

years, leading to improved consent forms, more targeted recruitment, clearer language and a more streamlined screening process. RPAG member surveys indicate a greater understanding of clinical research challenges, critical health issues, and how research can benefit them. The WE C-RAB has improved community recruitment efforts, as well as survey and study design. Researchers highlight the importance of feedback in creating greater study participant engagement, indicating deeper understanding of the community/participant perspective and how to work “with” community. Ongoing WE C-RAB-faculty partnerships have led to at least 3 federally funded grants. **DISCUSSION/SIGNIFICANCE OF IMPACT:** The 3 RPAGs provide the versatility to meet the needs of the diverse research spectrum across the AHC. This includes the type of research as well as the level or degree of participant/community engagement needed. RPAGs create greater connection and understanding leading to better participant experiences and the promise of better health outcomes.

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Feasibility of building a community-based gardening initiative

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OBJECTIVES/GOALS: Community gardening can foster healthy behaviors among low-income communities. This project aimed to develop a community garden. The primary objectives of this project are (1) assessing the need for and perspective on a community garden at the childcare center, (2) installing the garden, and (3) engaging children in gardening education. **METHODS/STUDY POPULATION:** This project took place at a childcare center in Harrisburg, PA. Most (74.6%) residents identified as Black or Hispanic/Latino. Every child at the center was eligible for free or reduced lunch. A listening session was held with directly impacted community members to discuss the need for a community garden. Four caregivers, 1 early childhood educator and a master gardener ($n = 6$) attended the listening session, in which they shared their personal strengths and challenges in growing food. Attendees provided suggestions on what foods they wanted to grow. Children enrolled in the center's summer program ($n = 50$) were then invited to participate in weekly gardening activities for 9 weeks. Activities were targeted to preschoolers (3- to 5-year-olds). Older children enrolled in the summer program were welcome to participate. **RESULTS/ANTICIPATED RESULTS:** Feedback from the listening session was positive. Attendees provided ideas on what to grow and shared interest in expanding the garden to the broader community. Project staff installed four garden beds and planted a variety of herbs (basil, mint, and lavender), fruits (strawberry and melon), and vegetables (tomato, squash, pepper, and onion). Roughly 20–50 children were engaged in the garden each week. Eight weeks into the project, one member from the broader community noticed the garden's growth and expressed gratitude to the staff, stating “I saw you when you first started planting. This is great what you are doing for the kids.” Children and the center's staff responded positively to the activities. The staff expressed verbal gratitude for the project and were enthusiastic about maintaining the garden. **DISCUSSION/SIGNIFICANCE OF IMPACT:** Developing a community garden was feasible in this sample and shows potential to (1) increase

children's food literacy and vegetable acceptance and (2) bridge the gap from farm to early childcare education. The project's success paves way for future gardening initiatives that address food access issues within other diverse low-income populations.

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Assessing feasibility of including participants in user experience (UX) design for genetic testing digital education platform (Genesis Ai)

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OBJECTIVES/GOALS: The study is designed to co-develop a genetics education digital platform with community participants. Diverse populations, especially African American communities, are less likely to participate in genetic testing and clinical trials. To increase participation and community input, we want community participants across Louisiana. **METHODS/STUDY POPULATION:** A cross-sectional, mixed-methods study will be conducted to assess interest in learning about genetics through a digital education platform and to adapt the platform based on participant feedback. Specific Aim 1 will be achieved by recruiting a diverse cohort and collecting demographic data to identify participants' characteristics. For Specific Aim 2, 35 community participants will be enrolled as a co-design team to complete 5-week educational modules. Feedback from focus groups will guide iterative platform refinements, ensuring the platform is culturally tailored and user-friendly. **RESULTS/ANTICIPATED RESULTS:** For Specific Aim 1, we anticipate that the majority of participants will express interest in learning about genetics through the digital platform, with demographic data revealing a diverse participant pool, predominantly from African American and Hispanic communities. For Specific Aim 2, we expect that all 35 co-design team members will complete the 5-week modules. Feedback from the focus groups is anticipated to highlight the need for more user-friendly navigation, culturally tailored content, and enhanced visuals. These insights will guide the refinement of the digital platform for improved engagement and accessibility. **DISCUSSION/SIGNIFICANCE OF IMPACT:** This study addresses a critical translational barrier – underrepresentation of African descended communities in genetic testing. By developing a culturally tailored, digital platform to engage these populations, the project aims to reduce health disparities, enhance genetic literacy, and foster inclusivity in genomic research.

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Assessing the effects of balance training on executive functions and BDNF biomarkers in Alzheimer's disease patients

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OBJECTIVES/GOALS: As the aging population increases, maintaining cognitive and physical health becomes crucial. Executive functions (EF), including reaction time, sustained attention, and spatial memory, are essential for daily life and independence in older