ABSTRACT

Depression has emerged as a significant issue among workers in the technology companies in Indonesia. This research aims to address the need for a specific approach tailored to this work environment. An expert system has been designed using the Mamdani fuzzy logic method to diagnose the level of depression among employees in technology companies. The selection of the Mamdani fuzzy logic method is based on its capability to handle the complexity and uncertainty inherent in diagnosing depression. A literature review was conducted to evaluate similar approaches and outline their unique contributions to the context of technology company employees. Data was collected by questionnaires filled out by technology company employees, designed to encompass variables related to depression symptoms and protective factors. This data was utilized to test and validate the developed expert system. The results of the system testing indicated an accuracy level of 98.27%, measured from 30 comparisons between manually and automatically calculated results. Additionally, the overview of the fuzzy algorithm testing revealed an average time of 605 milliseconds, with an accuracy rate of 98.27%, ensuring the effectiveness and reliability of the fuzzy approach in this context. This research providing a more specific and focused diagnostic solution for employees in technology companies in Indonesia. These findings pave the way for further development in understanding and addressing depression among technology workers.

Keywords: *depression, technology company workers, expert system, fuzzy logic Mamdani*