

## **Steve Moeini – Abstract**

### **“Development and Evaluation of a Mobile-Based Weighted Well-Being Scoring Function for Trauma Affected Communities”**

Trauma affected communities are population groups in which members have experienced chronic traumatic events. This dissertation defines “trauma informed” communities as services which have been tailored and evaluated specifically for the needs of communities in which trauma and violence have been seen. The process of designing and evaluating a novel intervention via a weighted mobile app with the emphasis on trauma informed services is described. This research is part of a larger project known as imHealthy, a comprehensive health status evaluation system, which represents an entire ecosystem of both mobile technology coupled with various other software components. . There were several parts to this research study. First, a preliminary study was conducted to test the usability of the well-being app. The results showed that further attention was needed in addressing various UI sizing issues. Upon modification and a re-test positive time on task results were found. The total time spent logging into the app dropped by 50%; navigation between domains dropped by 43%, navigation within pages dropped 82% and overall total time to logout dropped by 44%. Next, a scoring algorithm was devised to weight and score the mobile based survey. A step by step approach outlines the process of the scoring function and the calibration of the algorithm. Initial results showed inconsistencies between expert raters vs. app generated score (Inter-rater reliability values for five domains were physical = .279, behavioral = .237, relational = .029, spiritual = .497, socio-economic = -.268). Structural equation modeling was utilized to analyze the relationships of the various domains against each other. And lastly, a usability study was conducted to test user satisfaction of an administrative, results oriented web portal used in conjunction with the mobile app. The low ASQ (Avg. Range 1.00 - 1.52) and CUSQ (Avg. Range 1.00 – 1.95) scores during and post study suggest highly favorable user satisfaction.