

Reasoning of dissertation topic and competency of potential supervisor for admission into LSU biology doctoral studies with a participation of Tartu university 2024

Area of research (title and code)	Gerontology, physiology
Field of research (title and code)	Ageing
Topic of research	Pelvic floor, ageing, gerontology, physical activity, sedentary behaviour, cocreation
Institution	Lithuanian Sports University

Potential supervisor

Pedagogical and scientific degree	Name, surname	Academic position
Professor, PhD	Javier Jerez-Roig	Senior Researcher

Short reasoning of proposed dissertation topic

Title
Effects of an eHealth solution on activity patterns among people aged 50 and over: a multicenter randomized controlled trial
Short research description (including aims and objectives) (maximum 1500 characters).
<p>This project aims to develop and test an evidence based digital health program to improve bladder health and increase activity patterns of adults aged 50 and over. A novel module embedded in the approved app “Keep-on-Keep-up” (KOKU) will be co-created with end-users, researchers, health professionals, and stakeholders through a participatory and appreciative action and reflection methodology. After a comprehensive literature review and consultation with 4-6 experts, 6 workshops will be undertaken in Kaunas (Lithuania), Catalonia (Spain) and Manchester (UK) to co-create the contents of the module. Data will be analyzed using thematic analysis. Gamification and the Honeycomb model for user experience will be followed to achieve an appropriate technological solution that will be tested through a randomized controlled trial with at least 120 individuals.</p> <p>The project’s objectives are: Specific [to develop and test a program based on eHealth and behavioral change techniques to improve bladder health, specifically urinary incontinence and increase activity patterns of community-dwelling men and women aged 50+]; Measurable (see research methods); Achievable [agreed using co-creation through Participatory and Appreciative Action and Reflection methodology (Baum et al., 2006) to support end-users to develop self-management strategies, independence and health intelligence (Tsartsara & Kivilehto, 2015)]; Relevant [follows policy initiatives on Active and Healthy Ageing, eHealth, Innovation and Digital Care Transformation (George Crooks; Donna Henderson; Andrea Pavlickova; Cecilia Vera; Magda Rosenmoller; Paola Obbia; Jean Bousquet; et al., 2019; Tsartsara & Kivilehto, 2015)] and Time-bound (3-4 years).</p>

Relevance of the problem, its novelty at national and international level (maximum 1500 characters).

The proposal is original and innovative: 1) **novel and unique eHealth** intervention based on **behavioral change techniques** to enhance self-management, following the Michie's taxonomy (Michie et al., 2015); 2) **co-creation** of the intervention by involving researchers, health professionals, stakeholders (local charities and organizations) and adults, taking into consideration the end-users' preferences; 3) **gamification** [multimodal games will be co-designed with end-users to add an enjoyment component and improve adherence, using octalysis principles [i.e. meaning, accomplishment (related to achieving goals as in goal setting), empowerment, ownership, social influence, scarcity, unpredictability and avoidance] (Argilés, 2017; Uzor et al., 2012); 4) **inclusive design** (audio/written/visual instructions provided and people from deprived areas, low digital literacy and diverse impairments participating in the development and testing);

5) co-designed **virtual community of practice** to enhance communication and share knowledge among and between researchers/professionals and end-users (Toledo-Chávarri et al., 2020); 6) comprehensive evaluation including both quantitative and qualitative methods, and economic analysis; 7) possible **follow-up of professionals** (to complement face-to-face interventions). To our knowledge, KOKU Bladder is the first project to assess a co-created program based on eHealth and BC techniques to improve the BH of both women and men aged 50+. It is worth noting that the only app (called TÄT), which has been trialed clinically and is evidence-based, does not present some of the above-mentioned innovative aspects (Ho et al., 2021). Furthermore, it is worth highlighting the **international** nature of this project, with collaboration of renowned researchers working in 3 countries (Lithuania, Spain and UK). The project will be conducted in these 3 sites and therefore the new eHealth solution will be available in Lithuanian, Spanish and English.