

8<sup>th</sup> European Conference on

# Predictive, Preventive and Personalized Medicine & Molecular Diagnostics

August 20-21, 2018 | Rome, Italy

## Applying a mixed-methods framework in user-centered design and usability testing of smartphone-based interventions

**Meshari F Alwashmi**  
Memorial University, Canada

Although quantitative research has historically been the primary approach in health sciences research, many contemporary phenomena in health and health care are difficult, if not impossible, to measure using quantitative methods alone. On the other hand, qualitative research goal is to produce depth of understanding and perhaps generate a hypothesis regarding a phenomenon, its precursors and its consequences. Mixed methods research (MMR) is gaining popularity and acceptance across disciplines and the world. A mixed methods approach is recommended when the study phenomenon of interest is multifaceted and includes dimensions that are both qualitative and quantitative in nature; such as user-centered design and usability testing. Many of the barriers in using mHealth can be avoided with better planning and collaboration. A user-centered design within teams composed of health care professionals and patient advocates may facilitate successful uptake of mHealth interventions. Contemporary iterative development methods, such as agile development and prototyping, reduce the challenges created by users or environment requirements that evolve during the development lifecycle. While patients express interest in using technologies for self-management, the majority of current tools are not usable. mHealth involves the interaction between multiple user groups through a system, making the usability aspect of such system crucial for the continuous, efficient and satisfactory use. Researchers recommend frequent and iterative usability testing to respond to the users' preferences, technical issues, and shortcomings which could potentially limit attrition. The goal of this oral presentation is to explain the use of mixed methods design in user-centered design and usability testing.