ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25feb1656

Prevalence of Depression amongst Nurses Working at Central Regional Referral Hospital

Jigme Zangmo

Mental Health Unit. Central Regional Referral Hospital
Ministry of Health
Gelephu, Sarpang. Bhutan

https://orcid.org/0009-0004-4309-7305

Publication Date: 2025/03/19

Abstract: Depression has become a leading cause of mental illness and disability throughout the world. However, much of the cases remains undiagnosed owing to various reasons such as stigmatization, lack of awareness etc… Similarly, it is estimated that only about five percent of the individuals with depression receive treatment in Bhutan. When depression is not addressed properly it may lead to suicide with subsequent loss to family, society and economy. While much are being done to address the issue in the public, often it is the health workers themselves that are least cared of. Among the health workers, the nurses are often exposed to various risk factors of depression due to the work overload, conflicts at work, night shifts and lack of professional autonomy. Therefore, it becomes quite pertinent to look into the mental health of nurses, as they are the core service provider, that requires them to be in constant touch with many patients. This study aims to find the prevalence of depression among nurses working in Central Regional Referral Hospital in Gelephu.

Keywords: *Depression, Suicide; Stigma.*

How to Cite: Jigme Zangmo (2025) Prevalence of Depression amongst Nurses Working at Central Regional Referral Hospital. *International Journal of Innovative Science and Research Technology*, 10(2), 2328-2334. https://doi.org/10.38124/ijisrt/25feb1656

I. INTRODUCTION

The modern world has seen many advancements in many fields of study, however, challenges in coping have increased due to work pressure, unemployment, increment of materialistic desires, influences made by social media and many more. This, as a result constantly challenges people to face many mental health issues like depression, anxiety, and stress. Depression is a serious and common medical disorder, that negatively effects how one feel, the way one think and act. According to World Health Organization (WHO) depression is an illness characterised by persistent sadness and a loss of interest in activities that you normally enjoy, accompanied by an inability to carry out daily activities, for at least two weeks. Depression can cause the affected person to suffer greatly and function poorly at work, at school and in the family and the worst is depression can lead to suicide. Close to 800 000 people die due to suicide every year. Suicide is the second leading cause of death in 15-29-year-olds and causes huge burden to the societies. It is found that the leading cause of illness and disability today is depression worldwide, where more than 300 million people are living with depression and there has been a rise of 18% from 2005 to 2015, and nearly half of them live in South East Asia region and western Pacific Region. The burden of depression and other mental health conditions are on the rise globally, and depression is more common in females (5.1%) than in males (3.6%). The prevalence rate varies by age and is found highest in older adults (above 7.5% in females of aged 55 to 74 years, and above 5.5% in males). Depression also occurs in children and adolescents below the age of 15 years, but at a lower level than older age groups (WHO.2017). Depression affects people of all ages, from all walks of life and all countries. It causes mental anguish and affects person's performance including simple everyday task, which may lead to devastating consequences for relationship with family and friends and make a living (WHO.2017).

Major depression affects both employees and organizations. Nurses suffer from depression as twice as much as other individuals. Depression is linked to increase in work absenteeism, short-term disability and decrease in productivity and mindfulness (Brandford & Reed, 2016).

Negative attitude contributes to underestimation of depressive disorders in the community and clinical setting (Postuvan, Becaj, & Marusic, 2007). An integrative study shows that suicide risk is associated with depression among the nursing professionals. Depression has an impact on professionals affecting their personal lives and work capacities, moreover, among the health professionals, nurses are most prone to mental health problems like depression and suicide risk. The main reason is that they deal with human suffering, pain, joy, sadness and they need to offer help to

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25feb1656

those who need their care. Some main factors are, difficult working conditions and lack of professional recognition. Other factors contributing to depression were identified as work environment, family conflicts, interpersonal conflict in work place, marital status, stress, lack of professional autonomy, family income, insecurities in developing activities, work overload, young adult, higher educational level, night shifts, unhealthy work environment, pressure from the health institutions and patients' families, and work nature dealing with serious illness and risk of deaths leading them to develop depression easily.

The imbalance in the family lives of the nurses especially loss of family members, absence of family and lack of family support increases the odds for suicide risk. The working nature of this profession diminishes the family contact and lack of this contact leads to depression. Due to the work demand like weekend and night shifts, the quality family time is compromised, and a study had found that nursing professionals have higher depression rate than other medical professionals, and that depression affects a person's social and personal life. Interpersonal conflicts are common in nursing profession, and this causes irritabilities and conflicts which leads to depression.

The nursing profession consist mainly of women population, and it becomes difficult for the married nurses to meet the demands of partners, children, home and work leading to an increase in the development of depression and chanced of quitting their job and damaging their marital relationships. Since nursing profession is a demanding profession where the nurses are expected to know complex activities, it as a result increases their level of stress. This has proven to correlate with high levels of depression among nurses working in psychiatry wards, intensive care units and operation theatre, and highlights the need for the use of internal and external coping strategies to reduce the effects of adverse stimuli.

Burnout syndrome is common in nurses working in intensive care units due to the physical and mental wear and tears caused by work overload. One study shows that overload and low wages generate excessive working hours, physical and emotional stress in nurses. Studies also revealed that work overload arises from lack of professionals, especially on holidays; co-workers who do not complete all the tasks and cause burden for following shifts; conflicts of shifts, resulting in dissatisfaction and the intention to abandon employment and larger number of hospitalized patients (Silva, Tavares, Alexandre, Freitas, Breda, Albuquerque, & Neto, 2015).

Depression can cause an ultimate consequence, known to the world as suicide, and it can be devastating to see people become a victim of this consequence, especially because of depression. There is a culture of survival in some wards, where the nurse manager takes pride in running a difficult working environment. Some nurses cope well, but some struggle and ultimately feel depressed. They face some rude behaviours of the patients and face situations which seem out of their control, where patients' condition worsens under their care and even die. Nurses may find it difficult to concentrate in their work, manage their time effectively, and are prone to making mistakes in drug dose calculations ("Depression: who's nursing the nurses? 2017). Errors in nursing profession can hamper the recovery of the patients and cost the lives of the patients. In a study which included 1790 nurses and conducted over 20 Hospitals in United States of America, found that 54% of the respondents reported poor physical and mental health, and about half the nurses reported making errors in past five years. Depression stood out as the major concern, and was a key predictor of errors (Ford, 2017).

When nurses suffer from depression, no one knows including the nurses themselves. Depression is an epidemic in nurses, but no one talks about it. Robert Wood Johnson Foundation Interdisciplinary Nursing Quality Research Initiatives (INQRI), states, that nurses experience clinical depression twice than general population, where depression affects 9% of every citizen but 18% of nurses experience the symptoms of depression. It is not in the realm of treatment within the medical professionals, who doesn't give much thought to mental illness. Additionally, nurses dismiss the idea of depression in considering their patients as well as themselves. Besides neglect, culture of nursing is another factor which leads nurses to depression; surviving everyday under lots of tension and stress is the culture, and some endure it, and some suffer from depression ("Depression in nurses: the unspoken epidemic", 2016). Nurses usually talk about the problems of staff shortage or poor ratio, and lack of management support but do not wish to talk about mental illness due to stigma, prejudice and discrimination. They fear losing their job due to stigma, so they choose to keep quiet. The cause of depression in nurses are multi-factors, and stigma also remains as a great part of this problem (Lambert, 2016).

Depression is one of the three common problems mentioned by nurses and the problem should be identified at an early stage and provide care to them to prevent loss of care quality (Silva et al., 2015). The prevalence of mental health problems like anxiety and depression is high due to excessive workload, organizational factors and job factors. Stress level in nurses have increased over the recent years due to increase in demand of nursing care; and nurses working in intensive care unit experience more stress than nurses working in other wards. A study conducted with female nurses working in intensive care units of the private hospitals of Maharashtra, India showed that 16.9% of nurses were suffering from depression. The 28-items General Health Questionnaire(GH8-28) was used as tool to assess the prevalence of mental disorders (somatic symptoms, anxiety, social dysfunction and depression) among nurses (Swapnil, Harshali, & Snehal, 2016).

As there are no such studies conducted in Bhutan, this study will examine information about where or not nurses have symptoms of depression in one of the regional referral hospitals. In Bhutan, there are three referral hospitals, Eastern Regional Referral Hospital (ERRH) situated in Mongar, Jigme Dorji Wangchuck National Referral Hospital (JDWNRH) situated in Thimphu the capital city and Central Regional Referral Hospital(CRRH) situated in Gelephu. There are 28 district hospitals, 23 Basic Health Unit (BHU) grade I, 184 BHU grade II including 28 satellite clinics, 28

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25feb1656

sub posts, 54 indigenous units and 494 outreach clinics. The health-care service delivery in Bhutan is structured into three-tiered system with BHUs at the primary level, district hospitals at the secondary level and regional referral and national referral at the tertiary level. The coverage was planned to be sustained with at least 90% of the population living within 3 hours walking distance from a health facility, be it ORC, BHU or district hospital. The primary health care reaches out to the community through ORC and village health workers (VHW). District hospitals also serve as the nodal referral centres for the BHU, within their jurisdiction and for adjoining BHUs in other districts. Patient pathways for rural patients has an option of visiting a VHW or BHU-II, which are much closer to them. The urban patients would have direct access to a BHU-I, district hospital or referral hospital. A patient has the choice to go to any health centre in any district as the health-care is free for every Bhutanese. The referral hospitals at Mongar and Gelephu also function as the secondary care centres because there are no other hospitals in those areas. The referral hospitals being tertiary care centres have a referral process for patients from other districts (Thinley et al., 2017).

It is obvious that nurses working in referral hospitals have complex work situations, must care for a variety of serious medical cases, and will have work overload. Excessive workloads, job factors and organizational factors stand to be the leading cause of mental health problems in nurses (Swapnil et al, 2016). Since nurses are constantly in touch with patients who are already in distress, it is important that the mental health of a nurse is stable and taken care of, as it will directly influence the quality of the treatment provided to the patient. Nurses are prone to mental health problems as compared to other healthcare professionals. Nurses are susceptible to depression because they deal with the pains and death of people under their care. Depression is one of the mental illnesses that most affects nurses, causing damage to their work capacity and personal life. (Silva et al, 2016). Nurses working shifts reported higher levels of mental distress and lower levels of job satisfaction, especially women working shifts reported significantly higher level of mental distress compared with women working regular day shifts (Jaradat, Nielsen, & Bast-Pettersen,2017).

As mentioned by Silva et al., 2016, nursing professionals must not be only seen as health workers, but also as people who may suffer from mental health problems. This study will shed light upon the mental health factors pertaining to the nurses particularly in recognising whether they have symptoms of depression or not. The nurses in CRRH work in various places like administration, non-communicable diseases clinic, major and minor operation theatre, dialysis unit, central sterile supply division, casualty and wards. Since CRRH is functioning as the regional referral hospital and provides multi-speciality services, there are multiple roles for the nurses.

II. METHODOLOGY

This study to see the prevalence of depression amongst the nurses working in central regional referral hospital in Gelephu was done by using the brief depression scale, patient health questionnaire (PHQ-9). This study adopted a cross-sectional survey design. It took account of existing literatures on mental health especially depression in nurses. This study reports the prevalence of depressive symptoms in nurses as estimated by the patient health questionnaire-9 (PHQ-9), administered by the nurses themselves.

A. Participants

The researcher invited all the nurses who had direct contact with patients and the patient attendants. All the nurses who had shift duties were invited to participate. These nurses were working in Unit-I, unit-II, Dialysis unit, operating theatre, and emergency ward. Complex working condition is present in emergency department, unit I and unit II. The emergency caters service to all kind of specialities. Unit I and unit II also are multi-speciality wards along with intensive care units. All the age group of nurses were invited, and with all the educational background like certificate in nursing, diploma in nursing, graduates and with master's degree. Nurse who did not have direct contact with patients like holding administrative works were excluded. Further nurses who worked in out-patient department who did not have to work on shifts were excluded.

B. Ethical Consideration

The study was approved by the Research Ethics Board of Health (REBH), Ministry of health, Bhutan (*Ref.No.* REBH/Approval/2017/084). Since the study involved human participants, informed consent form with information about the study like introduction of the researcher, purpose of the study, type of research intervention, participation selection, procedure, and risk and benefits were included in the consent form. Voluntary participation, confidentiality, right to refuse or withdraw and anonymity were emphasized. Certificate of consent was obtained before the administration of the depression scale.

C. Data Collection Tool and Measurement

Demographic information was obtained on the self-filled form. The participants were asked to fill in the demographic information in the self-filled form. The researcher used the validated Patient Health Questionnaire-9 which was developed by Dr Robert L. Spitzer, Janet B.W Williams, Kurt Kroenke and colleagues, and these authors allows the PHQ-9 to reproduce, translate, display or distribute without permission or any payment. The patient health questionnaire (PHQ-9) is a self-administered depression test, which scores each of the 9 DSM-IV criteria as 0 (not at all) to 3 (nearly every day). The PHQ-9 incorporates DSM-IV depression diagnostic criteria with other leading major depressive symptoms into a brief self-report tool. The internal reliability of the PHQ-9 was excellent with a Cronbach's alpha of 0.89 in the PHQ Primary care study and 0.86 in the PHQ ob-gyn study. The test- retest reliability of the PHQ-9 was also excellent. PHQ-9 is also a reliable and valid for measures of severity of depression, thus makes PHQ-9 a useful clinical and research tool (Kroenke, Spitzer, & Williams, 2001). The

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25feb1656

PHQ 9 establishes the diagnosis of depression and can additionally be used to measure the severity of symptoms over time. PHQ 9 scores of 5,10,15 and 20 are representative of mild, moderate, moderately severe and severe depression respectively (Bienenfield, & Stinson, 2016). PHQ-9 is a commonly used and validated screening tool and an appropriate follow up test (Maurer, 2012). The PHQ-9 can be used to screen for depression as well as guide depression treatment planning among Chinese Americans in primary care (Chen et al, 2006). It is a valid tool for screening depression in the general population. It seems to be a useful tool to recognize not only major depression but also subthreshold depressive disorder in the general population (Martin et al, 2006).

III. RESULT

A total of 76 nurses working in multi-specialty wards (Unit-I, and Unit-II), emergency unit, haemodialysis unit, and operating theatre participated in the study.

Table 1 Frequency Distribution of the Respondent by Demographic Characteristics.

	Frequency distribution of respondents			***Frequency distribution of respondents with depressive symptoms.***		
S.no	***Demographic information***	***N***	***Percentage***	***Demographic information***	***N***	***Percentage***
1	Sex			Sex		
	Male	29	38.2	Male	16	55.2
	Female	47	61.8	Female	26	55.3
2	Age in years			Age in years		
	20-29	42	55.3	20-29	20	47.6
	30-39	18	23.7	30-39	11	61.1
	40-49	12	15.8	40-49	9	75
	50-59	4	5.3	50-59	2	50
3	Education level			Education level		
	Certificate	14	18.4	Certificate	10	71.4
	Diploma	51	67.1	Diploma	26	50.9
	Graduate	9	11.8	Graduate	5	55.5
	Masters	2	2.6	Masters	2	100
4	Marital status			Marital status		
	Single	31	40.8	Single	14	45.16
	Married	44	57.9	Married	19	43.18
	Separated	1	1.3	Separated	1	100

IV. DISCUSSION

The overall estimate prevalence of depressive symptoms in nurses working in Central Regional Referral Hospital is 55.3%, and female nurses have slightly higher prevalence at 55.3% compared to the male nurses at 55.2%. The result is similar to the earlier studies of Lee et al. (2016), where they have examined the association between shift work and the severity of depressive symptoms among female nurses in Korea. They inferred that 64.8% of nurses had different levels of depressive symptoms; and nurses who worked shifts had 1.519 times greater odds of experiencing a higher severity of depressive symptoms. The participants of the current study also have a shift duty system, that can be related to high prevalence of depressive symptoms as Chang et al. (2013), states that night shift alone contributes to 23% of depression in nurses. It was also pointed out by Jaradat et al. (2017), that nurses working shifts reported higher levels of mental distress. Silva et al. (2016), also stated that, among the health workers, nurses are more prone to depression. Kim et al (2016), have further synthesised that nursing is a profession which is exposed to night-eating syndrome (NES), and nurses with NES were 1.65 times more likely to have greater severity of depressive symptoms. The participants of current study are also exposed to night-eating syndrome since the night shift is 12 hours long.

The current study constitutes participants working in multi-speciality wards, so this working condition may cause burnout in nurses. A nurse may have to conduct multi tasks at a given time, one moment they may have to conduct a delivery of a baby, the next moment they may have to provide care to a new born baby in the phototherapy room and subsequently, also provide care for a child undergoing treatment for a disease. This complexity of working conditions and pressure on cognition may cause burnout and ultimately predispose into depressive symptoms. This is also supported by Adam et al. (2015), in his study, where 48% of Hungarian nurses had prevalence of depressive symptoms and had comorbidity with burnout.

It is common in Bhutanese culture that household chores are mostly conducted by women, including child rearing and caring. Having to perform such a challenging duty along with a stressful life at home, would not give them much time to engage in other social activities. This as a result can lead to lack of entertainment, improper sleep and lack of peaceful time for themselves. This study mostly includes female participants, and as mentioned, all these factors could have led to the prevalence of depressive symptoms found in this study.

The working environment of a nurse is such that, there is no proper standard, or a clear protocol. In addition, there is also the presence of a relaxed monitoring system that gives rise to irregularity in working patterns. Some work with integrity whereas, some remain relaxed and do not match the working pace of others. This gives rise to the disputes at workplace and creates unhealthy working conditions. Some

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25feb1656

nurses also consume alcohol, which could be an indication that they are already depressed. These factors such as, conflict at work and alcoholism could be the cause for depressive symptoms in the participants of the current study. These results are similar to that of a study conducted by Cheung et al. (2015), where they found 35.8% of nurses having prevalence of depression in Hong Kong. This association was seen with marital status, clinical speciality, upset with colleagues, workplace violence, job satisfaction, and level of physical activity, entertainment, sleep problem, drinking alcohol, psychiatric disorders and self-perceived physical and mental health.

The current study also consists of participants who are highly committed to their work, and with different levels of educational background. All the nurses holding a master's degree level education, have depressive symptoms. This could be due to excessive job responsibilities and high personal expectations pertaining to respect and income. The nurses with certificate level of education also had high levels of depressive symptoms (71.4%), and this could be due to various reasons. First, they are the lowest ranked in the profession and they are not entrusted with managerial roles, where decision making is involved. There is no proper career advancement plan drawn in the nursing service system. Moreover, whenever there are trainings offered through agencies, they fail to qualify, as they do not fulfil the pre-requisite of these training programs (e.g. low education level). These factors could be a reason behind their high depressive symptoms in comparison to nurses holding a bachelors and diploma level education. Similar result was inferred by Gao et al. (2012) where they found 61.7% of nurses having prevalence of depressive symptoms. The association was seen with lower job rank, higher over commitment, alcohol consumption, worse nurse-patient relationship and higher education background.

Participants of the current study have long working hours especially night duty starting from 8.00 pm and finishing at 8.00 am. The nurses mostly work during the night shift for two consecutive days, with a minimum of 45 hours a week, where most nurses, work for more than 45 hours due to their work overload and sometimes they do not get a week off. They also work in critical areas like labour room, intensive care units, medical ward, haemodialysis etc., which requires excessive focus, attention, performing of many procedures and prolonged standing. Nurses also face a problem related to poor nurse-patient ratios. These factors could have caused prevalence of depressive symptoms amongst nurses. These findings are also similar to results of studies conducted by Gong et al. (2014), where they found 38% of Chinese nurses having depressive symptoms. The depressive symptoms were associated with long working hours (>45 hours/week), frequent night shifts (2or more/week) and specific departments. Zaher et al (2016), found that depression was mostly related to the nurses working in haemodialysis unit. Chiang & Chang (2012), found nurses working in medical ward experienced a higher depression than their counterparts working in emergency room and operating room.

Depression affects mostly the female population compared to male counterpart (Xu et al, 2014), and this association is seen in the nurses of Central Regional Referral hospital; more female nurses are affected with depressive symptoms than the male counterparts. Many other studies have inferred the same, where the rate of depression is more in female than male nurses (Zaher et al, 2016). Cheung and yip (2016), also found that depressive symptoms were more prevalent in female nurses (36.6%) than male nurses (30.3%). Even studies in nursing universities found that female nursing students have higher depression rates than the male students (Xu et al,2014). Uras et at (2012), found 34% of nursing students had risk for depression and female students had higher risk.

The current study results demonstrate that participants of 40 – 49 years had the highest level of depressive symptoms, out of all age groups. This could be because of high expectations pertaining to being exempted from the night duties or emergency duties. Furthermore, it could be due to their expectations about achievements in life as they reach a stage of planning for a retirement plan within the next 6-8 years. This as a result could be highly frightening and awakening for them. It could be also due to non-work-related factors predisposing them to depressive symptoms. It is somewhat similar to the study of Yoon & Kim (2013), where they found that 38% of South Korean nurses experience depressive symptoms and found an association with young age and single status, job-related stress, and emotional labour. These factors could have a direct or an indirect association with depressive symptoms with the current study.

Nursing is a profession which sees joys and sorrows of life now and then. The profession demands composure, where a nursing professional is not allowed to give in to such emotions during time of work. Mostly, this professionally expected composure can be misinterpreted by others. During a time of great loss like death of a patient, relatives may become abusive and violent. The constant exposure to such situations may lead to the development of depressive symptoms in the participants of the current study. These findings are somewhat similar to the study of Hsieh et al. (2018), where they found that 75.9% of Taiwanese nurses had depressive symptoms and saw the association with violence at workplace and decreased social support. Further Fang et al (2018), studied workplace violence in China, and found that nurses who had suffered physical violence had 71.25% of depressive symptoms.

In this current study, results demonstrated that unmarried (45.16%, n=31), and separated nurses (100%, n=1) have higher levels of depressive symptoms in comparison to the married nurses. This relation has been made by Hao et al. (2015), who studied the relation of marriage and depression, and found that married nurses are less likely to develop depressive symptoms.

Nursing students that eventually graduate out to be the nurses working in hospitals, their mental health and wellbeing should be given high prominence. It is essential that they are assessed and treated (if required) on time. Tung et al (2018), found that Asian nursing students experienced higher prevalence (43%) compared to others. Chatterjee et al (2014),

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/25feb1656

also found that 63.9% of nursing students were depressed. Similarly, this study also includes participants that joined the nursing profession recently.

It should be also taken into account that prevalence of depressive symptoms amongst nurses working at Central Regional Referral Hospital is not due to purely work-related factors, it could also be due to certain personal factors like poor coping mechanisms, divorce, lack of social support, past and present abuse (physical, sexual, and emotional), serious illness, loss of loved ones in their life, genetic predisposition, side effects of drugs, occurrence of major events in life, and substance abuse.

V. CONCLUSION

This study has found that, there is a prevalence of depression amongst nurses working at central regional referral hospital in Gelephu, Bhutan.

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