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An International Research Collaborative to Examine Global Health Resilience Using the MyStrengths+MyHealth Application

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Abstract

International organizations have called for the development of programs to strengthen global health resilience. This poster describes the development of an international research collaborative to examine whole-person health and resilience using the web-based application MyStrengths+MyHealth (MSMH). MSMH enables individuals to self-report strengths (resilience), challenges, and needs using simplified terms that have been community validated and at the fourth grade US reading level.

Keywords:

Omaha System, Standardized terminologies, Whole-person health

Introduction

Resilience is the ability of individuals, families, communities, and countries to maintain and improve their well-being in the face of short and long-term stressors.[1], [2] Whole-person health takes into account a person's environment, psychosocial aspects, and health-related behaviors. In our research we consider a person's strengths (or resilience) as part of a whole-person approach.

Digital health tools, such as mobile health applications (mHealth apps), are increasingly seen as a method to assist and engage individuals in managing their health. Further, most mHealth app data is unstructured therefore not easily accessible or analyzable.[3]

Standardized methods to measure whole-person health including individual and community resilience are lacking. Informatics methods have been shown to represent the individual and community-level perspective.[4], [5]

The Omaha System, a multidisciplinary health terminology, enables a whole-person assessment across four domains of health Environmental, Psychosocial, Physiological, and Health-related Behaviors. The Omaha System consists of three standardized instruments: The Problem Classification Scheme, Intervention Scheme, and Problem Rating Scale for Outcomes.[6], [7] The Omaha System is mapped within the Systematized Nomenclature of Medicine-Clinical Terms (SNOMED CT) and accessible across health disciplines to enable inclusive communication and data exchange.

Thus, we developed a whole-person web-based mobile health application, MyStrengths+MyHealth (MSMH), in 2017, for individuals, families, and communities to self-identify strengths, challenges, and needs.[8] MSMH leverages the rigor of the Omaha System a multi-disciplinary standardized health terminology and valid reliable instrument that addresses all of health across four domains with 42 discrete concepts.[10] Surveys for each of the 42 concepts are embedded using expert- and community-validated Simplified Omaha System Terms validated at the fourth grade reading level.[14]

Figure 1. Sleeping Concept Strengths, Challenges, and Needs

The purpose of this research was to develop and coordinate an international effort to promote strengths (resilience), challenges, and needs as part of a health and well-being initiative with global partners using web-based application MyStrengths+MyHealth (MSMH). The aims of this research are to 1) Translate in simplified terms MSMH and 2) Establish an international collaboration to examine health resilience using a standardized terminology.

Methods

Through the OSCOP and Research Partnership we invited international collaborators to join the MyStrengths+MyHealth International Research Collaborative. The aims of this research are to 1) Translate MSMH into foreign languages using simplified terms and 2) Develop an international research collaborative to exchange ideas, develop research partnerships, and share resources in an effort to build sustainable methods to examine individual and community resilience using standardized informatics method via MSMH to generate actionable data.

Results

To date MSMH has been translated into three languages (Spanish, Dutch, Turkish and Mandrin) (Figure 2). Seven more languages (French, Thai, Icelandic, Japanese, and Maori) are in-progress.

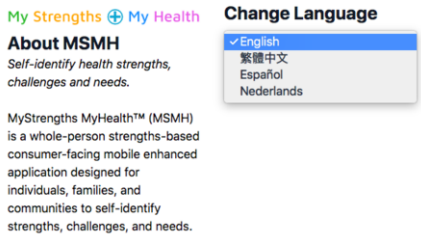

Figure 2. MyStrengths+MyHealth Language Selection

Discussion

This collaborative highlights an international partnership to build and support a global health resilience research trajectory. A key factor contributing to the successful launch of the MSMH International Research Collaborative was the existing international network of the OSCOP. This research program aligns with international organizations efforts to build health resilience through partnerships and collaboration.[1], [2]

This research initiative enables us to collaborate with informaticians and community partners to translate MSMH into simplified terms in another language.

This research has implications for individual, population health management, research, and policy. This research has the potential to shift the paradigm to optimize population health management using a strengths perspective. Limitations of this research is not all terms are a direct translation from the English language. For example, demographic data such as private health insurance is not applicable to all countries. Additionally, not all languages have a validated readability tool. Many partners are validating terms with community members. For example, current work is underway to validate simplified terms with community members in both Spanish and Turkish languages.

Conclusions

This MSMH International Research Collaborative presents a new phase of individual and community-level data to understand hidden needs of the most vulnerable. A data-driven picture can connect individuals with vital resources, inform community programming, and advise policy makers who would not otherwise be aware of these needs.

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