Key Summary of Conference Abstract

Annual Screening and Digital Behavioral Counseling in a Workplace Setting Reduce 10-year Cardiovascular Risk

Background

- Metabolic syndrome is a group of conditions that occur together and increase the risk of cardiovascular disease and diabetes.
- Digital behavioral counseling programs have been shown to reduce diabetes and cardiovascular disease risk factors. These programs aim to facilitate healthy behaviors and lifestyles by combining digital devices (eg, scales, pedometers, mobile devices) with online support (eg, lessons, communities, health coaches).
- The effect of such programs on 10-year risk of atherosclerotic cardiovascular disease (ASCVD) in individuals with metabolic syndrome has not been reported.
- **Objective:** The investigators of this study examined whether a digital behavioral counseling program could reduce the 10-year risk estimate of ASCVD events among individuals with metabolic syndrome within the first year of participation.

Methods

- Study participants had to meet the following criteria:
  - Be enrolled in an annual employer-sponsored wellness program with year-end biometric screening from 2016 to 2018
  - Have metabolic syndrome at the end of 2017
  - Finish ≥9 lessons of a digital behavioral counseling program in 2018
- Pre-intervention (from 2016 to 2017) and post-intervention (from 2017 to 2018) changes in prevalence of metabolic syndrome, ASCVD risk factors, and 10-year ASCVD risk were calculated.
- Paired t-tests and McNemar tests were used to compare changes in ASCVD risk before versus after the program intervention.

Results

- Among the 144 participants enrolled in the intervention program, mean age was 50 years; 62% were female. Participants finished an average of 24 lessons.
- Before intervention, the mean 10-year ASCVD risk increased from 3.5% in 2016 to 4.4% in 2017. After intervention, it decreased from 4.4% in 2017 to 3.6% in 2018 (P=0.0002 for changes before versus after intervention).
- The percentage of study participants with 10-year ASCVD risk ≥5% also declined from 30% before to 22% after intervention (P=0.04).
- The ASCVD risk factors systolic blood pressure, LDL-C, and HDL-C moved in a positive direction.
- The percentage of participants with metabolic syndrome significantly declined after intervention (P<0.0001).

Conclusions

- After 1 year of a digital behavioral counseling program for individuals with metabolic syndrome, 10-year ASCVD risk declined and ASCVD risk factors shifted in a positive direction, compared to the previous year.