

USAGE OF DIAGNOSTIC QUESTIONNAIRE FOR DEPRESSIVE PATIENTS VERSUS CENTER FOR EPIDEMIOLOGIC STUDIES OF DEPRESSION SCALE IN BREAST CANCER PATIENTS

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SUMMARY

Objective: The aim of the study was to examine the agreement and differences between Diagnostic Questionnaire for Depressive Patients according to 10th revision of International Statistical Classification of Diseases and Related Health Problems (ICD-10) and Center for Epidemiologic Studies Depression Scale (CES-D).

Methods: Participants were 115 breast cancer female patients recruited in specialised cancer hospital radiotherapy unit. Depression was measured with CES-D, 20-item self-report scale designed to measure depressive symptoms in community. Score of ≥ 16 indicated clinically relevant depression. Depression was also measured with Diagnostic Questionnaire for Depressive Patients based on the criteria of 10th revision of International Statistical Classification of Diseases and Related Health Problems.

Results: By using Diagnostic Questionnaire for Depressive Patients we established that of 115 patients 47 (40.9%) fulfils the criteria for depressive episode and that in the division by type of depressive episode 5(10,6%) has mild, 22(46,8%) has moderate and 20(42,5%) has severe depressive episode. By CES-D 42(36,5%) patients were considered clinically depressive. Kappa coefficient shows good agreement between two measures ($\kappa=0,799$; $p=0,000$).

Conclusion: CES-D and Diagnostic Questionnaire for Depressive Patients show good agreement in assessment of depression but in clinical setting assessment should be made with diagnostical instruments as Diagnostic Questionnaire for Depressive Patients.

Key words: diagnostic - questionnaire for depressive patients - CES-D - depression - breast cancer

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INTRODUCTION

Depression is very common in population of cancer patients. It adversely affects patients' quality of life, compliance with therapy, ability to care for oneself, length of hospital stay and even the outcome of the illness (McDaniel et al. 1995, Spiegel and Giese-Davis 2003).

Range of depression prevalence in various studies varies from 1.5% to 50% (McDaniel et al.

1995). Prevalence differences depend on various factors: place where the study was made (hospital versus community based setting), whether the therapy was in progress, which kind of therapy, type of cancer and time passed from the beginning of illness. Most of the studies show that the prevalence of depression substantially rises as severity of medical illness increases (Berard 2001). Although all these results reveal valuable clinical informations, it is important to distinguish

how particular study define depression. We can differ so far made investigations to those that defined depression as symptom and measured symptom severity, or define depression as diagnostic entity based on current classification systems.

Various psychological instruments, most of them self-perception scales, were used in detecting depression (McDaniels et al 1995, Ballenger et al. 2001). The Center for Epidemiologic Studies Depression Scale (CES-D) is one of the scales most often used in studies of cancer patient. It is a sensible tool to use with medically ill population such as cancer patients. It includes six components: depressed mood; feelings of guilt and worthlessness, feelings of helplessness and hopelessness, psychomotor retardation; loss of appetite; and sleep disturbance. Reliability and validity of the scale have been tested in general and clinical populations, yielding very good internal consistency with an alpha of 0.85 for the general population and 0.90 for a psychiatric population. Satisfactory test-retest reliability over a 2- to 8-week period ranged from 0.51 to 0.67 and from 0.32 to 0.54 over a 3- to 12-month period (Hann et al. 1999).

Diagnostic Questionnaire for Depressive Patients (Jakovljević 2003) is comprised of items mentioned by 10th revision of International Statistical Classification of Diseases and Related Health Problems (ICD-10) as diagnostic criteria and reveals diagnosis of depression as would be made in diagnostical psychiatric interview. These criteria attempt to set an operational threshold for depressive disorder based on a specified number of items and their temporal patterns. ICD-10 divides depressive episodes into mild, moderate, and severe categories. According to ICD-10, mild depression requires fewer symptoms than moderate or severe depression. Diagnosis is based on dimensional scores obtained. Current depressive episode scores two typical and two additional symptoms for mild episode, two typical and three additional for moderate, and three typical and at least four additional symptoms for severe depressive episode (WHO 1993).

The aim of our study was to examine the agreement and differences between CES-D, as self-perception instrument and Diagnostic Questionnaire for Depressive Patients as instrument based on current classification system ICD-10 in the population of breast cancer patients.

METHODS

Participants were 115 breast cancer female patients recruited in specialised cancer hospital radiotherapy unit. They gave informed consent to participate in the study after the purpose and procedures of the study were fully explained. Of the 138 patients surveyed, 115 (83.3%) agreed to participate in the psychological assessment. Four patients refused to participate, 19 were excluded from evaluation for miscellaneous reasons (poor physical state, dementia, discharge before being seen). All patients were female Caucasians, mean age 61.8 years, SD 11.21 and were currently treated with radiation therapy although they differed on how much past treatment they had already received.

Depression was measured with CES-D and Diagnostic Questionnaire for Depressive Patients Appendix 1).

CES-D is 20-item self-report scale designed to measure depressive symptoms in community. The overlap with symptoms of physical illness has been shown to be very limited in a number of studies. Respondents indicate how often within the last week they experienced the symptoms, responding: "rarely or none of the time" (0); "some or little of the time" (1); "occasionally or a moderate amount of time" (2); and "most or all of the time" (3). The scores for the 20 items are added, resulting in a range of possible total scores from 0 to 60. A score of 16 and higher was taken to indicate a clinically relevant depressive syndrome (Randolf 1977, Hann et al. 1999). Mode of assessment was paper and pencil.

Depression was also measured with Diagnostic Questionnaire for Depressive Patients, which is an inventory used to diagnose depression by ICD-10 criteria and measure intensity and duration of

depressive episode and is comprised of items mentioned by ICD-10 as diagnostic for depression (Jakovljević 2003). For the purpose of this trial the scale was scored only by number of symptom obtained for the diagnosis.

A trained psychiatrist conducted the interviews and applied the instruments.

The sociodemographic and clinical characteristics of the 115 subjects are summarized in table 1.

Table 1. Sociodemographic characteristics of the sample

Characteristic	N	%	
Age	< 50 years	21	18.2
	50-70 years	68	59.1
	>70 years	26	22.6
Education	Primary (all or part)	78	67.8
	Secondary	27	23.5
	Tertiary	10	8.6
Employment	Employed	19	16.5
	Unemployed/housewife	46	40.0
	Retired	50	43.5
Marital status	Married	61	53.0
	Unmarried	7	6.1
	Divorced	10	8.7
	Widow	37	32.2
Children	No children	18	15.6
	One	31	26.9
	Two	45	39.1
	Three /four	21	18.3
Former mental problems	yes	37	32.2
Family mental problems	yes	14	12.2
Cancer stadium	I	38	33.0
	II	56	48.7
	III	11	9.6
	IV	10	8.7

Descriptive statistics and kappa coefficient of agreement were calculated with Statistical Package for Social Sciences for Windows, version 11.0.

Cohen's kappa coefficient was used to analyse the diagnostic agreement between two scales. With this procedure it is possible to prove the amount of agreement between two instruments (Mynuchin & Foyers 2000). A kappa value close to 1 indicates a near perfect agreement while a kappa value near to 0 means that agreement is poor but also that agreement no greater than 0 would be expected by chance. Kappa value higher than 0.8 indicates an excellent, a kappa between 0.61 to 0.8 a good and between 0.41 and 0.61 a moderate agreement (Landis & Koch 1977).

RESULTS

By using Diagnostic Questionnaire for Depressive Patients we established that of 115 patients 47 (40.9%) fulfilled the criteria for depressive episode. By categorising them by intensity there were 5(10.63%) with mild, 22(46.81%) with moderate and 20(42.5%) with severe depressive episode.

Mean sum score of CES-D was 16.21 SD± 9.46 median 15.0 (range 0-50). By using CES-D, we established that of 115 patients 42 (36.5%) fulfilled the criteria for being clinically depressive.

Frequencies of depressive and non-depressive patients measured by both scales are shown on table 2.

Table 2. Frequencies of depressive and non-depressive patients diagnosed by CES-D and Diagnostic Questionnaire for Depressive Patients (DQDP)

	CES-D n(%)	DQDP n(%)
Non-depressive	73(63.5)	68(59.1)
Depression	42(36.5)	47(40.9)
Mild	-	5(10.6)
Moderate	-	22(46.8)
Severe	-	20(42.5)

Kappa coefficient (κ) as measure of agreement between two scales was good, close to excellent, $\kappa=0.799$ $p=0.000$.

DISCUSSION

In described sample depression was present in 36.5% versus 40.9% of participants showing good agreement between two scales. These results are in accordance with results of some other studies (McDaniel et al. 1995, Bukberg et al. 1984, Goldberg et al. 1992, Farber et al. 1984).

So far most investigators measured symptom severity rather than specific diagnosis of depression (McDaniel 1995). CES-D focuses primarily on cognitive and affective components of depression rather than the physical manifestations of depression (Hann et al. 1999, Haringsma et al 2004).

Diagnostic Questionnaire for Depressive Patients measures also intensity of depressive episode and CES-D does not. With Diagnostic Questionnaire for Depressive Patients symptoms that could be attributed to patients' malignant neoplasm (fatigue, loss of energy, appetite loss, weight loss) were not excluded during establishing diagnosis. This inclusive approach (McDaniel 1995) may be responsible for somewhat higher percentages of depression.

Cohen-Cole et al. (1993) recently reviewed conceptual approaches to the diagnosis of depression in medically ill patients and proposed two systems for diagnosing of depression depending on whether the assessment is primarily

for research (exclusive approach) or clinical (inclusive approach) purpose. Inclusive approach as used in Diagnostic Questionnaire for Depressive Patients, maximises sensitivity and protects the patient from the risk of undiagnosed depression or so-called false-negative result.

The choice of the measuring instrument should depend on the goal of the assessment. Clinicians should generally have lower threshold for suspicion for major depression in patients with cancer. This is particularly relevant in view of recent evidence that depression is associated with increased somatic morbidity and disability (McDaniel 1995). Studies confirmed that those patients might experience significant improvement in quality of life with antidepressant treatment (Evans et al. 1988).

CONCLUSION

Depressive symptoms are common in cancer patients, and it is important to assess depressive symptomatology in psycho-oncology research. Both scales are useful in screening depression, but in clinical practice diagnostic questionnaires based on current classification system are necessary in order to make adequate decisions about treatment of depression.

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APPENDIX: DIAGNOSTIC QUESTIONNAIRE FOR DEPRESSIVE EPISODE (Jakovljević 2003)

THE BASIC DEPRESSIVE SYMPTOMS I-III

I. If you are feeling depressive or empty, sad, miserable, helpless, hopeless, desperate, tearful or irritable (underline the words that describe your feelings) in the last two weeks or longer, please determine the intensity and duration of the depressive mood:

Intensity: 1 - mildly low or irritable mood; 2 - moderately low or irritable mood; 3 - very low or irritable mood; 4 - extremely low or irritable mood

Weekly frequency: 1 - occasionally (1-2 days per week); 2 - moderately frequent (3-4 days per week); 3 - very often (5-6 days per week); 4 - every day

Daily duration: 1 - only: a) in the morning; b) at noon; c) in the evening; 2 - several times per day; 3 - most of the day; 4 - all day

II. If your ability to be happy or feel good enjoy and interested in everyday activities was lowered during the last two weeks or longer, determine the intensity and duration:

Intensity: 1 - slightly lowered; 2 - interest and pleasure were significantly lowered; 3 - it is difficult for something to interest or cheer me up; 4 - nothing interests me or makes me happy anymore, I feel empty

Weekly frequency: 1 - occasionally (1-2 days per week); 2 - moderately frequent (3-4 days per week); 3 - very often (5-6 days per week); 4 - every day

Daily duration: 1 - only: a) in the morning; b) at noon; c) in the evening; 2 - several times per day; 3 - most of the day; 4 - all day

III. If you feel tired or without energy during the last two weeks or longer, determine the intensity and duration:

Intensity: 1 - I feel tired slightly, not significantly more than before; 2 - I get tired quickly and have less energy; 3 - I feel very tired and almost without energy; 4 - I feel deeply tired and completely without energy

Weekly frequency: 1 - occasionally (1-2 days per week); 2 - moderately frequent (3-4 days per week); 3 - very often (5-6 days per week); 4 - every day

Daily duration: 1 - only: a) in the morning; b) at noon; c) in the evening; 2 - several times per day; 3 - most of the day; 4 - all day

ADDITIONAL DEPRESSIVE SYMPTOMS IV-X

IV. If you have the lack of self confidence, low self-esteem or the feeling of worthlessness in the last two weeks or longer, determine the intensity and duration:

Intensity: 1 - lack of self-confidence; 2 – low self-esteem and moderate feeling of worthlessness; 3 - strong feeling of worthlessness; 4 - I feel completely worthless

Weekly frequency: 1 - occasionally (1-2 days per week); 2 - moderately frequent (3-4 days per week); 3 - very often (5-6 days per week); 4 - every day

Daily duration: 1 - only: a) in the morning; b) at noon; c) in the evening; 2 - several times per day; 3 - most of the day; 4 - all day

V. If you have a self-reproach or feeling of excessive guilt in the last two weeks or longer, determine the intensity and duration:

Intensity: 1 - self-reproach; 2 - moderate feeling of guilt, thinking about past mistakes and faults; 3 - strong feeling of guilt, perceiving illness as punishment; 4 – extremely strong feelings of guilt

Weekly frequency: 1 - occasionally (1-2 days per week); 2 - moderately frequent (3-4 days per week); 3 - very often (5-6 days per week); 4 - every day

Daily duration: 1 - only: a) in the morning; b) at noon; c) in the evening; 2 - several times per day; 3 - most of the day; 4 - all day

VI. If you have a feeling that life is not worth living and you are thinking of suicide in the last two weeks or longer, determine the intensity and duration:

Intensity: 1 - life has no value, it would be better if I was gone; 2 - I have a wish to die, but do not think about suicide; 3 - I intensively think about and plan suicide; 4 - I attempted suicide

Weekly frequency: 1 - occasionally (1-2 days per week); 2 - moderately frequent (3-4 days per week); 3 - very often (5-6 days per week); 4 - every day

Daily duration: 1 - only: a) in the morning; b) at noon; c) in the evening; 2 - several times per day; 3 - most of the day; 4 - all day

VII. If you have problems with memory and concentration and difficulties with thinking and decision-making in the last two weeks or longer, determine the intensity and duration:

Intensity: 1 - mild difficulties; 2 - significant difficulties and problems; 3 - big difficulties and problems; 4 - extremely strong difficulties and problems

Weekly frequency: 1 - occasionally (1-2 days per week); 2 - moderately frequent (3-4 days per week); 3 - very often (5-6 days per week); 4 - every day

Daily duration: 1 - only: a) in the morning; b) at noon; c) in the evening; 2 - several times per day; 3 - most of the day; 4 - all day

VIII a. If other people tell you that your movements have slowed down, your gesticulation and expressiveness decreased in the last two weeks or longer, determine the intensity and duration:

Intensity: 1 - they haven't told me that, but I seem slower; 2 - they say that I am a bit slower; 3 - they say that I have become really slower; 4 - they say that I have become extremely slower than before

Weekly frequency: 1 - occasionally (1-2 days per week); 2 - moderately frequent (3-4 days per week); 3 - very often (5-6 days per week); 4 - every day

Daily duration: 1 - only: a) in the morning; b) at noon; c) in the evening; 2 - several times per day; 3 - most of the day; 4 - all day

VIII b. If you seem agitated and faster in the last two weeks or longer, determine the intensity and duration:

Intensity: 1- I feel mild nervousness; 2 - I feel moderate nervousness, I play with my hand, hair etc.; 3 - I feel strong nervousness, I gesticulate with hands, bite my nails, pull my hair, bite my lips; 4 - I feel very strong nervousness, I cannot sit in one place

Weekly frequency: 1 - occasionally (1-2 days per week); 2 - moderately frequent (3-4 days per week); 3 - very often (5-6 days per week); 4 - every day

Daily duration: 1 - only: a) in the morning; b) at noon; c) in the evening; 2 - several times per day; 3 - most of the day; 4 - all day

IX a1. If you have difficulties falling asleep in the last two weeks or longer, determine the intensity and duration:

Intensity: 1 - I lie awake for more than 45 minutes before falling asleep; 2 - I need more than 2 hours before I fall asleep; 3 - I fall asleep with the dawn; 4 - I cannot sleep at all

Weekly frequency: 1 - occasionally (1-2 days per week); 2 - moderately frequent (3-4 days per week); 3 - very often (5-6 days per week); 4 - every day

IX a2. If you wake up often during the night or earlier than usually in the last two weeks or longer, determine the intensity and duration:

Intensity: 1 - I wake up 1-2 times per night or half an hour earlier than usually; 2 - I wake up 3-4 times per night or an hour earlier than usually; 3 - I wake up 5-6 times per night or two hours earlier than usually; 4 - I wake up more than 6 times per night or more than two hours earlier than usually

Weekly frequency: 1 - occasionally (1-2 days per week); 2 - moderately frequent (3-4 days per week); 3 - very often (5-6 days per week); 4 - every day

IX b. If you have a greater need for sleep than usually in the last two weeks or longer, determine the intensity and duration:

Intensity: 1 - slightly bigger; 2 - considerably bigger; 3 - much bigger; 4 - I only want to sleep

Weekly frequency: 1 - occasionally (1-2 days per week); 2 - moderately frequent (3-4 days per week); 3 - very often (5-6 days per week); 4 - every day

Daily duration: 1 - only: a) in the morning; b) at noon; c) in the evening; 2 - several times per day; 3 - most of the day; 4 - all day

X a. If you have lowered appetite in the last two weeks or longer, determine the intensity and duration:

Intensity: 1 - I don't enjoy in eating; 2 - I have significantly lowered appetite; 3 - I eat when forced and pleaded with; 4 - I don't eat at all

Weekly frequency: 1 - occasionally (1-2 days per week); 2 - moderately frequent (3-4 days per week); 3 - very often (5-6 days per week); 4 - every day

Daily duration: 1 - only: a) in the morning; b) at noon; c) in the evening; 2 - several times per day; 3 - most of the day; 4 - all day

X b. If you have bigger appetite in the last two weeks or longer, determine the intensity and duration:

Intensity: 1 - slightly bigger; 2 - significantly bigger; 3 - very much increased; 4 - I only want to eat

Weekly frequency: 1 - occasionally (1-2 days per week); 2 - moderately frequent (3-4 days per week); 3 - very often (5-6 days per week); 4 - every day

Daily duration: 1 - only: a) in the morning; b) at noon; c) in the evening; 2 - several times per day; 3 - most of the day; 4 - all day

Xc. If you are loosing weight in the last two weeks or longer, determine the intensity and duration:

Intensity: 1 - not much, less than half a kilo per week; 2 - about one kilogram per week; 3 - up to two kilograms per week; 4 - more than two kilograms per week

Xd. If you are gaining weight in the last two weeks or longer, determine the intensity and duration:

Intensity: 1 - slightly, less than half a kilo per week; 2 - about one kilogram per week; 3 - up to two kilograms per week; 4 - more than two kilograms per week

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