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Editorial

Biomechanics

The purpose of this study was to determine whether the Index of Coordination (IdC) and the propulsive phase durations can differentiate performance level during a maximal 400-m front crawl swim trial. Sixteen male swimmers constituted two groups based on performance level (G1: experts; G2: recreational). All participants swam the 400-m front crawl at maximal speed. Video analysis determined the stroke (swimming speed, stroke length, stroke rate) and coordination (IdC) parameters for every 50 m. Both stroke and coordination parameters discriminated performance level. The expert group had significantly higher values for speed and stroke length and lower values for the relative propulsive phase duration and IdC ($p < .05$). However, there was no significant change in coordination parameters for either group throughout the trial. This suggests that, when associated with greater stroke length, catch-up coordination can be an efficient coordination mode that reflects optimal drag/propulsion adaptation. This finding provides new insight into swimmers' adaptations in a middle-distance event.

Motor Behavior

An individual's a priori talent can affect movement performance during learning. Also, task requirements and motor-perceptual factors are critical to the learning process. This study describes changes in high bar swing performance after a 2-month practice period. Twenty-five novice participants were divided by a priori talent level (spontaneous-talented [ST] and nonspontaneous-talented [NST]) and compared to experienced gymnasts. Additionally, we assessed their perception of their performance level before and after practice. We defined three events independently for hip (H) and shoulder (S) angle joints and for the lag between consecutive events (phases [P]): the smallest angle during downswing (P1H, P1S), the largest angle after P1 (P2H, P2S), and the smaller angle during upswing (P3H, P3S). Movement performance variables were the maximum elevation on the downswing (Pi) and the upswing (Pf), and the total path between both (swing amplitude). Data were collected during pre- and postpractice sessions by two video cameras. At the end of both sessions, participants drew a sketch to represent their perception of their performance level relative to the Pi, Pf, and the hip events. Results showed a similar practice effect in the swing amplitude in both novice groups. However, the ST group's performance and perception variables on the downswing improved more than the NST group due to practice. This study suggests that (a) downswing improvements were easier than in the upswing, possibly due to familiarity of the visual reference in combination with proprioceptive feedback; and (b) being ST may involve a better or faster gain in perception of self-action compared to NST.

To examine the effect of long lasting practice on pedal behavior in sport, we compared experienced adult soccer players and nonsoccer players on leg preference in motor tasks requiring general mobilization, soccer related mobilization, and body balance stabilization. We also evaluated performance asymmetry between the right and left legs in static and dynamic unipedal body balance, based on center of pressure displacement, and correlated that with leg preference in balance stabilization tasks. Results revealed (a) a distinct leg preference between mobilization and stabilization tasks, which were significantly different between players and nonplayers, (b) similar balance stability between the right and left legs, (c) greater stability of experienced players compared with

nonplayers in static and dynamic balance, and (d) absence of a significant leg preference correlation with interlateral balance asymmetry. These results suggest an effect of extensive soccer skill practice on establishing leg preference for specific mobilization tasks and overall balance control.

The Effects of Reinvestment of Conscious Processing on Switching Focus of Attention (pp. 28–36)
Stephen M. Weiss

The effects of switching focusing strategies on complex motor skill learning were investigated using a dart-throwing task. Participants were screened for reinvestment of conscious processing by completing the Reinvestment Scale (RS) of Masters, Polman, and Hammond (1993). After an initial baseline phase, two focusing strategies were described. Low and high reinvestors were then asked which of the strategies was used during baseline. Regardless of preference, they were requested to change focus. Novice dart-players used either a nonpreferred internal focus (EI), in which they were asked to concentrate on movements of their body, or a nonpreferred external focus (IE), in which they were asked to focus on the effects of their movements. This procedure produced two separate groups, EI and IE. Those scoring low and high on the RS were separated, thus producing four groups. Participants in the EI high group were the least successful. These results support the findings of earlier studies suggesting that switching to an EI is detrimental. Additionally, it appears that high reinvestors switching from a preferred IE to a nonpreferred EI are the most susceptible to unsuccessful performance.

Pedagogy
PE Is Not for Me: When Boys' Masculinities Are Threatened (pp. 37–48)
Amy Tischler and Nate McCaughtry

This study used hegemonic masculinity theory to examine the intersection of masculinities and school physical education from the perspectives of boys who embodied masculinities that were marginalized. Over a 13-week period using present-focused, student-centered, qualitative methodological approaches, we observed, interviewed, and worked in small groups with 5 middle school boys from two schools. We identified three significant themes that merge the stories and experiences of masculinity hierarchies in sport-based physical education. First, we found that four social practices (content, pedagogies, teacher-student relationships, and peer cultures) in these physical education settings privileged some masculinities over others. Second, we examined the role that embodiment played, both in how the boys wore their oppression and in how their bodies resisted marginalizing situations. Third, we describe the contrasts these boys drew between physical activities experienced in sport-based physical education and physical activity experiences in other areas of their lives. We used Connell and Messerschmidt's (2005) reconceptualization of the theory of hegemonic masculinity for understanding how competitive sport-based physical education functioned to oppress boys with masculinities that were deemed abnormal. Additionally, we introduce feminist poststructuralism as a possible theoretical lens for interpreting boys' bodies as also being active agents in social practices rather than being only passive objects who are oppressed and dominated.

Culturally Relevant Physical Education in Urban Schools: Reflecting Cultural Knowledge (pp. 49–60)
Sara B. Flory and Nate McCaughtry

Using a three-part theoretical framework, the cultural relevance cycle—which consists of (a) knowing community dynamics, (b) knowing how community dynamics influence educational processes, and (c) implementing strategies that reflect cultural knowledge of the community—we examined teachers' and students' perspectives on culturally relevant physical education in urban settings. We observed and interviewed 53 physical education teachers and 183 students in urban districts over 4 years. We identified themes of care, respect, language and communication, and curricular content that explained how these teachers enacted the cultural relevance cycle. Within these themes, teachers and students specified global and discipline-specific components of care, the rflattening of social hierarchies among students and between students and teachers, accommodation of English as a second language and urban communication, and relevant curricular content as necessary for achieving cultural relevance. Enacting the cycle of cultural relevance resulted in respectful learning environments in which students were highly engaged; however, very few teachers enacted all three steps of the cycle.

Physiology

Aerobic, Anaerobic, and Skill Performance With Regard to Classification in Wheelchair Rugby Athletes (pp. 61–69)
Natalia Morgulec-Adamowicz, Andrzej Kosmol, and Bartosz Molik, Abu B. Yilla, and James J. Laskin

The purpose of the study was to examine the sport-specific performance of wheelchair rugby players with regard to their classification. A group of 30 male athletes from the Polish Wheelchair Rugby League participated in the study. The seven International Wheelchair Rugby Federation classes were collapsed into four groups. Standardized measures of aerobic, anaerobic, and skill performance were examined to identify performance differences among the four groups. Major findings were that most differences were between Group I players and all others and that anaerobic performance was the most sensitive to classification differences. Another important finding was that for all other groups, with one exception, adjacent groups did not differ in anaerobic, aerobic, and sport-specific skill performance. The results of this study demonstrate the need to investigate other performance measures that will help in evaluating the current wheelchair rugby classification system.

Allometric Scaling of Wingate Anaerobic Power Test Scores in Women (pp. 70–78)
Ronald K. Hetzler, Christopher D. Stickley, Iris F. Kimura

In this study, we developed allometric exponents for scaling Wingate anaerobic test (WAnT) power data that are effective in controlling for body mass (BM) and lean body mass (LBM) and established a normative WAnT data set for college-age women. One hundred women completed a standard WAnT. Allometric exponents and percentile ranks for peak (PP) and mean power (MP) were established. Allometric exponents were applied to WAnT scores for an independent sample (n = 31) to assess external validity. PP and MP were 477.0 W (SD = 80.0) and 372.6 W (SD = 61.5), respectively. Allometric exponents for PP and MP scaled for BM were b = 0.92 and b = 0.76, respectively, and for LBM they were b = 0.93 and b = 0.91, respectively. In the independent sample, these exponents produced correlations between allometrically scaled PP and MP and BM of r = -.02 and r = .02, respectively. Correlations between allometrically scaled PP and MP and LBM were r = .004 and r = -.02, respectively. The allometric exponents were effective in partialing out the effect of BM for PP and MP and demonstrated acceptable levels of external validity when applied to an independent sample. The allometric exponents and normative values provide a useful tool for comparing WAnT scores in college-age women without the confounding effects of BM or LBM.

Psychology

Proposed Modifications to the Conceptual Model of Coaching Efficacy and Additional Validity Evidence for the Coaching Efficacy Scale II-High School Teams (pp. 79–88)
Nicholas Myers, Deborah Feltz, and Melissa Chase

The purpose of this study was to determine whether theoretically relevant sources of coaching efficacy could predict the measures derived from the Coaching Efficacy Scale II-High School Teams (CES II-HST). Data were collected from head coaches of high school teams in the United States (N = 799). The analytic framework was a multiple-group confirmatory factor analysis with ordered-categorical indicators and observed covariates. Applying this framework to the conceptual model of coaching efficacy (CMCE) resulted in a statistical model equivalent to a multiple-group multivariate regression with latent outcomes. Results provided evidence for the ability of measures derived from the CES II-HST to be predicted by theoretically relevant sources of coaching efficacy and suggested modifications to the CMCE.

When to Blink and When to Think: Preference for Intuitive Decisions Results in Faster and Better Tactical Choices (pp. 89–98)
Markus Raab and Sylvain Laborde

Intuition is often considered an effective manner of decision making in sports. In this study we investigated whether a preference for intuition over deliberation results in faster and better lab-based choices in team handball attack situations with 54 male and female handball players of different expertise levels. We assumed that intuitive

choices—due to their affective nature—are faster when multiple options are to be considered. The results show that athletes who had a preference for intuitive decisions made faster and better choices than athletes classified as deliberative decision makers. It is important that experts were more intuitive than near-expert and nonexpert players. The results support a take-the-first heuristic defining how options are searched for, how option generation is stopped, and how an option is chosen. Implications for the training of intuitive decision making are presented.

Effects of The Coach Approach® Intervention on Adherence to Exercise in Obese Women: Assessing Mediation of Social Cognitive Theory Factors (pp. 99–108)
James J. Annesi, Jennifer L. Unruh, C. Nathan Marti, Srinivasa Gorjala, and Gisèle Tennant

The link between physical activity and weight loss has precipitated interest in interventions to foster adherence to exercise. It has been suggested that treatment effects, when significant, should be analyzed to determine theory-based mediators. This research assessed possible mediation of changes in Physical Self-Concept, Exercise Self-Efficacy, Total Mood Disturbance, and Body Areas Satisfaction scores on the relationship between exercise session attendance and participation by obese women in a 6-month treatment based on tenets of social cognitive theory ($n = 73$) or a control condition ($n = 64$). Participation in the treatment was associated with significantly greater exercise session attendance and significantly greater improvements in Physical Self-Concept, Exercise Barriers Self-Efficacy, and Body Areas Satisfaction. Overall, changes in the assessed psychological factors demonstrated significant mediation of the association between group membership and exercise session attendance, $R^2 = .23$, with only change in Physical Self-Concept scores providing a significant unique contribution. Extensions of this research across different sample types, and with longer durations, were suggested to refine theory and, ultimately, improve exercise adherence treatments.

Where Are the Women in Women's Sports? Predictors of Female Athletes' Interest in a Coaching Career (pp. 109–117)
Kelli Moran-Miller and Lisa Y. Flores

In this study, we used social cognitive career theory (Lent, Brown, & Hackett, 1994) to examine the development of female athletes' career interest in coaching and, specifically, the impact of contextual factors (female coaching role models, working hours, and perceived discrimination) on coaching self-efficacy and outcome expectations. Participants were 205 predominantly White, heterosexual female student athletes. A path analysis indicated that role models and working hours predicted coaching self-efficacy, which predicted coaching outcome expectations. Additionally, coaching self-efficacy, coaching outcome expectations, and contextual factors predicted coaching interest. Practical implications are discussed as well as suggestions for further research in this relatively unexplored area.

Sociocultural Foundations
Arab American College Students' Physical Activity and Body Composition: Reconciling Middle East-West Differences Using the Socioecological Model (pp. 118–128)
David Kahan

In this study, I conducted focus group interviews with 21 Arab American college students (9 men, 12 women; 9 Muslims, 12 non-Muslims), who were selected for extreme manifestation of religiosity or acculturation, to explore their beliefs and attitudes toward socioecological (SE) factors that facilitated and hindered their individual physical activity (PA) and body composition (I also considered body image and food and eating behavior). To analyze responses, I used a combination of deductive coding, which used levels of the SE model and demographic variable groupings, and inductive coding, to search for common themes among participants within and between research questions. Results revealed that (a) the context of physical activity participation differed by gender; (b) ideal body image was conflicted and varied by gender; and (c) consumption of cultural foods diminished along with Arab social customs related to eating. Interpersonal and cultural/community levels of the SE model were identified as primary influences, with parents regulating and instilling values backed by cultural norms to preserve Arab identity, especially in women. Finally, I identified an indeterminate adjustment period, during which immigrants transitioned between physical activity purpose/form in the Middle East and the United States.

Research Notes

Commentary