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S21-2: Promoting Physical Activity-Related Health Competence in Nursing Education: First Results of a Hybrid Effectiveness-Implementation Study

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Purpose: Acknowledging the health-enhancing effects of physical activity (PA), the nursing education system in Bavaria, Germany, has recently integrated physical activity-related health competence (PAHCO) into the curriculum. However, it cannot be assumed that PAHCO has sufficiently permeated the educational practices of nursing schools. The TakeCare! study, conducted after this curriculum integration, aimed to evaluate the effectiveness and implementation of different intervention approaches to address PAHCO in nursing education.

Methods: Within a hybrid effectiveness-implementation study, we conducted a cluster-randomised controlled trial with 16 nursing schools. These schools were allocated to four parallel study arms: Intervention group 1 (IG-1) applied a participatory bottom-up approach, intervention groups 2 (IG-2; facilitation by external PA professionals) and 3 (IG-3; facilitation by nursing teachers) followed a top-down approach using intervention mapping, and the control group (CG) followed regular curriculum without any further intervention. To examine the short-term effectiveness, questionnaire-based data on nursing students' PAHCO, PA behaviour, and movement quality, collected pre- and post-intervention implementation, were analysed via linear models (n = 195). To investigate intervention implementation, questionnaires (n = 4) and protocol data (n = 161) were analysed using descriptive and qualitative analyses.

Results: The analysis of the short-term effects of the interventions revealed significant Time × Group interaction effects for control competence and self-regulation competence as PAHCO-subscales and for PA enjoyment in leisure time as operationalisation for movement quality, which were not confirmed by post-hoc tests ($p > .05$). The intervention implementation in the schools of IG-1, IG-2, and IG-3 followed the planned approaches. The multi-component interventions developed in the IG-1 schools were partially implemented depending on the respective school-related conditions. In the IG-2 schools, six external PA professionals carried out all 12 intervention units. In the IG-3 schools, nine nursing teachers carried out the majority of all 12 intervention units (mean = 10.8).

Conclusions: Building on the current results and additional (long-term) effectiveness and implementation data, the study will enable evidence-based recommendations to disseminate PAHCO promotion in all Bavarian nursing schools.

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Keywords: Cluster-randomised controlled trial, co-creation, curriculum, intervention mapping, vocational education and training