

Epidemiology

Pre- and Postnatal Women's Leisure Time Physical Activity Patterns: A Multilevel Longitudinal Analysis (pp. 403–411)
Anita G. Cramp and Steven R. Bray

The purpose of this study was to examine women's leisure time physical activity (LTPA) before pregnancy, during pregnancy, and through the first 7 months postnatal. Pre- and postnatal women ($n = 309$) completed the 12-month Modifiable Activity Questionnaire and demographic information. Multilevel modeling was used to estimate a growth curve representing the average change in LTPA over time and intraindividual variations in the average growth curve over time. Growth curve estimates for the linear, quadratic, and cubic trends were significant ($p < .05$), indicating that LTPA declined during pregnancy but then increased following birth. The results also demonstrated that the individual trajectories of LTPA varied substantially from the average growth curve. One demographic predictor variable (having other children at home) was significant ($p < .05$).

Quantity, Type, and Correlates of Physical Activity Among American Middle Eastern University Students (pp. 412–423)
David Kahan

The prevalence of hypokinetic disease among persons of Middle Eastern heritage is higher than whites and research on American young adults of this population is limited. Therefore 214 tertiary students of Middle Eastern descent self-reported their physical activity (PA) over a 1-week monitoring period using pedometers and daily activity logs. Daily step count averaged 9,256 ($SD = 3,084$) steps, while daily energy expenditure averaged 6.26 kcal/kg ($SD = 4.92$). Most participants reported no weekly engagement in sport (69.2%) and walk/run (52.8%) activities, and at least once-weekly engagement in conditioning (68.7%) activities. Moderately religious and highly acculturated men, and Muslims, and moderately/highly acculturated persons were more likely to average $\geq 10,000$ steps/day and engage in at least one sport activity per week, respectively. These findings may be related to religious and cultural issues unique to Middle Eastern American college students whose collectivist social affiliations with family and community members may facilitate or inhibit various aspects of PA behavior.

Influence of Activity Monitor Location and Bout Duration on Free-Living Physical Activity (pp. 424–433)
Daniel P. Heil, Gary G. Bennett, Kathleen S. Bond, Michael D. Webster, and Kathleen Y. Wolin

The purpose of this study was to evaluate the influence of the location (ankle, hip, wrist) where an activity monitor (AM) is worn and of the minimum bout duration (BD) on physical activity (PA) variables during free-living monitoring. Study 1 participants wore AMs at three locations for 1 day while wearing the Intelligent Device for Energy Expenditure and Activity (IDEEA) system. Study 2 participants wore AMs at the same locations for 3 days. Variables included time (T_{MV} , min/day) and AEE (AEE_{MV} , kcal/day) for each monitor location and BD above a moderate-vigorous (MV) intensity. T_{MV} and AEE_{MV} in Study 1 were similar across AMs to IDEEA values at $BD = 10$ min, as was T_{MV} in Study 2. This suggests that ankle-, wrist- and hip-worn AMs can provide similar PA outcome values during free-living monitoring at 10-min BDs.

Waist Circumference, Pedometer Placement, and Step-Counting Accuracy in Youth (pp. 434–444)

Mark G. Abel, James C. Hannon, Patricia A. Eisenman, Lynda B. Ransdell, Marjorie Pett, and Daniel P. Williams

This study examined whether differences in waist circumference (WC) and pedometer placement (anterior vs. midaxillary vs. posterior) affect the agreement between pedometer and observed steps during treadmill and self-paced walking. Participants included 19 pairs of youth (9–15 years old) who were matched for sex, race, and height and stratified by WC (high WC: HWC; low WC: LWC). Participants performed 3-min treadmill-walking trials at speeds of 59, 72, and 86 $m \cdot min^{-1}$ and a 400-m self-paced walking trial on level ground. Bland-Altman plots were used to assess the agreement between pedometer and observed steps of spring-levered pedometers by WC, pedometer placement, and walking speed. In the HWC group, the posterior pedometer placement consistently agreed most closely with observed steps at all treadmill speeds and during self-paced walking. In the LWC group, no single pedometer placement consistently agreed most closely with observed steps at all treadmill speeds and during self-paced walking. We conclude that a posterior pedometer placement improves step-count accuracy in most youth with an HWC at a range of walking speeds on level ground.

How Many Days Are Enough? A Study of 365 Days of Pedometer Monitoring (pp. 445–453)

Minsoo Kang, David R. Bassett, Tiago V. Barreira, Catrine Tudor-Locke, Barbara Ainsworth, Jared P. Reis, Scott Strath, and Ann Swartz

This study was designed to determine the number of days of pedometer monitoring necessary to achieve reliable and valid estimates of a 1-year average of step counts in adults based on either consecutive days (CD) or random days (RD) of data collection. Twenty-three participants (16 women; M age = 38 years, SD = 9.9) wore a Yamax SW 200 pedometer and recorded their step counts for 365 consecutive days. Nine measurement periods of various lengths were selected (2, 3, 4, 5, 6, 7, 14, 21, and 30 days). Each measurement period was randomly selected 10 times each for CD and RD from the larger database. For reliability and validity, two-way intraclass correlation coefficients and mean absolute percentage error (MAPE) were calculated, respectively. The year-round average was considered the criterion measure of the “true” habitual physical activity. Data were analyzed separately by CD and RD. At least 5 CD or 6 RD were necessary to achieve an ICC of .80. A minimum of 30 CD or 14 RD were necessary to achieve an MAPE lower than 10%. These findings provide researchers and practitioners with useful information to determine appropriate measurement length and the method of data selection based on a desired level of reliability and validity.

History and Philosophy

Trends in International Research Presented Through the Research Consortium of the American Alliance for Health, Physical Education, Recreation and Dance (1965–2008) (pp. 454–411)

Bradley J. Cardinal, Felicity M. Powell, and Miyoung Lee

The extent of international research on the Research Consortium’s program between 1965 and 2008 was documented. A total of 9,132 abstracts were reviewed, and 657 (7.19%) had an international component. Inclusion of international research ranged from a low of 1.97% in 1983 to a high of 14.24% in 2007. There was a decrease in the amount of international research presented between 1965 and 1983, after which there was an increase through 2008. Most growth was from increased contributions coming from researchers in Southeast Asia. In terms of general research topics, eight areas increased over the 44-year history reviewed, and five areas decreased. Seven recommendations are advanced for expanding the place and role of international research within the Research Consortium.

Measurement and Evaluation

The Utility of Shorter Epochs in Direct Motion Monitoring (pp. 460–468)

Karen Dorsey, Jeph Herrin, Harlan Krumholz, and Melinda Irwin

This cross-sectional study using direct motion monitoring evaluated whether short epochs increased estimates of moderate or vigorous physical activity (MPA or VPA) and enhanced differences in daily VPA comparing overweight (OW) and nonoverweight (NOW) children. Seventy-seven children (ages 8–10 years) wore accelerometers for 7 days. We calculated two estimates (mean minutes per day) of MPA and VPA using motion counts based on a 15-s epoch and a calculated 60-s epoch produced by totaling each consecutive group of four 15-s motion counts. We compared estimates as a function of mean motion count \cdot min⁻¹ for sex, age, and status as OW or NOW. The results showed that a 15-s epoch produced higher estimates of VPA (mean difference of 7 min per day, $p < .001$). The average number of VPA minutes added using the 15-s epoch vs. the 60-s epoch was 8.8 for more active children compared with 5.8 for less active children ($p < .001$). There was no difference in VPA minutes between OW and NOW children. These findings suggest modestly increased sensitivity to VPA using shorter epochs; this was particularly true for the most active children. Shorter epochs, however, might not be useful in clarifying the relationship between VPA and obesity in children.

Motor Control and Learning

Challenges to Cognitive Bases for an Especial Motor Skill at the Regulation Baseball Pitching Distance (pp. 469–479)

Jeffery P. Simons, Jacob M. Wilson, Gabriel J. Wilson, and Stephen Theall

We tested expert baseball pitchers for evidence of especial skills at the regulation pitching distance. Seven college pitchers threw indoors to a target placed at 60.5 feet (18.44 m) and four closer and four further distances away. Accuracy at the regulation distance was significantly better than predicted by regression on the nonregulation distances ($p < .02$), indicating an especial skill effect emerged despite the absence of normal contextual cues. Self-efficacy data failed to support confidence as a mediating factor in especial skill effect. We concluded that cognitive theories fail to fully account for the patterns of observed data, and therefore theoretical explanations of the especial skills must address noncognitive aspects of motor learning and control.

Effect of Information Load and Time on Observational Learning (pp. 480–490)

Gavin Breslin, Nicola J. Hodges, and A. Mark Williams

We examined whether altering the amount of and moment when visual information is presented affected observational learning for participants practicing a bowling skill. On Day 1, four groups practiced a cricket bowling action. Three groups viewed a full-body point-light model, the model's bowling arm, or between-limb coordination of the model's left and right wrists only. Following retention tests on Day 2, all participants practiced after viewing a full-body display. Retention was again tested on Day 3. Bowling accuracy improved in all four practice groups. Kinematics of the bowling arm became more like the model for the full-body and intralimb groups only. All groups improved on measures of interlimb coordination. Visual search data indicated that participants mainly focused their gaze on the model's bowling arm. These data lead to the suggestion that viewing "end-effector" information (i.e., information pertaining to the bowling arm) is an important perceptual constraint early in observational learning. Implicit manipulations designed to increase attention to other sources of information did not facilitate the learning process.

How Do Batters Use Visual, Auditory, and Tactile Information About the Success of a Baseball Swing? (pp. 491–501)

Rob Gray

Bat/ball contact produces visual (the ball leaving the bat), auditory (the "crack" of the bat), and tactile (bat vibration) feedback about the success of the swing. We used a batting simulation to investigate how college baseball players use visual, tactile, and auditory feedback. In Experiment 1, swing accuracy (i.e., the lateral separation between the point of contact and "sweet spot") was compared for no feedback (N), visual alone, auditory alone, and tactile alone. Swings were more accurate for all single-modality combinations as compared to no feedback, and visual produced the greatest accuracy. In Experiment 2, the congruency between visual, tactile, and auditory was varied so that in some trials, the different modalities indicated that the simulated ball contacted the bat at different points. Results indicated that batters combined information but gave more weight to visual. Batting training manuals, which typically only discuss visual cues, should emphasize the importance of auditory and tactile feedback in baseball batting.

Effect of the 3-Point Line Change on the Game Dynamics in Girls' Minibasketball (pp. 502–509)

José L. Arias, Francisco M. Argudo, and José I. Alonso

We examined the game dynamics in minibasketball when comparing two different forms of the 3-point line. During the first competition, participants used a 3-point line delimited by the free-throw lane, and 1,642 ball possessions were recorded. During the second competition, participants played with a 3-point line delimited by a rectangular area, and 1,669 ball possessions were recorded. Results from the Mann-Whitney U Test show that when playing with a 3-point line delimited by the free-throw lane, higher average values were achieved in terms of points scored, number of players taking part in the ball possessions, number of passes, and one-on-one situations.

Attentional Demands on Motor-Respiratory Coordination (pp. 510–523)

Eric E. Hessler and Polemnia G. Amazeen

Athletic performance requires the pacing of breathing with exercise, known as motor-respiratory coordination (MRC). In this study, we added cognitive and physical constraints while participants intentionally controlled their breathing locations during rhythmic arm movement. This is the first study to examine a cognitive constraint on MRC. Cognitive constraints included either instruction (Experiments 1 and 2) or signal detection (Experiment 1). Physical constraints were nonoptimal movement frequencies (Experiment 2). Instruction shifted breathing locations and both shifted and increased variability in the number of movements produced per breath (frequency ratio). Signal detection had no effect on MRC. Fast movement frequency resulted in higher, more variable frequency ratios. Cognitive and physical constraints can generate unnatural and variable breathing during athletic performance.

Motor Development

The Effects of a 12-Week Walking Program on Community-Dwelling Older Adults (pp. 524–532)

Shun-Ping Cheng, Tzu-I Tsai, Yun-Kung Lii, Shu Yu, Chen-Liang Chou, and I-Ju Chen

Walking is a popular and easily accessible form of physical activity. However, walking instruction for older adults is based on the evidence gathered from younger populations. This study evaluated walking conditions, strength, balance, and

subjective health status after a 12-week walking-training program in community-dwelling adults > 65 years old. Participants walked 1,921 m (3,158.88 steps) in 26.69 min with a heart rate of 114 beats/min. An analysis of covariance to adjust for previous exercise habits, pretest strength, and subjective health status revealed significant differences in strength and in subjective physical and mental health status between experimental and control groups. This study identified the effects of the walking-training program on community-dwelling elderly adults without changing their previous physical activities.

Instructional Climates in Preschool Children Who Are At-Risk. Part I: Object-Control Skill Development (pp. 533–542)

Leah E. Robinson and Jacqueline D. Goodway

Part I of this study examined the effect of two 9-week instructional climates (low autonomy [LA] and mastery motivational climate [MMC]) on object-control (OC) skill development in preschoolers ($N = 117$). Participants were randomly assigned to an LA, MMC, or comparison group. OC skills were assessed at pretest, posttest, and retention test with the Test of Gross Motor Development–2nd edition. A significant Treatment \times Time interaction ($p < .001$) was present, supporting the effectiveness of both OC instructional climates in improving OC skills over time, while the comparison group resulted in no changes. The authors conclude that developmentally and instructionally appropriate climates are beneficial to OC skill learning, along with the need for “planned” movement experiences in motor learning environments.

Instructional Climates in Preschool Children Who Are At-Risk. Part II: Perceived Physical Competence (pp. 543–551)

Leah E. Robinson, Mary E. Rudisill, and Jacqueline D. Goodway

In Part II of this study, we examined the effect of two 9-week instructional climates (low-autonomy [LA] and mastery motivational climate [MMC]) on perceived physical competence (PPC) in preschoolers ($N = 117$). Participants were randomly assigned to an LA, MMC, or comparison group. PPC was assessed by a pretest, posttest, and retention test with the Pictorial Scale of Perceived Competence and Social Acceptance. A significant Treatment \times Time interaction ($p < .001$) was present, supporting that MMC participants reported significantly higher PPC scores over time, while no positive changes were present in LA and comparison participants. The results show that an MMC leads to psychological benefits related to achievement motivation. These findings should encourage early childhood educators to consider the effect of instructional climates on children’s self-perception.

Pedagogy

E-Mentoring in Physical Education: Promises and Pitfalls (pp. 552–562)

Donetta Cothran, Nate McCaughy, Roberta Faust, Alex Garn, Pamela Hodges Kulinna, and Jeffrey Martin

Physiology

Moderate Association of Anthropometry, But Not Training Volume, With Race Performance in Male Ultraendurance Cyclists (pp. 563–568)

Beat Knechtle, Andrea Wirth, Patrizia Knechtle, and Thomas Rosemann

In 28 male Caucasian nonprofessional ultracyclists, we investigated whether anthropometry or training volume had an influence on race speed in the 600 km at the Swiss Cycling Marathon 2007. Anthropometric parameters (age, body mass, body height, skinfold thicknesses) were determined before the race to calculate body mass index and percent body fat. In addition, participants, using a training diary, recorded their training volume in hours and kilometers in the 3 months before the race. The influence of anthropometry and training volume on speed in the race as the dependent variable was investigated in a multiple linear regression model. Anthropometry showed a moderate association with speed in the race ($r^2 = .178, p < .05$), whereas training volume showed no association ($r^2 = .000, p > .05$). We concluded that anthropometry had a greater influence on race performance than training volume in recreational ultraendurance cyclists.

Eight-Week Traditional Mat Pilates Training-Program Effects on Adult Fitness Characteristics (pp. 569–574)

Kate Rogers and Ann L. Gibson

We investigated responses of adult, novice practitioners ($n = 9$) to an 8-week traditional mat Pilates program (P) who met 1 hr/day three times/week. Classes consisted primarily of beginner and intermediate level exercises. Compared to an active control group (C; $n = 13$) that showed no improvements, those in P significantly ($p < .05$) improved relative body fat (-1.2%BF), sit-and-reach (+7.5 cm), shoulder reach (+6.9 cm), curl-up (+14 reps), and low back extension (+7 reps) scores, as well as circumferences at the waist (-2.7 cm), chest (-1.7 cm), and arm (-0.5 cm). Baseline differences were noted only for

curl-ups and low back extensions, with P being lower than C. Body composition, muscular endurance, and flexibility significantly improved after 8 weeks of traditional mat Pilates.

Within- and Between-Day Repeatability and Variability in Children's Physiological Responses During Submaximal Treadmill Exercise (pp. 575–582)

Paulo R. S. Amorim, Nuala Mary Byrne, and Andrew P. Hills

The purpose of this study was to verify within- and between-day repeatability and variability in children's oxygen uptake (VO_2), gross economy (GE; VO_2 divided by speed) and heart rate (HR) during treadmill walking based on self-selected speed (SS). Fourteen children (10.1 ± 1.4 years) undertook three testing sessions over 2 days in which four walking speeds, including SS were tested. Within- and between-day repeatability were assessed using the Bland and Altman method, and coefficients of variability (CV) were determined for each child across exercise bouts and averaged to obtain a mean group CV value for VO_2 , GE, and HR per speed. Repeated measures analysis of variance showed no statistically significant differences in within- or between-day CV for VO_2 , GE, or HR at any speed. Repeatability within- and between-day for VO_2 , GE, and HR for all speeds was verified. These results suggest that submaximal VO_2 during treadmill walking is stable and reproducible at a range of speeds based on children's SS.

The DiabetAction Program: Implementation in Community-Based Settings (pp. 583–592)

Marie-Eve Mathieu, Martin Brochu, and Louise Béliveau

Developed for specialists who want to increase the physical activity (PA) level of type 2 diabetic and at-risk individuals, the 10-week DiabetAction program introduced participants to a wide variety of cardiovascular, resistance, balance, and flexibility exercises. Thirty-three of 48 individuals completed the intervention in community-based settings, while 25 of 29 participants completed control group evaluations. A significant time effect ($p < .05$) was measured for leisure PA level, resting systolic and diastolic blood pressure, estimated aerobic capacity, and dynamic balance (nonsignificant group effect; $p > .05$). The physical functioning domain of quality of life improved in the experimental group, while the vitality domain improved in the control group (significant interactions; $p < .05$). Follow-ups of the experimental group revealed that they maintained postintervention parameters (leisure PA level, proportion of participants ≥ 150 min of PA weekly, estimated aerobic capacity) or improved (mental component summary measure of quality of life). Ninety-four percent of the experimental group was "very" or "extremely" satisfied with the program, and participants perceived improvements in PA level, health, and tiredness postintervention. In conclusion, participants in community-based settings improved on many of the measured parameters and maintained PA practice up to 6 months postintervention. However, since control participants also saw improvements, further controlled studies will be needed.

Increase of Total Body Water With Decrease of Body Mass While Running 100 km Nonstop—Formation of Edema? (pp. 593–603)

Beat Knechtle, Andrea Wirth, Patrizia Knechtle, and Thomas Rosemann

We investigated whether ultraendurance runners in a 100-km run suffer a decrease of body mass and whether this loss consists of fat mass, skeletal muscle mass, or total body water. Male ultrarunners were measured pre- and postrace to determine body mass, fat mass, and skeletal muscle mass by using the anthropometric method. In addition, bioelectrical impedance analysis was used to determine total body water, and urinary (urinary specific gravity) and hematological parameters (hematocrit and plasma sodium) were measured in order to determine hydration status. Body mass decreased by 1.6 kg ($p < .01$), fat mass by 0.4 kg ($p < .01$), and skeletal muscle mass by 0.7 kg ($p < .01$), whereas total body water increased by 0.8 L ($p < .05$). Hematocrit and plasma sodium decreased significantly ($p < .01$), whereas plasma urea and urinary specific gravity (USG) increased significantly ($p < .01$). The decrease of 2.2% body mass and a USG of 1.020 refer to a minimal dehydration. Our athletes seem to have been relatively overhydrated (increase in total body water and plasma sodium) and dehydrated (decrease in body mass and increase in USG) during the race, as evidenced by the increased total body water and the fact that plasma sodium and hematocrit were lower postrace than prerace. The change of body mass was associated with the change of total body water ($p < .05$), and we presume the development of edema.

Total Protein of Whole Saliva as a Biomarker of Anaerobic Threshold (pp. 604–610)

Miguel Junior Sordi Bortolini, Guilherme Gularte De Agostini, Ismair Teodoro Reis, Romeu Paulo Martins Silva Lamounier, Jeffrey B. Blumberg, and Foued Salmen Espindola

Saliva provides a convenient and noninvasive matrix for assessing specific physiological parameters, including some biomarkers of exercise. We investigated whether the total protein concentration of whole saliva (TPWS) would reflect the anaerobic threshold during an incremental exercise test. After a warm-up period, 13 nonsmoking men performed a maximum incremental exercise on a cycle ergometer. Blood and stimulated saliva were collected during the test. The TPWS anaerobic threshold (PAT) was determined using the Dmax method. The PAT was correlated with the blood lactate anaerobic threshold (AT; $r = .93, p < .05$). No significant difference ($p = .16$) was observed between PAT and AT. Thus, TPWS provides a convenient and noninvasive matrix for determining the anaerobic threshold during incremental exercise tests.

Psychology

Brief Walks in Outdoor and Laboratory Environments: Effects on Affective Responses, Enjoyment, and Intentions to Walk for Exercise (pp. 611–620)

Brian C. Focht

The purpose of this study was to compare the effect of brief walks completed in outdoor and laboratory environments on affective responses, enjoyment, and intention to walk for exercise. Thirty-five active young women (M age = 22.14 years, $SD = 1.73$) walked for 10 min at a self-selected intensity in outdoor and laboratory environments. Affective responses were assessed before, during, and following each brief walk. Enjoyment and intention also were assessed following each walk. Results revealed that although both walks resulted in improvements in affective responses, participants reported greater pleasant affective states, enjoyment, and intention for future participation with outdoor walking. Results of correlation analyses also revealed that affective responses were only consistently related to enjoyment in the outdoor environment. These findings suggest that the environment influences the affective responses to brief walks and show that affective states experienced during walking are related to theoretical determinants of physical activity.

An Examination of Psychosocial Correlates of Eating Disorders Among Female Collegiate Athletes (pp. 621–632)

Trent A. Petrie, Christy Greenleaf, Justine J. Reel, and Jennifer E. Carter

With female collegiate athletes, we examined the relationship of eating pathology to body image concerns, weight pressures, sociocultural internalization, and mood state. Multivariate analyses revealed that the symptomatic and eating disorder groups were similar on seven of eight weight pressures, three of four mood states, on internalization, and on five of six body image measures; in all instances, these two groups reported more pathological scores than the asymptomatic athletes. Except for pressures from coaches, the psychosocial variables differentiated the groups, correctly classifying 79% of the cases. These findings suggest that athletes symptomatic of eating disorders report similarly high levels of disturbance across a wide range of psychosocial risk factors, and both groups warrant prevention and treatment efforts.

Automatic Activation of Exercise and Sedentary Stereotypes (pp. 633–640)

Tanya Berry and John C. Spence

We examined the automatic activation of “sedentary” and “exerciser” stereotypes using a social prime Stroop task. Results showed significantly slower response times between the exercise words and the exercise control words and between the sedentary words and the exercise control words when preceded by an attractive exerciser prime. Words preceded by a normal-weight exerciser prime showed significantly slower response times for sedentary words over sedentary control words and exercise words. An overweight sedentary prime resulted in significantly slower response times for sedentary words over exercise words and exercise control words. These results highlight the need for increased awareness of how active and sedentary lifestyles are portrayed in the media.

Attitudes Toward Overweight Individuals Among Fitness Center Employees: An Examination of Contextual Effects (pp. 641–647)

James A. Dimmock, Bree E. Hallett, and J. Robert Grove

Our study assessed implicit and explicit evaluations of overweight individuals among a sample of fitness center employees ($N = 70$). Participants completed a general demographics questionnaire and an explicit, self-report Antifat Attitudes Test (AFAT). Participants also completed two Implicit Association Tests (IATs) to measure implicit attitudes toward overweight individuals. In one IAT, participants responded to pictures of overweight and thin individuals in a neutral context. A second IAT required participants to respond to pictures of the same individuals exercising on a treadmill. Consistent with hypotheses, average scores fell below the midpoint on the AFAT subscales, suggesting an absence of a significant explicit

bias. The sample exhibited moderately strong implicit weight biases, however, in both the neutral (IAT $D = .39$) and exercise contexts (IAT $D = .39$). The findings do not support the premise that implicit biases against overweight individuals vary according to the context in which the judgments are made.

Research Notes

Effect of Pedometer-Based Physical Activity Interventions: A Meta-Analysis (pp. 648–655)

Minsoo Kang, Simon J. Marshall, Tiago V. Barreira, and Jin-Oh Lee

Give or Take a Few? Comparing Measured and Self-Reported Height and Weight as Correlates of Social Physique Anxiety (pp. 656–662)

Jennifer Gay, Eva V. Monsma, and Toni Torres-McGehee

Knowledge of Results After Good Trials Enhances Learning in Older Adults (pp. 663–668)

Suzete Chiviacowsky, Gabriele Wulf, Raquel Wally, and Thiago Borges

Relative Age Effect in Masters Sports: Replication and Extension (pp. 669–675)

Nikola Medic, Janet L. Starkes, Patricia L. Weir, Bradley W. Young, and J. Robert Grove

Gender Stereotyping and the Influence of Race in Sport Among Adolescents (pp. 676–684)

James Hannon, Sonya Soohoo, Justine Reel, and Thomas Ratliffe