

# A quantitative approach to testing effects of different expertise levels, playing positions, and game situations on shared tactical knowledge in football teams

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## The study

According to the social cognitive view, the organization of sports team behavior is underpinned by the existence of shared knowledge. This study considers tactical position knowledge as an example of shared macro-level plans involved in organizing team behavior. A coach- and a team-referenced measure of sharedness in tactical knowledge are introduced to investigate whether expert sport teams share knowledge to a higher degree than weaker sport teams, whether the time spent performing a common task predicts shared knowledge, whether role-specific specializations are mirrored in the degree to which athletes share tactical knowledge and whether tactical knowledge is shared to different degrees in defensive as opposed to offensive game situations.

## Methods

Members of 17 football teams ( $N = 296$ ) participating in championships at different levels of the Swiss National Football Federation took part in the scenario-based, cross-sectional study. Participants marked the positions of their team members according to their tactical playing strategy. Data were analyzed using general linear model procedures.

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## Results

Teams playing at the professional level had significantly more consistent ideas about their teams' tactical positions than those at the amateur level. Within the amateur level, no consistent pattern of increasing consensus as the playing level increased was found. Sharedness in tactical knowledge increased with the duration of team membership. Defenders and midfielders agreed more with their team reference positions than did forwards. Sharedness was generally higher in defensive situations than in offensive situations.

## Discussion

The presented approach to measuring shared knowledge offers new insights into a yet under-researched field. It can be adopted to answering research questions in other sports and situations involving other measures of team performance assumed to be affected by shared knowledge.

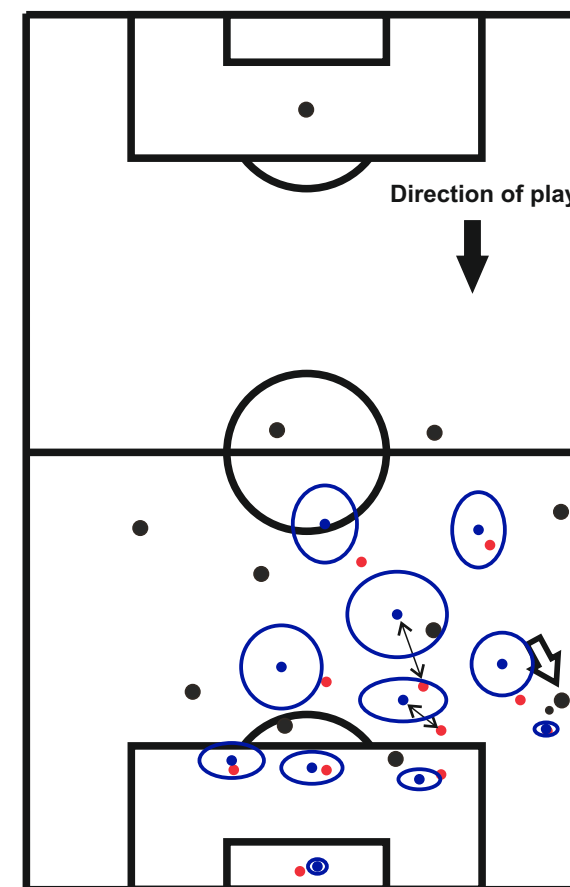


Figure 1. Visual representation of the results of a participating team in one of the used game scenarios. Black dots indicate players of the opposing team, and the white arrow indicates the ball carrier. The blue dots represent the average positioning of a player by the team members, the red dots represent the coach's reference. The ellipses around the blue dots indicate the standard deviations of the player responses with respect to x- and y-axis.