Impact of a Comprehensive Lifestyle Peer-group-based Intervention on Cardiovascular Risk Factors: A Randomized Controlled Trial

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Introduction: Cardiovascular diseases stem from modifiable risk factors. Peer support is a proven strategy for many chronic illnesses. Randomized trials assessing the efficacy of this strategy for global CV risk factor modification are lacking.

Hypothesis: We assessed the hypothesis that a peer-group strategy helps improve healthy behaviors in individuals with CV risk factors.

Methods: We recruited 543 adults aged 25-50 years with at least one risk factor: hypertension (20%), overweight (82%), smoking (31%) or physical inactivity (81%). Subjects were randomized 1:1 to a peer-group based intervention group (IG) or a self-management control group (CG) for 12 month. Peer-elected leaders moderated monthly meetings involving role-play, brainstorming and activities to address emotions, diet and exercise. The primary outcome was mean change in a composite score related to Blood pressure, Exercise, Weight, Alimentation and Tobacco (Fuster-BEWAT score, 0-15). Multilevel models with municipality as cluster variable were applied to assess differences between groups.

Results: Participants’ mean age was 42 ± 6 years, 71% female, with mean baseline score of 8.42 ± 2.35. After 1 year, the mean BEWAT score values were significantly higher in the IG (n=277) than CG (n=266) [IG mean=8.84 (8.37-9.32); CG mean=8.17 (7.55-8.79), p=0.02]. The increase in the overall score was significantly larger in the IG compared to the CG [diff: 0.75(0.32-1.18); p: 0.02]. The mean improvement in the individual components was uniformly greater in the IG, with a significant difference for the tobacco component (Table).

Conclusion: The peer-group intervention had beneficial effects on CV risk factors, with significant improvements in the overall score and specifically on tobacco cessation. A follow-up assessment will be performed 1-year after the final assessment reported here in order to to determine long-term sustainability of the improvements associated with peer-group intervention.
Disclosure: