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APsyM LAB
Applied Psychology Measurement Lab

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The effect of technological stress on the usage and acceptance of telemedicine services in rural healthcare providers: A qualitative study

Aim

we investigated the role of rural areas healthcare providers in the adoption of telemedicine services inside their communities and how the technostress experienced by professionals might influence the willingness to adopt such services.

Background

Telemedicine is defined by the World Health Organization (WHO, 2022) as "the delivery of health-care services where distance is a critical factor, by all health-care professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment, and prevention of disease and injuries all in the interest of advancing the health of individuals and their communities". These services have been found effective in the reduction of health-related costs of the people who live in **rural areas** (Delgoshaei et al. 2017) and in an increase of trust in the local physicians and healthcare facilities (Potter et al., 2016).

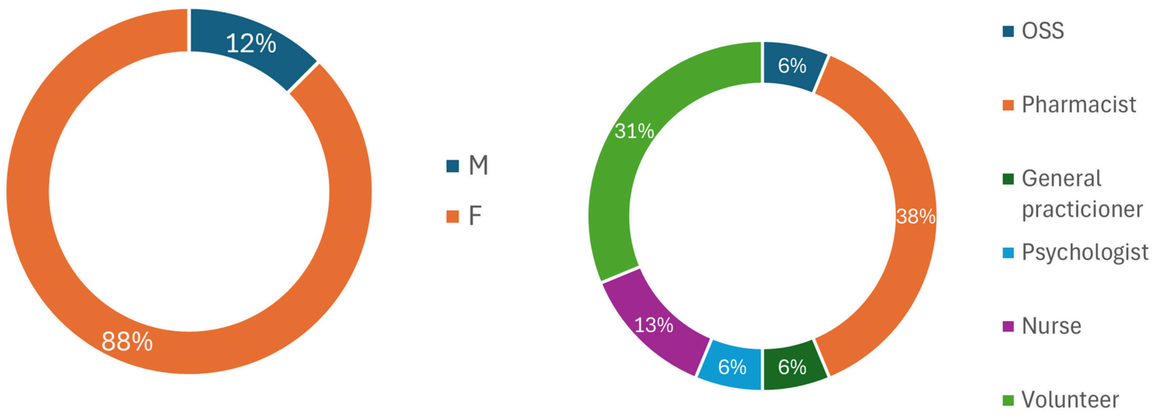
Work-related technostress is defined as "the phenomenon of stress experienced by end users in organizations as a result of their use of ICTs" (Ragu-Nathan et al., 2008). The five technostress sources proposed by Tarafdar and colleagues in 2007 are the following:

Technostress sources	
Techno-overload	ICTs' potential to compel users to work faster and longer or change work habit
Techno-invasion	ICTs' ability to invade users' personal life and make the boundaries between work and private contexts more blurred
Techno-complexity	situations where ICTs' features and complexity make users feel inadequate with respect to their skills
Techno-uncertainty	continuous upgrades and changes in ICTs that disturb users and force them to constantly learn new aspects of ICTs
Techno-insecurity	potential users' feeling of being threatened about losing their jobs, due to a replacement by automation or others who have a better ICT knowledge

Method

The study was conducted on 16 health providers operating in two municipalities of the mountainous area of the Dolomites northern Italy. At first, all participants took part in a structured interview about their experiences, opinions, and interests in telemedicine services. After the interview participants completed the Italian version of the Technostress Creators Scale (TCS, Molino et al., 2020) to evaluate the current technostress experienced in working activities, and an adapted version of the scale that measured the possible technostress experienced by using telemedicine services

16 Healthcare providers



Results

Preliminary results derived from content analysis of the interviews highlighted the **convenience of not having to travel**, the **age** of the population, the **cost savings,** and the **sense of community** the four main factors that will bring their communities to accept telemedicine services more easily. On the contrary, a **lack of digital competencies**, **reduction of social contact** with physicians, and **distrust over new technologies** are considered the main detractors of these services.

All the participants expressed their support for introducing telemedicine services in their professional lives.

From the data gathered through the use of the TCS and its modified version it is possible to notice a significant positive correlation between the participant's mean values obtained in Techno-invasion (TI, Original TCS) and Techno-InvasionTEL (TI-TEL, Adapted version), $r(14) = 0.51$, $p = .044$, and Techno-Complexity (TC, Original TCS) and Techno-ComplexityTEL (TC-TEL, Adapted version), $r(14) = 0.58$, $p = .019$. The mean values of TI, TI-TEL, TC, and TC-TEL respectively are $M = 2.46$, $SD = 0.92$; $M = 2.15$, $SD = 1.19$; $M = 2.39$, $SD = 1.16$; $M = 2.23$, $SD = 0.82$.

Implications

From the preliminary results it is possible to notice that although the perceived technostress in the current use of digital tools, specifically Techno-Invasion and Techno-Complexity, leads to similar concerns in the future use of telemedicine tools, the benefits brought by these tools in professional and community life mitigate these concerns and foster interest and willingness to use.

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