
Utility of the New Stanford Brief Activity Survey in a Clinical CAD Population

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BACKGROUND: Accurate assessment of physical activity in free-living coronary artery disease (CAD) populations can be time consuming for both subjects and staff. The two-item Stanford Brief Activity Survey (SBAS) was designed to obtain a quick assessment of the usual amount and intensity of physical activity a person performs throughout the day, and can effectively classify subjects into 5 distinct activity levels.

OBJECTIVE: To determine the utility of the new SBAS in a clinical CAD population, for estimating current total physical activity.

METHODS: The SBAS was administered in an epidemiological study of early-onset CAD (men <46yrs, women <56 yrs). Frequency distributions of the SBAS, and associations between SBAS activity categories and selected CVD risk factors associated with physical activity, were calculated.

RESULTS: Data from 500 subjects in the Heart, Health and Heredity Study, from the Stanford Donald W. Reynolds Center, were analyzed. Subjects were 45.9 (\pm 6.4) years old, 68% married (339 of 496), 49% women (247 of 500), 51% Caucasian (257 of 500), and 21% college graduates (105 of 500). Clinical diagnoses for early-onset CAD included 61% myocardial infarction (307 of 500), 23% coronary revascularization procedure (115 of 500), and 16% angina (78 of 500). The associations between SBAS categories and CVD risk factors were all statistically significant ($p < 0.001$). Separate analyses of SBAS categories and CVD risk factors by gender remained statistically significant for all variables ($p < 0.03$), except for BMI in men ($p = 0.06$)

CONCLUSIONS: SBAS was able to classify CAD subjects into different levels of physical activity. Subjects in the higher activity categories had more favorable CVD risk profiles than their less active counterparts, regardless of gender. SBAS can be recommended for use in clinical settings, with immediate feedback provided regarding current physical activity level.

Table: Comparisons of SBAS Activity Levels with CVD Risk Factors in Men and Women

SBAS Activity Levels	Inactive	Light-intensity	Moderate-intensity	Hard-intensity	Very hard-intensity	ANOVA trend across groups, p-value
% (n)	14.1 (70)	43.1 (213)	25.7 (127)	11.5 (57)	5.5 (27)	---
BMI, mean±SD	33.3±7.7	33.0±8.0	30.0±5.8	29.2±5.0	28.9±6.7	<0.001
HDL mg/dL, mean±SD	43.2±11.7	43.5±11.2	45.5±12.7	47.9±19.6	54.0±13.3	<0.001
Triglycerides mg/dL, mean±SD	214.6±137	179.6 ± 153	162.0 ± 131	125.9±90	107.5±66	<0.001
Fasting Glucose mg/dL, mean±SD	144.1±70.5	123.4±63.5	113.2±48.8	101.1±23.3	97.7±17.2	<0.001
Fasting Insulin uU/mL, mean±SD	36.2±56.3	17.7±16.7	13.5±10.8	10.3±8.5	7.6±5.7	<0.001
Metabolic Syndrome,%	62.7	45.6	34.7	18.2	14.8	<0.001