Innovation of prenatal care from a user-centered technology

Any new technology that can innovate care will always find acceptance among professionals as well as suitable environments for its application in primary health care.

As a result of doctoral dissertation research focused on users, a novel information technology, which uses Web and Android platforms with animated images of pregnancy associated to technical and cultural expressions, was developed. The information is available via multimedia (text, audio, video, animations and pictures) and depicts the anatomical and physiological changes as well as body care standards of pregnant women. Moreover, the technology provides a dynamic schedule of individualized prenatal care routines, which is mediated by an expert system.

The developed system was named "Day-to Day Mommy." It offers the service of best practices in software engineering such as scalability, robustness, usability and maintainability, and caters mainly to the needs of users, as identified during previously applied interviews. The technical requirements used included an Apache server as load balancer and HTTP server, Apache Tomcat as a J2EE application server (where the application rests), and PostgreSQL as the Database Manager (saved data storage space). Specifically, for the development of the Web application the JAVA script Java Server Faces - JSF, which serves as a JAVA framework for the web supported by Spring and Hibernate frameworks, was used.

For the creation of the technology in focus, 16 prenatal nurses, 4 managers of the Family Health Strategy program, and 24 pregnant women were interviewed in basic health units distributed in different districts of the city of Fortaleza in the State of Ceará. This phase was based methodologically on narratives, thereby providing a wide vision of the demands, as well as an orderly, chronological and finite sequence regarding prenatal and informational needs of pregnant women, as well as in regard to technological innovations in said service.

During the development of this technology, analysis procedures were covered in order to ensure ease of implementation by health professionals, while at the same time providing contextualized information to pregnant women about pregnancy and body care in prenatal situations through accessible multimedia with different platforms. This holds special relevance when considering the quality and organization of primary care network services.

The fact remains that the technological product still necessitates extensive validation as a

technology worthy of being transferred to health services for use by the targeted social actors (health professionals and pregnant women).

Thus, the potential of this technology to foster a better understanding and management of pregnant women's bodies with the intention of improving the living conditions and health of both mother and child is substantiated.

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