Mental Health of Residents during Obstetrics and Gynecology Training in Thailand

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Objective: *To evaluate mental health of residents during Obstetrics and Gynecology training and identify the factors that affect mental health problems.*
Material and Method: *During January-April 2004, one hundred and sixty Obstetrics and Gynecology residents (62% of 259) had completed a self–administered questionnaire composed of demographic data, workload, self-report of life stressors, and the Thai Mental Health Questionnaire (TMHQ-70).*
Results: *The prevalence of mental health problems was 29% (46/160). Somatization and social function were found in the first and second rank (18.1% and 11.9%), respectively. A resident who was younger than 25 years old, was married, cared for more than 20 patients per 8 hours in the labor room, performed more than 10 academic activities per year, or attended more than 5 examinations per year was at risk to develop social function problems.*
Conclusion: *About one-third of residents training in Obstetrics and Gynecology have faced mental health problems - somatization, social function, depression and anxiety. The significant risk factors associated with social function problems were younger age, marriage and excessive workload.*

Keywords: *Mental health, Resident, Obstetrics and Gynecology Training*

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Mental health is defined as the condition of being sound mentally and emotionally characterized by the absence of a mental disorder (as neurosis or psychosis) and by adequate adjustment especially as reflected in feeling comfortable about oneself, positive feeling about others, and ability to meet the demands of life[1]. A common mental health problem is stress-situation or external force requiring a change in one's behavior. The effects of stress include anxiety, depression, somatization, psychosis, social function problems, and alcohol or substance abuse. Although stress is usually considered an unpleasant feeling, it can help people eager to improve themselves to achieve their goals. For example, during resident training, a moderate degree of stress is necessary to stimulate and facilitate the acquisition of new knowledge, skills, attitudes, and appropriate behaviors.

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The demands of the training experience can independently lead to anxiety, dysphoria, and fatigue. If the new physicians meet these challenges successfully, a process of positive adaptation occurs. In contrast, failure to adjust leads to suffering and mental health problems.

Bridging the gap from graduation to working in general practice and being eligible in a medical specialty is a critical period. This is because graduate physicians face formidable developmental tasks and adaptation during residency training. Residents have more responsibility to look after complicated and difficult patients. Mastering the use of advanced technology and acquiring new knowledge and skills is challenging.

Robert[2] found that inordinate and inflexible time demands, fatigue, sleep deprivation, limited support from clerical staff, excessive workload, too many difficult patients, financial issues and social problems are universally recognized as problems in

residents training that may be a source of conflict and unhappiness.

In Thailand, the Obstetrics and Gynecology residency program was established in 1971. However, until now there has been no study of the effects of training on residents' mental health. The goal of the present study was to evaluate mental health problems in residents during Obstetrics and Gynecology training and determine the risk factors that can predict these problems. By understanding the mental health problems and recognizing the early signs of resident impairment, program directors can intervene to help both healthy and impaired residents and to facilitate better adaptation to new careers.

Material and Method

All 259 Obstetrics and Gynecologic residents training at 14 institutes in Thailand were recruited. Self-administered questionnaires were sent from January to April 2004. A written informed consent was obtained from each participant. The questionnaires consisted of demographic data, workload, self-report of life stressors and the Thai Mental Health Questionnaire (TMHQ-70); which is a 70-items self-report screening scale which is loaded into five aspects. The symptoms that the TMHQ-70 measured, based on DSM IV are[3]

Somatization: This dimension reflects distress arising from perceptions of bodily dysfunction.

Depression: Symptoms of dysphoric affect and mood are represented, as a sign of withdrawal of interest in life events, lack of motivation and loss of vital energy.

Anxiety: General indications such as restlessness, nervousness, and tension are included as are somatic signs.

Psychosis: Florid, acute symptomatology, and behavior, typically viewed as a more oblique, less definitive indicator of psychosis behavior and indication of a schizoid life style are also represented.

Social function: General indications in interpersonal relationships and contact with other people in social environments.

Scoring of TMHQ-70 was calculated by transferring scores on the items under each aspect, summing them up and dividing by the number of items in that category. The results were then translated to T-scores using the table. The cut-off level for abnormal T-score in each aspect was 65. Correlations between factors of interest and these five symptoms were assessed by univariate and multivariate analysis using multiple logistic regressions.

Results

One hundred and sixty complete questionnaires (62%) were returned and used for analysis. Mean age of participants was 28 years old, 76.2% were female, 80.6% were single and 93.1% had no children. Ninety-seven percent of physicians were Buddhists, 71.2% had a monthly income of between 10,001-20,000 Baht, 43.1% had a hometown in Bangkok and the suburbs, and 39.4% were in the first year of training.

All participants had graduated with a Medical degree during 1989-2004. The length of professional work before starting the training ranged from 1-13 years (average 4.1 years). Eighty-two percent had worked for 1-5 years. Eight physicians (5%) had underlying diseases such as hyperthyroidism, constipation, gastritis, asthma and migraine. Chiang Mai University, Prince of Songkla University, Siriraj Hospital and Rajavithi Hospital were the institutes that 20 or more participants joined the study.

Table 1 shows workload of Obstetrics and Gynecology residents. Most physicians working in antenatal clinic, Gynecologic clinic, Obstetrics inpatient, Gynecologic inpatient, and labor room (service time) cared for 11-20 patients per working period (8 hours). In the labor room (out-service time), 52.5% stated they cared for fewer than 10 patients per working period (16 hours).

Table 1. Workload of Obstetrics-Gynecology residents who completed the questionnaires

Workload	Number of patients per day (%) (n = 160)					
	< 10	11-20	21-30	31-40	41-50	> 50
Antenatal clinic	2 (1.3)	86 (53.8)	45 (28.1)	16 (10.0)	4 (2.5)	7 (4.4)
Gynecology clinic	2 (1.3)	91 (56.9)	49 (30.6)	11 (6.9)	1 (0.6)	6 (3.8)
Obstetrics inpatient	13 (8.1)	95 (59.4)	44 (27.5)	6 (3.8)	(-)	2 (1.3)
Gynecology inpatient	39 (24.4)	95 (59.4)	19 (11.9)	4 (2.5)	2 (1.2)	1 (0.6)
Labor room (service time, 8 hours)	61 (38.1)	84 (52.5)	11 (6.9)	2 (1.3)	2 (1.3)	(-)
Labor room (out-service time,16 hours)	84 (52.5)	66 (41.3)	6 (3.8)	3 (1.9)	(-)	1 (0.6)

Mean of out-service time duty was 7.1 days per month. Forty-one percent of residents worked at private clinics or private hospitals on average 1.9 days per month. Residents performed on average 7 conferences and entered an average of 3 examinations per year.

Using these scoring methods and validity data for the recommended cutoff from TMHQ-70, the prevalence of mental health problems was 29% (46/160 cases). No significant difference in mental health problems occurred between male and female residents (p-value = 0.21). Somatization, social function, depression and anxiety were found in 18.1%, 11.9%, 3.8% and 3.8% of all respondents, respectively. No psychosis problem was detected.

Univariate analysis demonstrated a significant correlation between somatization, depression, anxiety, social function and some demographic factors, characters of training program, workload and number of yearly examinations as shown in Table 2.

Multiple logistic regression analysis demonstrated that only social function problems were correlated with age, marital status, labor room (service time) workload, number of conferences and examinations ($p<0.05$). Younger age, being married, excessive workload in the labor room, conferences and examinations were risk factors for social function problems. Details are shown in Table 3.

Residents mentioned the following factors caused stress and anxiety during training: sleep deprivation, too many difficult patients, excessive workload, the Royal Thai College of Obstetrics and Gynaecologic Board examination, conferences, grand round attendance, iatrogenic complications, inadequate coping skills, financial issues, family problems and law-suits against the doctor.

Table 2. Univariate analysis of factors correlated with mental health problems

Mental health problems	p-value
Somatization	
Medical Degree graduated institute	0.037
Marital status	0.023
Number of children	0.012
Income	<0.000
Obstetric outpatient workload	0.004
Obstetric inpatient workload	0.008
Gynecologic inpatient workload	0.023
LR (service time)	0.025
Number of yearly examination	0.028
Depression	
Obstetric inpatient workload	0.002
Gynecologic inpatient workload	<0.000
LR (service time)	0.011
LR (out-service time)	<0.000
Number of yearly examination	0.032
Anxiety	
Age	0.010
Obstetric inpatient workload	0.045
Gynecologic inpatient workload	<0.000
Number of yearly examination	0.032
Social function	
Training status	0.018
Medical Degree graduated institute	0.011
Year of Medical Degree graduation	0.036
Current training institute	0.044
Obstetric inpatient workload	0.011
Annual number of conference	0.012
Number of yearly examination	0.010

Table 3. Mulitiple logistic regression analysis of factors correlated with social function problems

Factor	Adjusted odds ratio	95%CI
Age (years)		
25-30	0.04	0.01-0.26
> 30	0.02	0.00-0.34
Marital status		
Married	4.97	1.27-19.43
Labor room (service time) (no.of patients/period)		
21-30	25.00	4.28-145.86
Conference (times/year)		
6-10	2.12	0.44-10.16
> 10	9.31	2.00-43.33
Examination (times/year)		
> 5	9.92	1.49-66.10

CI = Confidence interval

Discussion

Sixty-two percent of completed questionnaires were received, which represents nearly two-third of Obstetrics and Gynecology residents in Thailand during the study period. Prevalence of mental health problems was 29%, consisting of somatization, social function, depression and anxiety. There was no psychotic problem found in the present study. Only social function problems were significantly correlated with age, marital status, labor room (service time) workload, and annual number of conferences and examinations when using multiple logistic regression analysis.

In Thailand there was a study concerning mental health problems in residents at Ramathibodi Hospital in 1996[4] using the General Health Questionnaire (GHQ-30) composed of 4 problems: unhappiness, anxiety, social impairment and hypochondriasis. The prevalence of emotional disturbance was 42.2%. Physicians whose spouses were physicians were significantly more stressed and there was no relationship between other demographic data and stress. The present study aimed to survey only Obstetrics and Gynecology residents who had different characters of training program and workload compared with other specialists and the authors used the Thai Mental Health Questionnaire (TMHQ-70) that was more specific for evaluation of mental problems than GHQ-30.

The mental health questionnaires frequently used in Thailand are the General Health Questionnaire (GHQ), the Symptom Checklist-90 (SCL-90), and the Thai Mental Health Questionnaire (TMHQ-70). The TMHQ-70 was developed to record the presence of almost any symptoms or group of symptoms of psychopathology and is based on a system analysis model of the DSM-IV. Phattharayuttawat, et al[5] reported that TMHQ-70 has sufficient discriminate power, adequate construct validity, adequate reliability, and the Norm Profile. Moreover, the result will be a more direct and meaningful application of an instrument to detect mental illness in the Thai community (reliability coefficient 0.80-0.92, reliability for Cronbach alpha = 0.94).

Hsu and Marshall[6] studied 1,805 interns, residents, and fellows training in Canada using a self-rated depression scale questionnaire. They found that female physicians had higher depression scores than men. The proportion of unmarried house staff with moderate or severe depression scores was higher than that of married house staff. Considerable differences were found by specialty and Obstetrics and Gynecology residents had the highest scores for depression. In the present study, sex of residents had no effect on the mental health problems and married residents had more social function problems than unmarried residents. Robert[2] reported that excessive workload, sleep deprivation, difficult patients, poor learning environments, relocation issues, isolation, social problems, financial concerns, culture, minority issues, information overload, and career planning issues can cause stress and lead to alcohol or drug abuse among residents.

The risk factors for social function problems identified by the presented group were younger age, married, more workload in the labor room, more conferences and more examinations. Younger physicians who have recently graduated from medical school, and enter residency with less maturity and experience are at greater risk. Academic and clinical deficits became apparent, including spotty clinical judgment skill, and deficits in interpersonal relations and personality problems due to younger age.

Residents who were married may spend a lot of time with their spouses, and thus have joined fewer outside social activities. Riley et al[7] found that a reluctant spouse or partner posed an important problem for rural communities ineffectively. Furthermore, Landau et al[8] showed that over 40% of residents reported major marital problems and 72% attributed these problems to residency training because many residents came home to their spouses who have not seen them in days, and the residents were emotionally and physically exhausted.

Furthermore, preparing for conferences and examinations were time-consuming tasks that led to reduced interest in social life. Caring for patients in the labor room required more professional skills as physicians have to consider the safety of both mothers and babies. Physicians must be constantly active and alert. These factors may cause fatigue and exhaustion. Residents who had heavier workloads need more time to rest, therefore, less time for social interaction in the community.

Aach, et al from the resident services committee[9] reported that information overload can be an undesirable stress if the resident does not learn to use a systemic approach to accessing, reading, appraising, and remembering pertinent medical literature. Living with uncertainty and the need for making crucial decisions may be a positive force if carefully supervised, but can be negative if unattended to, particularly early in training or when the number of very ill patients is great. If impairments of residents are identified and treated at an early stage, the outcome may be good. Therefore, it is important to implement strategies that

facilitate rapid recognition. Supervisors of the residents should know about the subtle presentations of impairment. A supportive attitude is necessary if the resident is identified as impaired and transferring to therapists might be more appropriate when severe mental health problems are detected. Moreover, the course director should continuously evaluate the training program. Communication between the supervisors and program director is essential to discuss general issues of residents' progress and to facilitate better adaptation to their careers.

The correlation between other mental health problems and demographic data or characters of training program could not be demonstrated in the present study due to the small sample size.

Conclusion

Resident training in Obstetrics and Gynecology had affected mental health problems, mainly in somatization and social function. Approximately one-third of respondents in the present study were clarified with mental health problem when evaluated by TMHQ-70. The significant risk factors correlated with social function problems were younger age, marriage and excessive workload.

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สุขภาพจิตของแพทย์ใช้ทุนและแพทย์ประจำบ้านขณะฝึกอบรมเพื่อวุฒิบัตรแสดงความรู้ความชำนาญในการประกอบวิชาชีพเวชกรรม สาขาสูติศาสตร์และนรีเวชวิทยา

เกษมา ประเสริฐศิริ, ฐิติมา สุนทรสัจ, จารุรินทร์ ปิตานุพงศ์

วัตถุประสงค์: *เพื่อประเมินสุขภาพจิตและศึกษาปัจจัยต่าง ๆ ที่สัมพันธ์กับปัญหาสุขภาพจิตของแพทย์ใช้ทุน และแพทย์ประจำบ้านขณะฝึกอบรมผู้เชี่ยวชาญ สาขาสูติศาสตร์และนรีเวชวิทยา*

วัสดุและวิธีการ: *ช่วงเดือนมกราคมถึงเมษายน พ.ศ. 2547 ผู้เข้ารับการฝึกอบรม 160 คนจาก 259 คน (ร้อยละ 62) ตอบแบบสอบถามที่ประกอบด้วย ข้อมูลพื้นฐาน ลักษณะของการฝึกอบรม คำถามปลายเปิดให้บรรยายสุขภาพจิตของตนและแบบประเมินสุขภาพจิตสำหรับคนไทย (TMHQ-70)*

ผลการศึกษา: *ความชุกของปัญหาสุขภาพจิตเท่ากับร้อยละ 29 ปัญหาที่พบบ่อยคือ ความผิดปกติที่ไม่มีพยาธิสภาพและการทำงานด้านสังคม ผู้เข้ารับการฝึกอบรมที่อายุน้อยกว่า 25 ปี มีคู่สมรส ดูแลผู้ป่วยในห้องคลอดเกิน 20 คนต่อ 8 ชั่วโมง ทำกิจกรรม วิชาการเกิน 10 ครั้งต่อปีและสอบเกิน 5 ครั้งต่อปีจะมีความเสี่ยงต่อปัญหาสุขภาพจิตการทำงานด้านสังคม*

สรุป: *1 ใน 3 ของแพทย์ใช้ทุนและแพทย์ประจำบ้านขณะฝึกอบรมหลักสูตรผู้เชี่ยวชาญสาขาสูติศาสตร์และนรีเวชวิทยามีปัญหาสุขภาพจิตด้านความผิดปกติที่ไม่มีพยาธิสภาพ การทำงานด้านสังคม มีความกดดัน และความกระวนกระวายใจ ปัจจัยเสี่ยงที่ทำให้มีปัญหาการทำงานด้านสังคม คือ อายุน้อย มีคู่สมรสและภาระงานมาก*