JOURNAL OF SPORT & EXERCISE PSYCHOLOGY

Volume 41 • Supplement • June 2019

North American Society for the Psychology of Sport and Physical Activity

Baltimore, Maryland

June 6–8, 2019

Contents

The Journal of Sport & Exercise Psychology is an official publication of the North American Society for the Psychology of Sport and Physical Activity

Conference Chairs and Committees

Conference Program Chair	Steven Bray, McMaster University, Canada
Site Coordinator	Penny McCullagh, California State University-East Bay, USA

Motor Development

Laura J. Claxton, Purdue University, USA (Chair)
Melissa Pangelinan, Auburn University, USA
Leah Robinson, University of Michigan, USA
Sara Scharoun-Benson, University of Windsor, Canada
Sabrina Thurman, Elon University, USA
Jianhua (Jerry) Wu, Georgia State University, USA

Motor Learning and Control

Breanna Studenka, Utah State University, USA (Chair)
Jody Jensen, University of Texas at Austin, USA
Adam King, Texas Christian University, USA
Atilla Kovacs, University of Wisconsin at La Crosse, USA
Jim Lyons, McMaster University, Canada
Christopher Rhea, University of North Carolina at Greensboro, USA
Shannon Ringenbach, Arizona State University, USA
Jill Whitall, University of Maryland, USA

Sport and Exercise Psychology

Jennifer Brunet, University of Ottawa, Canada (Chair)
Steve Amireault, Purdue University, USA
Ralf Brand, University of Potsdam, Germany
Yu Kai Chang, National Taiwan Sport University, Taiwan
Anne Cox, Washington State University, USA
Ben Jackson, University of Western Australia, Australia
Meghan McDonough, University of Calgary, Canada
Nicolas Myers, Michigan State University, USA
Kathleen Wilson, California State University at Fullerton, USA
Amanda Wurz, University of Ottawa, Canada

Executive Committee

President	David Anderson, San Francisco State University, USA
President-Elect	Catherine Sabiston, University of Toronto, Canada
Past-President	Steven Bray, McMaster University, Canada
Past-Presidents' Liaison	Jill Whitall, University of Maryland-Baltimore, USA
Communication Director	Sarah Ullrich-French, Washington State University, USA
Secretary-Treasurer	Anne Cox, Washington State University, USA
Student Representative	Christine Pacewicz, Michigan State University, USA

The abstracts contained in this publication were submitted by authors using the NASPSPA Web site.

activity and difficulties in sensory processing may affect the body weight of children with ASD. However, studies on the relationship between these three areas of sensory processing, motor proficiency, and BMI are limited. The purpose of this study was to investigate motor proficiency, sensory processing, and BMI in children with ASD and whether the three areas were related. Twenty-six children with ASD (ages 7-14 years; 23 males, 3 females) participated in this study. The Movement Assessment Battery for Children-2 was used to assess the children's motor proficiency, the Short Sensory Profile was used to examine the children's sensory response, and BMI data were also collected to measure children's weight status. Findings revealed that children with ASD were significantly delayed in both fine and gross motor proficiency and sensory processing when compared to the normative data. Many children with ASD (36%) were classified as unhealthy weight. The Pearson correlation analysis showed a significant positive relationship between children's motor proficiency and sensory processing. These findings indicated that children with delayed motor skill performance tend to have greater sensory processing difficulties. It is recommended that practitioners and educators include sensory and motor skills as they develop and implement training programs for children with ASD to improve their weight status and help them succeed in school and in their daily life.

The Effect of a Motor Behavior Course on Undergraduate Students' Attitudes Toward Disability and Mobility

Samuel W. Logan, Oregon State University; Kathleen R. Bogart, Oregon State University; Erica Woekel, Oregon State University; Heather A. Feldner, University of Washington; Christina M. Hospodar, New York University; Michele A. Catena, Oregon State University; Samantha Ligman, Oregon State University; Samantha M. Ross, Oregon State University; Joseline S. Raja, Oregon State University

Previous research has demonstrated the effect of interventions to reduce ableism through education, contact with people with disabilities, and experiential learning experiences. However, contact and experiential learning experiences may not always be possible as part of an intervention. Therefore, it is important to continue to test additional pedagogical strategies that focus on classroom-based education interventions to reduce ableism. The purpose of this study was to determine the effect of a Motor Behavior course on undergraduate students' attitudes toward disability and mobility. Method: Participants included 858 college students enrolled in Motor Behavior (intervention group: $n = 279$) or Health and Human Wellness (control group: $n = 579$). Participants completed the Attitudes toward People with Disabilities Scale, Darling and Heckart's Medical and Social Model subscales, and the Attitudes toward Self-directed Mobility Scale pre and post the 10-week courses. The intervention included education and contact by video. Results: Age, disability status, and contact with people with disabilities were significantly different between the intervention and control groups, and were controlled for in all analyses. Separate One-Way ANCOVAs indicated that the intervention group had significantly more favorable attitudes toward people with disabilities ($p<.001$; $\eta p^2=.36$), decreased medical model views ($p<.001$; $\eta p^2=.23$), increased social model views ($p<.001$; $\eta p^2=.18$), and more favorable attitudes toward mobility ($p<.001$; $\eta p^2=.3$) compared to the control group. Conclusion: Positive attitude changes may be attributed to the lecture content of the course that focused on disability in the context of pediatric rehabilitation, including viewing and discussion of a documentary (indirect contract) of two children with spinal muscular atrophy who used customized motorized wheelchairs for mobility. Education interventions may be a viable pedological strategy for reducing ableism. Future research should test the underlying mechanisms and processes that facilitates attitude change.

Parent-Reported Perceived Barriers of Modified Ride-on Car use of Young Children with Disabilities

Samuel W. Logan, Oregon State University; Kathleen R. Bogart, Oregon State University; Michele A. Catena, Oregon State University; Heather A. Feldner, University of Washington; Joseline S. Raja, Oregon State University; Jenna Fitzgerald, Oregon State University; Sarah Schaffer, Oregon State University; Christina M. Hospodar, New York University; William D. Smart, Oregon State University; Samantha M. Ross, Oregon State University

Modified ride-on cars are a low-cost option for children with disabilities to engage in self-directed mobility. Research suggests that families encounter perceived barriers to use of modified ride-on cars. The purpose of this study is to identify and categorize parent-reported perceived barriers to providing opportunities to children with disabilities to use a modified ride-on car. 14 children with disabilities (M=19.9 months, SD=6.9) used a modified ride-on car for 3 months. Parents were asked about their perceived barriers of modified ride-on car use pre and post the 3 months. Four types of perceived barriers were identified based on a review of previous research and results of the current study: Device factors such as battery-life, bulky to transport, fast acceleration and loud sound, child factors (child's health such as sickness, tolerance such as willingness or lack of enjoyment, and physical abilities such as inability to steer), family factors (physical demands, motivation, lack of time), and environmental factors (weather, available space). At pre-test, 11 total barriers were reported (64% environmental; 18% child's abilities; 9% child's tolerance; 9% device factors). At post-test, 22 total barriers were reported (37% environmental; 21% child's abilities; 21% device factors; 16% child's tolerance; 5% family factors- lack of time). Many of the parent-reported perceived barriers may be addressed through a targeted educational intervention. For example, parents could be provided with a list of local, covered playgrounds with a large amount of open space where modified ride-on cars could be used in inclement weather. The child's physical therapist may provide direct support to the parents to further adapt the modified ride-on car to maximize a child's physical skills to ensure driving is possible. A resource guide for families outlining specific play activities to scaffold a child's progression of using the modified ride-on car may be especially helpful. Funding source: John C. Erkkila, M.D. Endowment for Health and Human Performance; Oregon State University (Colleges of Engineering and Public Health & Human Sciences Joint Interdisciplinary Research Grant Program).

Physical Fitness, but not Specific Skill Levels nor Motor Coordination, is Associated with Coaches' Perception of Young Soccer Players Competence.

Vitor P. Lopes, Research Center in Sports Sciences, Health Sciences and Human Development (CIDESD), and Instituto Politécnico de Bragança, Campus de Santa Apolónia; Alvaro Fortunato, Research Center in Sports Sciences, Health Sciences and Human Development (CIDESD), and Instituto Politécnico de Bragança, Campus de Santa Apolónia; Celina Gonçalves, Research Center in Sports Sciences, Health Sciences and Human Development (CIDESD), and Instituto Politécnico de Bragança, Campus de Santa Apolónia; Luis P. Rodrigues, Research Center in Sports Sciences, Health Sciences and Human Development (CIDESD), and Escola Superior Desporto e Lazer de Melgaço, Instituto Politécnico de Viana do Castelo

Many youth sports programs in sport clubs aim to develop sporting excellence and focus on results, with the tangible success of a sports program often related to the club's ability to produce good athletes within specific sporting disciplines. However, the success of young practitioners depends on several factors, namely the generic and specific motor competence that develops with the practice. The present study aims to understand if physical fitness, specific skill levels, and motor coordination, are associated with the perception of coaches about young soccer players competence. Participants were N=111 boys with 10.5(2.48) years of age, who practiced soccer regularly in youth training clubs, and their coaches (N=17).Boys were evaluated on physical fitness (multi stage aerobic test), motor coordination (KTK) and in specific soccer skills (passing and receiving, juggling the ball, dribbling, and kicking to the goal). Percent body fat was determined with a bioimpedance scale. The coaches were asked about the future success (achieving high performance) of each of their athletes, having into account four parameters: tactic ability, motor skills, physical aptitude, and psychological skills. Four each parameters each coach responded in a 3-point scale: (1) Will not succeed, (2) Could succeed, (3) Will succeed. The result is the sum of the points assigned in the four parameters. Multiple regression was used to identify the variables that predicted the coaches' perception of the competence of young soccer players. The performance results in specific soccer skills were previously transformed into z-scores and the results of all the skills' tests were summed to obtain an indicator of soccer skill performance. Results show that only physical fitness test (cardiovascular fitness) was associated with coaches' perception of young soccer players' competence. In conclusion, cardiovascular fitness, but not specific skill levels nor motor coordination, was associated with the perception that coaches have of their young soccer players competence.

Type, Frequency, and Duration of use of Infant Positioning Devices

Yuemei Lu, Janet Hauck, Michigan State University

The use of Infant Positioning Devices (IPDs) during infancy is very popular in western culture. In most cases, these devices place the infant in a seated or supine position, restricting movement of their trunk and limbs. However, there is limited knowledge about the type, frequency, and duration of use of these devices. To longitudinally determine the type, frequency, and duration of use of 10 commonly used IPDs during a typical 24-hour period once monthly from one to six months of age in typically developing infants. This is a longitudinal, observational study. Twenty-eight infants were recruited to participate in this study from one to six months of age. IPD use was measured once monthly during a 24-hour period from one to six months of age. During the monitoring period, caregivers were asked to use a log to record the type, frequency, and duration of use of IPDs. This log provided a detailed account of the amount of time an infant spends in various IPDs during a typical 24-hour period. In a typical 24-hour period, IPD use accumulated to approximately 8.5 hours at one month of age, 7.8 hours at two months of age, 8.7 hours at three months of age, 5.6 hours at four months of age, 4.9 hours at five months of age, and 4.2 hours at six months of age. In early infancy, fewer devices are used during longer periods of time. As infants age, multiple types of devices are used but the total cumulative duration of IPDs gradually decreases. There also appears to be differences in frequency of use of certain devices. Results indicate swaddles are the most frequently used IPD during early infancy, swings and bouncers are also frequently used at these ages as well. Jumpers, walkers, and highchairs are used more frequently at five and six months of age. IPDs are frequently used in infancy with substantial use from one to three months of age. Future research should discriminate the benefits and consequences of using these devices to better understand their influence on infant development.

A First Look at Senior Female Motor Competence: Comparation Between Generations.

Carlos Luz, Escola Superior de Educação de Lisboa, Instituto Politécnico de Lisboa & CIED; Rita Cordovil, CIPER, Faculdade de Motricidade Humana, Universidade de Lisboa; Luís P. Rodrigues, Escola Superior de Desporto e Lazer de Melgaço, Instituto Politécnico de Viana do Castelo

The increased life expectancy has led to demographic changes with an increase of the population aged 60 and older. Research in the last decades showed that Motor Competence (MC) has a key role in the development and maintenance of a healthy lifestyle in children. However, nothing is known about MC in senior population. Therefore, the aims of the current study were to: i) evaluate MC in female senior population and ii) compare senior MC with the MC of younger generations (children, adolescents and young adults).A total sample of 156 female participants was divided in 6 age groups (26 participants per group, 3-5 y, 6-10 y, 11-14 y, 15-18 y, 19-22 y and 60-75 y). MC of all participants was assessed with the Motor Competence Assessment (MCA) battery, evaluating stability (Shifting platforms, lateral jumps) locomotor (shuttle run, standing long jump) and manipulative (throwing and kicking velocity) skills. Raw results were converted in z-scores to allow a comparison between age groups. Kruskal-Wallis and Mann Whitney U-tests were used for statistical analysis. Kruskal-Wallis analyses exhibited significant differences between the six age groups (p<0.001) in MC and MC components. A more detailed analysis showed that senior females present significant better results (p<0.001) in MC, stability and manipulative skills than 3-5 years old children. However, for age groups older than preschoolers there is a shift in the results with children, adolescents and young adults presenting significant better performances than seniors (p<0.001) in all MC and MC components, expect for the manipulative skills in the 6-10y age group. MCA showed to be a valid instrument to evaluate MC in an older age group, supporting the theoretical rationale that in the elderly there is a decline in the functions and capacities, including MC. It seems that the MC performance of senior females is on the border between the preschoolers and the primary school children performances. Furthermore, locomotor skills seem to be the first ones to decline and manipulative skills decline at a slower rate later in life.

Developmental Differences in Prefrontal Cortex Activation in an Executive Function Task with High vs. Low Motor Elements

Kimberly Milla, University of Delaware; Elham Bakhshipour, University of Delaware; Amanda Plumb, Federation University Australia; Reza Koiler, University of Delaware; Nancy Getchell, University of Delaware

Our group has characterized hemodynamic activity in the prefrontal cortex (PFC) during executive function tasks in adults, however to our knowledge this has not been investigated in children. We examined PFC activity in a group of typically developing (TD) children using functional near infrared spectroscopy (fNIRS) as they solved the Tower of Hanoi (ToH) puzzle. Two conditions were presented to participants; the first condition utilized a traditional, three-dimensional (3D) model requiring manual manipulation. The second condition used a two-dimensional (2D) computerized model that presented equivalent executive function demands yet with diminished motor requirements. Our aim was to further understand the PFC role in these two ToH conditions (high vs. low motor elements), and to characterize PFC activity in TD children during a cognitive-motor task. Nineteen TD children (5F/14M, $M = 10.9 \pm 2.2$ y.o) solved as many puzzles as possible in two blocks (one per condition) of 3, 1-minute epochs. Participants had an overall mean MABC-2 percentile of 55.9 and 44.2 for the manual dexterity subcategory. Paired, two-sample t-test for means was utilized to analyzed data. Results showed significantly lower changes in oxygenated hemoglobin, ΔHbO, in block 2 (B2) with respect to block 1 (B1), $p = 0.047$. Furthermore, significantly lower ΔHbO was seen in B2 when participants began the protocol with the 3D condition (3D/B1), $p = 0.026$, unlike participants that began the protocol with the 2D condition (2D/B1), $p > 0.05$. Lastly, no significant differences in ΔHbO were found between 3D and 2D conditions, contrary to previous findings on adult participants. In conclusion, this study supports previous evidence in adults where learning and performance benefited the most by introducing the