

PREVALENCE AND ASSOCIATED FACTORS OF DEPRESSION, ANXIETY AND STRESS AMONG HEALTH STAFF IN THE HOSPITAL OF TROPICAL DISEASES- HO CHI MINH CITY-VIETNAM

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ABSTRACT

Objectives: *To assess the presence and level of common mental problems such as stress, anxiety, depression of health workers and to identify the main associated factors contributing to these mental problems.*

Methods: Survey design: *A descriptive cross-sectional survey in 2016 and a qualitative research in 2018 were conducted at the Hospital of Tropical Diseases. Participants:* managers and health workers who consent to participate.

Methodology: *A scale about depression, anxiety and stress was self-administered by 601 health workers. In-depth semi-structured interview and focus group discussion were conducted with 33 managers, doctors and nurses.*

Results: *Among the 601 respondents and according to the moderate and severe level, the prevalence of depression, anxiety and stress was 28.4%, 38.8% and 18.9% respectively. Women had a higher risk of mental problems than men. There was no significant difference relating to other demographic profile such as profession, working years or age group. From the 33 respondents in the qualitative research, the main stressors were related with the working environment including the infrastructure, administrative policy and interpersonal relationship. Concerning the work life balance, health workers worry about the long distance from home to hospital and responsibility with their family.*

Conclusion: *This screening survey showed the presence of depression and anxiety in a number of health workers with associated factors related to working environment. The health staff needed a support from the hospital managers and the psychological/psychiatric experts to improve their mental health.*

Keywords: *depression, anxiety, stress, health staff, managers, working conditions.*

INTRODUCTION

Depression and anxiety are psychiatric disorders that can result in emotional and /or physical pain, impaired functioning, and difficulty in relationships and/or employment. Depression is also linked with an increased risk for suicide. Prompt screening, assessment, and treatment improve prognosis in clients with depression and/or anxiety. Depression and anxiety each have unique clinical features and overlapping signs and symptoms and often coexist with general stress. Stress can contribute to an over aroused and tense state, the inability to relax, and irritability.

Medicine is psychologically demanding field and associated with suboptimal psychological health. Recently, two studies reported a high prevalence of depression (42.9%), anxiety(60.7- 63.7%) and stress(57.1%) among house officers in Malaysian hospitals.[1] In Western countries, the prevalence of psychological distress ranged from 7% to 29%. [2]

In Vietnam, up to now, no survey was conducted about depression and anxiety of health staff in hospitals.

Abdel Aziz M Kamal Aziz M Kamal, et al [3] did an assessment for 488 residents at Ain Shams University Hospitals, Egypt, to study the prevalence and risk factors of work related stress. This research revealed an association between leisure time factors and work related stress where residents who were suffering from short break during work, family problems due to their work and lack of time for practicing hobbies and sports or difficulty in taking vacation were significantly more stressed than those not suffering. The study also revealed a significant association between work related stress and the following variables: workload, long working hours, irregularity of schedule of work shift (days and nights), no value, role ambiguity and role conflict. Besides, the current study revealed significant relation between problems with supervisors, colleagues, subordinates, patients and their families and work related stress (Abdel Aziz M Kamal; Sahar M Sabbour;Ihab S Habeel, 2015).

A study on the life of patients after discharge form the Hospital of Tropical Diseases, Ho Chi Minh city, showed a reported cause of stress is the interaction of health staff with patients and their families(Annabelle Audier, Nguyen Thi Kim Ngoc, Mary Chambers, 2016)[4].

This survey was designed to answer two important research questions:(1) what are the prevalence of depression, anxiety and stress among the clinical and non-clinical staff at the Hospital of Tropical Diseases(HTD) in Ho Chi Minh city, Vietnam? and (2) what are the associated factors of these mental problems at HTD?

METHODS

Study design and participants

A cross-sectional survey was conducted in October 2016. A workshop was organized in the HTD to introduce the mental problems frequently encountered in the hospital such as stress, anxiety, depression to the health staff of HTD. The questionnaires were distributed by the office of Quality Management of HTD to the health staff of all departments. The questionnaires were self-administered by the health staff and returned to the Quality Management office 1 week later. The questionnaires were confidential and sent to PE-OUCRU for analysis.

In 2018, a qualitative research was conducted with managers, doctors and nurses to identify the main factors contributing to depression, anxiety and stress, using in-depth interviews and focus group discussions.

Ethical considerations

The study was approved by the Institutional Review Board of HTD and the Oxford Tropical Research Ethics Committee.

Privacy and Confidentiality

All participants were given a clear explanation of the study's objectives and confidentiality of the information they shared. The consent forms were explained by the study team and the participants were willing to accept to provide information. Names of participants were kept confidential. All notes or recordings used for data collection that were included personal identifiers will be destroyed upon approval and acceptance of the final report.

Data collection tools:

1. The Depression Anxiety Stress Scales (DASS) is a validated and reliable tool used to screen depression, anxiety, and stress symptoms within the last week. It is a client self-reporting tool designed to measure the severity of the negative emotional states of depression, anxiety, and stress. The items for depression scale focus on low mood and low self-esteem, anxiety scale focus on fear response to psychological arousal and the stress scale focus on persistent arousal and tension. DASS-21 is a questionnaire with 21 items (7 items for each category) based on a four-point rating scale. To calculate comparable scores with full DASS (42 items), each 7-item scale was multiplied by 2. Participants were asked to rate how many of each of the items (in the form of statements) applied to them over the past week, with "0= did not apply to me at all" to "3 = applied to me very much, or most of the time". The higher the score the most severe the emotional distress was. Any score of depression, anxiety and stress more than 13, 9 and 18 respectively were considered as caseness. DASS-21 was validated by Tran et al [5] in a rural community-based cohort of northern Vietnamese women in 2013.

2. In-depth interviews (IDI) applied semi-structured interviews with individuals.
3. Focus group discussions (FGD) used rich picture method to encourage participants to draw pictures and reflect their ideas through the semi-structured questions of FGD.

- **Data analysis**

Categorical variables are described by frequency (percentage) and the relationship between two categorical variables is examined by Fisher’s exact test. *P*-value less than 0.05 is considered as significant difference.

All IDIs and FGDs were note-taken, recorded, and analyzed by using word/excel.

RESULTS

A sample of 626 health workers in all departments of HTD was recruited. 100% completed the list of stressors and 96% completed the DASS-21 questionnaire.

1. Demographics

Demographics collected from each respondent included age, gender, position, years of employment, and name of the department where they are working. No questions to reveal identity were asked. The participants also list self- described stressors, and their coping strategies. Age was classified as 20-29, 30-39, 40-49 or ≥ 50 years. The position was classified as doctors, nurses, technicians, cleaners and other staff working in 37 clinical and non- clinical departments.

2. Prevalence of depression, anxiety and stress

Table 1. Prevalence and level of depression, anxiety and depression in HTD

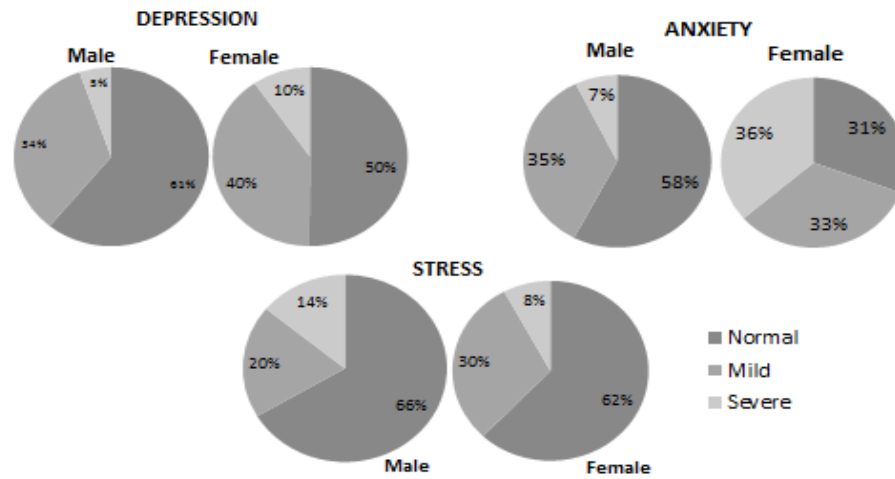
	Depression (N=601)	Anxiety (N=601)	Stress (N=601)
Level	n (%)	n (%)	n (%)
Normal	319 (53.1%)	306 (50.9%)	391 (65.1%)
Mild	111 (18.5%)	62 (10.3%)	96 (16%)
Moderate	120 (20%)	162 (27%)	69 (11.5%)
Severe	31 (5.2%)	27 (4.5%)	37 (6.2%)
Extremely severe	20 (3.2%)	44 (7.3%)	8 (1.2%)

28.4% participants had depression with moderate, severe and extremely severe levels.

38.8% participants had anxiety with moderate, severe and extremely severe levels.

3. Association of depression, anxiety and stress with gender

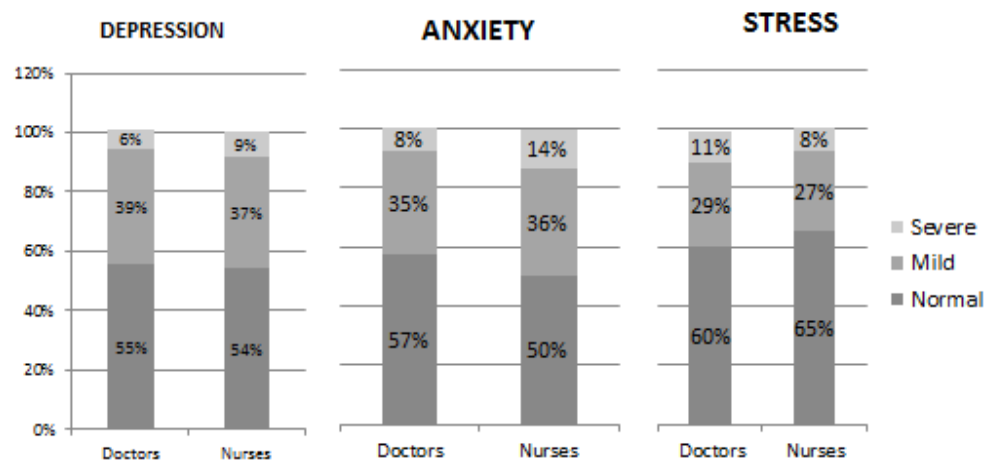
Table 2. Association with gender



p value significant < 0.05 based on Fisher's exact

The women had higher risk of depression ($p= 0.048$) and anxiety ($p=0.043$) than men.

Table 3. Correlation with position (doctors and nurses)



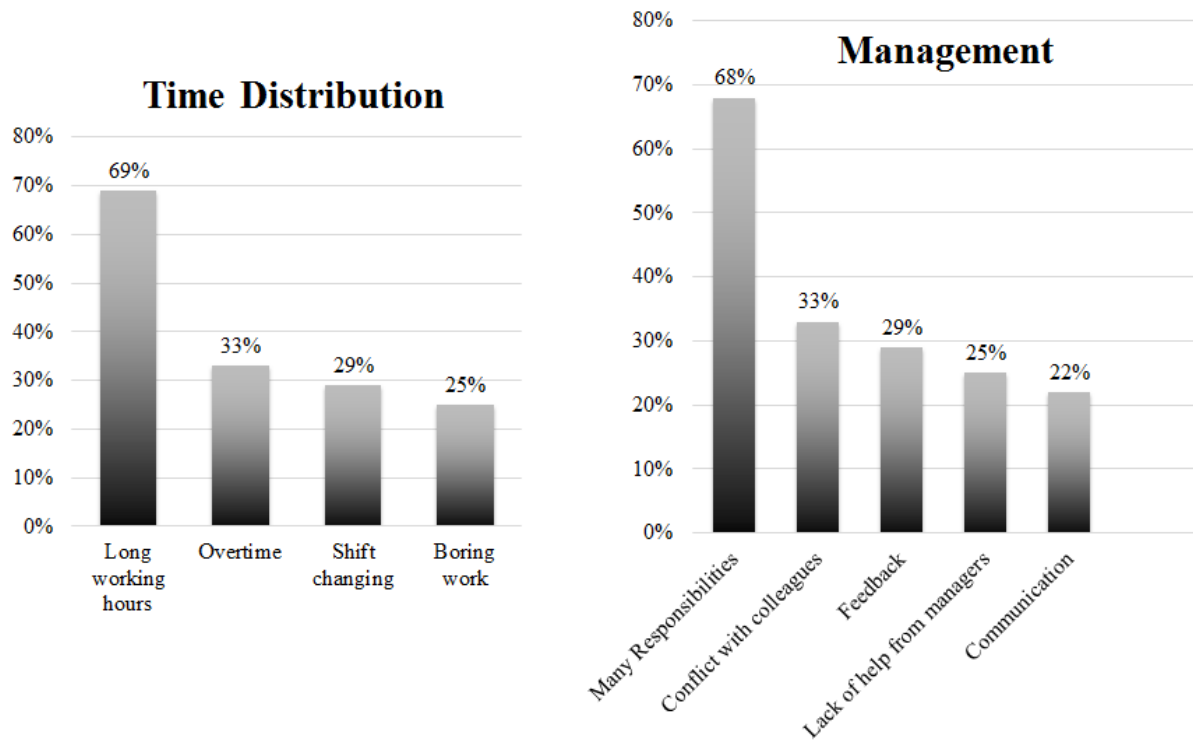
There was no significant differences between doctors and nurses ($p>0.05$)

There was no significant correlation between mental problems and other demographic characteristics concerning years of employment and age group.

4. Stressors

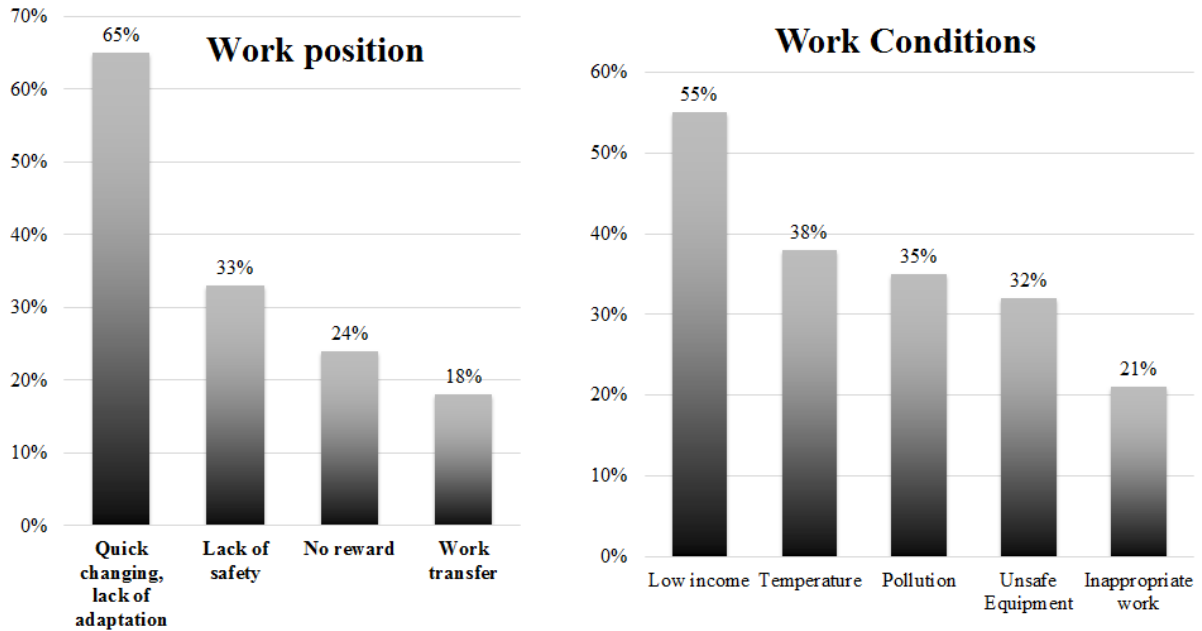
4.1 Stressors according to 626 health staff in self-report questionnaire in 2016

Table 4. Stressors relating to time distribution and management



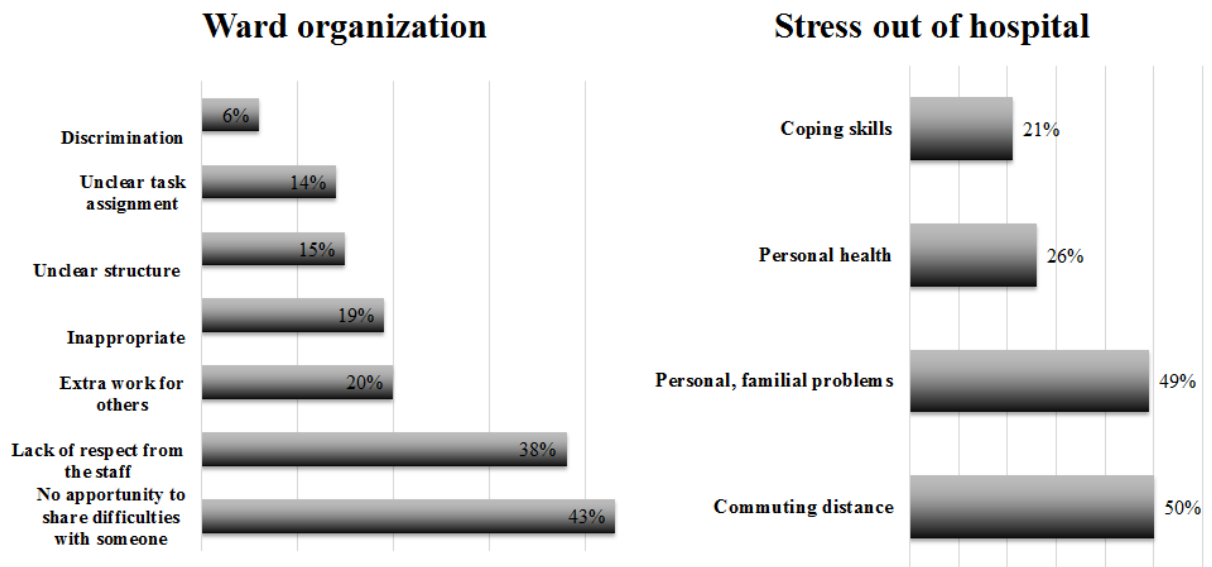
According to the opinions of 626 health staff in HTD, the main stressors in the hospital relating to time distribution and management were long working hours (69%) and many responsibilities (68%), respectively.

Table 5. Stressors relating to work position and conditions



Relating to work position and work conditions, the main stressors were quick policy change and lack of adaptation (65%) and low income (55%).

Table 6. Stressors relating to ward organization and factors out of hospital



In ward organization, the main stressor was lack of opportunity to share difficulties with someone (43%). Out of the hospital, the main stressors were commuting distance (50%) and personal/family problems (49%).

4.2 Stressors according to 33 managers, doctors and nurses in IDIs and FGDs in 2018

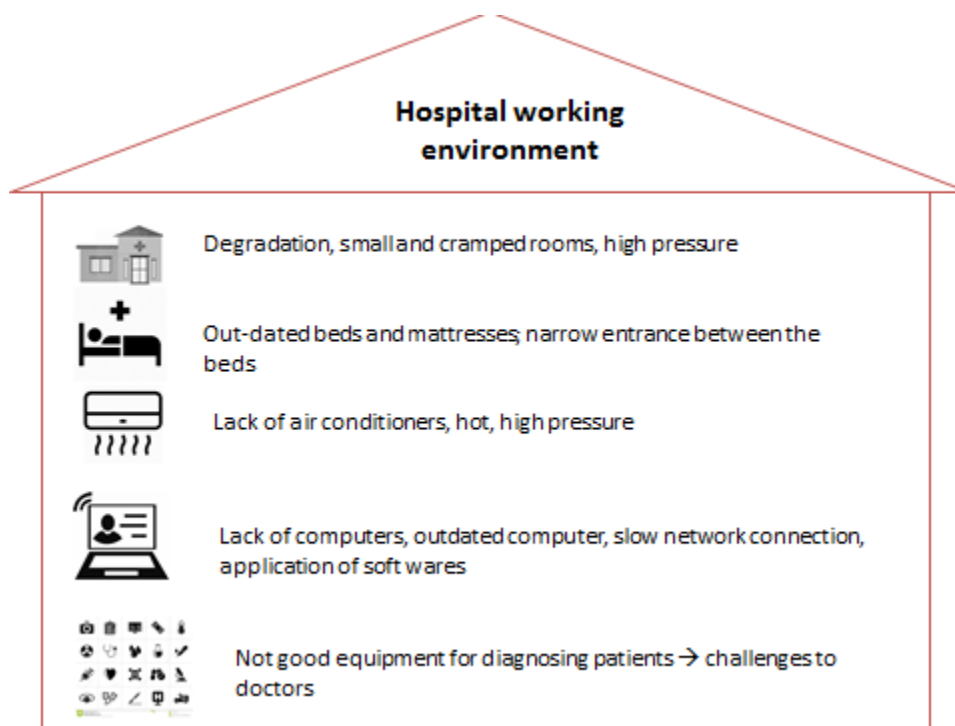
Table 7. Position of participants

Position	n	%
Head nurses	5	15%
Head doctors	4	12%
Deputy doctors	2	06%
Nurses	11	33%
Doctors	11	33%

Among the 33 participants of the qualitative research, there were 11 managers and 22 doctors/nurses of the wards.

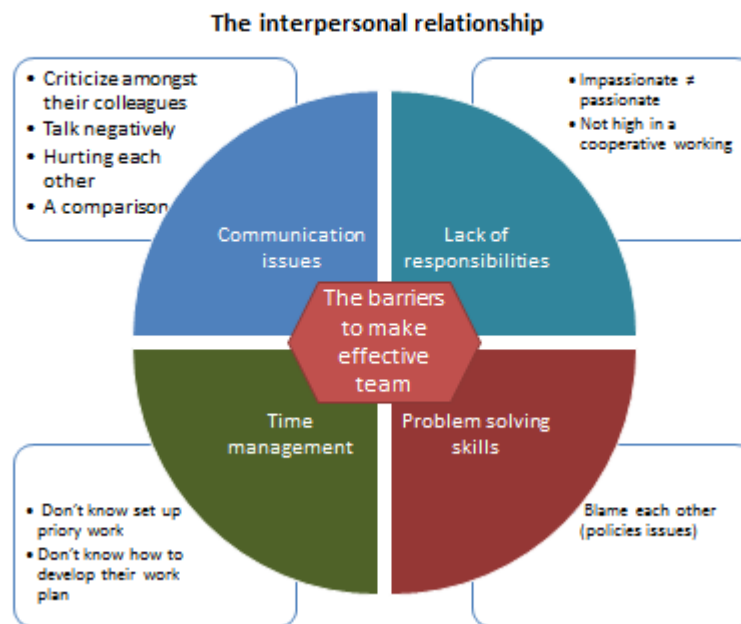
The main stressors were related to work environment and communication problems.

4.2.1. Work environment:



The participants raised the problems with lack of new equipment, heavy workload, bad conditions of work (hot climate, not enough fans and air conditioners), much administrative work and less time for nursing care, low income.

4.2.2. Relationship:



The participants raised the problems of relationship between doctors and nurses, between peers, between staff and managers and between clinical and non-clinical staff. A power hierarchy held between the doctoring and nursing professions, with the former responsible for clinical diagnosis and the treatment of patients while the latter take in hand the care of patients, including dispensing medicines and to input data with a new software program. Doctors felt stressful and anxious with severe patients when there were problems in diagnosis and treatment. Nurses felt frustrated, irritated and exhausted, they might have difficulty in sleeping or succumbed to depression.

5. Coping strategies

Among the 626 participants in the cross-sectional survey in 2016, 438 participants listed their personal activities to cope with depression, anxiety and stress as shown in the following table.

Table 8. Personal coping strategies (N= 438) in the cross-sectional survey in 2016

Activities	n	%
Reading, music, television, shopping	211	48
Tourism, physical activities	201	46
Eat and drink	189	43
Sharing with friends	103	24
Sleep	044	10
Positive thinking	015	03

In the qualitative research, there were some suggestions for the managers to help health staff reducing negative emotions such as fair behavior, empathy, listening, clear planning and instructions. Each ward should have a medical secretary with experience in administrative work, so that the nurses would have more time for nursing care to the patients. The hospital needs to upgrade equipment and knowledge, patients' rooms. The staff mental health should be improved with improvement of work place, entertainment and relaxation.

DISCUSSION

In HTD, Ho Chi Minh city, the prevalence of staff stress was 35% with the mild, moderate, severe and extremely severe levels as respectively 16%, 11.5%, 6.2% and 1.3%. In 2011, DASS-21 was also used in a research in an Oncology hospital, Hanoi and Tran Thi Thuy [6] found a prevalence of stress in 36.9% of staff.

Up to now, there is no research on depression and anxiety in health centers. Our survey found that almost 50% health staff in HTD had mental problems. The prevalence of depression was 47% with the mild, moderate, severe and extremely severe levels as 18.5%, 20%, 5.2% and 3.3% respectively. The prevalence of anxiety was 49.1% with the mild, moderate, severe and extremely severe levels as 10.3%, 27%, 4.5% and 7.3% respectively. A study of Teris Cheung in Hong Kong (2015) revealed a prevalence of depression, anxiety and stress of nurses at 35.8%, 37.3% and 41.1% [7]. A research of Siti Nasrina Yahaya et al (2018) found that the highest occurrence of psychological distress among emergency medical officers in 7 Malaysian hospitals was anxiety (28.6%), followed by depression (10.7%) and stress (7.9%) [8]. Pertaining to gender, the female health staff in Vietnam and Hong Kong were more prevalent to report depression and anxiety than male staff, whereas the male staff were more prevalent in anxiety in Malaysia.

Most of the stress factors are related to organization of people's jobs, such as long working hours (69%), too much responsibility (68%), difficulty adapting to quick changes in policies (65%), low income (55%) and no opportunity to share difficulties with someone (43%). Stressors out of the hospital are long commuting distances, with traffic jams and floods (50%) and personal/familial problems (49%).

The qualitative research highlighted the main stressors concerning the working environment and the relationship. Infrastructure has long been degraded. The nurses were stressed due to the application of software computer with double work on the paper and the software. In relationship,

there was a conflict between doctors and nurses, between managers and staff with unfair management, between health staff and seriously ill patients. The study among Hong Kong nurses in 2015 found positive correlations between depression and job dissatisfaction, disturbance with colleagues, low physical activity and sleep problems[7].

LIMITATIONS OF THE STUDY

The limitations of the cross-sectional survey in 2016 were the lack of analyzing the levels of depression, anxiety and stress according to the different wards as only 40% of staff have identified the ward name in the questionnaire.

The qualitative research in 2018 had a limited number of non-clinical staff who was willing to be interviewed and some staff could not attend the whole process of the focus group discussion. The research team could not collect more information about intervention suggestions.

CONCLUSION

There is a high prevalence of depression and anxiety among health staff at the Hospital of Tropical Diseases in Ho Chi Minh city, Vietnam. Gender is the only factor significantly associated with depression and anxiety. The associated factors are related with organization and communication problems. Effective strategies from the authorities are necessary to promote staff's mental balance and restoring them to health.

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