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The study will evaluate cognitive performance in football players from different age categories, providing insights into cognitive performance at different stages of development. It will also explore potential differences in responses to VR training between female and male football players. Beyond examining cognitive and performance outcomes, the project seeks to understand how virtual reality can be effectively integrated into everyday sport practice.

Dr. Ana Carolina Paludo is an ONISILOS MSCA Postdoctoral Research Fellow at the Department of Psychology at the University of Cyprus. She is a sport scientist whose research focuses on athlete performance, training load monitoring, female athlete health, and the factors that influence performance in sport. Throughout her academic career, she has collaborated with professional athletes and sport organizations across Europe and Brazil, contributing to projects that bridge scientific research with practical applications in high-performance sport. Her ONISILOS fellowship project, titled “Smart Investments: Using Virtual Environments to Enhance Football Players' Performance while Saving Costs,” investigates whether football-related virtual reality (VR) tasks can improve players' performance. Although VR technologies are becoming increasingly popular in sport training settings, there is still limited scientific evidence demonstrating their effectiveness in improving performance under real competitive conditions. The project is conducted under the supervision of Doctor Marios Avraamides from the Department of Psychology at the University of Cyprus, whose research focuses on cognitive processes relevant to sport performance and, more recently, on the use of football-based virtual reality tasks. The VR tasks used in this project simulate key cognitive-motor demands of football, including decision-making, reaction time, inhibitory control, visual scanning, and rapid movement tracking. These abilities are essential for football players, who must constantly perceive their surroundings, process information quickly, and make effective decisions under time pressure during both training and matches.

In addition to tasks designed for outfield players, the project will also examine VR-based training specifically developed for goalkeepers, using tasks that replicate the perceptual and decision-making demands associated with goalkeeping situations. The study will evaluate cognitive performance in football players from different age categories, providing insights into cognitive performance at different stages of development. It will also explore potential differences in responses to VR training between female and male football players. Beyond examining cognitive and performance outcomes, the project seeks to understand how virtual reality can be effectively integrated into everyday sport practice. By monitoring players throughout a competitive season, the study will investigate how VR training may influence cognitive performance and physiological responses, including potential changes in biomarkers such as Brain-Derived Neurotrophic Factor (BDNF). Ultimately, the project aims to provide practical evidence on how clubs, coaches, and athletes can incorporate virtual reality technologies into training programs in order to enhance decision-making, optimize performance, and make more efficient investments in athlete development.