

IMPACT OF PERSONAL CHARACTERISTICS AND WORK STRESS ON JOB BURNOUT AMONG PSYCHIATRIC NURSES

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ABSTRACT

Aim: The purpose of this study was to investigate the effect of psychiatric nurse characteristics and work stress on occupational burnout. **Methods:** The study was designed as a cross-sectional study targeting psychiatric nurses from Kaohsiung-Pingtung area hospitals. To qualify, the nurses had to have been on the job for at least the last three months. We distributed a structured questionnaire to potential participants and collected 217 valid questionnaires between February and April 2012; SPSS 17.0 was used for statistical analysis. **Results:** Gender and education level had a significant effect on the total score for job stress, while the total score for occupational burnout showed that overtime work, age, work unit, and total years in nursing were statistically significant factors. In terms of the relevant factors affecting occupational burnout among psychiatric nurses, stepwise multiple regression analysis found that for every 1 point of increase in overall job stress, the overall occupational burnout score increased correspondingly by 1.279 points. In terms of total years in nursing, the overall burnout scores for those who had worked for 6-10 years was increased by 5.369 points as compared to those with 11 or more years of work experience. In terms of age, the overall burnout score for those who were less than 30 years old was increased by 4.755 points as compared to those who were more than 36 years old. **Conclusion:** Age, total years in nursing, and overall job stress are important factors impacting overall occupational burnout among psychiatric nurses.

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INTRODUCTION

At Taiwanese medical institutions, a lack of sufficient manpower for clinical nursing staff, overwhelming numbers of patients needing care, stressful work environments, excessive workloads, and the need to undertake various non-nursing-related tasks have resulted in too much overtime work for nurses. Since nurses need to maintain their levels of concentration at work, long periods of extended working hours and frequent shift changes can result in mental fatigue that seriously affects patient care and safety, while also taking a physical and psychological toll on the well-being of nursing staff members. For medical professionals, especially nurses, there exists a high risk of burnout because the job characteristics of nursing necessary involve high levels of emotions [1, 2, 3]. In the psychiatric nursing field, nurses work in an environment where there is a constant need to deal with patients and patients' families while also facing a multitude of communication issues and complicated human relationships among various medical teams. For example, when hospitalized patients who are not fully stabilized become agitated, destructive, threatening, aggressive, violent, or even commit suicidal or self-injurious acts, nursing staff members face nothing less than a great test of stress [4]. Injury caused on the job and verbal attacks from patients increase levels of occupational burnout among psychiatric nurses [5, 6], who suffer twice as many on-the-job verbal attacks as medical and surgical nurses [7]. Previous studies have shown that the most worrisome and serious problem facing acute psychiatric ward nurses is aggressive patient behavior, which is one of the primary causes of stress and burnout at work [8]. Therefore, a psychiatric nursing workplace can be extremely challenging.

Nursing is in fact a highly specialized field. With changes in the health care system, the pressure of evaluations, institutional difficulties in caring for patients, and organization-family role conflicts, whether these sources of stress are the cause of psychiatric nursing burnout still needs to be better understood. Studies done in other countries show that the

quality of a work environment is directly related to nursing staff burnout and patient treatment outcomes [9]. Recent studies on occupational burnout have mostly focused on teachers as research subjects, while studies that have considered medical professionals in general or members of nursing staffs in particular as research subjects have mostly focused on investigating such things as job satisfaction, organizational commitment, and turnover tendency. In short, the literature on job stress and occupational burnout among psychiatric nurses is far too limited. Therefore, the purpose of this study was to investigate psychiatric nursing in terms of the relationship between job stress and occupational burnout, with the expectation that findings from the study could provide some reference to psychiatric clinical nurses that would help them to better understand their perception of stress. Our study may also provide a positive and healthy method of coping with stress that prevents occupational burnout from occurring, thereby enhancing the quality of psychiatric nursing care as a profession.

METHODS

Study design

The study adopted a cross-sectional design in targeting psychiatric nurses at eleven district-level or above hospitals in the Kaohsiung-Pingtung area of southern Taiwan. To qualify, the nurses had to have been on the job for at least the last three months. This study was approved by the institutional review board of the Meiho University before data collection. The questionnaire collection period was from February to April 2012. The questionnaires were self-administered and anonymous, with each participation consent form and questionnaire sealed in separate envelopes to minimize privacy concerns. The study involved the distribution of a total of 235 questionnaires. After screening out incomplete and unidentified questionnaires, the actual number of valid samples in the study was 217, for an effective sample recovery rate of 92.3%.

RESEARCH INSTRUMENTS

According to the related literature and based on consideration of the research variables in this study, the proposed questionnaire was divided into a total of three major parts. The first part consisted of basic information on personal characteristics, the second part consisted of a Questionnaire on Medical Workers' Stress (QMWS); and the third part was the Maslach Burnout Inventory (MBI).

The personal characteristics section included gender, age, education, marital status, job training, job title, hospital level, employment status, job tenure, job class, overtime working hours, and monthly salary. Work units were categorized as follows: acute ward, chronic ward, day hospital, home care, rehabilitation home, and community rehabilitation center. The QMWS uses scales developed by Taiwan scholars, including Lai-Chu See, Hsun-Jong Chang, Meng-Ju Liu, and Hsiu-Kuei Cheng. The scale was designed in accordance with current work content overviews of medical professionals in Taiwan, and develops on its own possible stressor items that can completely cover all the stressor affect medical care professionals. Respondents placed check marks beside items that they themselves believed to be sources of stress. The overall Cronbach's α value of the original scale was .84. The questionnaire uses a 6-point Likert scale with 8 questions regarding the following duties and conditions: maintaining hospital operations, handling hospital accreditation work, the stability of patient conditions, maintaining relationships with patients, facing medical disputes, salary payment systems, personal evaluation systems, and seeking job promotion or doing academic research. Measurement score scales are defined on a range from 1 = very definitely is not a stress to 6 = very definitely is a stress. The higher the score, the higher the stress level the respondent felt from the particular dimension [10].

The MBI used scales edited by Dr. Lu Luo. The scale has been used in studies of job burnout among occupational therapists (trainees), dentists, and psychiatric nurses [4, 11]. The Cronbach's α value for psychiatric nurses' original scale total score was .87; the Cronbach's α values for the three dimensions had scores ranging from 0.76-0.88 [4]. Using 7-point Likert scales, the three dimensions included 9 items on emotional exhaustion and 5 items on depersonalization, with higher scores indicating the weight of occupational burnout was approaching 0. In addition, personal achievement was measured via 8 items, with higher scores indicating lower burnout. The measurement scales were defined as 0 = never; 1 = 2-3 times per year; 2 = 1 time per month; 3 = 2-3 times per month; 4 = 1 time per week; 5 = 2-3 times per week; and 6 = every day, for a total of 22 items.

Reliability analysis: With respect to questionnaire reliability and content consistency, the stability of the questionnaire was measured to test its reliability by selecting 30 nurses from one hospital as subjects for the test. The Cronbach's α value for the medical work stressor perception scale pretest was .753, and the value for the post formal test was .813. The Cronbach's α value for the job burnout scale pretest was .809, and the value for the post formal test was .835. The scales of burnout included emotional exhaustion, depersonalization, and personal accomplishment. The Cronbach's α values for the pretest of the three dimensions ranged from .650 - .888, while the values for the post formal tests ranged from .829 - .898.

Data processing and statistical analysis

After the collected data was encoded, it was entered into the computer to be processed and analyzed using SPSS for Windows release 18.0. Descriptive statistics included frequency distributions, percentages, means, and standard deviations in order to understand the actual distribution of study subjects, while inferential statistics were produced using independent sample t-test, one-way ANOVA, Pearson correlation, and stepwise multiple regression analyses to understand psychiatric nursing professional characteristics and job stress as related to occupational burnout and the factors that may affect occupational burnout.

RESULTS

In terms of basic characteristics, the study subjects included 6 men and 211 women with education levels divided into below junior college and above university. Work unit was categorized into acute wards, chronic wards, and other units. Age was divided into below 30 years old, 31-35 years old, and above 36 years old. Job tenure was divided into 5 years or below, 6-10 years, and 11 years or above. Table I shows that the average value of the overall work stressor perception scale was 36.1 ± 5.3 points for the psychiatric nurses. The scale's total score of 48 points suggests that this average lies between "is generally stressful" and "is certainly stressful," which is classified in the moderately stressful

region, wherein the stressor "dealing with hospital accreditation work" has the highest average score of 5.3 points followed by "facing medical disputes" at 5.1 points, located between "is certainly stressful" and "very definitely stressful." The use of percentages to express stressors was done based on the top three stressors, which are "dealing with hospital accreditation," "facing medical disputes," and "seeking job promotion or doing academic research" at 93.9%, 93.1%, and 81.6%, respectively.

Table I Psychiatric nurse job stressor scale and distribution of each item (n = 217)

Dimension	Item	Very definitely not stressful	Definitely is not stressful	Generally speaking is not stressful	Generally speaking is stressful	Definitely is stressful	Very definitely is stressful	Mean ± SD	Rank
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)		
Total job stressor scale score								36.1 ± 5.3	
1	Maintaining medical institution operation	5 (2.3)	11 (5.1)	46 (21.2)	88 (40.6)	44 (20.3)	23 (10.6)	4.0 ± 1.1	6
2	Dealing with hospital accreditation work	0 (0.0)	0 (0.0)	11 (5.1)	24 (11.1)	63 (29.0)	119 (54.8)	5.3 ± 0.9	1
3	Disease stability level of patients	1 (0.5)	2 (0.9)	25 (11.5)	80 (36.9)	73 (33.6)	36 (16.6)	4.5 ± 1.0	3
4	Maintaining patient relationship	0 (0.0)	13 (6.04)	73 (33.6)	80 (36.9)	39 (18.0)	12 (5.5)	3.8 ± 1.0	7
5	Facing medical disputes	0 (0.0)	3 (1.4)	12 (5.5)	36 (16.6)	67 (30.9)	99 (45.6)	5.1 ± 1.0	2
6	Salary payment system	2 (0.9)	3 (1.4)	42 (19.4)	64 (29.5)	76 (35.0)	30 (13.8)	4.4 ± 1.0	4
7	Individual evaluation regime	0 (0.0)	7 (3.2)	36 (16.6)	81 (37.3)	64 (29.5)	29 (13.4)	4.3 ± 1.0	5
8	Seeking promotion or doing academic research	0 (0.0)	5 (2.3)	35 (16.1)	64 (29.5)	76 (35.0)	37 (17.1)	4.5 ± 1.0	3

Results from the overall job burnout scale show that the highest score was 110 points, the lowest score was 24 points, and the average was 65.1 ± 16.2 points (Table II), which falls under the moderate burnout region. Of the average scores for the three dimensions, the emotional exhaustion average 27.5 points, the depersonalization average was 8.3 points, and the personal achievement average was 29.2 points. Of the three dimensions, in the emotional exhaustion dimension, the highest scored item was Item 2, "at the end of a day's work, I feel completely exhausted," followed by Item 3, "in the morning, the thought of facing another day at work makes me feel tired." In the depersonalization dimension, the highest scored item was Item 22, "I think my clients would blame some of their own problems on me," followed by Item 11, "I worry that this job will cause me to become emotional indifferent". In the personal achievement dimension, the highest scored item was Item 7, "I can be very effective in handling the problems of my clients," followed by Item 4, "I can easily understand my clients' feeling about things," and Item 17, "I can easily create a relaxed atmosphere with my clients."

Table II Psychiatric nurse burnout scale and distribution of each dimension (n = 217)

Dimension	Item	Never felt	Few times or less per year	Few times or less per month	Few times per month	Once per week	Few times per week	Everyday	Mean ± SD
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	(points)
Total job burnout scale score								65.1 ± 16.2	
Emotional Exhaustion								27.5 ± 10.1	
1.	My job makes me feel emotionally exhausted	2 (0.9)	18 (8.3)	33 (15.2)	70 (32.3)	21 (9.7)	55 (25.3)	18 (8.3)	3.5 ± 1.5
2.	At the end of the day, I felt completely exhausted	0 (0.0)	13 (6.0)	24 (11.1)	54 (24.9)	24 (11.1)	71 (32.7)	31(14.3)	4.0 ± 1.5
3.	Getting up in the morning, the thought to facing another day of work makes me feel tired	4 (1.8)	20 (9.2)	32 (14.7)	54 (24.9)	31 (14.3)	52 (24.0)	24(11.1)	3.6 ± 1.6
6.	To me, working with other people all day is really a tiring thing	27 (12.4)	45 (20.7)	44 (20.3)	58 (26.7)	13 (6.0)	22 (10.1)	8 (3.7)	2.4 ± 1.6
8.	My job makes me feel depleted of energy	4 (1.8)	19 (8.8)	36 (16.6)	57 (26.3)	28 (12.9)	49 (22.6)	24(11.1)	3.5 ± 1.6
13.	My job makes me feel frustrated	5 (2.3)	39 (18.0)	57 (26.3)	76 (35.0)	19 (8.8)	12 (5.5)	9 (4.1)	2.6 ± 1.3
14.	I think I have committed too much at work	9 (4.1)	12 (5.5)	39 (18.0)	76 (35.0)	20 (9.0)	41 (18.9)	20 (9.2)	3.3 ± 1.5
16.	Direct contact with others at work brings me too much stress	29 (13.4)	55 (25.3)	52 (24.0)	56 (25.8)	5 (2.3)	19 (8.8)	1 (0.5)	2.1 ± 1.4
20.	I feel like I have reached the end of myself	25 (11.5)	46 (21.2)	40 (18.4)	46 (21.2)	23 (10.6)	28 (12.9)	9 (4.1)	2.5 ± 1.7
Depersonalization								8.3 ± 6.3	
5.	I feel that when I face some service clients, they seem to be objects rather than not people to me.	92 (42.4)	44 (20.3)	29 (13.4)	26 (12.0)	9 (4.1)	15 (6.9)	2 (0.9)	1.4 ± 1.6
10.	Ever since I took this job, I have become more ruthless to others	75 (34.6)	45 (20.7)	35 (16.1)	32 (14.7)	11 (5.1)	16 (7.4)	3 (1.4)	1.6 ± 1.6
11.	I worry that this job will make me become emotionally indifferent	78 (35.9)	47 (21.7)	25 (11.5)	25 (11.5)	18 (8.3)	18 (8.3)	6 (2.8)	1.7 ± 1.8
15.	I do not really care about what happen to some of my clients	77 (35.5)	49 (22.6)	41 (18.9)	32 (14.7)	11 (5.1)	7 (3.2)	0 (0.0)	1.4 ± 1.4

22. I think my clients would blame some of their own problems on me 31 (14.3) 59 (27.2) 47 (21.7) 38 (17.5) 15 (6.9) 19 (8.8) 8 (3.7) 2.2 ± 1.6

Table II Psychiatric nurse burnout scale and distribution of each dimension (cont.)

Dimension	Item	Never felt	Few times or less per year	Few times or less per month	Few times per month	Once per week	Few times per week	Everyday	Mean ± SD
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	(points)
Personal Accomplishment									29.2 ± 8.5
	4. I can easily understand my clients feeling about things	7 (3.2)	9 (4.1)	20 (9.2)	53 (24.4)	26 (12.0)	67 (30.9)	35 (16.1)	3.9 ± 1.6
	7. I can be very effective handle problems of my clients	1 (0.5)	7 (3.2)	12 (5.5)	31 (14.3)	25 (11.5)	90 (41.5)	51 (23.5)	4.5 ± 1.4
	9. Through my work, I think I bring a positive impact on the lives of others	7 (3.2)	13 (6.0)	22 (10.1)	67 (30.9)	26 (12.0)	54 (24.9)	28 (12.9)	3.7 ± 1.6
	12. I think I'm energetic	17 (7.8)	17 (7.8)	48 (22.1)	59 (27.2)	19 (8.8)	43 (19.8)	14 (6.5)	3.1 ± 1.6
	17. I can easily create a relaxing atmosphere with my clients	4 (1.8)	10 (4.6)	28 (12.9)	57 (26.3)	22 (10.1)	62 (28.6)	34 (15.7)	3.9 ± 1.5
	18. After working closely with my clients, I feel excited	19 (8.8)	30 (13.8)	42 (19.4)	41 (18.9)	21 (9.7)	47 (21.7)	17 (7.8)	3.0 ± 1.8
	19. I have completed many valuable things in this job	6 (2.8)	22 (10.1)	22 (10.1)	82 (37.8)	24 (11.1)	39 (18.0)	22 (10.1)	3.4 ± 1.5
	21. At work, I can calmly deal with emotional problems	3 (1.4)	14 (6.5)	23 (10.6)	57 (26.3)	24 (11.1)	70 (32.3)	26 (12.0)	3.8 ± 1.5

Table III shows that basic characteristics of psychiatric nurses, such as gender, education, and overall work stress reached statistically significant differences (p <.05). Stress levels were significantly higher among men than among women, and among those with college level education or above. Other basic characteristics showed no statistically significant differences. Additionally, it was found that the working overtime, age, work unit, total years in nursing, and overall burnout factors reached statistically significant differences (p <.05). Feelings of burnout were significantly higher for those who worked overtime for more than two hours as compared to those who did not, for those aged 30 years old or less as compared to those aged 36 years old or more, for those working in acute ward units as compared to those working in other units, for those with nursing tenures of 6-10 years as compared to those with shorter tenures. Others characteristics, such as gender, education level, marital status, continuing education, job title, employment status, class of work, level of hospital, tenure in psychiatric service, and monthly income, did not show any statistically significant differences.

Table III Differece analysis between basic attributes and total job stressor score and total job burnout score (n = 217)

Variables	Total job stressor score			Total job burnout score			Variable	Total job stressor score			Total job burnout score	
	n	Mean±SD	p	Mean±SD	p	n		Mean±SD	p	Mean±SD	p	
Gender			.029		.795		Age			.510		.021
Male	6	40.7 ± 4.6		66.8 ± 15.9		① ≤30 years old	81	36.6 ± 5.4		68.6 ± 14.7		① > ③
Female	211	35.9 ± 5.2		65.1 ± 16.3		② 31-35 years old	65	35.6 ± 5.3		64.9 ± 16.8		
Education level			.010		.533		③ ≥36 years old	71	35.9 ± 5.3		61.3 ± 16.8	
Vocational education or below	82	34.9 ± 5.4		64.2 ± 14.8		Hospital level				.412		.192
College education or above	135	36.8 ± 5.1		65.7 ± 17.1		① Regional hospital	24	36.6 ± 5.6		63.7 ± 14.8		
Marriage status^a			.800		.523		② District hospital	76	35.4 ± 5.0		62.2 ± 16.3	
Without spouse	111	36.1 ± 5.7		65.8 ± 15.1		③ Specialist hospital	95	36.6 ± 4.9		67.2 ± 16.3		
With spouse	106	36.0 ± 4.8		64.4 ± 17.4		④ Medical center	22	35.5 ± 7.2		67.9 ± 16.7		
Job training			.733		.790		Work unit^c			.053		.001
Yes	24	35.7 ± 6.1		64.3 ± 16.4		① Acute ward	104	36.7 ± 5.1		67.5 ± 16.2		① > ③
No	193	36.1 ± 5.2		65.2 ± 16.3		② Chronic ward	54	36.3 ± 5.5		67.8 ± 16.1		
Job title^b			.188		.470		③ Other unit	59	34.7 ± 5.2		58.6 ± 14.9	
Clinical staff	187	35.9 ± 5.3		65.4 ± 16.3		Total years in nursing				.506		.031
Team leader or above	30	37.2 ± 5.1		63.1 ± 16.0		① ≤5 years	63	36.7 ± 5.7		67.1 ± 14.6		n.s
Employment status			.745		.280		② 6-10 years	57	35.6 ± 5.5		68.3 ± 16.3	
Full time	155	36.1 ± 5.2		65.9 ± 16.0		③ ≥11 years	97	35.9 ± 4.8		61.9 ± 16.8		
Temporary	62	35.9 ± 5.6		63.2 ± 16.8		Psychiatric tenure				.753		.505
Work class			.298		.790		① ≤5 year	89	36.2 ± 5.3		66.5 ± 15.2	
Non-shift	91	36.5 ± 5.0		64.3 ± 16.4		② 6-10 year	67	36.2 ± 5.2		64.9 ± 17.5		
shift	126	35.7 ± 5.5		65.2 ± 16.3		③ ≥11 year	61	35.6 ± 5.3		63.4 ± 16.4		
Overtime			.175		.002		Monthly salary			.430		.987
① ≤0.5 hour	43	35.2 ± 6.4		61.2 ± 17.2		③ > ①	① ≤30,000 yuan	48	36.4 ± 5.8		65.4 ± 15.5	
② 1-1.5 hour	110	35.8 ± 5.2		63.3 ± 15.1		③ > ②	② 3-50,000 yuan	154	36.1 ± 5.1		65.0 ± 16.5	
③ ≥2 hour	64	37.0 ± 4.4		70.9 ± 16.3			③ ≥50,000 yuan	15	34.4 ± 5.3		65.5 ± 17.6	

^a Without spouse including unmarried, widowed, divorced or separated.

^b Team leader or above include chairperson, deputy head nurse, head nurse, supervisor, and director.

^c Other units include outpatient, home care, day care, rehabilitation home, conservation, and administrative units.

Correlations among eight medical work stressor items and three occupational burnout dimensions showed that overall job stress and the eight items were positively correlated ($r = .460$; $r = .294$, $p < .01$) to emotional exhaustion and depersonalization, while overall job stress and the eight items were negatively correlated when compared to personal achievement, except when faced with a medical dispute, when did it become statistically significant ($r = -.141$, $p < .05$). This means that the greater the feelings of job stress, the higher the burnout, and the lower the feeling of personal accomplishment (Table IV).

Table IV Correlation analysis of job stressor and job burnout

Dimension	Emotional exhaustion	Depersonalization	Personal accomplishment	Overall job burnout
Maintaining medical institution operation	.251**	.104	-.007	.200**
Dealing with hospital accreditation work	.232**	.077	-.127	.241**
Disease stability of patients	.336**	.160*	-.033	.289**
Maintaining patient relationship	.458**	.336**	.077	.376**
Facing medical disputes	.251**	.093	-.141*	.266**
Salary payment system	.344**	.273**	.081	.279**
Individual evaluation regime	.325**	.307**	.039	.302**
Seeking promotion or doing academic research	.233**	.192**	-.073	.259**
Over job stressor	.460**	.294**	-.031	.418**

* $p < .05$, ** $p < .01$.

† Using Pearson correlation.

The present study used stepwise multiple regression to show basic characteristics and job stressor as influencing factors on job burnout. Table V showed that, in terms of the factors influencing occupational burnout, variables analyzed by the regression model, including overall job stress ($t = 6.798$, $p < .001$), total years in nursing ($t = 2.395$, $p < .05$), and age ($t = 2.327$, $p < .05$) can predict overall burnout at 21.4% variance, representing a regression effect that is statistically significant. In terms of overall job stress scores, every 1 point of increase in work stress correspondingly increased the overall burnout by 1.279 points. In terms of total years in nursing, those with work tenures of 6-10 years, as compared to 11 years or more, had an increase of 5.369 points in overall burnout. In terms of age, those who were 30 years or younger, as compared to 36 years or older, had an increase of 4.755 points in overall burnout.

Table V Stepwise multiple regression analysis of factors influencing psychiatric nurse basic characteristics and job stressors on job burnout (n = 217)

Variable	Unstandardized Regression coefficient (β)	Standardized Regression coefficient (Beta)	R ²	ΔR ²	t	F
Constant	15.839				2.297*	
Overall job stressor	1.279	.415	.175	.175	6.798***	45.574***
Total years in nursing (6-10 years vs 11 years or above)	5.369	.146	.194	.019	2.395*	25.797***
Age (30 years old or younger vs 36 years old or older)	4.755	.142	.214	.020	2.327*	19.358***

* $p < .05$, ** $p < .01$, *** $p < .001$.

† The current regression model is based on stepwise multiple regression.

‡ Variables included in the analysis include: basic attributes (age, gender, education level, job title, employment status, monthly income, total years in nursing, tenure in psychiatry, overtime, hospital level, and work units), overall job stressor score, and eight items.

§ Total years in nursing are grouped as 1: 5 years or less and 2: 6-10 years, with reference group of 11 years or above.

¶ Age is grouped as 1: 30 years old or younger and 2: 31-35 years old, with reference group of 36 years old or older

DISCUSSION

In this study, variance analysis on basic characteristics of psychiatric nurses and medical work stressors showed that gender, education level, and overall job stress reached levels of statistically significant differences. University education level or above showed the highest work stress, which could be because the higher the academic qualification, the higher the self-expectation in the job, which is consistent with research results from Zhang et al. [12]. And stress on males was significantly higher than on females, a result that is different than that from a study done by He et al. [13] on 450 employee subjects from three teaching hospitals in the southern region using the same job stress scale. Possible reasons for this difference could be that, since psychiatric care is a specialty, patients often show behavior problems such as aggression, violence, and being suicidal because of their illness, which require substantial male nurse involvement and assistance, such that the overall stress level is high. Research from other countries has indicated that, in terms of work stress experienced by male and female nurses during work, it is higher for female nurses than male nurses. However, male nurses suffered more difficulties on the job than female nurses [14]. Lou et al. [15] indicated that stress from playing the role of a male nurse mainly comes from patient care-related job stress.

The results for overall burnout show that the lower the age of the person is, the worse the person's job burnout situation, a finding that is similar to that of previous studies [4, 11, 16]. Working more than 2 hours overtime daily in the acute wards makes a significant difference on overall burnout. The reason may be because acute ward patients tend to be less stable, more complicated, and often take more effort to deal with, a result that is similar to previous studies [17]. And Ilhan et al. [18] pointed out that those who work overtime daily will feel job burnout caused by physical exhaustion, also a similar result. The study showed that those with total of 6-10 years in nursing had overall burnout rates higher than those with

less than 5 or more than 11 years in nursing because clinical nurses with 6-10 year tenure often are given more responsibilities. So taking on heavier responsibility and stress may also make the role played during this period more serious, which correspondingly made lead to experiencing the feeling of burnout more frequently. Imai et al. [19] in Japan, who did a study on 396 psychiatric nurses in public health and 389 non-psychiatric nurses in public health, found that the 59.2% burnout incidence of psychiatric nurses in public health is significantly higher than the 51.5% rate for non-psychiatric nurses in public health. The reason is that the psychiatric emergency medical services system does not differentiate between holidays and normal days, or daytime and nighttime, and often has to deal with or respond to emergencies, with a frequent need to extend work hours. This vicious cycle of stress is considered an important factor in occupational burnout.

Psychiatric nurses' feelings of medical work stress for the eight items were positively correlated to the emotional exhaustion induced job burnout and depersonalization dimensions. Of the eight items, the work stressor "maintaining relationships with patients" was most relevant to these two dimensions. Namely, the more one experiences this work stressor, the higher the burnout and the more obvious the degree of emotional exhaustion and depersonalization. When the overall job stress and the eight individual items were compared with personal achievements, just a few items had negative correlations, and only "facing medical disputes" reached a level of statistically significant difference. That is, the more one experiences this work stressor, the lower the feeling of personal accomplishment. This result is similar to those of previous studies [11,20,21]. Studies from other countries showed that job burnout experienced by nurses will lead to emotional exhaustion, lack of humanity, and reduced feelings of personal accomplishment, which are the result of work stress since they are closely related [22]. One British study also indicated that increases in workload, excessive bureaucracy, and lack of resources will continue to increase stress and burnout among nurses [23]. Studies by other countries on retired college professors have shown that work stress is the cause of leaving and burnout from jobs of all kinds [24]. In addition, studies using counselors as subjects showed that stress in the work environment and job burnout have a significant correlation [25]. Studies on business employees as subjects showed that the higher the job stress experienced by employees, the higher the level of job burnout they feel, with emotional exhaustion and depersonalization being more severe. In the job stress dimension, "emotional exhaustion" has the highest correlation coefficient [26].

In terms of important factors influencing overall job burnout among psychiatric nurses, the study showed that psychiatric nurses' overall job burnout can have overall job stress, total years in nursing, and age as three influencing factors predicting 21.4% of variance. This result is similar to findings from a study on doctors [27]. Some studies also show that younger ages have more obvious burnout [4, 11, 16, 18, 21], which may be because younger people have not accumulated sufficient clinical connections and resource support, or because they lack experience, which can easily lead to burnouts. Another study also showed that incidence of burnout and workplace management, education and training, as well as degree of support among colleagues, are all related [28,29]. The strongest influence on overall burnout of psychiatric nurses is overall job stress, indicating that high work stress can easily lead to the occurrence of burnout, similar to the findings of some previous studies [4, 11, 16, 18, 21, 30].

The present study found that the higher the job stress level that psychiatric nurses feel, the higher the incidence rate of job burnout, and vice versa. The study found that the job stressor "maintaining patient relationships" is significantly correlated to emotional exhaustion, depersonalization, and personal accomplishment. Whether this reflects the lack of clinical manpower or excessive workload that affects nurses' job burnout is still pending further study. If levels of manpower are sufficient, nurses can then have more time to understand the needs of patients, which translates to better handling of nurse-patient relationships. One can then receive more affirmations through work, as well as getting a sense of accomplishment from patients' feedback.

This study still had some limitations that are worth noting. Because the subjects were limited to 217 psychiatric nurses in the Kaohsiung-Pingtung area in southern Taiwan, selection bias could not be avoided, and so the study's findings cannot be generalized to all psychiatric nurses. Furthermore, the enrolled subjects were limited to currently employed clinical nurses, so it is possible that the group that actually felt the highest stress may have already left or transferred to other selective administrative work. The factors affecting job burnout are many. This study did not factor in marriage and family stress; peer relationships; or colleagues and supervisor support levels. So the overall results may involve some underestimations. In addition, the study used a cross-sectional study design, which entails limits on the inferences of cause-effect relationships.

CONCLUSION

The findings suggest that stress levels were significantly higher among men than among women, and among those with college level education or above. Age, total years in nursing, and overall job stress are important factors impacting overall occupational burnout among psychiatric nurses.

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