Horizon Europe Health&SSH Brokerage Event

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Pitching Session

THE TOPİC OF OUR PROJECT

HORIZON-HLTH-2024-STAYHLTH-01-02-two-stage

DEVELOPING 3-DIMENSIONAL EYE TRAINING GAMES TO TREAT DIGITAL EYE STRAIN AND ATTENTION DEFICIT IN ADOLESCENTS WITH INCREASED SCREEN EXPOSURE

THE RELATİONSHIP OF THE ORGANISATION AND THE RESEARCHERS İDEA OF THE EXISTING PARTNERS WORK-FLOW CHART

Work Flow Timing	Works	organisation expertise in relation to the topic(s)	An idea of the existing partnerships
0- 3 Month	Creation of The Project	All partners and researchers	All partners and researchers
3-6 Month	Devalopment of the game	Computer Engineering and Physiotherapy department researchers will support the creation of the game.	In the creation of the game, ideas will be discussed with the partner universities and contribution will be expected.
6 – 8 Month	Preliminary Evaluations	Preliminary evaluations will be made by the researchers of the Faculty of Medicine, Department of Ophthalmology, the Faculty of Health Sciences, the Physiotherapy and Rehabilitation Department Researchers, and the Guidance and Counseling Specialists in the pilot schools where the study will be conducted.	Support is expected from the researchers of the Faculty of Medicine, the Department of Ophthalmology, the Faculty of Health Sciences, the Physiotherapy and Rehabilitation Department of the partner universities and the Guidance and Counseling Specialists in the pilot schools in making the preliminary assessments.
8 – 20 Month	Playing games regularly for adolescents	Playing the games designed by the Psychological Counseling and Guidance Specialist at schools regularly to adolescent students.	Regular play of games designed by the Counseling and Guidance Specialist in selected schools in Partner Countries to adolescent students
20 - 24 Month	Receiving final assessments	Final Assesments will be made by the researchers of the Faculty of Medicine, Department of Ophthalmology, the Faculty of Health Sciences, the Physiotherapy and Rehabilitation Department Researchers, and the Guidance and Counseling Specialists in the pilot schools where the study will be conducted.	Support is expected from the researchers of the Faculty of Medicine, the Department of Ophthalmology, the Faculty of Health Sciences, the Physiotherapy and Rehabilitation Department of the partner universities and the Guidance and Counseling Specialists in the pilot schools in making the final assessments.

LİTERATURE

- Screen exposure time refers to the time spent using smart phones, computers, tablets and watching TV (1).
- Individuals with a long screen exposure experience negative physiological and psychological effects over time.

Physiological negative effects:

Decreased gross motor skills, head and back pain, obesity, increased blood pressure, short sleep time, digital eye fatigue, strabismus (2,3,4).

Psychological negative effects:

Depression, suicidal behavior, antisocial personality disorder, attention deficit and hyperactivity disorder (2,3,5).

LİTERATURE

- There are studies in the direction that screen exposure situations such as smart phone, computer, tablet use and watching TV also have positive effects on the person according to the content. Certain computer programs and video games can improve memory, multitasking skills, visual attention, and other cognitive abilities (6).

Health-promoting digital technology strategies for the aging brain.

Strategies	Brain-Health Promoting Targets
Online searching	Neural activation of circuits controlling decision-making and complex reasoning
Cognitive training games	Global cognition, memory (immediate, delayed, and working), attention, learning abilities
Racecar videogames with distracting road signs	Multitasking skills
N-back task training games	Working memory, fluid intelligence
Action videogames	Visual attention, reaction time, task-switching abilities
Monitoring apps	Heart rate, breathing patterns
Psychotherapy, educational apps	Mood, sleep, social support

LİTERATURE

- The purpose of game-based exercise programs is to make exercise interesting and enjoyable. Thus, purposeful repetitive movements are performed by the person in a more concentrated manner. Motivation is increased by giving rewards such as badges, points or level increase according to the success of the exercise and it is ensured that participation in the exercise is maintained (7,8).

- There are few studies that include eye exercises to prevent and treat digital eyestrain, strabismus and attention deficit due to increased screen exposure(9,10,11,12).

BENEFİT FROM THE PROJECT

- This study will be the first to include game-based 3D eye exercises.
- It is expected to make eye exercises more fun and motivating for adolescents, thanks to its game-based nature.
- Thus, the negative effects of increased screen exposure in adolescents will be translated into positive gains.

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Thank you

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