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Effect of an Exercise Intervention on Gestational Diabetes Mellitus: A Randomized Controlled Trial

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In Reply:

We appreciate the interest in our study from Mr. Taghiof and colleagues, who raise excellent points regarding the inherent limitations of research on physical activity and pregnancy outcomes specifically and more generally facing epidemiologic research as a whole. We found that 7% of women were ineligible for our study based on their inability to read at a sixth-grade level. However, we believe the disadvantage of this restriction was offset by the corresponding ability of our intervention to be largely mail-based. Such a low-cost, high-reach strategy has advantages over prior interventions, which required participants to travel to on-site sessions, along with a greater potential for benefits to be sustained over time.

It is important to note that although a questionnaire was used to measure participant compliance with their assigned intervention arm, our intent-to-treat analysis relied only on objective measures of exposure (intervention arm) and outcome (gestational diabetes mellitus). We agree that future studies would benefit from the integration of objective activity measures but need to be cognizant of their limitations. During pregnancy, hip-worn monitors can be affected by changes in body girth, placement site, and monitor tilt; both wrist- and hip-worn monitors face lack of consensus regarding cutpoints to categorize counts into pregnancy-specific intensity levels.¹

We concur with the letter writers regarding the importance of considering race and ethnicity in research; this was part of our motivation for conducting the study in the diverse population served by Baystate Medical Center. Our goal was to maximize internal validity through the use of intervention materials and assessments tailored to our specific ethnic group. Based on the promising findings of focused trials such as ours, larger trials can be

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conducted to evaluate the effects of such exercise interventions across a diverse range of racial and ethnic groups.

Finally, we share the letter writers' opinion that research evaluating the potential benefits of exercise—a lifestyle factor recommended by the American College of Obstetricians and Gynecologists—for prevention of gestational diabetes mellitus as well as on other measures of quality of life is critical and hope that our study helps to promote research in this area.

REFERENCE

1. Evenson KR, Chasan-Taber L, Symons Downs D, Pearce EE. Review of self-reported physical activity assessments for pregnancy: summary of the evidence for validity and reliability. *Paediatr Perinat Epidemiol* 2012; 26:479–94. [PubMed: 22882792]