A Computationally Intelligent Framework to Support Youth Mental Health in Australia

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Abstract: Web-enabled systems for supporting youth mental health management in Australia are pioneering in their field; however, with their success, these systems are experiencing exponential growth in demand which is straining an already stretched service. Supporting youth mental is critical as the lack of support is associated with significant and lasting negative consequences. To meet this growing demand, and provide critical support, investigations are needed on evaluating and improving existing online support services. Improvements should focus on developing frameworks capable of augmenting and scaling service provisions. There are few investigations informing best-practice frameworks when implementing e-mental health support systems for youth mental health; there are fewer which implement machine learning or artificially intelligent systems to facilitate the delivering of services. This investigation will use a case study methodology to highlight the design features which are important for systems to enable young people to self-manage their mental health. The investigation will also highlight the current information system challenges, to include challenges associated with service quality, provisioning, and scaling. This work will propose methods of meeting these challenges through improved design, service augmentation and automation, service quality, and through artificially intelligent inspired solutions. The results of this study will inform a framework for supporting youth mental health with intelligent and scalable web-enabled technologies to support an ever-growing user base.

Keywords : artificial intelligence, information systems, machine learning, youth mental health

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