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Prevalence of depression in gynecologic outpatients at King Chulalongkorn Memorial Hospital

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Roomruangwong C, Hemrungrojn S, Tangwongchai S. Prevalence of depression in gynecologic outpatients at King Chulalongkorn Memorial Hospital. Chula Med J 2007 Apr; 51(4): 191- 202

Objective : *To examine the prevalence of depression and related factors among gynecologic outpatients, King Chulalongkorn Memorial Hospital*

Design : *Descriptive study*

Method : *This study was conducted at King Chulalongkorn Memorial Hospital during August 2006 to October 2006. A total 271 gynecologic outpatients, with their mean age of 39.8 years old, were recruited. Demographic, psychosocial and gynecologic information were obtained. Center for Epidemiological Studies Depression Scale (CES-D) and The Personal Resource Questionnaire (PRQ part II) were completed by the participants to evaluate depression and the patient's supporting systems during waiting time before going to see gynecologist.*

Results : *16.6 % of subjects had depression. There were 7 factors significantly associated with depression in this group. Pain symptom, history of medical illness and unavailable of best supporting resource were significantly associated with depression in these samples with $p < 0.05$. Whereas, financial inadequacy, living with parent(s), menstrual abnormality and poor personal resources were significantly associated with depression with $p < 0.01$. Logistic regression analysis showed that living with parent(s), pain symptoms and poor personal resources were statistically associated with depression with adjusted odd ratio = 4.5 (95 % CI=1.8-10.7), 2.8 (95 %CI=1.1- 6.8) and 10.1 (95 %CI=4.2- 24.2) respectively.*

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Conclusion : *Prevalence of depression in this study was approximated to the prevalence of depression in other previous studies conducted in general gynecologic outpatients, but it was lower than the prevalence of depression in specific subgroup of gynecologic patients (e.g., patients with ovarian cancer, patients in menopause clinics, patients with menstrual abnormalities, patients during their postoperative period, etc.). Living with parent(s), pain symptoms and poor personal resources were associated with depression in gynecologic outpatients.*

Keywords : *Depression, Gynecologic, Outpatients, Personal resources.*

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ชุติมา หรุ่มเรืองวงษ์, โสพสินี เหมรุ่งโรจน์, สุขเจริญ ตั้งวงษ์ไชย. ความชุกของภาวะซึมเศร้าและปัจจัยที่เกี่ยวข้องของผู้ป่วยนอก แผนกนรีเวช โรงพยาบาลจุฬาลงกรณ์. จุฬาลงกรณ์เวชสาร 2550 เม.ย; 51(4): 191 - 202

วัตถุประสงค์ : *เพื่อศึกษาความชุกของภาวะซึมเศร้าและปัจจัยที่เกี่ยวข้องในผู้ป่วยนอก แผนกนรีเวช โรงพยาบาลจุฬาลงกรณ์*

ระเบียบวิธีการวิจัย : *การเก็บข้อมูลในผู้ป่วยนอก แผนกนรีเวช โรงพยาบาลจุฬาลงกรณ์ ได้ดำเนินการ ในช่วงเดือนสิงหาคม พ.ศ. 2549 ถึงเดือนตุลาคม พ.ศ. 2549 จำนวน 271 ราย โดยกลุ่มตัวอย่างที่ศึกษามีอายุเฉลี่ย 39.8 ปี ได้มีการเก็บข้อมูลส่วนตัว ข้อมูลทางนรีเวช ข้อมูลทางจิตสังคม และให้กลุ่มตัวอย่างทำแบบวัดภาวะซึมเศร้า (CES-D) เพื่อประเมินภาวะซึมเศร้าแบบวัดแรงสนับสนุนทางสังคม (PRQ part II) เพื่อประเมินระดับของแรงสนับสนุนทางสังคม ในช่วงที่ผู้ป่วยนั่งรอตรวจ*

ผลการวิจัย : *ผู้ป่วยที่มารับการรักษาแบบผู้ป่วยนอกของแผนกนรีเวช มีความชุกของภาวะซึมเศร้า เท่ากับ 16.6 % โดยพบว่ามี 7 ปัจจัยที่เกี่ยวข้องได้แก่ มีอาการปวดร่วมด้วย มีประวัติการเจ็บป่วยทางกาย และขาดผู้ที่คอยให้คำปรึกษาและประคับประคองจิตใจที่ดี มีความสัมพันธ์กับภาวะซึมเศร้าอย่างมีนัยสำคัญที่ $p< 0.05$ ส่วนการมีรายได้ไม่เพียงพอ การพักอาศัยอยู่กับบุพการี การมีอาการผิดปกติของรอบเดือน และการมีแรงสนับสนุนทางสังคมต่ำ มีความสัมพันธ์กับภาวะซึมเศร้าอย่างมีนัยสำคัญที่ $p< 0.01$ จากการทำ Logistic Regression Analysis พบว่าการพักอาศัยอยู่กับบุพการี มีอาการปวดร่วมด้วย และการมีแรงสนับสนุนทางสังคมต่ำ ยังคงมีความสัมพันธ์กับภาวะซึมเศร้าอย่างมีนัยสำคัญ โดยมีค่า adjusted odd ratio เท่ากับ 4.5 (95 % CI=1.8-10.7), 2.8 (95 %CI=1.1- 6.8) และ 10.1 (95 % CI= 4.2- 24.2) ตามลำดับ*

สรุป : *ความชุกของภาวะซึมเศร้าของการศึกษานี้มีค่าใกล้เคียงกับการศึกษาอื่น ๆ ที่ทำในผู้ป่วยนรีเวชทั่วไป แต่มีค่าความชุกต่ำกว่าการศึกษาที่ทำในผู้ป่วยนรีเวชที่เป็นกลุ่มเฉพาะ เช่น ผู้ป่วยมะเร็ง ผู้ป่วยในวัยหมดระดู ผู้ป่วยที่มีอาการผิดปกติของรอบเดือน และผู้ป่วยหลังได้รับการผ่าตัดทางนรีเวช เป็นต้น การพักอาศัยอยู่กับบุพการี มีอาการปวดร่วมด้วย และการมีแรงสนับสนุนทางสังคมต่ำ มีความสัมพันธ์กับภาวะซึมเศร้าในผู้ป่วยนอกแผนกนรีเวช โรงพยาบาลจุฬาลงกรณ์ อย่างมีนัยสำคัญ*

คำสำคัญ : *ภาวะซึมเศร้า, แผนกนรีเวช, ผู้ป่วยนอก, แรงสนับสนุนทางสังคม*

Depression is a syndrome that includes depressed mood or anhedonia most of the day, nearly everyday accompanied with the lack of energy, psychomotor retardation or agitation, weight loss or weight gain, sleep disturbance, diminished ability to think or concentrate, feelings of worthlessness and recurrent thoughts of death. The prevalence of depression among women is about twofold greater (15 -25 %) than men (5 - 12 %).[1] The reasons for the differences have been hypothesized to hormonal differences and specific psychosocial stressors in women.[2-7]

Several studies indicated that the incidence of depression in women varied during their life span. The peak incidence during childbearing years has been hypothesized to be associated with cyclic hormonal changes.[5-9] These also present with reproductive -specific mood disorders: pre-menstrual dysphoric disorder (PMDD), depression in pregnancy, postpartum mood disorder (PDD) and perimenopausal depressive disorder.[8,10-14]

Since the past decade, physical and mental health of the women has been focused. The female patients with any depressive diagnoses had significantly more visits to health care personnel and received counseling by phone and letter significantly more often than non-depressed women.[10,15] This group of patients also frequently encountered in gynecologic practice.

The prevalence rates for depressive disorders among patients consulting their gynecologist have been reported to be 10 – 40 %[15-21], but they were still underdiagnosed and undertreated.[20] There were several factors associated with depression in gynecologic patients e.g., advanced age, not living with their spouse or their children[19], have previous history of depression, and have specific symptoms include menstrual irregularities[22], pelvic pain, breast tenderness[21], and pain during postoperative period.[23] Depression in this group of patients was associated with unfavorable outcome of gynecological treatment and needs special attention.

Most previous studies were conducted in specific and homogeneous groups of gynecologic patients in large tertiary hospitals or centers e.g. teenage patients, perimenopausal patients, patients who underwent hysterectomy, patients who received acute gynecologic admission and the group of gyneco-oncologic patients.[18-20, 22-24] There were only few studies that were conducted in general gynecologic outpatients which would be more applicable in Thailand's public health policy.[15-17] Identification of these risk factors in general gynecologic outpatients may be helpful for the gynecologists in every level of health care services in early case detection and give proper intervention or referral to the mental health personnels.

Methods

Subjects

Two hundred and seventy-one women (aged 18 or more) who came to the Gynecologic Outpatient Department, King Chulalongkorn Memorial Hospital, from August 2006 to October 2006 were included in this study. The subjects who could not read or write in Thai language were screened out and excluded by well-trained interviewers who worked as a nurse in the Gynecologic Outpatient Department, King Chulalongkorn Memorial Hospital.

Procedure

Every subjects was asked to complete all the questionnaires including personal information, medical and gynecologic information, psychosocial information, as well as self-rating questionnaires including Center for Epidemiological Studies Depression Scale (CES-D)[16-17] to diagnose depression with the cut-off score more than 22 [25] and The Personal Resource Questionnaire (PRQ part II) during waiting period, to see gynecologist. Inform consents were obtained from all subjects by interviewers. This study had been reviewed and approved by the Ethics Committee of the Faculty of Medicine, Chulalongkorn University.

Statistical analysis

The data were analyzed by using SPSS for Windows version 13.0. Descriptive statistics were reported as mean, SD and percentage. Univariate analysis was performed to demonstrate various possible associated factors among the patients in terms of chi-square test and t-test. Logistic Regression Analysis was used to show significant risk factors for depression in gynecologic outpatients and presented as adjusted odd ratio with 95 % confident interval.

Results

The results showed that 271 female patients had mean age of 39.8 $\pm$ 12.2 years. Most of the patients (95.2 %) were Buddhist and 128 cases (47.3 %) were graduated or had post-graduate education. One hundred and seventy-seven cases (65.3 %) were married; 50 cases (18.5 %) were still living with their parent (s) and forty-seven patients (17.4 %) had financial inadequacy.

Concerning gynecologic information, 75 patients (27.7 %) came to see gynecologist for checking up without any specific symptom, whereas 196 patients (72.3 %) had at least one specific complaint (s). In the group with specific complaints, seventy-seven patients found abnormal mass or tumor; 49 had pain symptom in at least one part of the body; 39 had menstrual abnormality; 34 had leucorrhea; 24 had abnormal vaginal bleeding;10 came to receive contraceptive devices; 6 had infertile problems; 21 had appointment for post-operative followed-up; 7 had menopausal symptoms; 4 came to receive chemotherapy; and 6 came to visit for specific symptoms that could not be classified in the previous groups (e.g. itching). Eighty-four patients (31.0 %) had a history of gynecologic hospitalization and 77 (28.4 %) had gynecologic operation at least once.

Regarding the patient's acknowledgement about their diagnosis, ninety-two patients (46.9 %) did not know about their diagnosis, whereas 61 patients (31.1 %) knew that their diagnosis was not cancer and 43 patients (22.0 %) knew that their diagnosis was cancer. The mean age of menarche was 14.03 $\pm$ 1.67 years. Sixty-one patients (22.5 %) had history of abortion with the mean age of first abortion at 27.54 $\pm$ 6.33 years old. Ninety-eight patients (36.2 %) had a history of medical illness and 182 patients (67.2 %) had a history of at least one type of substance use, including caffeine.

Concerning psychosocial information, 10 patients (3.7 %) had a history of psychiatric illness, 57 (21.0 %) had suicidal ideation at least once in their life and 11 (4.1 %) had a history of suicidal attempt (s). Thirty-five patients (12.9 %) reported unavailability

of supporting system when they had problem (s) and need somebody to help or give advice. Ninety-eight patients reported their spouse as best supporting; 55 and 37 patients reported that their same-gender friend and their mother was a best supporting resource, respectively (as shown in Table 1).

Table 1. Patient's characteristic.

Character	N (%) or Mean ± SD
Age	39.8 ± 12.2
Personal income	15746 ± 17206
Family income	42251 ± 43656
Age of menarche	14.03 ± 1.67
Age of first abortion	27.54 ± 6.33
Marital status	
- single	65 (24.0)
- married	177(65.3)
- separated/ divorced	21(7.7)
- widow	8 (3.0)
Religious	
- Buddhism	258 (95.2)
Education	
- None	5(1.8)
- Primary school	46 (17.0)
- Secondary school/ college	92 (33.9)
- Graduated / Post-graduated	128 (47.3)
Live with parent(s)	50 (18.4)
Financial inadequacy	47 (17.7)
History of psychiatric illness	10 (3.7)
Family history of psychiatric illness	14 (5.2)
Unavailability of supporting system	236 (87.1)
Poor personal resource†	48 (17.7)
Chief complaint(s)	
- for check up	(27.7)
- for specific complaint(s)	196 (72.3)
- menstrual abnormality	39
- pain	49
- leukorrhea	34
Acknowledgement about their diagnosis	112 (54.9)
History of abortion	61 (22.5)
History of medical illness	98 (36.2)
History of hospitalization for gynecologic problems	84 (31.0)
History of substance abuse	182 (67.2)
Depression††	45 (16.6)

† = according to PRQ part II

††= according to CES-D

From all subjects in this study, forty-five (16.6 %) had depression according to the Center for Epidemiological Studies Depression Scale (CES-D), as shown in Table 2.

Univariate analysis showed that financial inadequacy, living with parent (s), menstrual abnormality and poor personal resources were significantly associated with depression (p value < 0.01). Additionally, existence of pain symptom, history of medical illness and unavailable of supporting resource were significantly associated with depression (p value < 0.05), as shown in Table 3.

Table 2. Prevalence of depression in gynecologic out - patients.

Depression in Gynecologic out-patients (according to CES-D)	**% (N)**
Depress	16.6 (45)
Non depress	83.4 (226)

Table 3. Factor associated with Depression in gynecologic out-patients.

Character	**Non depress (N = 226)**	**Depress (N = 45)**
Age (yrs, Mean ± SD)	40.3 ± 12.3	37.3 ± 11.3
Personal income (Baht/month, Mean ± SD)	15945 ± 17905	14716 ± 13139
Family income (Baht/month, Mean ± SD)	40902 ± 39522	49058 ± 60520
Age of menarche (yrs, Mean ± SD)	14.02 ± 1.7	14.05 ± 1.5
Married marital status	150 (66.4)	27 (60.0)
Buddhist religious	215 (95.1)	43 (95.5)
Graduated education	91 (40.3)	17 (37.8)
Living with parent (s)**	33 (14.6)	17 (37.8)
Financial inadequacy**	32 (14.2)	15 (33.3)
History of psychiatric illness	7 (3.1)	3 (6.7)
Family history of psychiatric illness	13 (5.8)	1 (2.2)
Unavailability of supporting system*	24 (10.6)	11 (24.4)
Poor personal resource†	25 (11.1)	23 (51.1)
Check-up without specific symptoms	66 (29.2)	9 (20.0)
Menstrual abnormality**	27 (11.9)	12 (26.7)
Pain symptom*	35 (15.5)	14 (31.1)
Leukorrhea	25 (11.1)	9 (20.0)
Acknowledgement about their diagnosis	97 (42.9)	15 (33.3)
History of abortion (%)	58 (25.7)	13 (28.9)
History of medical illness (%)*	75 (33.2)	23 (51.1)
History of gynecologic hospitalization	67 (29.6)	17 (37.8)
History of substance abuse	152 (67.3)	30 (66.7)

† = according to PRQ part II

* $p<0.05$, ** $p< 0.01$

Table 4. Logistic Regression analysis.

Factors	Adjusted OR	95% CI	P value
Live with their parent(s)	4.5	1.8 - 10.7	0.001**
Pain symptoms	2.8	1.1 - 6.8	0.026*
Poor personal resources	10.1	4.2 - 24.2	0.000**

* $p<0.05$, ** $p< 0.01$

Logistic regression analysis was performed and showed significant risk factors related to depression in gynecologic outpatients were living with parent(s), existence of pain symptoms and poor personal resources, as shown in Table 4.

Discussion

This study found that 16.6 % of the subjects who came for consultation at gynecologic outpatient service of King Chulalongkorn Memorial Hospital had depression. There were 7 factors significantly associated with depression in this group including pain symptom, history of medical illness, unavailable of best supporting resource, financial inadequacy, living with parent(s), menstrual abnormality and poor personal resources. Multivariate analysis showed that living with parent (s), pain symptoms and poor personal resources may be the risk factors for depression in this group of patients.

The prevalence of depression in this study was close to the prevalence of depression in other previous studies conducted in general gynecologic outpatients [15-17], but lower than the prevalence of depression conducted in specific subgroups of gynecologic patients (e.g. patients with ovarian cancer, patients in menopause clinics, patients with menstrual abnormalities, patients during their postoperative period, etc.) who had more vulnerability to have depression. [18-20,22-24,26]

Seven related factors to depression in this study may effected each others in reciprocal fashions. Depression in the patients with menstrual abnormalities may support the concept of the relationship between female reproductive hormones, estrogen and progesterone, and serotonergic neurotransmission that regulate mood states. [7,9,17,22,27] Moreover there were some evidences of the dysregulations of hypothalamic-pituitary-adrenal axis commonly found in depressive patients. [28] Pain symptoms may be associated with depression via decreasing of noradrenergic transmission and dysregulations of opiate neurotransmission. Moreover, pain can cause psychological distress and worsen depressive symptoms. [17,23,26,29-35] On the other hand, patients with preexisting depression may be more vulnerable to experience pain symptoms, especially pelvic pain. [36]

Suffering from index gynecological problems and other physical illnesses may be perceived by the patients as loss. Additionally, if they also had financial problems to afford for the treatment cost, which triggered feeling of hopelessness and helplessness about their illnesses [35,37], then this could lead to depression.

In Thai rural culture, there was inadequate understanding of gynecological symptoms and many people misunderstood these symptoms as either cancers or sexual transmitted diseases. Female patients may feel embarrass to talk about their symptoms with others. Generation gaps would be another problem in talking about these issues, so the patients may need support from their spouses, their same sex friends, and their sisters. Support form these people gave direct effects on emotional stability, attenuated effects of stressful life events (e.g. suffering from medical illness and gynecologic symptoms), and prevented them from depression. Unavailability of these support systems or poor personal resources would predispose this group of patients to be more vulnerable to stress, worthlessness and hopelessness. [26,38-39] Living with parent(s) gave the patients more burden to take care of their elderly parents, for they had to work hard to support their familial income and this may be identified as stressors in their life.

Limitation

This study has been conducted in a tertiary hospital in Bangkok metropolis. Most of the subjects in this study were highly educated in middle class economic status. The results of this study may not represent other gynecologic outpatients in different settings. Generalization of the study's results should be performed with caution.

Conclusion

Identification of depressive symptoms and related risk factors in gynecologic outpatients is helpful for gynecologists to render early detection and give psychological support to the patients. Providing education on their gynecological symptoms and treatment plan help them in relieving anxiety and embarrassment about their symptoms. The referral to a social worker to aid for their financial problems and provide support would be helpful to prevent them from depression.

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