



## Handling Depression, Stress Or Anxiety through Game-based Cognitive Behavioural Therapy

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**Abstract**—Mental health as described by the World Health Organization, is a state of well-being where the person knows his own ability to function efficiently and productively to bring significant contributions to his community. Unfortunately, some people have poor mental health compared to others. The three main mental health issues are depression, stress and anxiety. Previous study found that adolescents refuse to seek therapy for their mental health issues because of a number of reasons. These include traditional therapy is time consuming, embarrassment of going to traditional therapy and lack of motivation to do daily tasks including social activities. Therefore, these reasons are good enough for this project to be developed. The objectives for this project are, to design a storyboard on Cognitive Behavioural Therapy (CBT) game, to develop a 2D CBT computer-based game and to evaluate the game's effectiveness in helping or reducing the teenagers' depression, stress or anxiety after playing the game. As the project methodology, Rapid Application Development (RAD) was used. The evaluation that was used to measure the effectiveness of the game is the DASS-21 pre-test and post-test questionnaires followed by the Therapeutic Game Design Model questionnaire. According to the project's findings, adolescents agree that this game is effective in helping mild to moderate depression, stress or anxiety. As for the game's future work, other features can be implemented into the game to make the game better such as developing the game in other language which is Malay and implementing other beneficial features that can help improve the game.

**Keywords**—*Depression, Stress, Anxiety, Cognitive Behavioural Therapy,*