



## Prevalence of depression and its associated factors among persons with chronic medical illness in Bhutan

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### ABSTRACT

This study aimed to determine the prevalence of depression and factors associated with the depression among persons with chronic medical illness. A total of 120 adult patients visited at a medicine OPD hospital in Bhutan were recruited and asked to complete self-report questionnaires. Descriptive statistics and binary logistic regression were employed to analyze the data. Results revealed 41% of the prevalence rate of depression in persons with chronic medical illness in Bhutan. Patients' age  $\leq 40$  years, being a female, and those with low level of physical activity and low social support were significantly associated with depression. Nurses and related health care providers could utilize these findings to develop an intervention to prevent depression in persons with medical chronic illness by promoting social support and physical activity focusing on females, and young adults.

### Introduction

Depression affects hundreds of millions of people all over the world. One in six people has experienced depression at some times in their life. The total number of people with depression is estimated about 322 million worldwide and nearly 86 million people in South-East Asia Region. A number of people living with depression are increased by 18% between 2005 and 2015 (World Health Organization [WHO], 2017). The increasing prevalence and the serious impact of depression all over the world make it become one of the most serious public health problems of the 21st century (Boing et al., 2012).

The National Institute of Mental Health (NIMH, 2019) reported that people with medical illness have increased risk of depression. It shows that about 10–65% of people with medical conditions became depressed during the time of their illness (Cleveland Clinic, 2019). Several studies reported increased prevalence of depression in individuals diagnosed with medical illnesses mostly in cardiovascular disease, diabetes mellitus, chronic obstructive pulmonary disease, arthritis and chronic pain, asthma and cancer (Hare, Toukhsati, Johansson, & Jaarsma, 2013; Khuwaja et al., 2010; Matcham, Rayner, Steer, & Hotopf, 2013; Tsai et al., 2013). Consequently, it increases the morbidity and mortality, worsens the prognosis for the patient, and reduces the capacity for self-management, which increases the risk of major health complications in patients with chronic medical illness (Goldberg,

2010; Katon, 2011).

Currently, Bhutan is undergoing rapid urbanization and this has led to an increase in mental disorders in the country. It was found that from 2011 to 2015, there was an increase in the total number of cases of mental health disorders, from 2878 cases to 7004, of which 31% was depression (Dorji et al., 2017). Along with that a number of people with chronic medical illness in the country are also increasing drastically. Medical illnesses such as diabetes, cardiovascular diseases, cancer and chronic obstructive pulmonary diseases are also on the rise in the Bhutanese population. Despite the increase in number of both depression and chronic illness in Bhutan, there is limited information regarding depression in chronic medical illness.

From the review of literature of previous studies on depression in chronic medical illness, factors such as disease characteristics, some sociodemographic factors (age, gender), duration and number of illness, physical activity and social support have shown to be related to depression in chronic medical illness. Studies reported that patients with age 50 years or more with diabetes were more likely to associated with depression than those < 50 years of age (Khuwaja et al., 2010; Téllez-Zenteno & Cardiel, 2002). However, a study of depression in Taiwanese COPD patients reported higher hazard for depression in younger patients than the elderly (Tsai et al., 2013), and so did a study about heart failure patients (Gottlieb et al., 2004). Depression in COPD female patients were at a 1.19 fold greater risk for depression than men (Tsai

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