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| **Source** | **Intervention** | **Outcome** | **Summary of Results** |
| Shields  2014 | N/A  Questionnaire | Identifying barriers and facilitators to PA participation for CWD | * Primary facilitators: welcoming providers, inclusive providers, accessibility of facilities, parental encouragement and support, and adaptable approaches/equipment * Primary barriers: inaccessible facilities, lack of transportation, lack of opportunities, and non-inclusive providers |
| Wright  2018 | N/A  Interviews | Identifying barriers and facilitators to PA participation for CWD | * Primary facilitators: realistic goal setting, motivational staff, opportunity to socialize, family motivation, appropriate and inclusive opportunities, and accessible opportunities * Primary barriers: financial or transportation limitations, time constraints, lack of access, inclusion, or opportunities, lack of motivation, physical limitations, low self-confidence in participants |
| Bantjes  2015 | N/A  Interviews | Identifying factors to consider when developing sports programs for CWD | * Primary factors: variety of choice and opportunity, adapted activities, autonomy, social interaction, challenge of physical skills, quality coaching to promote mastery, performance with an audience, competition, fairness, and inclusion |
| Hajjar  2016 | N/A  Interviews | Identifying benefits and barriers in facilitating adapted PA programs | * Primary benefits: positive attitude change toward people with disabilities, general wellness, shared activities, increased socialization, increased confidence * Primary barriers: communication skills, behavior differences, safety concerns, financial and transportation limitations, adequate and accessible facilities |
| Shields  2016 | N/A  Interviews | Identifying barriers and facilitators to PA participation for CWD | * Primary facilitators: individualized instruction, motivation, proactive parents, skilled instruction, peer acceptance, inclusive policies and programs, accessible transportation * Primary barriers: lack of physical skill, frustration or lack of confidence, financial and transportation barriers, poor instruction, negative societal attitudes, concerns for safety, lack of available opportunities |
| Lundberg  2011 | N/A  Interviews | influence of sport participation on qualitative self-perception | * Primary theme regarding self-perception: self-perception often influenced by the perceptions of people without disabilities and the challenges faced because of that * Primary qualitative outcomes: sense of community, independence, success, and equality |
| opinion of participants on important outcomes of participation in adaptive sports |
| McConkey  2013 | N/A  Interviews | Qualitative information regarding social inclusion in sports for CWID | * Primary outcomes: development of sport and personal skills, improved teamwork and friendships, and improved attitudes toward people with disabilities |
| Lamb  2016 | N/A  Interviews | Disposition toward aspects of physical education in schools | * Primary qualitative findings: changing rooms reported to feel unsafe and unhappy, while the PE teacher’s office was considered a place to go when they need help |
| Healy  2013 | N/A  Interviews | Identification of challenges, peer interactions, and exclusion in inclusive PA | * Primary challenges include: decreased physical ability and fitness, fear of injury, sensory limitations, bullying or social exclusion |
| Wakely  2018 | N/A  Interviews | Analysis of barriers and facilitators to PA participation in rural areas | Primary themes   * Parent predicament: difficulties parents face when attempting to facilitate their child’s participation in physical activity * Barriers: access to opportunities, ability, and social isolation * Facilitators: parents personally facilitating the opportunity, motivation of the participant, and opportunities in the community |
| Hui-Lun Tsai  2009 | N/A  Interviews | Analysis of barriers and facilitators to inclusive PE | * Primary themes: discrimination, community’s lack of understanding, providers’ attitudes of inclusion, social opportunities, behaviors of children with disabilities, parental sense of entitlement and civil rights, parental fear of harassment, parental sport values, and information and opportunities for participation |
| Dorsch  2016 | Inclusive outdoor recreation program | Reflections on previous participation in inclusive PA to identify barriers, facilitators, and benefits for inclusive/adapted PA programs | * Primary barriers: social barriers such as people without disabilities not accounting for the ability of all participants, depression, poor perceived ability levels, decreased motivation to seek out physical activity opportunities, families’ perception of participant’s ability * Primary facilitators: encouraging a sense of community, person-first approach, inclusive culture with focus on making physical activities more accessible * Primary benefits: improved confidence, improved skills, enhanced relationships, increased quality of life |
| Kanagasabai  2018 | N/A  Interviews | Identifying central themes of participation in PA for CWPD | * Three primary themes identified: choice of activities, places, and friends; adaptation of activities, roles, and equipment; and experience of both scheduled and unscheduled activities in their weekly routine |
| van Engelen  2021 | N/A  Interviews | Identifying barriers, facilitators, and solutions to inclusive playground PA for CWPD | * Three primary themes identified: comparison of physical and emotional barriers to inclusive play; the role of play in an inclusive society (reducing societal stigma); professionals’ role in prioritizing play and inclusion |
| Zitomer  2011 | Inclusive dance program | Identifying children’s perceptions of dance ability and disability pre and post-participation in inclusive dance class | * Common themes of children’s perceptions toward dance ability and disability pre-intervention: dance ability requires jumping and turning with children with disabilities believing they can dance regardless of need of assistive devices; children without disabilities perceived those with disabilities as being unable to dance if they had a walker or wheelchair * Common themes of children’s perceptions post-intervention: all children perceived the activity as being fun and enjoyable; most children perceived dance as being able to occur on different levels of the body or different body parts, rather than requiring whole body * Children without disabilities typically perceived that if a child cannot walk, they cannot dance. Another common perception was that the children with disabilities were different because of their use of equipment |
| 1 hour, once weekly, 10 weeks |
| Sterba  2006 | Adapted downhill skiing | Gross Motor Function Measure (GMFM) | * No significant differences in GMFM scores after 5 weeks of intervention * Significant improvements in GMFM domains for standing, walking, running, jumping, and total score after 10 weeks of intervention * Results did not remain significant at 5 and 10 weeks follow-up for walking, running, and jumping, however remained significant for standing and GMFM total score |
| Pan  2011 | Inclusive PE | ActiGraph Accelerometer (physical activity) | * Children with ASD were found to be less active in all domains than their peers * Children with ASD were found to have significantly less perceived competence and intrinsic motivation to participate in physical activity than their peers without ASD |
| Motivation in Physical Education Scale (motivation) |
| Peric  2018 | Mixed adapted and inclusive karate classes | Adaptive Behavior Scale | * Statistically significant improvements in physical development and self-initiative and perseverance domains on the Adaptive Behavior Scale following intervention. No significant changes in social interaction. * Statistically significant improvements in karate motor skills on the 5-point Lykert Scale following intervention |
| 1 hour, twice weekly, 12 weeks | Motor Skills 5-point Lykert Scale |
| Groff  2009 | Any sport participation | Athletic Identity Measurement Scale | * A significant relationship was found between quality of life and athletic identity * No significant relationship was found between quality of life and gender, ethnicity, age, amount of time participating in a sport * A negative correlation was found between quality of life and severity of disability |
| Influence on Quality of Life Scale |
| Fragala-Pinkham  2010 | Adapted aquatic exercise | Swimming Classification Scale | * Significant improvements in the Swimming Classification Scale in all but one child * Parent reported improvements in endurance, strength, self-esteem, group participation, gross motor skills, balance, and swimming skills * Increases in overall weekly physical activity participation at conclusion of program and at 6 month follow-up |
| Program Evaluation Questionnaire (parent) |
| Physical Activity Questionnaire |
| Interview of program directors on sustainability |
| Beckman  2018 | Adapted cricket | Functional Independence Measure | * Significant difference in step count * No significant relationship between step count and Scores on Functional Independence Measure |
| Pedometers |
| The Washington Self-Description Questionnaire |
| Very Short Measure of the Five Cs of Positive Youth Development |
| Children’s Activity Rating Scale |
| Pan  2008 | Inclusive PE and recess | Accelerometers | * Students with and without ASD demonstrated similar levels of physical activity during physical education classes * Students with ASD demonstrated decreased levels of physical activity during recess as compared to students without ASD |
| Turnnidge  2014 | Inclusive recreational and elite swimming | Para-Coach Athlete Interaction Coding System | * Overall positive experiences were found for all participants on the Youth Experience Survey for Sport * No significant difference in interactions and behaviors exchanged between the coach and competitive athletes and the coach and recreational athletes * No significant main effect differences for coach’s behavior toward athletes with or without a disability |
| 10 practices over a course of 6 weeks | Modified CAICS |
| Youth Experience Survey for Sport |
| Lankhorst  2021 | Any sport participation | Health-related cardiovascular fitness: height and body mass, waist and hip circumference, body impedance analysis, arteriography | * Significantly higher cardiovascular fitness, muscle power, sprint, jump, and grip strength in subjects participating in adapted sports >2 days per week compared to subjects with lower frequency of sport participation * Significantly lower waist/hip circumference and percent fat mass in subjects participating in adapted sports >2 days per week compared to subjects with lower frequency of sport participation * No statistical significance in blood pressure, resting heart rate, or arterial stiffness between groups with more or less sport participation |
| Health-related physical fitness: grip strength, standing broad jump, 10 x 5 meter sprint, muscle power sprint test, cardiopulmonary exercise testing |
| Neyroud  2021 | Any sport participation | 3-level Likert scale on effects of adapted sports in children across 12 domains: sleep, wakefulness, appetite, eating, communication, behavior, attention, mood, wellbeing, comfort, movement, and activity level | * Overall parents perceived the effects of adapted sport participation to be beneficial in 74.1%, neutral in 18.5%, and negative in 7.4% of cases of children who participated in adapted sports in a sample of 27 children * Most notable benefits perceived in mood, comfort, and well-being |
| Oriel  2012 | Inclusive community aquatics program | -PedsQL | * No statistical significance between groups at post-test on PedsQL * Statistical significance from pre- to post-test on PedsQL School Functioning Subsection for children without disabilities * No statistical significance between groups at pre-test on Self-Concept Scale * Statistical significance between groups at post-test on Self-concept Intellectual subsection AND children with disabilities showed a significant decrease in Happiness subsection |
| 8 weeks | Children’s Self-Concept Scale |
| Peer Sociometric Nomination Assessment-Friendship Questionnaire |
| Papaioannou  2014 | *Experimental group:* summer camp with CWD | Attitudes Toward Integrated Sports Inventory | * No significant changes in pre- and post-testing in the control group for any measures * Significant difference between pre- and post-testing for increased positive attitude toward integrated sports and integrated physical education |
| *Control group:* summer camp without CWD | Children’s Attitudes Toward Integrated Physical Education-Revised |
| Kodish  2006 | *Experimental group:*  Inclusive PE | Pedometers | * No significant differences were found in number of steps between inclusive and non-inclusive classes * Students were found to have positive attitudes toward physical activity as well as strong intentions to be physically active. Intention was found to be a predictor of amount of physical activity |
| *Control group:*  Non-inclusive PE | Theory of Planned Behavior Questionnaire |
| Biriococchi  2014 | Inclusive tap dance program | Bruininks-Oseretsky Test of Motor Proficiency-2 (BOT-2) | * Statistically and clinically significant difference in motor control skills related to postural control and balance on the BOT-2 * No changes were found in the Pediatric Balance Scale between pre- and post-testing |
| 1 hour, once weekly, 6 weeks | Pediatric Balance Scale |
| Cook  2015 | *Experimental group:*  Adapted gymnastics | Height | * No changes were found in habitual physical activity, physical self-perception, and attitude toward physical activity following both control and intervention periods. * Overall increases in gymnastics skill and quality following intervention period * Average 15% increases in Quality Function Measure following intervention period |
| Weight |
| *Control group:*  Regular daily PA | Physical Activity Questionnaire for Children |
| Children’s Self Perceptions of Adequacy in and Predilection for PA Scale |
| 1 hour, twice weekly, 6 weeks | Range of motion (goniometry) |
| Quality Function Measure |
| CWD – children with disabilities (type not specified), CWID – children with intellectual disabilities, CWPD – children with physical disabilities, CP – Cerebral Palsy, ASD – Autism Spectrum Disorder, TDC – typically developing children, PE – physical education, PA – physical activity, PedsQL – Pediatric Quality of Life | | | |