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Improvement on the slopes: the impact of an adaptive snow sports program on children and young adults with disabilities

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Improvement on the slopes: the impact of an adaptive snow sports program on children and young adults with disabilities

Green, S.M., Fisher, M.T., Eichner, J., McLaughlin, M.J.

Children's Mercy - Kansas City; Midwest Adaptive Sports

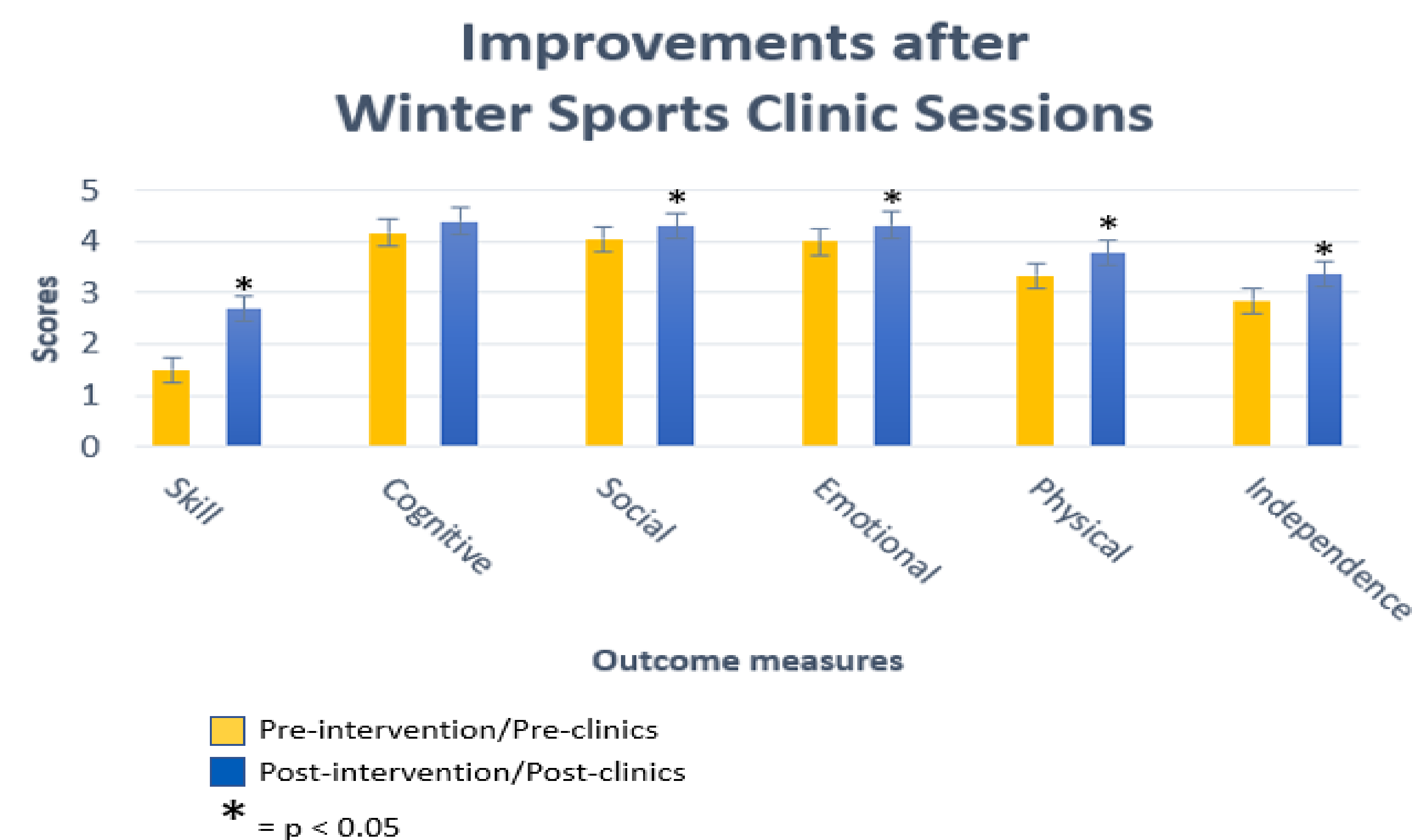
Background & Objectives

- Adaptive skiing is well-established as a therapeutic activity, yet the literature of its benefits remains minimal.
- Repeat themes include improvements of strength, endurance, cardiovascular health, autonomy, self-esteem, social and conversation skills, attention, health perception and quality of life.
- This study aims to determine the progress of participants in an adaptive snow sports program for children and young adults.

Design & Outcome Measures

- Retrospective cohort study in an adaptive ski/snowboard program
- Primary Outcome = Professional Ski Instructors of America and American Association of Snowboard Instructors skill levels (from 1-novice to 9-expert)
- Secondary Outcome = cognitive, emotional, social, physical and independence scores, as rated by trained instructors on a scale from 1-5
- Statistical Analysis: Descriptive statistics, Wilcoxon-rank sum test to demonstrate change from initial to final evaluation

Results



- 113 participants
- Median #sessions/participant = 4, (2-65)
- Median years of participation = 2 (2-10)
- Primary outcomes - improvement in final skill level from initial ($p < 0.0001$), with an average increase of 1.2 skill levels per participant & 0.48 skill levels per years of involvement.
- Secondary outcomes - improvements from initial scores: cognitive ($p = 0.07$), social ($p = 0.002$), emotional ($p = 0.018$), physical ($P < 0.0001$), and independence ($p < 0.0001$) scores.
- The most common diagnoses were visual impairment, autism, spina bifida, and spinal cord injury.

Discussion

- Showed improvements in all measured domains during participation.
- Limitations: lack of consistency in the number of sessions, instructors' teaching, and subjective instructors' scores.
- Evaluating the effectiveness of adaptive sports programs provides important info to set participants' expectations, determines goals of the program for trainers, and shows the benefit of this program to outside entities.
- **Level of Evidence: III**
- References available upon request

