RESULTS: a mixed two-way ANOVA without significant variation between sex and measurements (p = .942) was applied. In the same way, with a one-way ANOVA of related samples, no differences were found in BW (% Δ = -0.4; p = .237; η 2 = .123), MM (% Δ = 1.42; η 2 = .162) BFP (% Δ = -1.2; p = .444; η 2 = .071) among the three measurements. Differences in VFA (126.3 \pm 39.5cm 2 and 117.0 \pm 40.8cm 2; p = 0.002; η 2 = .472) were found between M1 and M3, respectively.

CONCLUSIONS: these results indicate that 16 sessions of high intensity interval training, lasting 17 minutes per session, decrease the visceral fat of sedentary people.

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May 28 10:30 AM - 12:00 PM

Validity & Reliability Of A Self-Report Modified Sitting Time And Physical Activity Questionnaire

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Self-report questionnaires are important tools for public health because of their ability to reach large populations at relatively low costs. Given recent scientific findings which highlight the risks of too much sitting time as well as the importance of physical activity throughout the entire day, new self-report instrumentation is needed which can effectively measure both sitting time and physical activity throughout the entire day.

PURPOSE: To determine the validity and reliability of a modified physical activity (PA) and sitting time (ST) questionnaire during work-time (WT) and leisure-time (LT).

METHODS: Full-time workers aged at least eighteen years (n=26) kept time logs and wore Actical Physical Activity accelerometers during the workweek for 4 days during work-time and leisure-time, while simultaneously completing a modified Occupational Sitting and Physical Activity Questionnaire (OSPAQ) two times 7-10 days apart.

RESULTS: Using intraclass correlation coefficient calculations, test-retest reliability ranged from 0.661-0.901, with WT Sedentary Time (0.901), WT PA (0.869), and LT Sedentary Time (0.818) showing excellent test-retest reliability. LT PA also showed good test-retest reliability (0.661). For validity, spearman's rho correlation coefficients were calculated, resulting in two categories of the modified OSPAQ with significant p-values, WT Sedentary (p=0.001) and LT PA (p=0.04). Self-report WT sedentary time showed a moderate correlation (r=0.583) to accelerometer data, while self-report LT PA showed a small correlation (r=0.394). Neither WT PA nor LT Sedentary showed significance.

CONCLUSIONS: The modified OSPAQ instrument showed excellent to good test-retest reliability and moderate to small correlation of WT sedentary time and LT PA with accelerometry. The modified OSPAQ instrument could be used as a public health tool to measure both PA and ST behaviors throughout the entire day.

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Retention Strategies For Incentive-free Exercise Interventions: Importance Of Enrollment Timing

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Nearly half of all US adults have a chronic disease diagnosis; these individuals are more likely to be sedentary than age-matched controls. When exercise programs incentivize their participation, attrition may be reduced for the duration of the trial, but the results lack applicability outside of the clinic. Thus, there remains a need to identify cost-free predictors of exercise adherence among sufferers of chronic diseases.

PURPOSE: To determine the effect of enrollment timing on retention in an incentive-free, community exercise program.

METHODS: 224 previously inactive patients with chronic diseases (cancer, diabetes, pulmonary and cardiovascular disease) were enrolled in an intervention involving 10 weeks of aerobic, resistance, and flexibility training. Independent-samples t-tests and chi-squared tests compared the profiles of patients who did and did not complete the trial. Logistic regression tested the effect of enrollment timing on program completion holding constant potential confounders.

RESULTS: Across 62 continuous months of admission, 43.3% of patients completed the trial. Retention differed throughout the year with the highest rate occurring in January and February; 55.8% of participants enrolled in those months were retained compared to 39.5% during later months (p=0.038). Patients exhibited no differences in health history, cardiometabolic risk factors, anthropometric measurements, functional assessments, or quality of life scores between months of enrollment. Holding constant sex, age, and diagnosis, initiating training during the first 2 months of the year predicted a 2.1-fold increase in program completion (p=0.023; 95% CI of OR: 1.107-4.053).

CONCLUSIONS: Incentive-free exercise interventions for patients with chronic diseases have high attrition. Fewer than half of our patients were retained for 10 weeks. However, those who enrolled at the start of the year were more likely to complete the program, indicating possible value seasonal recruitment.

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Qualitative Study On The Perceived Barriers Of A Physical Activity Program In Toddlers: Classroom Teacher Perspective Luke M. Sudarsky, Melanna Cox, Christine St. Laurent, Sarah Burkart, Sofiya Alhassan, FACSM. *University of Massachusetts Amherst, Amherst, MA.* (Sponsor: Sofiya Alhassan, FACSM)

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Toddler children (18 months-2.8 years) spend a significant portion of their day at childcare settings, where they spend most of their time engaged in sedentary activity. Toddler classroom teachers have a considerable influence on toddlers' physical activity (PA) levels. Due to the toddler classroom environment, teachers may encounter unique age and ability related barriers to the implementation of PA programs.

PURPOSE: The purpose of this qualitative study was to determine the perceived barriers that toddler classroom teachers may face in implementing PA programs to toddlers.

METHODS: Toddler classroom teachers from 3 environmentally matched childcare centers from the Springfield MA area participated in this qualitative study. Focus group meetings (n=3) were conducted separately at each center. At each meeting, a semi-structured focus group format and questionnaire were used to guide the sessions. All focus groups were audio-recorded and later transcribed by a primary, secondary, and tertiary trained researchers. Researchers used open coding to identify themes. Representative quotes were selected for each theme to demonstrate saturation of ideas.

RESULTS: A total of 15 teachers participated in this study (age = 38.4 ± 12.5 ; BMI (self-reported) = 26.1 ± 4.3 kg/m²). Teachers had an average of 9.5 ± 8.7 years of experience as toddler classroom teachers (ranging between 1 to 28 years). Teachers perceived barriers to PA were categorized into 3 main themes. The three main themes were 1) essential childcare needs (e.g., regular diaper changes of the toddlers, child supervision), 2) wide variation in cognitive and motor skill abilities of toddlers (e.g., differences in children that just learned to walk versus those that have been walking for an extended period, short attention span) and 3) limited resources and physical space (e.g., limited activity options, small classroom design to hold 9 toddlers). **CONCLUSION:** This qualitative study provides preliminary evidence that classroom teachers face unique perceived barriers in implementing PA to toddlers. Future research should examine how these perceived barriers can be incorporated into the design and implementation of PA programs designed for toddlers within the childcare center.

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Physical Fitness, Neurocognitive Performance, And Apolipoprotein E Genotype In Familial Alzheimer'S Disease

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