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educators to establish methods for promoting exercise adherence and preventing burn-out of exercise behavior. However, this is first evidence in exercise commitment for Thai populations, especially in the Northeast. Therefore, further research in this concern remains to be done to examine with the whole part of Thai populations and add some other predictor variables.

✓ PC-42

The Effect of Mental Practice's Arrangement on Retention and Transfer of Speed Parameter on Tracking Task

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The purpose of this research is to study the effect of mental practice's Arrangement on retention and transfer of Speed Parameter in Tracking Task on 36 Ferdowsi University students in 3 (three) groups of 12 students with average age of (21.60 ± 1.33) and average of MIQ score of (51.51 ± 2.71) were done. The groups performed mental imagery in two methods of random and blocked for 10 (ten) sessions, with speeds (20, 30 and 40 rpm) then performed one trial with speed 35 and 50 rpm in transfer test. Data was analyzed with ANOVA and post Hoc Duncan. Results showed that between performance of Random/Blocked Mental imagery in transfer and retention test of 50 rpm was significant. Random mental practice group was better. But, the difference between blocked mental practice group and Control and difference between groups in 35 rpm wasn't significant. Finally it can be concluded that, random arrangement for mental practice is useful when task complexity is higher.

✓ PC-43

The Effect of Anchoring on Learning of New Asymmetric Bimanual Coordination

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With respect to the spatial and temporal interferences that accrue in asymmetric bimanual movements, learning and instruction of these patterns are difficult. Therefore the purpose of this research is to investigate the effect of anchoring on learning of 90° relative phased asymmetric bimanual coordination pattern. An experimental group include of 15 right-hand students of B.A degree from physical education faculty of Ferdowsi university that participate in pretest, posttest and retention test. The pattern of asymmetric coordination was pendular movement with right hand and circular movement with left hand. The apparatus that is used consist of two pendulums which angular movements of them were recorded by computer. Results of this investigation indicate that t-test between pretest and posttest and between pretest and retention test is significant ($P < 0.05$). This investigation showed anchoring is an effective method in learning of asymmetric bimanual pattern. Also the results indicated anchoring cause in stable learning of coordination pattern. In order in this research anchor points were presented in real form, coaches and physiotherapists can use this method for instruction of stable coordination patterns.

PC-44

Effects of Spatial and Temporal Factors on a Tracking Error in Visuomotor Task With Delayed Feedback

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To investigate how temporal and spatial factors involved in visuomotor tasks affect on motor performance, we analyzed a tracking error obtained from a visuomotor task with delayed visual feedback. Twelve right handed participants performed visuomotor tasks, which consisted of four different cursor delays (80 ms, 580 ms, 1080 ms, and 2080 ms), three different target velocities (2.2 cm/s, 4.3 cm/s, and 10.8 cm/s), and eight different movement directions. A target and a cursor were displayed on a 19-inch computer display. The cursor was moved with a constant delay by participant's fingertip force in an isometric condition applied to a force sensor while the target shifted to a direction at a constant velocity. Participants were instructed to move a cursor to track a target precisely. A tracking error was defined as the root mean squared difference between the cursor and the target positions. Three way (cursor delay x target velocity x movement direction) ANOVA with repeated measures showed significant main effects of the cursor delay ($F(3, 33) = 74.576, P < 0.001, \epsilon = 0.660$) and the target velocity ($F(2, 22) = 95.077, P < 0.001, \epsilon = 0.928$) on the tracking error. From a linear multiple regression analysis, standardized partial regression coefficients of the cursor delay and the target velocity indicated 0.499 ($P < 0.001$) and 0.552 ($P < 0.001$), respectively. These results suggest that temporal factors (i.e., cursor delay and target velocity) consisting of visuomotor tasks with delayed feedback make independent and equivalent impacts on a motor performance.