

3.04 Relative age effect and birthplace effect in 18-19 year-old athletes and how they perceive these environmental effects

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Two of the most investigated factors that are associated with achieving expertise in sport are the relative age effect (RAE) and the birthplace effect (BE). The purpose of our study was not only to calculate these effects in young Israeli elite athletes (ages = 18-19 y), but also to study how the athletes perceive these effects, if the effects indeed exist. Participants were 1397 athletes (390 female and 1007 male) who competed in five individual (gymnastics, judo, swimming, tennis, and track and field) and five team (basketball, soccer, team handball, volleyball, and water polo) sports. A semi-structured questionnaire was administered to the athletes to gather information on how they assess the contribution of their anthropometrics and their physical and cognitive attributes to their achievement in sports. Data analyses showed that RAE was found to be significant among males in four sports – swimming, basketball, soccer, and team-handball. Those who were born early in the year had a higher representation in the elite youth leagues. BE was found to be significant in most sports in females and males, implying that the probability of achieving a high level of proficiency is greater when the athlete is from a community of less than 2.000 residents or from a community of 50.000-200.000 residents. Athletes who were born early in the year reported that they felt stronger than the rest of the players on the team. Those who were from small communities or medium-size communities claimed that they perceived their environment as supportive of their efforts.

3.05 Developmental changes in the accuracy of performance predictions in rope skipping

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The ability to correctly judge one's own performance potential and to adjust training intensities accordingly is an important prerequisite for successful sport careers. Research findings in cognitive development indicate that meta-cognitive abilities increase in childhood (Dufresne & Kobasigawa, 1989; Schneider, 2008). We tested performance-predictions in children, teenagers, young, and middle-aged adults (N = 26; age range 5 to 37 years, females only), who were all active members of a rope skipping club. Subjects were repeatedly tested in their maximum single rope speed over the course of 4 sessions. The dependent measure was the number of jumps in 10 seconds. Older participants outperformed younger ones, as reflected in the correlation of age and performance ($r = .710$). For some trials, subjects had to predict how many jumps they would do in the upcoming trial. Subjects received points equivalent to the predicted number if they succeeded, but 0 points if they failed. Children were predicted to show a more pronounced overestimation of their performances compared to teenagers or young adults (Riediger, Li, & Lindenberger, 2006). Results showed that age negatively correlated with the incidence of trials with a 0 score ($r = -.493$), and with the absolute difference between the predicted and achieved performances ($r = -.583$). These findings suggest that children indeed have more problems than teenagers or young adults to accurately judge and predict familiar motor-task performances. Coaches should therefore assure that young athletes do not systematically choose task-difficulty levels that are too high for them.

3.06 The relationship of emotional skills and stress: the mediating role of coping strategies

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According to Lazarus and Folkman (1984), coping mediates the relationship between resources and stress. The purpose of the current work was to examine whether specific coping strategies (focus on positives, support coping, active coping and evasive coping) mediate the relationship between the resource of emotional skills (i.e., acceptance skills, resilience skills and regulation skills) and stress in Physical Education (PE) teachers. The sample consisted of 457 PE (pre-service) teachers. Emotional regulation skills (SEK; Berking & Znoj, 2008), coping strategies (BriefCOPE; Knoll et al., 2005) and stress (PSQ; Fliege et al., 2005) were assessed by self-rating questionnaires. To analyse data, a bootstrapping analysis for mediation was conducted using the PROCESS macro (Hayes, 2017) for SPSS. Results show a significant mediation effect of evasive coping strategies within the relationship between resilience skills and stress (95% confidence interval = $-.08$ to $-.01$) and within the relationship between regulation skills and stress (95% confidence interval = $-.07$ to $-.01$). Moreover, regulation skills have a direct negative effect ($B = -.21$, $t = -5.92$, $p < .001$) on stress. The model is significant ($F(7, 449) = 25.45$, $p < .001$) and explains 28% of variance. This indicates that emotional skills might protect against using negative coping strategies (such as evasive coping strategies) and consequently result in less stress.

3.07 Learning of teenage athletes by psychological skills in realisation by them of "dual" career

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Educational activity is obligatory for school-age children, but subjectively, teenage athletes often do not accept it that finds reflection in a priority of a social role of "athlete" above "pupil". It makes some more difficulties in combining sports and educational activity ("dual" career). The psychological work by the optimisation of the balance between Athletic Identification and School Identification with teenaged athletes in the different kinds of wrestling ($n=16$) based point for construction "dual" career in sports (grant №17-06-00883). Learning of young athletes by basic psychological skills in realisation by them of "dual" career at the beginning of stage of sports training: techniques of rational remembering, grow attention's recourse, time management etc. consisted of 20 lessons (by 45-60 minutes). The general attitude is "the athlete is both in sports and in study is the athlete". Intermediate measurements of these indicators after these psychological lessons showed a convergence of identification with the role of an "athlete" and the role of a "pupil" (AIMS; Brewer, Van Raalte, & Linder, 1990; SIMS, Engström & Stambulova, 2010): October, 2017 - 6.50 ± 0.73 and 5.44 ± 0.63 , <0.05 ; February, 2018 - 13 ± 0.89 and 5.60 ± 0.73 , > 0.05 by the Mann-Whitney U-test. At the same time differences in these indicators in the second measurement are statistically not significant that is important for maintaining internal readiness for the positive relation to two types of activity – educational is being obligatory, and sports – having a voluntary nature.