interview was independently coded by multiple authors. While coding, peer debriefings were used to compare codes and adjust the codebook to achieve 100% agreement across team members.

Four themes emerged. (1) Most parents reported engaging their children in discussions about the importance of treating people kindly and equally. (2) The extent of families' conversations about racism and the Black Lives Matter movement were influenced by parents' assessments of urgency, children's awareness/exposure to racial diversity, and parents' reservations/concerns about causing confusion. (3) Parents' responses were informed by what happened locally in the aftermath of the death of George Floyd, which included both peaceful marches and more destructive rioting/looting. (4) Parents focus on highlighting aspects of these local responses seemed to vary based on parents' childhood/educational/occupational experiences, and their current family characteristics and social locations.

Discussions and Implications
In our sample, parents of young children did discuss race and racism after the death of George Floyd, though the extent to which racism and the Black Lives Matter movement were explicitly explored and processed varied by families. The current study findings might stimulate further conversations among parents and educators regarding the needs and processes of discussing race and racism with young children.

Presentation Title: *Humanity's Evolved Developmental Niche Optimizes Healthy and Prosocial Development: Initial Evidence from Five Studies*

Presentation Abstract:
We use a transdisciplinary approach to human development that integrates ethological, ethnographic, neurobiological, and clinical insights. Cross-disciplinary research suggests that avoiding toxic stress and adverse experiences in childhood is not enough for healthy development but that positive, nurturing experiences are also vital (Garner et al., 2021). Utilizing the theoretical framework of the Evolved Developmental Niche (EDN), the ecological system of care evolved to meet the basic needs of developing children, our research agenda investigates wellness across the lifespan. Our methods of assessing wellness include both behavioral outcomes in childhood and adulthood as well as neurobiological metrics.

We report on five studies. Study 1 tested the robustness of the EDN using a longitudinal investigation (N=170): we predicted child inhibitory self-control at age 4 using measures of EDN provision at 12 months, including 52 observational and maternal report variables. A machine learning, variable selection lasso technique assessed which variables related to child inhibitory self-regulation. Variables from each EDN component contributed to child inhibitory self-control (see Figure 1), suggesting that positive outcomes benefitted not just from maternal sensitivity but from disparate elements of EDN-consistent caregiving.

In three physiological studies, we investigated the influence of the EDN on both child and adult autonomic regulation (respiratory sinus arrhythmia, RSA). First, we examined maternal protectionist behavior (reactive, calculating, and dominant protectionism), as EDN-inconsistent components of children's early experience in relation to children's RSA. Longitudinal latent growth curve modeling showed increases in mothers' (N=78) protectionist behavior related to children's lower vagal tone during relaxed experiences when controlling for socioeconomic status and maternal history of basic needs fulfillment. Second, we examined maternal vagal tone and stress in relation to child baseline vagal tone (N=73). Higher maternal baseline vagal tone related to increased child baseline vagal tone with the opposite association for maternal reports of stress. These findings suggests that the nature of maternal wellbeing— both her physiological functioning as well as her perception of her own stress—may be important features of the caregiving environment with respect to children's autonomic development. Third, we examined the interaction between childhood EDN-history and adverse childhood experiences (ACEs; Felitti et al., 1998) on women's RSA (N=113). EDN-history moderated vagal withdrawal from baseline to stress and supported vagal activation from

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stress to recovery. Positive EDN-history acted as a buffer against ACEs on vagal adaptability across differing conditions, suggesting that the effects of early adversity on physiological adaptability in adulthood are mitigated by early EDN-consistent care. Such care might thus be a key component of physical and psychological wellbeing and resilience (see Figure 2).

We also tested possible long-term effects of childhood EDN-consistent care on adult personality (N=178), examining the interaction between EDN-history and ACEs on aggression, detachment, and engagement. The results suggest that EDN-consistent childhoods may mitigate the negative effects of ACEs for positive but not negative personality outcomes.

Provision of humanity's EDN may provide the sociocultural environment that facilitates healthy biopsychosocial development, promoting inhibitory self-control and physiological adaptability years later, even into adulthood.

Presentation Title: *Impact of Covid 19 on Comprehensive Character Education: Findings from National Schools of Character*

Presentation Abstract:
The role of Character Education (CE) programs in empowering the lives of young people are well documented. Such programs have been widely used in schools to help develop adolescents into ethical, connected, and thriving members of society. A first of its kind initiative was put in place to assess the National Schools of Character (NSOC) as part of the Cultivating Virtue in Leaders (CViL) Program that was launched to bring together school leaders and scholars from the field of character education practices by engaging in a conceptualization exercise of pathway modelling using their school's CE program. Pathway modelling is a tool used to conceptualize and draw a systems map of an existing program, which includes both internal and external stakeholders' participation, and relates the program to one or several systems (Urban & Trochim, 2017).

The initiative was particularly designed to study 11recent NSOC awardees from the American Midwest. Each school had a 3-member leadership or CE team that was invited to participate in a 2-day online workshop. All participants filled out a baseline survey N=33, of demographic and other CE related questions. All participants were asked to consider the following questions as they conceptualized their CE models: 1) How did students, staff, and parents respond to their CE efforts? 2) How would you use CE in your building and community to recover from the pandemic? 3) How did school leadership teams address issues of racial and social equity in this post pandemic world? The 2-day online workshop had components of the systems evaluation protocol, which led to the creation of 11 pathway models. The goal was to build a conceptual articulation of each NSOC's CE program, so that they could indicate pathways and connections that they had adapted, evolved, changed, and emphasized during the covid 19 pandemic and social justice unrests.

In the results we highlight our overall findings from the 11 NSOC schools, and in 3 developmental sub-groups: elementary (4), middle (4), and high schools (3). Over 90% school leaders report having continued some form of CE programming during remote school. Our findings also indicate middle school students to have performed better in remote settings, on the core CASEL 5 social emotional learning (SEL) competencies as compared to their elementary counterparts (CASEL, 2018). We also highlight the case of a special high school and a title one middle school and discuss the needs and strategies for CE programs at different stages of development, given their program theory and cultural contexts. Additionally, we discuss findings on the strengths and challenges of school-based CE programs as related to the covid 19 pandemic, social justice protests, and the need for social emotional competencies during large ongoing social crises. Our goal is to share our findings from the NSOC assessment on the state of CE programs in the US Midwest during the ongoing covid 19 pandemic. The results would help school leaders, researchers, and practitioners look for the next chapter in building more robust and sustainable CE programs in the future.

Presentation Title: *Longitudinal Characterization of Parents' Perceptions on 5 to 6 year old's Cognitive and Music Skills*

Presentation Abstract:
Objective
To expand our understanding of children's early cognitive development beyond traditional academic assessments, we explore the associations between parents' perceptions of what children learn in early schooling, inclusive of music, and their children's cognitive and academic skills. The purpose of this study is to acknowledge and understand the contextual factors that are likely to influence children's academic development. Parents' understanding and

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perceptions of their child's learning, including music and arts, are linked to the success of their child's education as music can be useful in examining children's cognitive strengths (Eccles, 2005; Gallardo et al., 2021; Huijsmans et. al., 2021). Specifically, we investigated how parents' perceptions of their child's transitional kindergarten (TK) learning were associated with kindergarten outcomes and music cognition, and how parents' perceptions varied by family demographic factors.

Methods
Thirty-four culturally and ethnically diverse families (31% lower income, 20% Spanish Speaking), with children (46% Hispanic) participated in this research practice partnership. We utilized a mixed methods study to understand ethnic and economic variation in relation to child outcomes. Parents completed demographic surveys and were interviewed about their perceptions of children's learning and development in TK. Parents' perception of TK learning codes included numeracy, literacy, art and music, fine and gross motor, openness to learning, school routines, and social emotional development. Children were assessed in TK (n=34, M age = 5.6) and kindergarten (n=29, M age = 6) using the Woodcock Johnson IV Early Cognitive and Academic Development battery (WJ ECAD IV; Schrank, McGrew, & Mather, 2015). Children also completed music measures on pitch production, pitch phoneme, and matching tones.

Results
The majority of parents describing children's learning in TK aligned with traditional measures of early development including literacy, numeracy, and social emotional development. Fewer parents described art and music, openness to learning, school routines as an important part of what children learn in TK. There were significant correlations between parent perceptions of TK learning with both Kindergarten ECAD outcomes and music cognition (See Table 1). There were no significant differences in parents' perceptions between demographic factors of language and income, controlling for maternal education, $F_{(7, 19)} = .61$, $p = .16$.

Discussion
Parent perceptions of early learning is well aligned with school's emphasis on literacy and numeracy, demonstrating that schools have great influence on the parents' way of teaching and learning with their children. With significant correlations between academic skills and parent perceptions of their child's nonacademic strengths, it is important to ensure parents and educators are thinking about ways of supporting their children beyond the traditional measures of literacy and numeracy. The negative correlations between academic skills and fine and gross motor may implicate that the control of body (ie. classrooms' heavy emphasis on sitting still) is not essential. Focusing on other cognitive skills, such as music, and parents' understanding of early learning beyond traditional academic measures, such as school routine, openness to learning, and socioemotional development, may support and strengthen children's connectedness to school, engagement with their peers, and motivation to learn.

Presentation Title: *Parents' Prenatal Anxious Attachment Style Predicts Postpartum Infant Bonding: Parenting Stress as a Mediator*

Presentation Abstract:
Background: The parent-infant bond provides an essential foundation for positive parenting (Condon, 1993; Condon & Corkindale, 1998) and impacts child development (Mason et al., 2011; de Cock et al., 2017). Although predictors of mother-infant bonding have been examined, father-infant bonding has received less attention. In particular, mothers' avoidant attachment style (Nordahl et al., 2020) and parenting-related stressors (McMahon & Meins, 2021) have been found to predict postpartum infant bonding. The current study adds to this literature by longitudinally examining these relationships as dyadic processes among couples experiencing first-time parenthood, as well as by investigating parents' anxious, rather than avoidant, attachment style. Individuals with an anxious attachment style tend to fear being unloved by a partner and of abandonment (Fraley, Waller, & Brennan, 2000). This study is the first, to our knowledge, to investigate the longitudinal and dyadic relationship between mothers' and fathers' prenatal anxious attachment styles and their postpartum infant bonding, as mediated by parenting stress.

Methods: As part of a longitudinal study investigating the transition to parenthood, 157 first-time parents completed the Experiences in Close Relationships-Revised (ECR-R) Scale (Fraley, Waller, & Brennan, 2000) to measure adult anxious attachment style at approximately 25-30 weeks' gestation during a laboratory visit. Both parents completed the Parental Stress Scale (PSS) at approximately three months postpartum. The PSS includes questions regarding both positive and negative aspects of parenthood and assesses individuals' feelings about their role as a parent (Berry & Jonas, 1995). At approximately six months postpartum, families returned to the lab and parents completed the Postpartum Bonding Questionnaire (PBQ). The PBQ asks parents to respond to statements regarding their baby and indicate how often these experiences have recently been true for them (Brockington, Fraser, & Wilson, 2006).

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We conducted a two-level multilevel mediation model, wherein parents were nested within couples, to understand both the individual- and dyad-level factors influencing parent-infant bonding. We included the outcome measure (PBQ), the mediator (PSS), the predictor (ECR-R), and the covariate of parent gender at level-1; we included relationship status (i.e., married or dating and cohabiting) and infant age at 6 months as level-2 covariates.

Results: The multilevel model showed a significant direct effect of parents' prenatal anxious attachment on postpartum infant bonding (C-path estimate = 0.119, p < .001). When PSS was included as a mediator, the indirect effect (A*B-path estimate = .047, p = .001) and the total effect were significant (estimate = 0.05, p = .03). The direct effect of attachment style on infant bonding was fully mediated and was thus no longer significant (C'-path estimate = .006, p = .78).

Discussion: These results illustrate that both mothers' and fathers' prenatal anxious attachment style predict bonding with infants, and parenting stress fully explains that relationship. Findings point to anxious attachment as a potential intergenerational risk factor and suggest that prenatal parenting interventions should address attachment style and early parenting-related stress to support infant bonding and later childhood development.

Presentation Title: *Perinatal Infant Hair Cortisol Predicts 6-Month Infant Temperament*

Presentation Abstract:
Background: The body's stress response system matures and becomes more regulated in the first few months of life (Martins et al., 2020), which helps to support healthy infant development. Previous literature focusing on premature infants (e.g., Enlow et al., 2016) has implicated low infant cortisol as a potential risk factor for negative developmental outcomes. Furthermore, a growing body of research documents the impact of perinatal exposure to maternal cortisol on infant temperament (Davis et al., 2007; Glynn et al., 2007). In both animal and human models, elevated cortisol exposure in utero, both, was associated with infants' negative emotional reactivity and heightened fear responses. To our knowledge, the current study is the first to examine whether infant cortisol levels as measured in neonatal hair predict temperament approximately six months later.

Methods: As part of a longitudinal study, 79 first-time parents giving birth to singleton babies provided their infants' hair samples 1-2 days after delivery. At six months postpartum, mothers completed The Infant Behavior Questionnaire Very Short Form (IBQ-R VSF) as part of a laboratory visit the whole family attended. The IBQ-R VSF includes three subscales for measuring temperament: positive affectivity/surgency, negative emotionality, and orienting/regulatory capacity (Putman et al., 2014). The current study focused on the orienting/regulatory capacity subscale.

Results: A linear regression model that controlled for infant gestational age and age at the later postpartum assessment, found that higher levels of neonatal hair cortisol predicted greater orienting/regulatory capacity later in infancy ($\beta 1$ = .310, p = .024).

Implications: These results are the first to demonstrate that neonatal hair cortisol predicts temperament approximately six months later. Alongside other studies that have found that infant temperament at six months can predict negative affect and behavioral outcomes in early childhood (Abulizi et al., 2017), the current study's findings may have long-lasting implications for childhood and beyond. Future research should further investigate the mechanisms by which perinatal cortisol levels impact later infant temperament to provide a better understanding of the hormonal correlates of behavior in infants.

Presentation Title: *Perspectives on a Developmental Screening Program for Children 0-3 years with Sickle Cell Disease*

Presentation Abstract:
BACKGROUND: Sickle cell disease (SCD) is an inherited blood disorder associated with developmental delays. Within the United States, most with SCD are Black or African American (Hassell, 2010). Sickled red blood cells are abnormally shaped, break down faster than normal red blood cells and cause vaso-occlusion (blockages in blood vessels) that can lead to oxygen desaturation, pain, and stroke (Morton & Key, 2002; CDC, 2010). SCD contributes to health complications that can emerge in the child's first year of life and persist throughout the lifespan (Hogan et al., 2006; Prussien et al., 2019; Thompson et al., 2002). Early detection of developmental delays and referral to early intervention (EI) therapy services can potentially reduce delays and improve outcomes, yet few children with SCD are screened or referred (Hoyt-Drazen et al., 2016; Whiteman et al., 2015). The purpose of this study was to

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understand the factors that contribute to participation in developmental screening and home-based services for children with SCD from caregivers and stakeholders in EI.

METHODS: EI providers and caregivers of children 3-5 years with SCD completed a semi-structured interview and survey. Caregivers completed the Knowledge of Infant Development Inventory (KIDI); the KIDI is a validated measure and has been previously used with caregivers of children with SCD (MacPhee, 2002; Thompson et al., 2002). EI Providers completed the Implementation Climate Scale (ICS), which is an 18-item survey to assess the readiness of an organization to embrace evidence-based practices and new programs (Ehrhart et al., 2014). Thematic analysis identified major themes from interviews. Results were analyzed to identify patterns across the dataset. A follow-up survey asked EI providers to rank order incentives for providers to implement evidence-based practices.

RESULTS: Eleven caregivers and eight EI providers participated. Three main themes were identified: 1) high acceptability of a screening and referral program, 2) awareness disparities in healthcare delivery and caregiver experiences, 3) need for caregiver buy-in. All participants described a need to support caregiver buy-in and desired SCD specific education, including the risk and prevalence of developmental delays, common indicators of delay, and strategies to improve child outcomes. Survey results demonstrated that knowledge related to child development is limited among caregivers (KIDI; mean = 79%, SD = 9%). EI providers expressed high interest in increasing EI utilization, however, ICS scores indicated very low incentive (mean = 0.08, SD = 0.22) for implementing evidence-based practices. The most preferred incentive was the ability to make a decision about something (e.g., topic of meeting).

CONCLUSION: These findings support the need for a screening and referral program for children with SCD, with a focus on caregiver engagement and education about child development and SCD.

Presentation Title: *Prenatal Adversity and Neonatal Brain Connectivity on Early Executive Function: The Role of Maternal Mind-Mindedness*

Presentation Abstract:
Introduction. Childhood exposure to poverty and related stressors alters brain development in frontal, parietal, and temporal regions important for executive function (EF). Whether these links begin prenatally to alter emerging EF is unknown. Maternal attunement to infant mental states (Maternal Mind-Mindedness, MMM) is one aspect of the early caregiving environment that supports EF and brain connectivity in older children. Whether MMM buffers the adverse effects of early life adversity and/or shapes the neural underpinnings of emerging EF is unclear.

Methods. This multi-disciplinary, longitudinal study focuses on 399 infant-mother dyads oversampled for poverty exposure. During pregnancy, mothers completed background measures which were analyzed with confirmatory factor analysis resulting in two factors: Social Disadvantage (education, health insurance, income-to-needs ratio [INR], area deprivation, nutrition) and Psychosocial Stress (depression, stress, racial discrimination, life events). At birth, neonates underwent resting-state functional (n=319) and diffusion (n=303) MRI scans on a Prisma 3T scanner. Key resting state networks included cingulo-opercular (CO), frontoparietal (FPN), ventral (VAN) and dorsal attention (DAN), and default mode (DMN) networks. Key white matter tracts included the cingulum, uncinate, and inferior fronto-occipital fasciculus (IFOF). At the 1-year follow-up, MMM was observed during parent-child interactions (n=232 coded). At age 2 years, the Minnesota Executive Function Scale task assessed EF (n=125 assessed to date) and INR was collected as a measure of postnatal disadvantage. Social Disadvantage and Psychosocial Stress were related to neonatal brain connectivity using multiple regression adjusted for covariates (age at scan, preterm birth, sex). Next, measures of adversity, brain connectivity, and MMM were fitted to EF using multiple regression and moderation analyses adjusted for covariates.

Results. Prenatal exposure to Social Disadvantage was independently related to aberrant neonatal CO (β=-.15) and VAN-FPN (β=.13) network connectivity and right dorsal cingulum (β=-.17), bilateral inferior cingulum (β=-.20) and left IFOF (β=-.17) microstructure (all p≤.03). Psychosocial Stress was independently related to CO-DMN connectivity (β=.16, p=.007) and left uncinate microstructure (β=.14, p=.01). Social Disadvantage and aberrant FPN-CO, IFOF, and cingulum connectivity predicted poorer age 2 EF (all p≤.03). Maternal Psychosocial Stress was not independently related to EF. At follow-up, year 1 MMM was positively associated with age 2 EF (Table 1). Moderation analysis suggested that prenatal INR was associated with worse EF outcomes in the lower MMM exposure group whereas this association was reduced in the higher MMM exposure group (Figure 1A). Although pre- and postnatal INR were highly correlated (r=.92, p<.001), there was no interaction between postnatal INR and MMM (p=.07). Infants exposed to higher year 1 MMM had stronger neonatal cingulum connectivity-EF outcome relationships than infants exposed to lower MMM (Table 1, Figure 1B). There was no interaction between MMM and either FPN-CO or IFOF connectivity on EF (p>.05).

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Conclusions. Integrating multi-modal neuroimaging, observational, and behavioral data elucidates the pathways by which EF delays emerge in early childhood. Prenatal exposure to poverty and altered neonatal brain connectivity increase risks of poorer EF outcomes. MMM may buffer the effects of poverty exposure and enhance brain-EF relationships, making MMM an important intervention target to support brain-EF development.

Presentation Title: *Prenatal Neighborhood Crime Exposure is associated with Socioemotional Functioning at Age 1 Year*

Presentation Abstract:

Prenatal exposure to neighborhood crime has been previously associated with reduced frontolimbic connectivity in the neonatal brain (Brady et al. 2022); however, it is unknown whether prenatal exposure to neighborhood crime is also associated with early socioemotional outcomes. It is plausible that prenatal crime exposure relates to later behavior, as studies in middle childhood and adolescents demonstrate a link between living in a high-crime neighborhood and mental health problems (Fowler et al. 2009). The aim of this study is to test the hypothesis that prenatal exposure to neighborhood crime is related to socioemotional functioning at age 1 year.

The study utilized a longitudinal cohort of 399 women recruited during pregnancy as part of the Early Life Adversity and Biological Embedding study at Washington University. Prenatal addresses were collected for each mother and coded by census block group. Crime data for each block group was obtained from Applied Geographic Solution's CrimeRisk Database, which is a commercial dataset that combines data from over 16,000 law enforcement agencies. Violent crimes (e.g., murder, rape, aggravated assault, robbery) and property crimes (e.g., burglary, larceny, vehicle theft, arson) were examined. At one year of age, the mothers of 293 infants completed the Infant-Toddler Socioemotional Assessment (ITSEA), which contains information about four domains of behavior: externalizing, internalizing, dysregulation, and competence. Pearson correlations were used to examine the relationship of block-tract group crime to the ITSEA t-scores in each domain. Results were corrected for multiple comparisons using an FDR procedure. To assess the specificity of exposure to crime compared to other forms of adversity, a composite measure of adversity experienced during pregnancy (income-to-needs, Area Deprivation Index, education, insurance status, and Healthy Eating Index) was added to the linear models of crime and ITSEA t-scores.

The results of this study demonstrated that prenatal exposure to high levels of neighborhood violent crime was related to higher ITSEA externalizing (FDRp<.001), internalizing (FDRp=.03) and dysregulation (FDRp < .001) t-scores, but not ITSEA competence t-scores (FDRp=.31) at age 1 year. Living in an area with high property crime during pregnancy was also related to higher ITSEA externalizing (FDRp=.001) and dysregulation (FDRp<.001) t-scores, but not ITSEA internalizing (FDRp=.06) or competence t-scores (FDRp=.81). Prenatal neighborhood violent and property crime exposure continued to be significantly associated with externalizing and dysregulation symptoms, but not internalizing symptoms, when adversity was added to the model.

These findings provide evidence that living in a high crime area during pregnancy is associated with poorer socioemotional processing in the externalizing and dysregulation domains at age 1 year, even after accounting for other forms of adversity. The specific association with crime exposure may be due to differential effects of threat vs. deprivation (McLaughlin et al. 2014). A limitation of this analysis is that it does not account for crime exposure during the first year, but this is a planned future direction of the study. Nevertheless, the current findings suggest that early exposure to crime may affect socioemotional functioning, extending the prior literature focused on middle childhood and reiterating the need for crime reduction.

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Presentation Title: *Promoting Partnership Between Resettlement Agencies And Head Start To Improve Refugee Access To Early Education*

Presentation Abstract:
Head Start, the federally funded preschool program for low-income children, provides comprehensive education, health, mental health, and family support to build an equitable and universal preschool system (NAEYC, 2019). National Head Start Impact study indicates multiple and long-term benefits such as vocabulary, letter-word recognition, mathematic skills, and socioemotional development for children who participate in Head Start (DHHS, 2010). Despite these benefits, the literature indicates that refugee families with young children have less access to Head Start programs than their US-born peers, 47 percent versus 65 percent (Fortunity et al., 2010, Morland et al., 2016), and children of refugees remain underrepresented in Early Head Start /Head Start (EHS/HS) programs (Gelatt et al., 2014). Refugee families depend on case managers at resettlement agencies to access ECEC services and other public benefits. Connecting refugee families with child-care providers is a complex and multilayered process, and oversight of this process is further complicated (Gross & Ntagengwa, 2016). A lack of accountability, interagency training, and information-sharing mechanisms makes the process of obtaining childcare confusing and frustrating for refugee parents and the staff of refugee-serving agencies (Gross & Ntagengwa, 2016). Additionally, there is a wide variety of access challenges including parents' lack of awareness of available programs, cost, language barriers, logistic barriers to enrollment, and lack of comfort with available programs that prevent immigrant and refugee families from enrolling in EHS/HS programs (Gross & Ntagengwa, 2016; Golden & Fortunity et al., 2010). Moreover, the staff at refugee resettlement agencies are unprepared to guide refugee families toward the most stable and highest-quality ECEC options, often lack knowledge of refugees, and cannot track them across their system (Gross & Ntagengwa, 2016).

Refugees receive services under the umbrella of providers and these services include receiving referrals to agencies providing early care settings, medical care, assistance for needy families, English language education, and more (Randolph, 2012). However, there is little research examining the interagency collaboration to increase access to EHS/HS services for children in refugee families.
This study focuses on the partnership between refugee resettlement agencies and EHS/HS programs to provide childcare services to refugee parents. It aims to explore the institutional and systemic challenges in cross-agency collaboration between refugee resettlement agencies and Head Start providers. Accordingly, a mixed-methods approach will be employed to better understand the collaboration between resettlement agency staff and EHS/HS providers and explore their needs, experiences, and knowledge about processes for childcare referrals and the enrollment of refugee children in EHS/HS programs. The researcher will conduct surveys and in-depth interviews with staff at refugee resettlement agencies and local HS/EHS providers in Massachusetts, where immigrants and refugees make up 17 percent of the state's population (American Immigration Council, 2020).
This project will help to promote the policies, strategies, and resources for increasing refugee children's enrollment in EHS/HS services. The findings of the study will also provide a framework for coordination between refugee resettlement agencies and EHS/HS programs and to increase the enrollment of refugee children in EHS/HS services.

Presentation Title: *Review of Research on Creativity Development: From Realities toward Hope for Culturally Sustaining Creative Education*

Presentation Abstract:
In response to the 2022 Special Topic Meeting call, we revisit the assumptions embedded in methods of researching child creativity (Hill, Immordino-Yang, and Cooper, 2022). We analyze empirical research from education, child development, and educational psychology journals to evaluate the potential of this research to impact policy and practice for culturally sustaining (Paris & Alim, 2017) creative development.
Creativity is a defining feature of the human experience that allows humans to imagine futures and thus alter their present realities (Vygotsky, 2004). Developing creative abilities benefits children's cognition (Runco, 2017), improves learning (Beghetto et al., 2014), supports social-emotional well-being (Rufo, 2017), leads to personal fulfillment (Eckhoff & Urbach, 2008), and contributes to societal innovation (Cropley, 2015). Unfortunately, not every child gets to be creative—and thus, fully human—in the current education system (Leonardo, 2018).

Equity issues in research and practice pose barriers to optimal creative development in early childhood. The construct of creativity has been defined and normed based on Eurocentric epistemologies and ontologies, thus marginalizing communities of color (Beghetto et al., 2014). The creative development of Black and Brown children unfolds within a highly standardized rigid culture of compliance that is not conducive to self-expression and agency

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afforded to their White peers (Adair and Sanchez-Suzuki Colegrove, 2022). Much research on creativity is intermingled with the construct of giftedness, which is known for systematic exclusion and underrepresentation of children of color. Despite cities being rich centers of creative cultural activities (e.g., museums, public art installations, concerts), urban schools that primarily serve Black and Brown children are regularly underfunded, especially in the areas of art education programming and creative development opportunities (Tamer, 2009).

Given these considerations, the questions of who is represented in creativity research, how creativity is conceptualized, and the context in which it is studied become critical for our ability to draw implications relevant to culturally sustaining creativity development in urban early childhood contexts in the US. To answer these questions, we employ critical content analysis (Utt & Short, 2018) to conduct a close textual analysis within and across 60 articles. This method allows us to think with focal theories that highlight implicit assumptions about who is represented in the study and how as well as who is missing (Crenshaw, 1989; Ladson-Billings & Tate, 1995; Paris & Alim, 2017) and how creativity is constructed and researched in respect to its critical socio-cultural nature (Glavenue, 2015; Strekalova-Hughes & Ismail, 2019).

The preliminary findings highlight the need for methodological change and offer insights into the future direction towards hope for culturally sustaining creative development and education.

Presentation Title: *Sectarian and Nonsectarian Antisocial Behavior and its Effects on Adolescent Alcohol Usage in Northern Ireland*

Presentation Abstract:
In 2019, it was estimated that 825,000 adolescents ages 12 to 20 reported binge drinking on 5 or more days over the past month (National Institute on Alcohol Abuse and Alcoholism). The adverse short and long-term effects of adolescent alcohol usage are clear: a higher risk of school dropout (Chatterji and DeSimone, 2005), higher rates of depression and anxiety (Galaif et al., 2007), and lower self-esteem (Scheier et al., 2000). While there are clear contributing factors to the prevalence of adolescent alcohol usage, such as peer pressure, influence from the media, and parent's drinking behavior (The Recovery Village, 2021), questions remain regarding the socioecological longitudinal predictors of its usage, specifically in the context of political violence. In a prior cross-sectional study, it was determined that mother's alcohol dependency, non-sectarian community antisocial behavior, and sectarian antisocial behavior were significant predictors of child alcohol use (Vetterly, 2021 conference presentation). The present study aims to examine the factors of non-sectarian community antisocial behavior and sectarian behavior in a longitudinal context to determine its predictive utility on adolescent alcohol outcomes.

The current study utilizes survey data from mother-child dyads from a six wave longitudinal study conducted in Belfast, Northern Ireland from 2006-2012 with a total of 999 participants. However, only waves four, five, and six will be used for the present study. Adolescents reported on their exposure to both sectarian and non-sectarian antisocial behavior in the last three months as well as their alcohol usage. In order to examine the long-term potential relationship amongst these variables, a longitudinal path model will be utilized. More specifically, both sectarian and non-sectarian antisocial behavior will be examined at wave four and five, measuring the predictive effect of these variables on wave six adolescent alcohol use.

While the analyses are currently underway, the findings may inform clinicians about the long-term potential effects of violence exposure and its potential relation to adolescent alcohol usage. Overall, obtaining a greater understanding of the longitudinal contributors to adolescent alcohol usage may also inform interventions that aim to limit its consumption. Given the association between alcohol abuse and violence, and the involvement of adolescents in political violence in Northern Ireland (Shirlow & Murtagh, 2010), implications for potentially ameliorating adolescent's involvement in political violence will also be discussed.

Presentation Title: *Shaping the Conversation: Exploring Early Childhood Educators' Diversity Beliefs and their Self-Awareness of Racial Bias*

Presentation Abstract:
Introduction
Early Childhood (EC) educators' personal experiences with racism, diversity, and child-rearing inform their beliefs and their equity and diversity practices within their classrooms (Chen et al., 2009; Siwatu et al., 2015). Many EC educators enter the classroom with unchecked biases, often stemming from their own experiences, or lack of, with race and discrimination (Garrity & Wishard Guerra, 2015; Starck et al., 2020). Educators also report that they are

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uninformed about how to address topics of race in the classroom and avoid making race a focus of their pedagogical practice and curriculum design, leading to ineffective engagement with young children on racial issues (Ladson-Billings, 1998). This Research Practice Partnership study between researchers and a university-based child care program investigates EC educators' beliefs about diversity, including their perceived benefits and challenges for children, and how their self-awareness of personal racial bias is associated with these beliefs.

Methods
To explore teachers' self-awareness of racial bias and their beliefs about diversity, an explanatory sequential mixed-methods design (Creswell & Creswell, 2017) utilized an online survey and semi-structured interviews to extend themes evident in the survey data (Chen et al., 2009; Guyton & Wesche, 2005; Taylor & Sobel, 2001). Participants included 32 teachers of children 0-5 years-old from a university-based child care center (91% women; Mean 38 years; 69% English first language; 63% Person of Color). A subset of teachers (n = 6) participated in a semi-structured interview.

Results
Teachers perceived the concept of diversity to be nebulous and difficult to define. The majority of teachers (79%) described diversity using fixed demographic characteristics including ethnic background (28%), race (21%), SES (7%), nationality (10%), language (3%), and gender (14%) or with with non-specific words such as "difference" and "variety" (72%). Teachers' perceived benefits of teaching and learning in a diverse classroom focused on acceptance and awareness of difference (57% of survey participants, 100% of interview participants), opportunities to learn about different cultures (29% of survey participants), and about other viewpoints and perspectives (30% of survey participants). The primary concerns EC teachers (76%) presented were a fear of accidental cultural appropriation and a desire to avoid unintentionally offending others by raising awareness of their own bias. Additionally, this study found that self-awareness of racial bias was significantly associated with teachers' beliefs about diversity. See Table 1.

Discussion
Teachers' generic yet positive view on diversity does not seem to support them in developing the skills and confidence they need to adequately respond to bias in their work. Out of a deep fear of offending others or appearing racist, teachers appeared to avoid addressing their own personal bias at times, as well as avoid meaningful attempts to work towards interrogating racist ideologies and beliefs with co-workers, children, and families. Teacher beliefs and self-awareness are at the core of changing the everyday experiences of children in child care and must be addressed through a systemic approach by the field of early childhood education that includes teacher training programs, recruitment of diverse teachers, and a revision of curricular approaches to early education.

Presentation Title: *They/Them/Theirs: Children's Use Of Gender-Neutral Pronouns*

Presentation Abstract:
Natural gender languages, like English, have singular third-person pronouns that emphasize a binary construction of gender based on people's sex assigned at birth (Gygax et al., 2019). However, the idea that people are either men or women and whether this binary should be reflected in our language is an important topic of interest in society. Increasingly, some English speakers identify with nonbinary gender identities and have gender-neutral pronouns like "they." Considering that the number of people who use they/them pronouns is increasing (The Trevor Project, 2020), and the use of someone's correct pronouns signals that one's gender identity is supported (Doyle et al., 2021; McLemore, 2018; Perales et al., 2021), research investigating how people remember gender-neutral pronouns is increasingly necessary.

We examined pronoun memory by taking a developmental approach. Although children often process gender in a binary way (Bednarek & Shutts, 2017; Quinn et al., 2002; Wiesman et al., 2015), children can also have flexible beliefs about gender (Rhodes & Gelman, 2009) and such beliefs can be changed with interventions (King et al., 2020; Kneeskern & Reeder, 2022; Shutts et al., 2017). Consequently, it is possible that scientists and educators could develop effective interventions to teach children about nonbinary gender identities and gender-neutral pronouns. However, before conducting an intervention study, we sought to measure children's baseline memory for gender-neutral pronouns.
We conducted a pair of studies to investigate children's ability to remember gender-neutral pronouns vs. gendered pronouns. Four- to 10-year-old English-speaking children (N = 168; n = 79 males, n = 89 females, n = 0 nonbinary) listened to and saw an experimenter read an illustrated story about a target character and asked participants to

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repeat the story to the best of their ability. An experimenter transcribed the participants' responses, and later, a researcher extracted the pronouns the children had stated.

In Study 1, the story characters had stereotypically-feminine or stereotypically-masculine appearances (determined by independent raters). Feminine-appearing targets were presented with pronouns "she" or "they," and masculine-appearing targets were presented with pronouns "he" or "they." In Study 2, all story characters had gender-neutral appearances and were described using the pronouns "he", "she," or "they". Regardless of the gendered appearance of our targets, we found that children were more likely to respond accurately with gendered (93.75%) than gender-neutral (41%) pronouns (Study 1: $\beta=0.67$, SE=0.04, $p < .001$; Study 2: $\beta=0.53$, SE=0.20, $p = .008$).

These studies demonstrate that children struggle with remembering gender-neutral (compared to gender-stereotypical) pronouns. However, there are many possible reasons for this effect that future work might investigate. For example, what is the role of previous knowledge of these pronouns on performance? How much exposure is necessary to reduce these effects? Are there ways to train people to better remember gender-neutral pronouns? We would like to collaborate with those interested in child development, social psychology, linguistics, gender studies, and mental health to conduct these and related future directions in this work.

Presentation Title: *Transdisciplinary Team Science for Adolescent Health: A Data Walk from USA to Jamaica and Back*

Presentation Abstract:

A Data Walk is an innovative approach from Public Health for multi-sector stakeholders to collaboratively interpret data in real-time to address real-world problems (Murray et al., 2015) including human development challenges (Annie E. Casey Foundation, 2016: https://www.aecf.org/blog/data-walk-is-a-key-tool-in-results-based-leadership/). Similar to a poster symposium, participants view multiple posters that are sequenced to tell a coherent story, but posters are much less dense and a collaborative discussion process is used to meld attendee perspectives. This Data Walk will illustrate the process of transdisciplinary team science in global adolescent health research addressing obesity prevention.

Adolescents in Jamaica are being inundated by the inflow of U.S. media, and those who have internalized U.S. culture and become "Americanized" via remote acculturation are especially vulnerable to unhealthy eating habits promoted by U.S. advertising (Ferguson et al., 2018, Child Development). U.S. cable TV is a major problem because it is widely accessible across the Majority World, most of its advertising features energy-dense foods, and heavy television viewing has been linked to less negative beliefs about the consequences of eating unhealthy food (Russell et al., 2015). Our Data Walk takes you on the journey of why and how our transnational team including university researchers, community, school and health partners, and students in Jamaica and USA, conducted translational research leading to the design, evaluation, and scaling of a food-focused media literacy intervention for Americanized adolescents and families in Jamaica to promote critical thinking skills about food advertising: the JUS Media? Programme (Ferguson et al., 2019, 2021).

Attendees will group or pair themselves (with disciplinary diversity if possible) and collect an index card with discussion questions for each poster, then start their self-guided Data Walk. Groups will rotate sequentially through 7 posters arranged around the room, stopping to view and discuss each for 4-5 minutes. The author(s) will be available for questions as each group exits the Data Walk. Posters will be low-density (4-6 bullet points of data), visually attractive, and jargon-free (see poster sequence below):

1. Remote Acculturation: Introduces this novel phenomenon using an accessible definition, adolescent-drawn image, and participant quotes (Ferguson, 2018)
2. Media Landscape in Jamaica: Illustrates the local versus global media to which adolescents are exposed daily, including TV and fast food billboards (Nelson et al., 2017)
3. Jamaican Nutrition: Compares national nutritional guidelines in Jamaica with data on actual consumption (Jamaica Ministry of Health and Wellness, 2015)
4. Media Literacy: Outlines core concepts such as advertisers' intentions, message meanings, and critical thinking about the food advertising (Christ et al., 1998)
5. Transdisciplinary Research: Presents multi-level modeling of cross-sectional data in Jamaica (164 adolescents and mothers) showing high media literacy as a buffer against U.S. media-driven unhealthy eating (Ferguson et al., 2020)
6. Transdisciplinary Intervention: Shares RCT findings from the JUS Media? Programme workshop in Jamaica (182 adolescents and mothers: Ferguson et al., 2021)

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7. Scaling: Demonstrates a novel method of scaling the intervention through digitization for virtual classroom delivery and cultural adaptation for U.S. immigrant and refugee groups (Simenec et al., under review)

Presentation Title: *Visualizing Person-Specific Mood-Sleep Dynamics in Children and Adolescents*

Presentation Abstract:

Mood and sleep are two interdependent indicators of well-being and are associated with socioemotional and cognitive functioning during childhood and adolescence (Baum et al., 2014; Hsieh & Lin, 2019; Lo & Chee, 2020; Nezlek et al., 2001; Owens, 2014; Palmer et al., 2018). Relational developmental systems (RDS) metatheory emphasizes that individual functioning is a result of the integration of the mutually influential relations between the individual and their context at a specific time (Bornstein, 2019; Overton, 2015). Accordingly, it is important to capture the holistic dynamic of mood and sleep.

Cross-lagged models are often used to describe the relations between mood and sleep. A cross-lagged model can capture several statistical coefficients of mood and sleep, including the autoregression (AR) of mood and sleep as well as the cross-lagged effects of mood and sleep. The ARs capture the temporal dependency, which is the carry-over effects when mood and sleep are perturbated by factors in their context. Cross-lagged effects describe the predictive effects from mood to subsequent sleep and from sleep to subsequent mood. Studies using cross-lagged models often use the cross-lagged effects to describe the relations between mood and sleep, but the whole model generates six coefficients: ARs of mood and sleep, cross-lagged effects of mood and sleep, and the personal average mood and sleep. Using vector plots to visualize the holistic dynamic relations between mood and sleep is an under-used but potentially useful approach to present all six coefficients in one picture (Abraham & Shaw, 2005). A vector plot is a graph that demonstrates the direction and magnitude of change of hypothetical starting points in the dynamic system. Arrows starting from a hypothetical point represent the direction and magnitude of change.
Using 3,472 measurement occasions of daily mood and sleep data from 31 children and adolescents, we employed dynamic structural equation modeling (DSEM) to generate person-specific ARs, cross-lagged coefficients, and personal average mood and sleep. We then used vector plots to present the holistic patterns of mood and sleep relations. To illustrate our approach, two out of 31 participants' vector plots were used as examples. In Figure 1, the arrows are going straight back to the setpoint. This figure demonstrates a pattern where there is no "coupling." That is, when mood or sleep are perturbated by events in the system, mood and sleep do not influence each other as they return to their equilibrium. In Figure 2, there is a swirl, and the arrows are angular. This figure demonstrates a pattern where there is "coupling" between mood and sleep. In other words, when this person's sleep gets disturbed, it will also impact their mood. Sleep and mood will keep playing off each other as they return to their equilibrium. Vector plots offer a useful holistic view of the dynamic relations between mood and sleep, and such a holistic pattern cannot be interpreted as the addition of isolated coefficients. Such a method may usefully illuminate changes within RDS-based models.

Presentation Title: *What Do Grandparents and Grandchildren Talk about During Digital Puzzle Games?*

Presentation Abstract:

The Chinese community has a long history of practicing multi-generational childrearing and believes that grandparental involvement positively influences children's cognitive and social-emotional development. However, rather than reflecting traditional or cultural values in community contexts, "multigenerational childcare" in the U.S. is often associated with risk factors for child development such as teen parents, incarceration, divorce, or separation. Thus, many Chinese immigrant families abandoned this traditional child-rearing practice during acculturation to the US culture. To better understand the unique influence of grandparents on child development in the Chinese community, this pilot research aims to examine the intergenerational interactions between grandparents and grandchildren, specifically, in the digital era. This study aims to investigate the comments that grandparents and grandchildren negotiate during an educational digital game, particularly that related to problem-solving.