

00313 **Randomized Controlled Trial of an Incentive-based Physical Activity Program Targeting Both Children and Adults (FIT-FAM)**

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Aims: Despite widespread awareness that physical activity (PA) improves general health and reduces disease risk, many working adults and their children in Singapore exhibit low levels of PA. Since children are known to influence their parents' behaviors, we aim to test whether a strategy that rewards children for meeting activity goals, only if their parents meet an identical goal, can effectively increase parents' PA.

Methodology: This study is a 12-month, two-arm randomized controlled trial involving 322 parent-child dyads. Parents are full-time employees with participating children aged 7 - 11. In the Child-Based Incentive (CBI) arm, children earn SGD\$5 for each week that they log $\geq 10,000$ daily steps for ≥ 4 , ≥ 5 , and ≥ 6 days in months 1 - 3, 4 - 6, and 7 - 12, respectively on Fitbit pedometers. In the Family-Based Incentive (FBI) arm, rewards for FBI children are identical but contingent on their paired parent achieving the targets also. Multilevel mixed-effects linear regression will be used to assess various accelerometer-measured outcomes at months 6 and 12: number of steps (primary), duration of moderate to vigorous PA (MVPA), and MVPA bout minutes (≥ 10 consecutive MVPA minutes with interruptions allowed for 1 - 2 minutes).

Result: On average, 58% of FBI dyads achieved the weekly step targets throughout the first 6 months compared to only 23% of CBI dyads. 6 month accelerometer data show that, on average, FBI parents walked 4,364 more steps (approximately 3 km more), clocked 32 more MVPA minutes, and logged 30 more MVPA bout minutes than CBI parents weekly, after controlling for age, sex, and ethnicity.

Conclusion: 6 month results suggest that the family-based reward scheme is a low-cost strategy for increasing PA for both children and parents. If maintained at 12 months, this novel incentive strategy can be adopted as part of a broader, comprehensive strategy for improving overall health.