

Biomechanics

Influence of a Horizontal Approach on the Mechanical Output During Drop Jumps (pp. 1–9)
Mianfang Ruan and Li Li

This study investigated the influence of a horizontal approach to mechanical output during drop jumps. Participants performed drop jumps from heights of 15, 30, 45, and 60 cm with zero, one, two, and three approach steps. The peak summed power during the push-off phase changed quadratically across heights (6.2 ± 0.3 , 6.7 ± 0.4 , 6.4 ± 0.4 , and 6.0 ± 0.4 kW, respectively) driven by the ankle joint response. Summed peak power was 10% greater with an approach attributed to the knee joint response. Downward phase dorsiflexion (31%), knee flexion (35%), and peak vertical force (32%) increased with drop heights. Vertical approach force (22%) increased, while knee flexion (11%) and downward duration (17%) decreased. An approach may improve drop jump training for explosive tasks.

Epidemiology

Patterns of Physical Activity and Overweight Among 7–13-Year-Old Russian Children: A 7-Year Nationally Representative Monitoring Study (pp. 10–17)

Catrine Tudor-Locke, Barbara E. Ainsworth, and B. M. Popkin

This is a repeated cross-sectional study of overweight and physical activity (PA) and inactivity patterns of successive samples of 7–13-year-old Russian children who were surveyed six times between 1995 and 2002 as part of the Russian Longitudinal Monitoring Survey. This analysis focused on moderate/vigorous (MOD/VIG) PA (e.g., active commuting to school, during school MOD/VIG PA as part of physical education classes, and/or before/after school MOD/VIG PA) and inactivity patterns (e.g., television viewing habits) obtained through parent proxy-reports of 3,507 boys (M age = 10.1 years, $SD = 2.0$; M body mass index = 17.5 kg/m^2 , $SD = 3.0$) and 3,273 girls (M age = 10.1 years, $SD = 2.0$; M body mass index = 17.2 kg/m^2 , $SD = 3.0$). Time spent in MOD/VIG PA appears to be on the rise, while the proportion of those actively commuting to school is decreasing, especially among girls.

But I Like PE: Factors Associated With Enjoyment of Physical Education Class in Middle School Girls (pp. 18–27)

Daheia J. Barr-Anderson, Dianne Neumark-Sztainer, Kathryn H. Schmitz, Dianne S. Ward, Terry L. Conway, Charlotte Pratt, Chris D. Baggett, Leslie Lytle, and Russell R. Pate

The current study examined associations between physical education (PE) class enjoyment and sociodemographic, personal, and perceived school environment factors among early adolescent girls. Participants included 1,511 sixth-grade girls who completed baseline assessments for the Trial of Activity in Adolescent Girls, with 50% indicating they enjoyed PE class a lot. Variables positively associated with PE class enjoyment included physical activity level, perceived benefits of physical activity, self-efficacy for leisure time physical activity, and perceived school climate for girls' physical activity as influenced by teachers, while body mass index was inversely associated with PE class enjoyment. After adjusting for all variables in the model, PE class enjoyment was significantly greater in Blacks than in Whites. In model testing, with mutual adjustment for all variables, self-efficacy was the strongest correlate of PE class enjoyment, followed by perceived benefits, race/ethnicity, and teachers' support for girls' physical activity, as compared to boys, at school. The overall model explained 11% of the variance in PE class enjoyment. Findings suggest that efforts to enhance girls' self-efficacy and perceived benefits and to provide a supportive PE class environment that promotes gender equality can potentially increase PE class enjoyment among young girls.

Walking for Health in Pregnancy: Assessment by Indirect Calorimetry and Accelerometry (pp. 28–35)

Jennifer M. DiNallo, Guy C. Le Masurier, Nancy I. Williams, and Danielle Symons Downs

The purpose of this study was to examine RT3 accelerometer activity counts and activity energy expenditure of 36 pregnant women at 20 and 32 weeks' gestation during treadmill walking and free-living conditions. During treadmill walking, oxygen consumption was collected, and activity energy expenditure was estimated for a 30-min walk at a self-selected walking pace. The number of min it would take a pregnant woman to meet exercise recommendations (i.e., kcal/week) were calculated. Preliminary activity count cut points at a

self-selected walking pace were then estimated and applied in interpreting free-living data. For the treadmill walking condition, the self-selected walking pace significantly decreased from 20 to 32 weeks' gestation. Additionally, few women (< 12% each day) met physical activity guidelines in the free-living condition. Encouraging pregnant women to walk for 30–40 min per day at a self-selected walking pace may be an appropriate public health recommendation.

Motor Development

The End-State Comfort Effect in Young Children (pp. 36–41)

Carola F. Adalbjornsson, Mark G. Fischman, and Mary E. Rudisill

The end-state comfort effect has been observed in recent studies of grip selection in adults. The present study investigated whether young children also exhibit sensitivity to end-state comfort. The task was to pick up an overturned cup from a table, turn the cup right side up, and pour water into it. Two age groups ($N = 20$ per group) were studied: preschool children (2–3 years old), and kindergarten students (5–6 years old). Each child performed three videotaped trials of the task. Only 11 of the 40 children exhibited the end-state comfort effect, and there were no differences between age groups. Results revealed the emergence of five different performance patterns, none of which were consistent with sensitivity to end-state comfort. The findings have implications for the advance planning of manual control in young children.

Measurement and Evaluation

Construct Validation of Physical Activity Surveys in Culturally Diverse Older Adults: A Comparison of Four Commonly Used Questionnaires (pp. 42–50)

Delilah S. Moore, Rebecca Ellis, Priscilla D. Allen, Katie E. Cherry, Pamela A. Monroe, Carol E. O'Neil, and Robert H. Wood

The purpose of this study was to establish validity evidence of four physical activity (PA) questionnaires in culturally diverse older adults by comparing self-report PA with performance-based physical function. Participants were 54 older adults who completed the Continuous Scale Physical Performance 10-item Test (CS-PFP10), Physical Activity Scale for the Elderly (PASE), CHAMPS Physical Activity Questionnaire for Older Adults, Yale Physical Activity Survey (YPAS), and modified Baecke questionnaire. The total PASE score, three outcome scores for the CHAMPS, and three summary indices for the YPAS were significantly correlated with total CS-PFP10 score. The modified Baecke exhibited no correlations with CS-PFP10 scores. The PASE, CHAMPS, and YPAS appear to be the most valid PA self-report questionnaires for culturally diverse older adults.

Pedagogy

Effects of Dispositional Ability Conceptions, Manipulated Learning Environments, and Intrinsic Motivation on Persistence and Performance: An Interaction Approach (pp. 51–61)

Weidong Li, Amelia M. Lee, and Melinda Solmon

The present study used an interaction approach to investigate how individuals' dispositions about ability as incremental or fixed (entity), manipulated learning environments, and intrinsic motivation affect persistence and performance on a challenging, novel motor skill. Seventy-two female college students who were assigned to either an incremental or entity learning condition for instruction and practice completed questionnaires and attempted to learn the skill. The results indicated that participants oriented toward incremental beliefs were likely to be more intrinsically motivated. Participants who were intrinsically motivated were likely to perform better on a final skill test. The significant interaction effect on persistence suggests that participants who were highly intrinsically motivated in the incremental condition persisted longer than those in the entity condition.

An Examination of the Multidimensionality of Situational Interest in Elementary School Physical Education (pp. 62–70)

Haichun Sun, Ang Chen, Catherine Ennis, Robert Martin, and Bo Shen

It has been demonstrated that situational interest in physical activity may derive from five dimensional sources, Novelty, Optimal Challenge, Attention Demand, Exploration Intent, and Instant Enjoyment. The purpose of this study was to examine the multidimensional sources in elementary school physical education. The five dimensions were measured in 5,717 students in third, fourth, and fifth grades from a random sample of 30 elementary schools. Students' responses were randomly divided into two samples for a two-step confirmatory factor analysis. The results confirmed that the five dimensions are primary sources of situational

interest for elementary school physical education. The findings implied that situational interest should be taken into account as a necessary curricular component in elementary physical education.

Examining Curricular Coherence in an Exemplary Elementary School Program (pp. 71–84)
Catherine D. Ennis

A coherent curriculum is characterized by visible connections between purposes and experiences so that students acknowledge the content's immediate value. This study examined an exemplary elementary physical education curriculum for coherence components. Research questions examined the role of coherence in connecting and engaging students meaningfully in physical education. Observations and interviews were conducted to collect qualitative data in one program for 22 weeks. Data were analyzed using open, axial, and selective coding. Results described two units, Balls Skills, leading to modified basketball, and Scooter City, a theme-based unit emphasizing student choice and responsibility. Students reported that both units were enjoyable. Although the Balls Skills unit was well planned, taught, and managed, some students commented that the skill and games content was valuable only in basketball. In the Scooter City unit, students identified numerous connections to out-of-school activities that enhanced content value. Comparisons with Beane's coherence criteria suggested that students valued Scooter City based on concrete connections to their lived experiences.

Physiology

Heart Rates of High School Physical Education Students During Team Sports, Individual Sports, and Fitness Activities (pp. 85–91)

Kelly R. Laurson, Dale D. Brown, Robert W. Cullen, and Karen K. Dennis

This study examined how activity type influenced heart rates and time spent in target heart rate zones of high school students participating in physical education classes. Significantly higher average heart rates existed for fitness (142 ± 24 beats per minute [bpm]) compared to team (118 ± 24 bpm) or individual (114 ± 18) activities. Similar results occurred for the percentage of activity time spent within a target heart rate zone (fitness $81.7 \pm 15.9\%$, individual $68.4 \pm 30.5\%$, and team $60.6 \pm 30.5\%$). Boys attained higher heart rates during team activities, while female students had higher rates during individual activities indicating male and female adolescents respond differently to activity types. The highest mean heart rates were observed during fitness activities.

Psychology

Self-Efficacy and Outcome Expectancy in Beginning Weight Training Class: Their Relations to Students' Behavioral Intention and Actual Behavior (pp. 92–100)

Zan Gao, Ping Xiang, Amelia M. Lee, and Louis Harrison, Jr.

This study was an initial attempt to investigate the relationships among self-efficacy, outcome expectancy, behavioral intention, and actual behavior over time in a beginning weight training class. A total of 109 participants completed questionnaires assessing their self-efficacy, outcome expectancy, and intentions for future weight training. Their attendance and workout logs were calculated as a measure of actual behavior. Correlation analyses revealed significant positive relationships among all the variables during both program periods. Multiple regression analyses indicated that outcome expectancy initially played a more important role than self-efficacy in predicting behavioral intention and actual behavior. However, self-efficacy appeared more influential at midprogram. Findings of this study can enhance our understanding of the determining factors for individuals' motivated behaviors in college physical activity classes.

Sociology and Cultural Anthropology

Italian Women's Television Coverage and Audience During the 2004 Athens Olympic Games (pp. 101–115)

Laura Capranica, Antonio Tessitore, Emanuele D'Artibale, Cristina Cortis, Rita Casella, Enrica Camilleri, and Caterina Pesce

This study aimed at determining the amount of Italian television coverage dedicated to men's and women's sport and the number of male and female viewers during the 2004 Summer Olympic Games. AUDITEL-AGB Nielsen Media Research Italia provided the TV airtime data for the sport events broadcast, which were classified into three categories: men-only, women-only, and mixed-gender. The viewer sample was divided by age and gender and included three audience parameters: mean audience, share, and appreciation index. The last item is calculated from the program duration, audience permanence, and the share related to programs broadcast by

other Italian channels. In particular, the appreciation index was used to investigate the relationship between (a) the viewer's and sport participants' gender and (b) the effect of Italian participation and expectations for sport achievement. The data showed that Italian male athletes outnumbered their female counterparts. Women's sport was allotted significantly less airtime than men's sport, but this imbalance was not proportional to the gender difference in the overall athletes' participation in the Games. Although the female audience represented 45% of the total, a significantly higher male mean audience and share were found. On the other hand, the appreciation of men's and women's sport events was balanced after equating for differences in media coverage. Moreover, sport achievement might have a positive effect on the trend toward equality of gender coverage, indicating that a global multisport event such as the Olympic Games is central to communicating a national image and identity independently of the athletes' gender.

Research Notes

Task Switching Effects in Anticipation Timing (pp. 116–121)

Jeffrey T. Fairbrother and Sebastian Brueckner

Self-Controlled Feedback in 10-Year-Old Children: Higher Feedback Frequencies Enhance Learning (pp. 122–127)

Suzete Chiviawowsky, Gabriele Wulf, Franklin Laroque de Medeiros, Angélica Kaefer, and Raquel Wally