

**2006 C. H. McCloy Research Lecture**

*Defining Learning as Conceptual Change in Physical Education and Physical Activity Settings*  
(pp. 138–150)  
Catherine D. Ennis

**Epidemiology**

*Occupational Physical Activity, Overweight, and Mortality: A Follow-up Study of 47,405 Norwegian Women and Men* (pp. 151–161)  
Sidsel Graff-Iversen, Randi Selmer, Marit Sørensen, and Svetlana Skurtveit

This population-based 24-year follow-up study evaluated the association of occupational physical activity (OPA) with overweight and mortality in 47,405 men and women, healthy at baseline, and reporting OPA as sedentary (reference), light, moderately heavy, or heavy. The adjusted odds ratio for overweight was slightly less than 1 for all categories of current nonsedentary work in men but increased by OPA in women. Only heavy OPA conferred a lower mortality with an adjusted rate ratio of 0.84 (95% confidence interval, 0.76–0.92) for men and 0.69 (95% confidence interval, 0.52–0.91) for women. This observational study, with OPA recorded in the 1970s and 1980s, suggested a slight protective effect for overweight by nonsedentary work for men and lower mortality by heavy OPA for both genders.

*Practical Considerations When Using Pedometers to Assess Physical Activity in Population Studies: Lessons From the Burnie Take Heart Study* (pp. 162–170)  
Michael D. Schmidt, C. Leigh Blizzard, Alison J. Venn, Jennifer A. Cochrane, and Terence Dwyer

The aim of this study was to summarize both practical and methodological issues in using pedometers to assess physical activity in a large epidemiologic study. As part of a population-based survey of cardiovascular disease risk factors, physical activity was assessed using pedometers and activity diaries in 775 men and women ages 25–64 years who were residents of Burnie, Tasmania, 1998–99. Common data problems were classified by type. The frequency of each problem and the methods used to identify it are reported along with strategies to correct or prevent each problem type. Pedometer data from 15 (1.9%) participants could not be used due to errors in completing the pedometer protocol. Among 760 participants with usable data, the median number of steps was 9,729 for men and 10,388 for women. Pedometer steps per day were modestly correlated ( $r = .20$ ,  $p < .0001$ ) with the duration of pedometer wear, which ranged from 4.50 to 21.75 hr. Adjustment for wear time, however, did not alter observed correlations between pedometer steps and cardiovascular risk factors. The authors conclude that pedometers can be used in large population studies with a relatively low frequency of data errors. However, guidelines for consistent data collection and interpretation are needed.

**Growth and Motor Development**

*Mastery Motivational Climate: Influence on Physical Play and Heart Rate in African American Toddlers* (pp. 171–178)

Loraine E. Parish, Mary E. Rudisill, and Paul M. St. Onge

The purpose of this study was to determine the effectiveness of a planned mastery motivational physical play session on physical activity (i.e., heart rate [HR] and physical play intensity [PAHR > 50]) in toddlers ( $N = 21$ ), as compared to a nonplanned free play session. Participants wore a monitor to measure HR over two, 30 min play conditions. A multivariate analysis of variance was conducted to evaluate the effect of the play conditions. A significant difference between conditions and physiological measures revealed that the mastery motivational physical play session resulted in higher HR and PAHR > 50 when compared to free play. These findings suggest the mastery motivational session resulted in more vigorous physical play in toddlers than free play.

*Anthropometric Characteristics of Columbia, South Carolina, Youth Baseball Players and Dixie Youth World Series Players* (pp. 179–188)

Karen E. French, John H. Spurgeon, and Michael E. Nevett

The purpose of this study was to compare measures of body size in two samples of youth baseball players with normative data from the United States National Center for Health Statistics (NCHS) growth charts. One sample of youth baseball players participated in a local little league. The second sample of youth baseball players were members of eight of the twelve teams participating in the 1995 Dixie Youth World Series. Normative data for the United States (NCHS) were used as comparative data. Two trained anthropometrists measured standing height, sitting height, lower limb height, upper limb length, arm girth, calf girth, tricep skinfold, and abdomen skinfold on all participants. In both samples, pitchers, short stops, and first basemen were a more highly skilled group and exhibited larger body size (greater standing height, sitting height, lower limb height, upper limb length) than children who played at other positions. The standing height of local little league players was similar to the median of reference data at ages 7, 8, and 9 years. The standing height and weight of skilled players in both samples approximated the 75th percentile for standing height and weight at ages 10, 11, 12, and 13 years. The results suggest that baseball players exhibit larger body size than the normal population at young ages. Body size may be an important criterion used by coaches to select and assign young players to certain positions.

### **Measurement and Evaluation**

*Validation of Self-Report Measures of Physical Activity: A Case Study Using the New Zealand Physical Activity Questionnaire* (pp. 189–196)

Lisa M. Mackay, Grant M. Schofield, and Philip J. Schluter

Accurate measurement of physical activity is fundamentally important in epidemiological research of physical activity behavior. A widely used telephone-based physical activity questionnaire was compared with other methods of administration and objective measures (pedometers and accelerometers) among 80 adults (43 women). The telephone questionnaire was comparable to both the self-administered form and

international telephone-administered equivalent. Although moderate correlation coefficients with objective measures supported the use of the questionnaire, wide prediction intervals generated using Bland Altman methods highlighted large discrepancies between the measures, particularly in the moderate intensity category. These findings illustrate the limitations of correlation coefficients in validation studies and the inaccuracy of self-report questionnaires in measuring physical activity.

### **Motor Control and Learning**

*Enhancing Motor Learning Through Dyad Practice: Contributions of Observation and Dialogue* (pp. 197–203)

Carolina Granados and Gabriele Wulf

It has been shown that practice in dyads, as compared to individual practice, can enhance motor learning and increase the efficiency of practice (as two participants can be trained at the same time; Shea, Wulf, & Whitacre, 1999). The dyad practice protocol used by Shea et al. included both observation and dialogue between partners. Thus, it was not clear whether the learning benefits of dyad practice were due to observation, dialogue, or both. The present study examined the individual and interactive effects of observation and dialogue. The task used was speed cup stacking. Participants practiced under one of four conditions: observation/dialogue, observation/no dialogue, no observation/dialogue, and no observation/no dialogue. The two conditions that included observational practice were more effective (i.e., produced faster movement times) than the two conditions without it, both during practice and on a retention test performed under individual performance conditions. This suggests that the learning advantages of dyad practice are primarily due to the opportunity to observe another learner.

### **Pedagogy**

*Teacher Perceptions of a Physical Education Statewide Assessment Program* (pp. 204–215)

Judith Rink, Laura Jones, Kym Kirby, Murray Mitchell, and Panayiotis Doutis

A statewide program assessment was established to make positive change in physical education school programs in South Carolina. Reform efforts depend both on balancing accountability for change and teacher support for change (Odden & Anderson, 1986). The purpose of the study was to determine teacher perceptions of the South Carolina Physical Education Assessment Program and its effects across six related themes including: changes in teaching and learning, changes in curriculum and instruction, teacher awareness of the assessment program, teacher support for the program, work place conditions, and the advocacy role of the program. It was also the purpose of this study to determine if the survey responses were in any way related to teacher and school variables. The overall results of the study indicated positive change and support for the assessment program, supporting the viability of the standards, assessment, and accountability reform effort to positively impact physical education programs.

*Students' Reports of Misbehavior in Physical Education* (pp. 216–224)

Donetta J. Cothran and Pamela Hodges Kulinna

The purpose of this study was to examine students' reports of misbehavior in physical education class. Secondary school participants ( $N = 2,309$ ) completed a previously validated instrument designed to measure students' reports of 59 student behaviors occurring in classes that might affect class management (e.g., from talking to bringing weapons to class). Three-way repeated measures analysis of variance results suggested that students' reports of misbehaviors occurring in physical education classes differed by gender, grade level, and ethnic background. Chi-square results also suggested there were differences in participants' views about why students misbehave by gender, grade level, and environment. Descriptive findings indicated most student misbehaviors were mild and moderate in nature.

## **Psychology**

*Mixing Methods in Assessing Coaches' Decision Making* (pp. 225–235)

Ineke Vergeer and John Lyle

Mixing methods has recently achieved respectability as an appropriate approach to research design, offering a variety of advantages (Tashakkori & Teddlie, 2003). The purpose of this paper is to outline and evaluate a mixed methods approach within the domain of coaches' decision making. Illustrated with data from a policy-capturing study on coaches' decisions about an injured gymnast's participation in competition, the approach involves the concurrent collection of quantitative and qualitative data and a three-phase process of data analysis. It is argued that (a) the method described can provide additional insights into the factors involved in coaches' decision making, beyond those provided via quantitative or qualitative methods alone, and (b) mixing methods holds promise for coaching research more generally.

*The Relationship Between Organizational Support, Work-Family Conflict, and the Job-Life Satisfaction of University Coaches* (pp. 236–247)

Marlene A. Dixon and Michael Sagas

This study examined the relationship between organizational support, work-family conflict, and job and life satisfaction among coaches. Data from collegiate head coaches with families ( $N = 253$ ) were gathered through a mailed questionnaire. Results from a series of covariance structure models indicated that a partially mediated model was the best fitting model,  $\chi^2 = (255, N = 253) 461.20, p < .001$ ; root mean error of approximation = .05; comparative fit index = .95; parsimonious normed fit index = .71. In partial support of the study hypotheses, the results supported full mediation of the direct effect from organizational support to life satisfaction. Work-family conflict partially mediated the relationship between organizational support and job satisfaction. Job satisfaction partially mediated the effect of organizational support and work-family conflict to life satisfaction.

## **Research Notes**

*Overweight and Its Relationship to Middle Eastern American College Students' Sociodemographics and Physical Activity* (pp. 248–256)  
David Kahan

*Attentional Focus Effects as a Function of Task Difficulty* (pp. 257–264)  
Gabriele Wulf, Thomas Töllner, and Charles H. Shea 257