III. Preliminary results from the 3-arm randomized controlled trial published in the American Diabetes Association journal *Diabetes.*

MICROCLINIC Social Network Interventions for Obesity and Diabetes in Jordan: a 3-Armed Cluster Randomized Controlled Trial

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BACKGROUND: Diabetes and obesity are suggested to propagate within social networks, with diabetes a concern in the Middle East. Leveraging pre-existing social networks to propagate healthy behaviors, we conducted the first ever social-network randomized trial to improve obesity and diabetes in a developing country.

METHODS: Based in community health clinics in Amman, Jordan, we tested the effects of various Microclinic Social Network (MSN) behavioral interventions in collaboration with the Jordanian Ministry of Health and Royal Health Awareness Society. A 3-armed 28-week cluster randomized trial was designed: Arm A) enhanced MSN social network program in weekly interactive sessions led by health-educators; Arm B) basic MSN social network program but without extensive class interactions; Arm C) controls with standard care. Weight, waist circumference, HbA1c, and blood pressure were collected. Longitudinal multilevel mixed models levels of community, classrooms, and microclinic social clusters were used.

RESULTS: The trial enrolled 911 participants, comprised of 9 community-cohorts, 45 classroom clusters, and 523 social clusters. Participants were 66% women, mean age 55.1 years (10.2), mean BMI 33.6 (3.2). After 12 weeks, Arm B reduced weight vs C (-0.99 kg, 95% CI: -1.93 to -.06; P=0.037), while A yielded borderline weight change vs C (-0.59 kg, P=0.096). However, by end of 28-weeks of intervention, Arm A showed strongest sustained weight reduction versus control (-1.11 kg, -1.87 to -0.35; P=0.004), while B did not (-0.64, -1.69 to 0.41, P=0.23), with over P for program*time interaction=0.019. HbA1c showed borderline significant drop at 28 weeks for A vs. control (-0.20, P=0.08), but not B vs. control (-0.15, P=0.27). Waist circumference and blood pressure were not significant.

CONCLUSIONS: Results demonstrate the effectiveness of MSN health interventions in a resource-limited, high chronic disease burdened, developing-country setting.