

Reasoning of dissertation topic and competency of potential supervisor for admission into LSU biology doctoral studies with a participation of Tartu university 2023

Area of research (title and code)	?
Field of research (title and code)	Biology
Topic of research	Health care
Institution	Lithuanian Sport University

Potential supervisor

Pedagogical and scientific degree	Name, surname	Academic position
PhD	Aija Klavina	Professor

Short reasoning of proposed dissertation topic

Title
Physical activity program to reduce health risks associated with problematic internet use in children and adolescents with and without disability.
Short research description (including aims and objectives) (maximum 1500 characters).
<p>This research study aims to determine the effect of the physical activity intervention on movement proficiency and cognitive health of adolescents with problematic internet use.</p> <p>Objectives:</p> <ol style="list-style-type: none"> (1) Determine problematic internet use (PIU), healthy lifestyle behaviors and subjective health complaints in children (7-12 years of age) and adolescents (13 – 18 years of age) with and without disability. (2) Develop and implement physical activity programs of different supervision mode (remote and onsite) implemented for 16 weeks (4 months) for participants with and without disability. (3) Determine and compare the effect of different supervision mode physical activity programs on movement proficiency and cognitive health parameters. (4) Determine the maintenance and sustainability of the movement proficiency and cognitive health variables after the three months of the physical activity intervention.
Relevance of the problem, its novelty at national and international level (maximum 1500 characters).
<p>Childhood and adolescence is a time when healthy lifestyle related behaviours are developed which can significantly impact current and long-term health and education aspects (e.g., body composition, fitness level, academic performance, sleep quality, and psychosocial behaviors) (Bianco et al., 2019; Costigan, Barnett, Plotnikoff, & Lubans, 2013). Numerous previous studies involving children and adolescents have demonstrated associations between lower levels of daily physical activity and greater time engaged in sedentary behaviors such as screen time (Hashem et al., 2017; Marques et al., 2019). Moreover, screen-based activities such as Internet use for leisure are considered highly prevalent forms of sedentary behaviour (Australian Bureau of Statistics, 2015). About 94% of adolescents in Europe who have access to different information technologies reported using the Internet daily (Eurostat, 2020). According to the recent research in Latvia 31.00 % of adolescents (N = 615) presented high psychosocial health risks related to problematic internet use (Klavina et al., 2022). Also, this study reported that mean of screen time use on weekends was higher than during weekdays (4.30, SD = 1.94 and 3.92, SD = 2.03 respectively). Moreover, a significantly higher proportion of girls reported experiencing psychological and somatic health complaints than boys ($p < .05$). While research examining the prevalence of PIU and health variables among adolescents is increasing (Costa & Patrao &</p>

Machado, 2019; Kokka et al., 2021; Machimbarrena et al., 2019), the extension of this research topic among adolescents with disability is limited.

Research methods and possibilities for conducting these studies (maximum 1500 characters).

Measures before the intervention study: **Baseline data.**

Problematic Internet Use. Adolescents' problematic internet use (PIU) will be assessed by the Problematic and Risky Internet Use Screening Scale (PRIUSS), a validated adolescent screening instrument (Jelenchick et al., 2014). The PRIUSS is an 18-item risk-based screening scale for problematic internet use with questions organized into the three subscales. A PRIUSS score ≥ 26 indicates that the adolescent is at high risk for PIU (Moreno et al., 2019). The translation and validation of the instrument to Lithuanian and/ or Estonian language will be part of the dissertation study.

Healthy Lifestyle Behaviors. For healthy behaviour data collection questions will be applied according to the Health Behaviour in School-aged Children (HBSC) (Ravens – Sieberer et al., 2008). The four subscales will be included: (1) subjective health complaints; (2) free time physical activity; (3) time spent using information technologies, and (4) eating habits.

The sample size for the baselined data will be about 800 children and adolescents, of which about 200 participants with disability. PRIUSS outcomes above the cut-off points (score ≥ 15 points) will be considered for inclusion in the intervention study as it indicates intermediate risk for PIU.

The intervention study (about 200 participants of which about 60 with disability). The research will be multilocation parallel, controlled group study.

In addition to instruments used in Baseline:

- Bruininks –Oseretsky Test – 2 (BOT-2) will be used to measure *movement proficiency*.
- *Cognitive Function Tests.* The psychophysiological parameters will include assessment of assess stress tolerance, concentration, short-term and long-term memory. The assessment platform will be decided according technnologies available.

Selected participants will be randomly divided into two groups: 1) remotely supervised physical activity program (RS-PAP) and 2) onsite physical activity program (PAP).

The RS-PAP and PAP will be developed according to the recent evidence of the methodological considerations for physical activity interventions in children and adolescents including those with disability.

Is the proposed topic for the doctoral thesis related to currently funded research projects? Please indicate the links between the proposed topic for the doctoral thesis and funded research projects

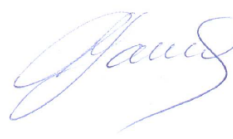
NO

Is the proposed topic for the doctoral thesis related to joint research with a foreign institution? Please indicate the links between the proposed topic for the doctoral thesis and research with a foreign institution

NO

Currently I am supervisor of 2 doctoral students.

Supervisor



(signature)

Aija Klavina

(Name, surname)

Date: 30.04.2023.