

Research Statement

Physical inactivity is linked to five million deaths per year annually worldwide, signaling an urgent public health crisis. In the United States, chronic illnesses have substantially increased as physical activity rates have gone down. This trend is reflected in children and adolescents, with only 20-28% meeting physical activity guidelines. Physical activity during childhood and adolescence is associated with lifelong health benefits, both physically and psychologically that can carry into adulthood. I, as a health promotion researcher, am interested in exploring and testing novel contextual and community-based strategies and methodologies to promote physical activity, particularly for children, adolescents, and families. While previous physical activity research has found effective interventions to increase children's physical activity, there are some large gaps in the literature. Adolescents, particularly adolescents going through biopsychosocial transitions (e.g. school level, puberty) is under-studied. Transitional periods of development for children and families are a sensitive time for health and well-being, and physical activity participation can improve long-term health outcome, build positive habits, and increase feelings of connectivity with their community. My research aims to identify and assess community-based, contextually-responsive physically activity interventions for children, adolescents, and families to improve biopsychosocial outcomes in childhood into adulthood. Findings from this research will help create more effective, culturally-and-contextually-tailored physical activity interventions for children and families by identifying and utilizing methodologies and strategies that will promote physical activity and sustain through developmental stages and transitions. My program of research contributes to furthering knowledge in this area by 1) identifying contextually relevant variables associated with physical activity for children and families during times of developmental transition, 2) identifying novel intervention methodologies and strategies, and 3) applying this knowledge and these strategies to evidence-based physical activity interventions for children, adolescents, and families.

The development of my research program began during my graduate career, where I studied theoretical frameworks for physical activity and health promotion, developmental physical activity and sport, and public health related to physical activity. Here, I also collaborated on tailored physical activity interventions for women at different life course stages with unique barriers toward being physically active. Specifically, I led a study examining a physical activity intervention on postpartum fatigue for mothers (Swinney et al, 2024) and a strength-training focused physical activity intervention for Black women (Swinney et al, 2026, In press). I also collaborated on a virtual strength-training intervention for perimenopausal women (Lewis et al, 2025). Throughout these experiences and in obtaining qualitative perceptions of physical activity from participants, I came to understand the importance of family structures and community support in creating, adopting, and maintaining physical activity participation. This led me to my T32 postdoctoral position at the University of Texas at Austin, where I sought to obtain more research experience in community-based methodology and physical activity interventions with children, adolescents, and families.

In the first two years of my postdoctoral fellowship, I have substantially increased my knowledge, skill, and experience in large-scale, community-based physical activity research and intervention. Additionally, I gained in-depth knowledge of the built environment and its relationship to specific types of physical activity, like active commuting. I led a study that utilized qualitative methodology to explore perceptions of active commuting to school for middle school-aged girls (Swinney et al, 2026, In press). I also conducted a study on the relationship between parental perceptions of physical activity and active commuting on child's behavior (Swinney et al, Under review). Finally, I led a large-scale study using a mixed-methodological tool (Public Participatory Geospatial Information Systems) to elicit perceptions of the physical activity environment for 102 participants residing in low-income middle school catchment areas to provide formative research for intervention (Swinney et al, In progress). These projects gave me a more comprehensive perspective of variables that affect children's physical activity behavior, and lays the groundwork for future intervention regarding the built and social environments that influence physical activity for children and families. In addition to these experiences, I have collaborated on a large-scale physical activity study as the intervention coordinator for three low-income middle schools. Here, I have worked with an interdisciplinary team of scholars, city and local partners, school officials, community members, and students to co-create a contextually-responsive physical activity intervention. This also entailed gaining experience in implementation, process evaluation, and sustainability of community-based physical activity intervention. This role has provided me with an in-depth learning experience in planning and carrying-out large scale, federally funded physical activity research, which will prepare me for my own projects in the future. Off this work, I submitted an K99/R00 grant in June 2026 to investigate physical activity perceptions and behavior for eighth grade girls in the transition to high school.

In ten years, I see myself as an associate professor who explores population health and chronic illness prevention for children, adolescents, and families, with a particular focus on high-risk populations, through novel methodologies and strategies. Some major scientific questions I hope to pursue that build off my research objectives are: a) What methods and systems lead to physical activity promotion interventions that remain stable throughout multiple life transitions? b) What are the long-term biological and physical outcomes of contextually-responsive physical activity interventions for children and families?, and c) How can evolving technology be utilized in intervention delivery and maintenance? To do this, I aim to collaborate on research projects that make meaningful change in the long-term health of children and families. I would aim to bring my knowledge in child and adolescent research, physical activity, psychology, health promotion, and experience working in community-based interventions to build these relationship and research projects. I plan to across disciplines to create teams that speak to different aspects of an individual's life experience, such as those in health care, city planning, and social psychology. I look forward to actively contributing to further my research goals, and in collaborative work that uses shared resources and partnerships to make a lasting impact on child, adolescent, and family health and well-being.