Abstract

This dissertation thesis addresses the area of spatial navigation of the blind. The author theoretically deals with a complex interplay of psychological functions involved in spatial navigation with respect to the specific conditions of the blind. The empirical part of the thesis presents an experimental study in the population of the blind (N=44). This study focuses on effects of the stress recovery phase from shortly increased stress levels on the process of learning a new route. The experiment is placed in real-world settings and overcomes some of the methodological flaws typical for this research domain. The research evidence suggests that the recovery phase from shortly increased stress levels hinders the development of procedural knowledge of the route. However, this deterioration in route knowledge is not associated with the effects of the strsss phase itself, but affects only the recovery phase part of the route in which stress levels are returning to their original baseline levels (not necessarily the level of the resting conditions). Besides its theoretical conclusions, the value of the presented thesis is in its contribution to the advancements of research methods in the given field. The outcomes of this work are practically applicable to the development of navigation aids for the blind.

Key words:
Navigation of the blind
Assistive technologies
Accessibility
Spatial cognition
Cognitive strategy
Stress
Stress recovery phase
Experiment in real-world settings
Methods for surveying spatial knowledge