PERCEPTUAL-COGNITIVE AND COGNITIVE SKILLS IN YOUTH VOLLEYBALL PLAYERS

PERCEPTUAL-COGNITIVE SKILLS: CRUCIAL IN FAST BALL SPORTS

PATTERN RECALL: reading and recalling specific patterns of play
ANTICIPATION: prediction of future course of action
DECISION MAKING: selecting the optimal decision

EXPERT > NOVICE = CONFIRMED

? Perceptual-cognitive skills in youth players
? Relationship with cognitive function in youth players

MULTI-DIMENSIONAL TEST BATTERY

Volleyball-Specific Perceptual-Cognitive Skills:
- Oclusion-based video test for:
  - Anticipation (ANT)
  - Decision Making (DM)
  - Pattern Recall (PR)

Cognitive Function:
- Tests for core and higher order executive functions (CBS Test Battery)
- (7 tests of which 4 were used for analysis)

N=171
Age 7 – 17

INHIBITION
U9 < older groups

WORKING MEMORY
U9 + U11 < older groups

SHIFTING
U9 < older groups

PLANNING
Improvement with age, although not statistically significant

REASONING
U9 < older groups

INHIBITION
DM Score
R_s = -0.717

ANT Score
R_s = -0.737

INHIBITION
PR RE
R_s = -0.803

DISCUSSION

Clear indications for early development of perceptual-cognitive function and the relation with cognitive function

- Longitudinal research to gain insight in development
  + Comparison with a control group → work in progress
- Account for age in canonical correlation analysis?

CONCLUSION

Sport-specific perceptual-cognitive function:

- Development starts early (9y/o)
- Related to higher order and core executive functions