CONCLUSION: This study is, to our knowledge, the first to implement and report the impact of a preschool PA intervention adapted to be responsive to the needs of preschoolers with ASD. The results provide preliminary evidence that WE PLAY-Autism increases MVPA among preschoolers with ASD to a similar magnitude as preschool-based interventions for typically developing children.

818 May 27 4:30 PM - 4:45 PM
Dearborn SHINES: The Impact Of A Comprehensive School Health Intervention
Erin E. Centeio1, Jeanne M. Barcelona2, Christine Pedder2, Hayley B. McKown1, Kowsar A. Hijazi1, 1University of Hawaii at Manoa, Honolulu, HI. 2Wayne State University, Detroit, MI.
Email: ecenteio@hawaii.edu

(Purpose statements)

PURPOSE: Arab Americans account for almost 3.7 million people in the U.S., however, limited health data is available on youth and adult populations. In order to better understand the health behaviors of Arab Americans and aid in the push for healthy lifestyles in children, more research should be conducted. Therefore, the purpose of this study was to implement a culturally relevant healthy eating (HE) and physical activity (PA) intervention known as D-SHINES in a primarily Arab-American school district and understand the impact it had on students’ overall PA, attitude toward PA and HE, as well as PA and HE knowledge, and perceived social support.

METHOD: Eight schools participated in the D-SHINES intervention over one school year, with 264 (Mage=11.1; Male = 106) randomly selected students participating in pre-post testing. The intervention consisted of physical education utilizing SPARK, PA afterschool clubs, gardening and nutrition programming, and classroom physical activity breaks. Students participated in a pre-post survey with validated measures for overall PA level, HE and PA attitude, knowledge, and perceived social support. Implementation of the garden, HE, and PA curriculum tools were also tracked for fidelity.

RESULTS: T-tests were used to determine differences among pre-post intervention. Results showed that students significantly increased their HE and PA knowledge over the course of the year (p<.001), as well as their PA attitude (p=.021). There was no significant difference observed in overall PA levels (p=.92), vigorous PA (p=.08), and perceived social support. Additionally, MANCOVA’s showed significant differences among the variables of grade and gender (p=.001).

CONCLUSIONS: Although limitations exist, the results show that while the D-SHINES program was implemented in the school, students’ significantly improved their attitudes and knowledge toward HE and PA, yet, failed to show a significant increase in overall PA. Additionally, great strides were made with teachers and schools to build and implement the garden curriculum. Additional research should be conducted to better understand successful comprehensive school programming among urban Arab American youth, a population that is often understudied.

819 May 27 4:45 PM - 5:00 PM
CHANGES IN PHYSICAL ACTIVITY, PHYSICAL FITNESS AND WELL-BEING FOLLOWING A SCHOOL-BASED HEALTH PROMOTION PROGRAM
Sabrina Krogh Schmidt, Michael Sæther Reinboth, Solfrid Bratland-Sanda. University of South-Eastern Norway, Rø in Telemark, Norway. (Sponsor: Jorunn Sundgot-Borgen, FACSM)
Email: sabrina.k.schmidt@usn.no

(Purpose statements)

PURPOSE: School-based physical activity (PA) has mostly been examined in a preventive perspective. The purpose of this study was to examine the changes in physical activity, physical fitness and psychosocial well-being in early adolescents after the implementation of a school-based health promotion program in secondary school.

METHODS: Four municipalities with 15 secondary schools in Telemark County, Norway, were recruited into an intervention or a control group. A total of 644 pupils participated in the study (response rate: 79%). The schools in the intervention group implemented the Active Healthy Kids program, where the physical activity component consisted of: (1) 120 min/week of physically active lessons (PAL), (2) 25 min/week of physical active breaks during classroom lessons and (3) 135 min/week of curriculum based normal physical education. Primary outcome was physical activity assessed by accelerometer and expressed as counts per minutes. Secondary outcomes were sedentary time, physical fitness and psychosocial well-being in the five domains; physical health, psychological well-being, peer relations, parents and peer school environment.

RESULTS: There was a Group X Time effect for school-based, but not full-day, physical activity (p=0.005), and for cardiorespiratory fitness (p=0.002) and vitality (p=0.008). A Group effect was found for the perceived exerted effort in class (p=0.001) and the health-related quality of life domains “psychological well-being” (p<0.04) and “school environment” (p<0.001).

CONCLUSIONS: A multi-component, school-based, health-promotion intervention with emphasis on the use of PAL led to positive changes in school-based physical activity, cardiorespiratory fitness, vitality and health-related quality of life among early adolescents in a county with poor public health profile. This might have implications for the development and promotion of general health and well-being throughout adolescence.

Trial registration: Approved by the Norwegian Data Protection Services (ID 54327), and registered in ClinicalTrials.gov, (ID NCT03906851).

Keywords: School-based physical activity, adolescents, Physical activity, physical fitness, Health Related Quality of Life, Norway

820 May 27 5:00 PM - 5:15 PM
Bi-directional Prospective Associations Between Objectively Measured Physical Activity and Fundamental Motor Skills In Children: A Two-year Follow-up
Ada Kristine Ofrim Nilsen1, Sigmund A. Andersen2, Kjersti Johannessen1, Katrine N. Aadland1, Einar Ylvisaaker1, Jan Morten Loftesnes1, Eivind Aadland1, 1Norwegian School of Sport Sciences // Western Norway University of Applied Sciences, Sogndal, Norway. 2Western Norway University of Applied Sciences, Sogndal, Norway.
Email: adakan@hvl.no

(Purpose statements)

PURPOSE: The direction of the longitudinal relationship between physical activity (PA) and fundamental motor skills (FMS) remains unclear. We evaluated the bi-directional, prospective relationships between intensity-specific physical activity (PA) and domain-specific fundamental motor skills (FMS) over two years in young children.

METHODS: A sample of 235 children (mean age at baseline 4.7 yr, 52 % boys) from the Sogn og Fjordane Preschool Physical Activity Study was measured two years apart. PA was assessed using ActiGraph accelerometers (GT3X+). FMS were evaluated by a test battery inspired by the “Test of Gross Motor Development 3” and the “Preschool Gross Motor Quality Scale”. PA outcomes were total PA (TPA [counts per minute]) and intensity specific PA and sedentary behaviour (SED) (min/day). FMS outcomes were total FMS score, locomotor-, object control-, and balance skills. Linear mixed model adjusted for potential co-variates was used to evaluate the bi-directional prospective associations between these variables, including the moderating effect of sex and age.

RESULTS: Baseline total PA, moderate-to-vigorous PA (MVPA), and vigorous PA predicted higher total FMS score, locomotor-, object control-, and balance skills at follow-up (standardized regression coefficient (β): 0.15 to 0.26, p=0.002-0.031). SED predicted lower FMS in all domains except balance (β: -0.10 to -0.27, p=0.008-0.026). Baseline light PA did not predict FMS at follow-up. Baseline object control- and balance skills were not associated with PA or SED at follow-up. Total FMS score at baseline predicted lower light PA at follow-up (β: -0.14, p=0.041), and locomotor skills at baseline predicted higher TPA in boys relative to girls (p for interaction=0.044).

CONCLUSIONS: PA, especially MVPA, were positively associated with development of FMS in young children. In contrast, FMS was largely unrelated to future PA levels. Our results suggest promotion of MVPA is important for FMS development in young children.