REMS 2019 Project Description

Design and Evaluation of Smartwatch Interventions for Children

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Background
Managing behaviors in classroom settings requires clear communication of expectations, and consistent feedback to students about whether the expectations are being met. The literature indicates a significant gap between evidence-based recommendations for behavior management and implementation in real classroom settings. To address this gap, we examined how school practitioners quantify behaviors, then collect and monitor data using a range of tools. Based on what we learned from that investigation, we have now engaged in a human-centered design process to explore the integration of ubiquitous computing technologies with existing classroom management strategies. In particular, we have identified smartwatches as having significant potential to deliver behavioral interventions for children and youth.

Project Goals
Drawing from literature on self-management, and in collaboration with psychologists, we are designing and evaluating smartwatch interventions for children and youth in school settings. We are interested in the feasibility and usability of smartwatches for helping children to self-manage their behaviors and promote emotional health. In addition, we are exploring the potential for smartwatch interventions to support a transition from special education into a regular education context, by helping a child gain more independence.

Student Role
The student will iterate on existing designs and create a study to validate the design of the intervention. The student will determine how to evaluate the feasibility, acceptability, usability, and usefulness of a smartwatch intervention in the school context. The student will lead development of the study protocol, participant recruitment, data collection, data analysis, and writing up findings of the study.

Mentorship Plan
The student will work as part of a collaborative research group, receiving support and feedback on a weekly basis from their faculty advisor as well as peers from diverse backgrounds. The student will be encouraged to take initiative on leading their own study, with frequent feedback from the faculty advisor to help them iterate and finalize study plans. There will also be many opportunities to work on oral and written communication skills.