

Effectiveness of a Telehealth Lifestyle Intervention on Reducing Diabetes Risk in Black Families

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Background: Type 2 Diabetes (T2D) in youth is a growing epidemic disproportionately affecting racial and ethnic minority populations. Intensive lifestyle interventions are proven to be more efficacious in preventing T2D in adults than pharmacological therapy; however, there is no gold standard lifestyle intervention to prevent T2D in youth. The purpose of the TELE-GEN pilot trial was to test the effectiveness of a lifestyle intervention tailored for Black families with children (8- to 11-years) at risk for T2D.

Methods: A single-arm, repeated measures design tested the hypothesis that a 30-week, parent-focused lifestyle intervention would reduce or stabilize body mass index (BMI) z-score (zBMI) in children and reduce BMI in parents. Parent-child dyads (n=19) with obesity were recruited from a pediatric weight management clinic. Weekly core (n=11) and monthly maintenance (n=4) sessions (60-minutes) were delivered to parents in small groups (n=3) using videoconferencing and led by a racially concordant, trained lifestyle coach. Assessments were conducted at baseline (T1), 12-weeks (T2), and 30-weeks (T3).

Results: Child participants (age = 9.9 ± 1.4 years) included 9 males and 10 females. Parents (age = 38.3 ± 5.2 years; 80.5% biological mother, 5.25% stepmother, 5.25% grandmother) reported the intervention acceptable and feasible for families. We modeled zBMI and BMI across the study window using an unadjusted repeated-measures mixed model. We observed no supported changes in child zBMI (T1 = 2.56 ± 0.25 ; T3 = 2.53 ± 0.28) or parent BMI (T1 = 42.2 ± 11.1 ; T3 = 41.9 ± 10.1); however, the data suggested a decrease in parent BMI at T2 (40.8 ± 9.9).

Conclusions: A telehealth lifestyle intervention for Black families with children at risk for T2D is feasible and acceptable. Further intervention research is needed to identify effective intervention approaches to reduce T2D risk in Black parent-child dyads.