Managing Depression and Cancer in Palliative Patients

Psycho-oncology

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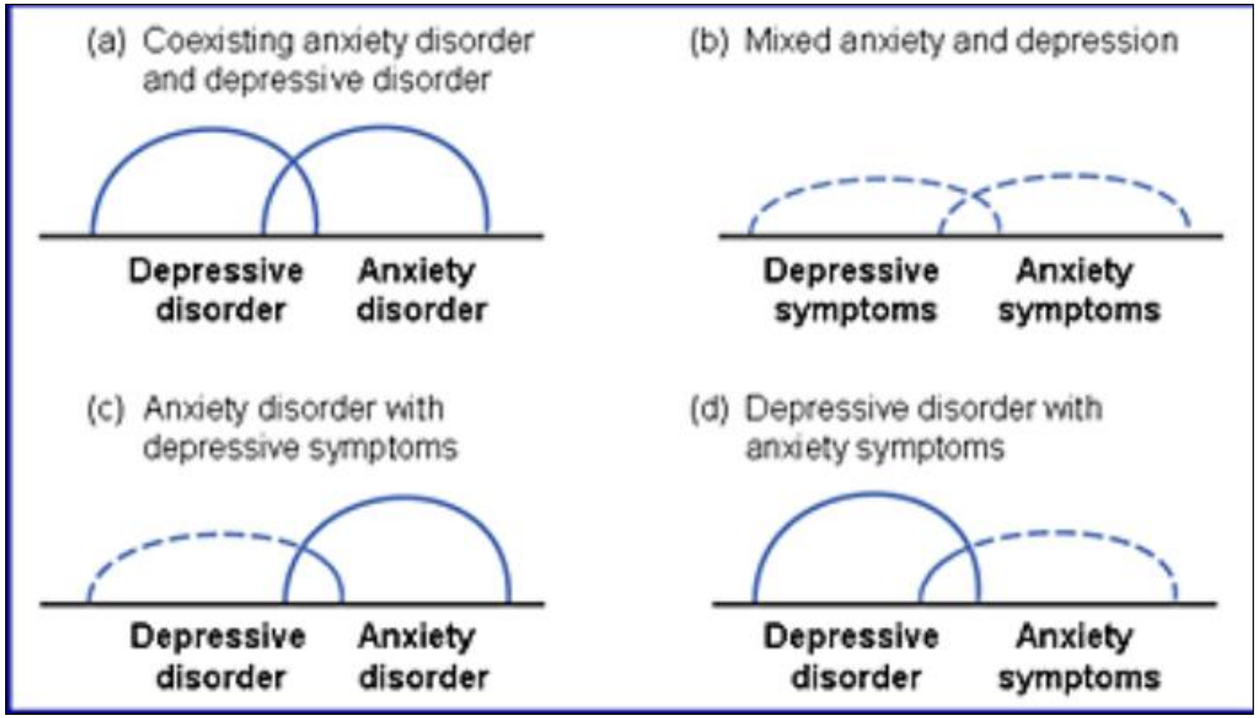
Prevalence, Recognition, and Treatment of Comorbid Depression and Anxiety

Mark H. Rapaport, M.D.

(J Clin Psychiatry 2001;62[suppl 24]:6–10)

- Relationship between anxiety and depression is complex
- Most depressed patients has comorbid anxiety.
- Depression also increased among patients with anxiety.

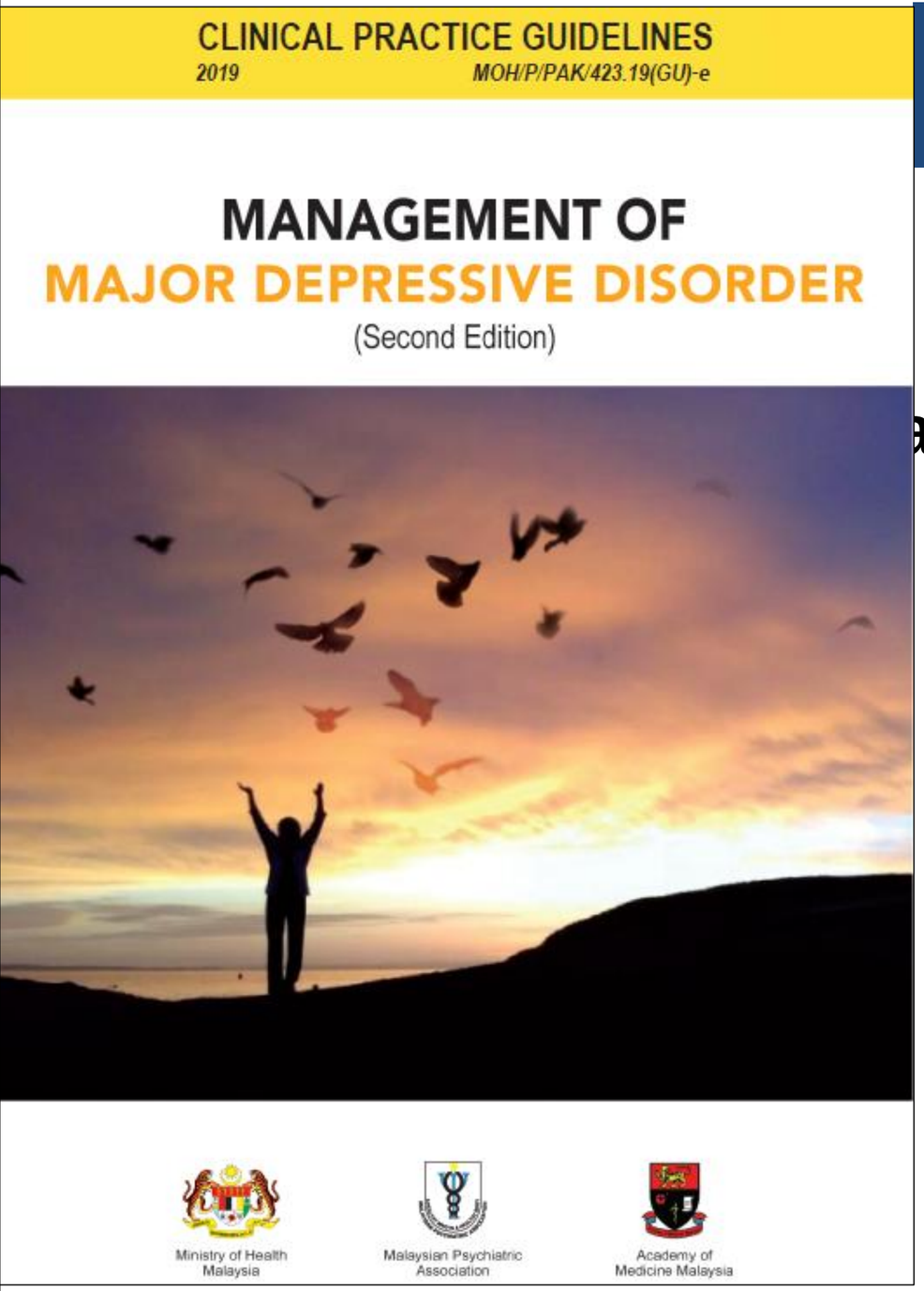
Relationship between Depressive symptoms and Anxiety symptoms



Adapted from Stahl SM., J Clin Psychiatry, 1993; 5(Supp 1): 33-38

Depression

- Prevalence of major depression in cancer patients to be 20% to 25%
- Increasing with higher levels of physical disability, advanced illness, and pain. (Sellick SM, Crooks., 1999)
  - Of this group, 25% present with depression at initial diagnosis,
  - approximately 75% develop depression subsequently. (Wise & Taylor, 1990; Lovejoy et al., 2000)
  - Even when the most stringent criteria are used, 5% to 15% of patients with cancer meet the criteria for major depression;
  - another 10% to 15% present with less severe depressive symptoms. (Wilson., 2000)



Screening

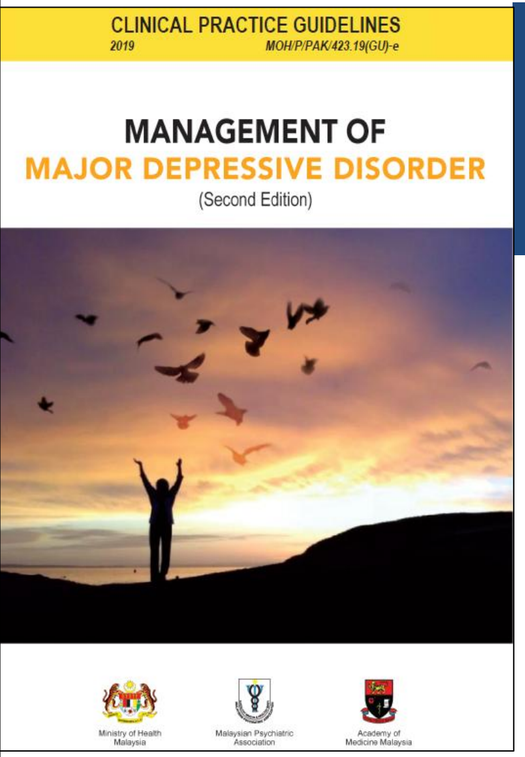
Screening for depression using Whooley Questions in primary care ay be considered in people at risk.

WHOOLEY QUESTIONS (Malay Version)

Dalam sebulan yang lepas, adakah anda terganggu oleh masalah berikut?
Over the past one month, have you been bothered by the following problems?

No	Soalan/Questions	Jawapan/ Answer
1.	Merasa murung, sedih atau tiada harapan? *Feeling down, depressed or hopeless?*	**Ya/Tidak** ***Yes/No***
2.	Kurang minat atau keseronokan dalam melakukan kerja-kerja? *Having little interest or pleasure in doing things?*	**Ya/Tidak** ***Yes/No***

Whooley et al, 1997, Mohd-Sidik et al., 2011



Screening of Depression for patients with Chronic Medical Illness (CMI)

For CMI-associated functional impairment, **NICE guidelines** recommend the use of Whooley 2-Questions to screen for depression.

Following 'Yes' to either question, proceed with these:

- During the last month, have you often been bothered by feelings of worthlessness?
- During the last month, have you often been bothered by poor concentration?
- During the last month, have you often been bothered by thoughts of death?

NICE Guidance, 2010

DSM-5 Criteria: Major Depressive Disorder

Box 4.

DSM-5 Diagnosis: Major Depressive Disorder

Major Depressive Episode:

- Five (or more) of the following symptoms have been present during the same 2-week period and represent a change from previous functioning; at least one of the symptoms is either (1) depressed mood or (2) loss of interest or pleasure.

  Note: Do not include symptoms that are clearly attributable to another medical condition.

  - Depressed most of the day, nearly every day as indicated by subjective report (e.g., feels sad, empty, hopeless) or observation made by others (e.g., appears tearful)
  - Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by subjective account or observation)
  - Significant weight loss when not dieting or weight gain (e.g., change of more than 5% of body weight in a month), or decrease or increase in appetite nearly every day
  - Insomnia or hypersomnia nearly every day
  - Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down)
  - Fatigue or loss of energy nearly every day
  - Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick).
  - Diminished ability to think or concentrate, or indecisiveness, nearly every day (either by subjective account or as observed by others)
  - Recurrent thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide
- The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- The episode is not attributable to the physiological effects of a substance or to another medical condition.

  Note: The above criteria represent a major depressive episode.
- The occurrence of the major depressive episode is not better explained by schizoaffective disorder, schizophrenia, schizophreniform disorder, delusional disorder, or other specified and unspecified schizophrenia spectrum and other psychotic disorders.
- There has never been a manic episode or a hypomanic episode.

  Note: This exclusion does not apply if all of the manic-like or hypomanic-like episodes are substance-induced or are attributable to the physiological effects of another medical condition.

Diagnosis: SIGECAPS symptoms

- **Symptoms of depression:**
  - **S**leep increase/decrease
  - **I**nterest in formerly pleasurable activities diminished
  - **G**uilt, low self esteem
  - **E**nergy poor
  - **C**oncentration poor
  - **A**ppetite increase/decrease
  - **P**sychomotor agitation or retardation
  - **S**uicidal ideation
- ≥ 5 of the following symptoms over 2 weeks
- At least 1 of the symptoms is either depressed mood or loss of interest

A. MAJOR DEPRESSIVE EPISODE

(➡ MEANS : GO TO THE DIAGNOSTIC BOXES, CIRCLE NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE)

A1	Have you been consistently depressed or down, most of the day, nearly every day, for the past two weeks?	NO	YES
A2	In the past two weeks, have you been much less interested in most things or much less able to enjoy the things you used to enjoy most of the time?	NO	YES
	➡ IS **A1** OR **A2** CODED **YES?**	NO	YES

A3 **Over the past two weeks, when you felt depressed or uninterested:**

a	Was your appetite decreased or increased nearly every day? Did your weight decrease or increase without trying intentionally (i.e., by ±5% of body weight or ±8 lbs. or ±3.5 kgs., for a 160 lb./70 kg. person in a month)? IF **YES** TO EITHER, CODE **YES**.	NO	YES *
b	Did you have trouble sleeping nearly every night (difficulty falling asleep, waking up in the middle of the night, early morning wakening or sleeping excessively)?	NO	YES
c	Did you talk or move more slowly than normal or were you fidgety, restless or having trouble sitting still almost every day?	NO	YES *
d	Did you feel tired or without energy almost every day?	NO	YES
e	Did you feel worthless or guilty almost every day?	NO	YES
f	Did you have difficulty concentrating or making decisions almost every day?	NO	YES
g	Did you repeatedly consider hurting yourself, feel suicidal, or wish that you were dead?	NO	YES

ARE **5** OR MORE ANSWERS (**A1-A3**) CODED **YES**?

NO **YES ***

MAJOR DEPRESSIVE EPISODE, CURRENT

PATIENT HEALTH QUESTIONNAIRE-9 (PHQ-9)

Over the last 2 weeks, how often have you been bothered by any of the following problems? *(Use "✔" to indicate your answer)*	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

FOR OFFICE CODING 0 + _____ + _____ + _____

=Total Score: _____

PHQ-9 score > 10 had a sensitivity of 88% and a specificity of 88% for major depressive disorder. Kurt et al., 2001

Depression

Major Depressive Disorder among Palliative Patients – Comparing 4 sets of Diagnostic Criteria

DSM IV (etiologic approach)	Modified DSM-IV (inclusive approach)	Cavanaugh Criteria (exclusive approach)	Endicott Criteria (substitutive approach)
Dysphoric mood	Same as DSM-IV (Question 1 – 9) but symptoms are counted regardless whether or not they might be attributable to cancer		
Loss of interest or pleasure			
Psychomotor agitation or retardation			
Feelings of worthlessness, self reproach or excessive or inappropriate guilt			
Recurrent thought of death, suicidal ideation, wishes to be dead or suicidal attempt			
Diminished ability to think or concentrate or indecisiveness			Fearfulness or depressed appearance in face or body posture
Weight loss or gain or a decrease in appetite		Not participating in medical care in spite of ability to do so, not progressive despite improving medical condition and/or in functioning at a lower level than the medical condition warrants	Social withdrawn or decreased talkativeness
Insomnia or hypersomnia			Brooding, self pity or pessimism
Fatigue or loss of energy			Cannot be cheered up, doesn't smile, no response to good news or funny situations

Common Anxiety Disorders

1. Situational or stress-related anxiety
2. Phobic disorders
3. Generalized anxiety disorder
4. Panic disorder
5. Obsessive-compulsive disorder
6. Illness anxiety disorder

Signs and Symptoms

- Some may report one specific, distressing symptom (eg, diarrhea or insomnia)
- Some may complain of a variety of unrelated symptoms (eg, Headaches, gastrointestinal disturbances, muscle tension, chest pain or tightness, and palpitations).
- Symptoms that are medically unexplained -> should raise the clinician's suspicion of an anxiety or depressive disorder

Gliatto MF. 2000, Kroenke K. 2003.

Table 1. Diagnostic Criteria for Generalized Anxiety Disorder

A. Excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance).

B. The individual finds it difficult to control the worry.

C. The anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms having been present for more days than not for the past 6 months):

Note: Only one item is required in children.

1. Restlessness or feeling keyed up or on edge.
2. Being easily fatigued.
3. Difficulty concentrating or mind going blank.
4. Irritability.
5. Muscle tension.
6. Sleep disturbance (difficulty falling or staying asleep, or restless, unsatisfying sleep).

D. The anxiety, worry, or physical symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.

E. The disturbance is not attributable to the physiological effects of a substance (e.g., a drug of abuse, a medication) or another medical condition (e.g., hyperthyroidism).

F. The disturbance is not better explained by another mental disorder (e.g., anxiety or worry about having panic attacks in panic disorder, negative evaluation in social anxiety disorder [social phobia], contamination or other obsessions in obsessive-compulsive disorder, separation from attachment figures in separation anxiety disorder, reminders of traumatic events in posttraumatic stress disorder, gaining weight in anorexia nervosa, physical complaints in somatic symptom disorder, perceived appearance flaws in body dysmorphic disorder, having a serious illness in illness anxiety disorder, or the content of delusional beliefs in schizophrenia or delusional disorder).

Reprinted with permission from the American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. *5th ed. Washington, DC: American Psychiatric Association; 2013:222.*

Generalized Anxiety Disorder 7-item (GAD-7) scale

Over the last 2 weeks, how often have you been bothered by the following problems?	Not at all sure	Several days	Over half the days	Nearly every day
1. Feeling nervous, anxious, or on edge	0	1	2	3
2. Not being able to stop or control worrying	0	1	2	3
3. Worrying too much about different things	0	1	2	3
4. Trouble relaxing	0	1	2	3
5. Being so restless that it's hard to sit still	0	1	2	3
6. Becoming easily annoyed or irritable	0	1	2	3
7. Feeling afraid as if something awful might happen	0	1	2	3
Add the score for each column	+	+	+	
Total Score *(add your column scores)* =				

If you checked off any problems, how difficult have these made it for you to do your work, take care of things at home, or get along with other people?

Score of 10 or more has an 89% sensitivity and an 82% specificity for detecting GAD.

Scores of *5, 10, and 15* may be represent mild, moderate and severe levels of anxiety.

Curran GM, et al., 2006.

PHARMACOLOGICAL TREATMENT

REVIEW ARTICLE

The Use of Antidepressants for Physical and Psychological Symptoms in Cancer

Syahrir Zaini[1,2,*], Ng Chong Guan[1], Ahmad Hatim Sulaiman[1], Nor Zuraida Zainal[1], Hasniza Zaman Huri[3] and Siti Hadijah Shamsudin[2]

Abstract: Cancer patients are commonly associated with various physical and psychological symptoms. In palliative setting, the aims are to relieve those symptoms, improve quality of life, and increase medication adherence among cancer patients. Antidepressants are generally accepted for the treatment of depression among patients with or without cancer. Some other potential benefits of the antidepressants have been reported in cancer patients.

Objective: This study aims to review the use of antidepressants for physical and psychological symptoms in cancer patients.

Results: Our findings showed the mixed result of positive and negative findings in various symptoms associated with cancer patients. These studies are categorised according to the hierarchy of evidence from high to low level, namely randomised controlled trials, cohort studies, case-control studies, case series, case reports, as well as other type of publications. The majority of antidepressants used in cancer patients seem to be beneficial for the treatment of depression, anxiety, hot flashes and other symptoms such as sexual dysfunction, fatigue, nicotine dependence, vasomotor symptoms, executive functions, sleep problems, pruritus, as well as for hypochondriasis. While fluoxetine was found to be associated with the reduction of antiemetic property in ondansetron, mirtazapine was identified to be a good alternative in treating nausea and cachexia among cancer patients.

Conclusion: More research studies with adequate statistical power are warranted to validate the use of antidepressants among cancer patients in treating these physical and psychological symptoms.

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The prevalence and pharmacotherapy of depression in cancer patients

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ABSTRACT

Background: Depression is a frequent and serious comorbid condition in cancer patients that may require special attention. We investigate the prevalence of depression in cancer and review the current state of evidence regarding the effectiveness of drug treatment of depression in this group.
Methods: We conducted a literature search for reports of prevalence rate of Major Depressive Disorder (MDD) in cancer patients based on Structured Clinical Interview based on DSM (SCID). We estimated the prevalence rate by combining the data of all reports. In addition we identified controlled trials studying the effect of psychotropic drugs in depressed cancer patients.
Results: Based on the 31 reports, the estimated prevalence rate of depression in cancer patients is 10.8% (996/9248). There were 8 trials comparing antidepressant with other active treatment in cancer patients. Only mianserin and alprazolam demonstrated to improve the depressive symptoms.
Limitations: This literature review cannot resolve the challenge of diagnosing depression in severely ill and is subject to publication bias.
Conclusion: Despite the high prevalence of depression in cancer patients, studies on effective pharmacotherapy are relatively scarce. The evidence for the efficacy of conventional medication used for the treatment of depression such as tricyclics antidepressants and selective serotonin reuptake inhibitors is very limited. It is possible that they may be less suitable in this setting because of their relatively late onset of action. The use of psychostimulants which have a rapid onset of action therefore deserves more attention.

Table 1
Prevalence of major depressive disorder in cancer patients among studies using SCID (n = 31).

No	Study	Design	Type of cancer	Inpatients	Setting	SCID	Sample size (N)	MDD		Age Mean ± SD	Female (%)
								n	(%)		
1.	Hosaka et al. (1994)	Prevalence study (cross-sectional)	Hematological	Yes	Hospital	DSM III R	31	2	6.4	52.35 ± 16.2	25.8
2.	Minagawa et al. (1996)	Prevalence study (cross-sectional)	All	Yes	Palliative care unit	DSM III R	93	3	3.2	67.2 ± 11.9	41.0
3.	Leopold et al. (1998)	Prevalence study (cross-sectional)	All	N/R	Medical centre	DSM III R	53	10	19.0	N/R	38.0
4.	Costantini et al. (1999)	Prevalence study (cross-sectional)	Breast	N/R	Cancer Institute	DSM III R	132	13	9.8	52.7 ± 9.6	N/R
5.	Burgess et al. (2000)	Etiological study (cross-sectional)	Breast	N/R	Hospital	DSM III R	158	12	7.6	53.0 ± N/R	100.0
6.	Kugaya et al. (2000)	Prevalence study (cross-sectional)	Head and neck	Yes	Cancer centre	DSM III R	107	4	3.7	61.0 ± 11.8	24.0
7.	Okamura et al. (2000)	Prevalence study (cross-sectional)	Breast	Both	Cancer centre	DSM IV	55	4	7.2	N/R	100.0
8.	Uchitomi et al. (2000)	Prevalence study (prospective)	NSCLC	No	Cancer centre	DSM III R	223	20	9.0	62.6 ± 10.8	39.0
9.	Ciaramella and Polli (2001)	Prevalence study (cross-sectional)	All	No	Palliative care unit	DSM III R	100	49	49.0	64.0 ± N/R	50.0
28.	Ozalp et al. (2008)	Diagnostic study (cross-sectional)	Breast	Yes	Hospital	DSM IV	204	17	8.3	50.8 ± 11.9	100.0
29.	Alexander and Palmer (2010)	Diagnostic study (cross-sectional)	Breast	No	Clinic	DSM IV	200	18	9.0	58.1 ± 12.2	100.0
30.	Olden et al. (2009)	Diagnostic study (cross-sectional)	All	Yes	Hospital	DSM IV	422	72	17.1	65.8 ± 13.7	56.6
31.	Singer et al. (2009)	Diagnostic study (cross-sectional)	All	Yes	Hospital	DSM IV	689	66	9.6	N/R	41.4
Total							9248	996	10.8		

SCID = Structured Clinical Interview for DSM, DSM = Diagnostic and Statistical Manual, SD = standard deviation, NSCLC = Non-Small Cell Lung Carcinoma, N/R = information was not included in the report.

[a] Early stage.

[b] Advanced stage.

Extracted from C.G. Ng et al. Journal of Affective Disorders (2011)

- the pooled prevalence of depression in cancer patients was 10.8% (996/9248, in the range of 3.7–49.0%).
- There is emphasis on the need for rapid relief of symptoms or rapid onset of antidepressant agents in this group of patients.
- Psychostimulants such as methylphenidate with rapid onset of action have been proposed for the treatment of depressed cancer patients.

Stiefel et al., 2001; Okamura et al., 2008; Masand and Tesar, 1995; Rozans et al., 2002; Kaminski and Sjøgren, 2007

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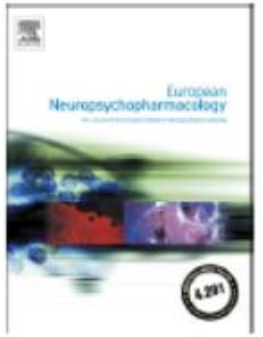
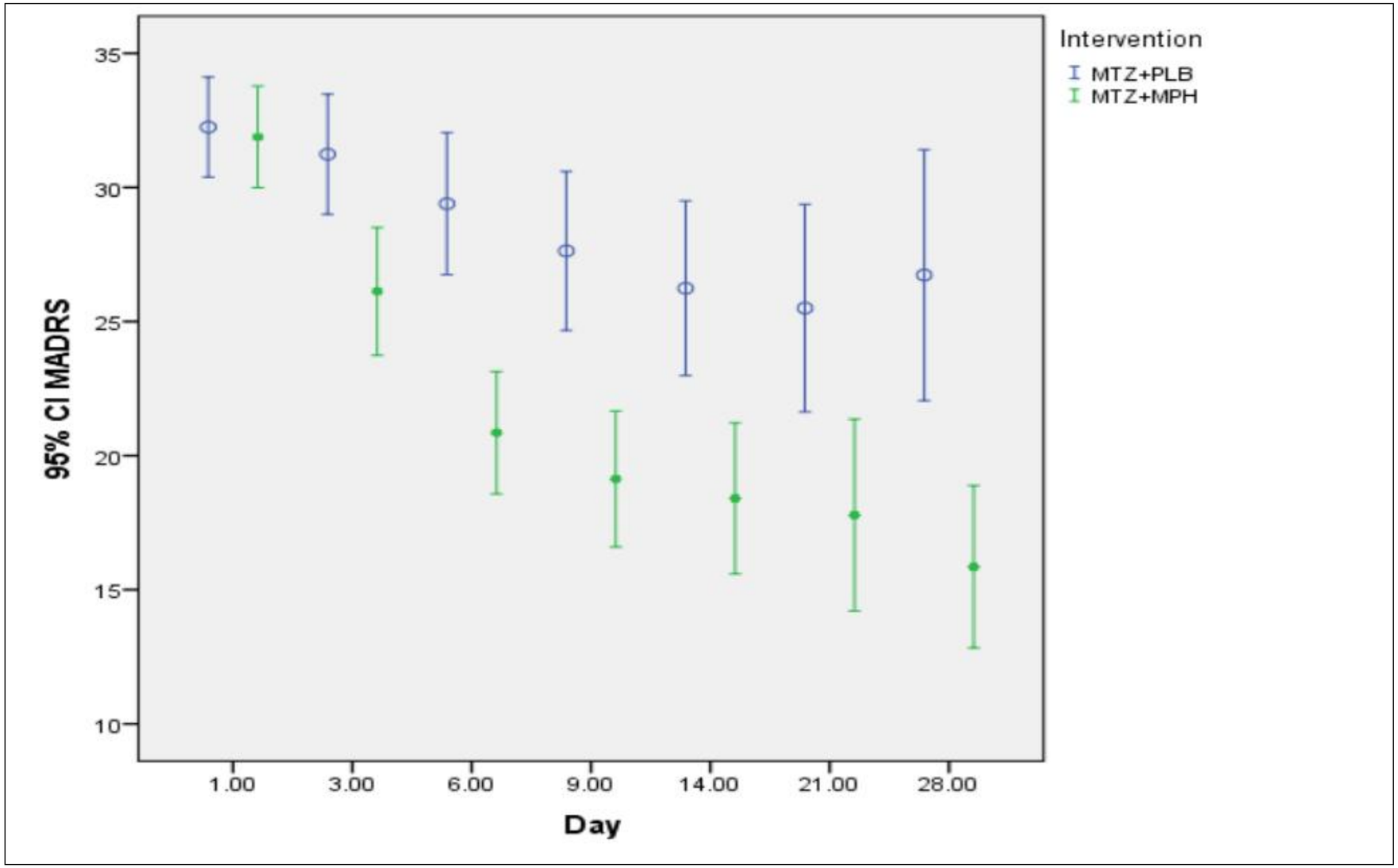


Rapid response to methylphenidate as an add-on therapy to mirtazapine in the treatment of major depressive disorder in terminally ill cancer patients: A four-week, randomized, double-blinded, placebo-controlled study

Ng Chong Guan[a,b,*], Marco P.M. Boks[a,c], Kit C.B. Roes[a], Nor Zuraida Zainal[b], Ahmad Hatim Sulaiman[b], Tan Seng Beng[d], Niek J. de Wit[a]

Figure 1 Mean Montgomery-Asberg Depression Rating Scale scores of the 88 subjects on each visit



Adverse events

Table 3 Incidence of treatment –emergent adverse events in 27 (30.7%) patients

Body system	MTZ + MPH (N=44) *n* (%)	MTZ + PLB (N=44) *n* (%)
General		
Fever	1 (2.3)	1 (2.3)
Headache	-	2 (4.5)
Pain	2 (4.5)	1 (2.3)
Sepsis	-	1 (2.3)
Digestive		
Gastric	2 (4.5)	-
Diarrhea	-	2 (4.5)
Vomit	1 (2.3)	-
Cardiovascular		
Hypotension	-	1 (2.3)
Nervous		
Giddiness	2 (4.5)	2 (4.5)
Confusion	1 (2.3)	1 (2.3)
Psychosis	2 (4.5)	1 (2.3)
Agitation	1 (2.3)	-
Insomnia	1 (2.3)	-
Tremor	1 (2.3)	-
Seizure	1 (2.3)	-

Percentage is based on the number of subjects in each group (*n*=44)

Issues In Pharmacologic Treatment

- Paroxetine decrease plasma concentrations of an active tamoxifen metabolite by as much as 64% (Stearns et al., 2003)
- Paroxetine, fluvoxamine, and fluoxetine are potent inhibitors of various cytochrome P450 isoenzymes
- Inhibitory potentials of sertraline and citalopram to be minimal (Hiemke & Hartter, 2000)
- Venlafaxine and mirtazapine are also weak inhibitors and may therefore be used safely (Spina et al. 2003)

NON-PHARMACOLOGICAL TREATMENT

Coping Strategies in Cancer Patients

Coping

Coping is a dynamic, progressive and life-preserving process of responding to a perceived threat to the self like cancer.

- Problem focused strategies which intervene on the stressful situation
- Emotion-focused strategies which target the emotional distress associated with the situation.

(Carver et al., 1989)

Religious Coping

- Use of religious beliefs or practices to reduce distress and deal with problems in life. *(Koenig et al., 1997)*
- Religious coping methods can be further classified into positive and negative religious coping. *(Pargament et al. 1998)*

Brief RCOPE

(+) 1. Looked for a stronger connection with God.
(+) 2. Sought God's love and care.
(+) 3. Sought help from God in letting go of my anger.
(+) 4. Tried to put my plans into action together with God.
(+) 5. Tried to see how God might be trying to strengthen me in this situation.
(+) 6. Asked forgiveness for my sins.
(+) 7. Focused on religion to stop worrying about my problems.
(-) 8. Wondered whether God had abandoned me.
(-) 9. Felt punished by God for my lack of devotion.
(-) 10. Wondered what I did for God to punish me.
(-) 11. Questioned God's love for me.
(-) 12. Wondered whether my church had abandoned me.
(-) 13. Decided the devil made this happen.
(-) 14. Questioned the power of God.

Pergament et al., 2000

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ORIGINAL PAPER

Anxiety and Depression in Cancer Patients: The Association with Religiosity and Religious Coping

Guan Chong Ng[1] · Salina Mohamed[2] · Ahmad Hatim Sulaiman[1] · Nor Zuraida Zainal[1]

Abstract There is a lack of studies looking into religiosity and religious coping in cancer patient. In this cross-sectional study, we examined the religiosity using Duke University Religion Index, religious coping using Brief Religious Coping Scale, anxiety and depression based on Hospital Anxiety and Depression Scale among 200 cancer patients. The association between religiosity and religious coping with anxiety and depression was studied. The findings showed that subjects with anxiety or depression used more negative religious coping and had lower non-organization religiosity. Hence, measurements in reducing negative religious coping and encouraging religious activities could help to reduce psychological distress in cancer patients.

Results

Table 4 Analysis of the association between religiosity, religious coping with depression and anxiety (based on HADS scores) among the study subjects using logistic regression test

	SLR			MLR		
	OR[a]	95 % CI	*p* value	OR[b]	95 % CI	*p* value
Depression						
RCOPE positive	1.03	0.98–1.09	0.20	1.00	0.94–1.06	0.87
RCOPE negative	0.88	0.82–0.96	<0.01	0.89	0.82–0.97	0.01
Organizational religiosity	1.19	0.97–1.46	0.09	1.16	0.94–1.43	0.18
Non-organizational religiosity	1.27	1.08–1.49	0.04	2.47	1.26–4.84	0.01
Intrinsic religiosity	1.07	0.97–1.18	0.16	1.00	0.88–1.12	0.93
	SLR			MLR		
	OR[a]	95 % CI	*p* value	OR[c]	95 % CI	*p* value
Anxiety						
RCOPE positive	1.04	0.99–1.09	0.12	0.98	0.88–1.07	0.61
RCOPE negative	0.88	0.82–0.96	<0.01	0.87	0.80–0.96	<0.01
Organizational religiosity	1.08	0.89–1.32	0.43	1.02	0.76–1.37	0.89
Non-organizational religiosity	1.23	1.05–1.45	0.01	1.13	0.88–1.46	0.34
Intrinsic religiosity	1.10	1.00–1.21	0.06	1.01	0.84–1.23	0.89

SLR single logistic regression, *MLR* multiple logistic regression, *CI* confident interval, *depression* HADS-depression subscale scores ≥5, *anxiety* HADS-anxiety subscale scores ≥7

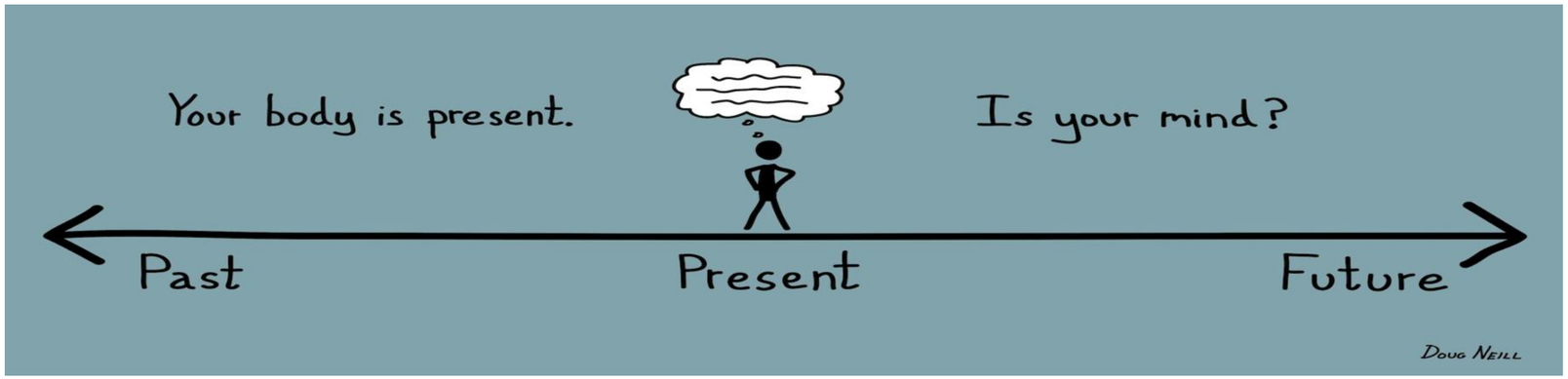
Conclusion

In conclusion, religiosity is associated with the level of psychological distress in cancer patients. Depression and anxiety are more common in cancer patients with low level of intrinsic faith and less practices of non-organizational (private) religious activities. The current study also showed that cancer patients with depression or cancer were using more negative coping methods. A prospective longitudinal study is helpful in establishing the causal relationship and answering whether psychological distress in cancer patients suppresses the level of belief in Gods and uses more negative religious coping methods or vice verse.

Mindfulness for Distress

What is Mindfulness?

- Mindfulness is the basic human ability to be fully present, aware of where we are and what we're doing, and not overly reactive or overwhelmed by what's going on around us



Mindfulness

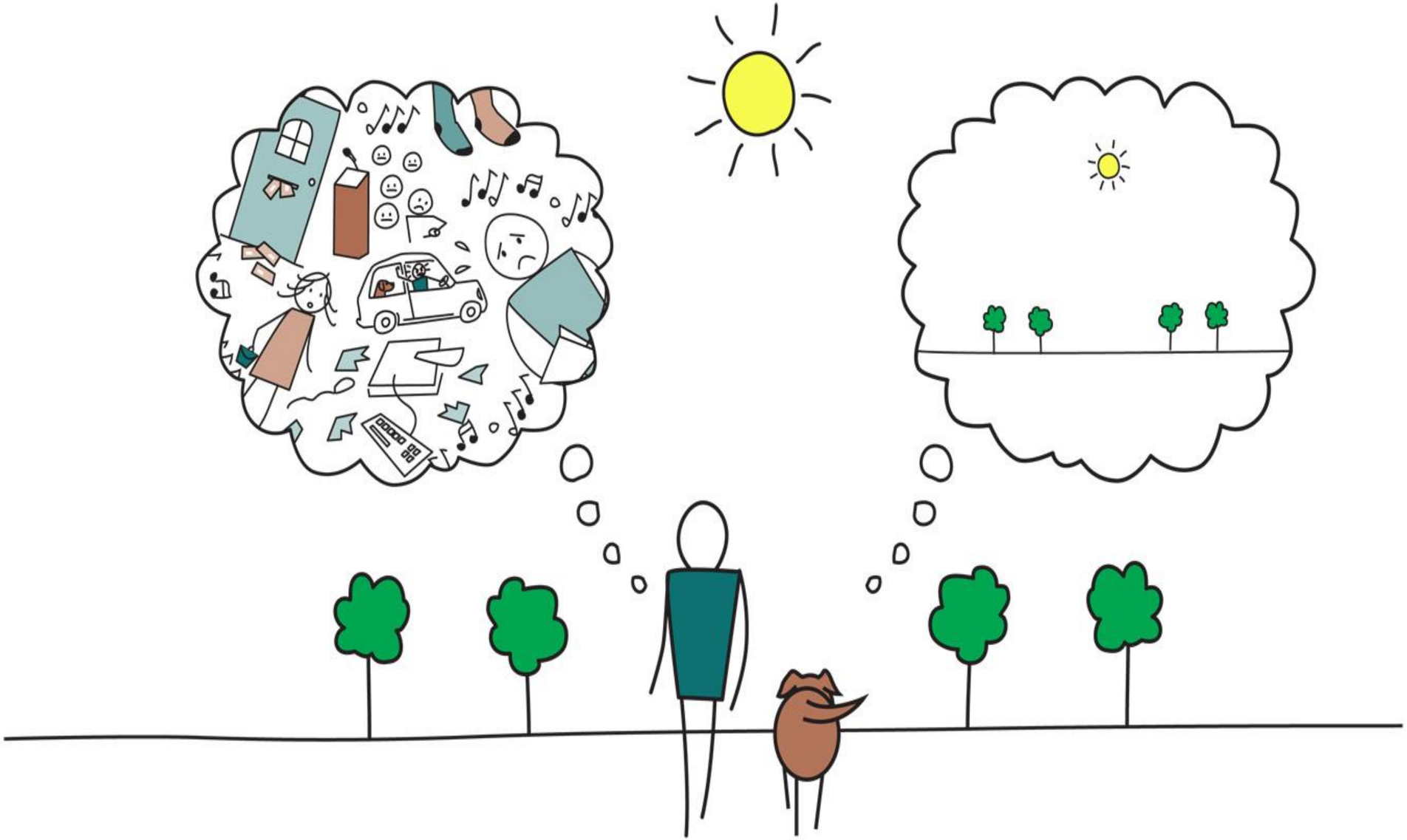
Paying attention

- On purpose
- In the present moment
- Non-reactively

VS

Mind[full]ness

- Mindlessness
- Automaticness
- Lifeless
- Robot
- Zombie



Mind Full, or Mindful?

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The Effect of 5 Minutes of Mindful Breathing to the Perception of Distress and Physiological Responses in Palliative Care Cancer Patients: A Randomized Controlled Study

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Background: Palliative cancer patients suffer from high levels of distress. There are physiological changes in relation to the level of perceived distress.

Objective: To study the efficacy of 5 minutes of mindful breathing (MB) for rapid reduction of distress in a palliative setting. Its effect to the physiological changes of the palliative cancer patients was also examined.

Methods: This is a randomized controlled trial. Sixty palliative cancer patients were recruited. They were randomly assigned to either 5 minutes of MB or normal listening arms. The changes of perceived distress, blood pressure, pulse rate, breathing rate, galvanic skin response, and skin surface temperature of the patients were measured at baseline, after intervention, and 10 minutes post-intervention.

Results: There was significant reduction of perceived distress, blood pressure, pulse rate, breathing rate, and galvanic skin response; also, significant increment of skin surface temperature in the 5-minute MB group. The changes in the 5-minute breathing group were significantly higher than the normal listening group.

Conclusion: Five-minute MB is a quick, easy to administer, and effective therapy for rapid reduction of distress in palliative setting. There is a need for future study to establish the long-term efficacy of the therapy.

Results and Conclusion

TABLE 2. COMPARING THE CHANGES OF THE PERCEIVED DISTRESS AND PHYSIOLOGICAL RESPONSES BETWEEN PALLIATIVE CANCER PATIENTS WITH 5 MINUTES OF MINDFUL BREATHING ($N=30$) AND NORMAL LISTENING ($N=30$)

	Intervention arm: 5-minute mindful breathing					*Control arm: Normal listening*					*5-minute mindful breathing vs. normal listening*	
	T1 mean (SD)	T2 mean (SD)	T3 mean (SD)	T1–T2 (p-value)	T1–T3 (p-value)	T1′ mean (SD)	T2′ mean (SD)	T3′ mean (SD)	T1′–T2′ (p-value)	T1′–T3′ (p-value)	T1–T2 vs. T1′–T2′ (p-value)	T1–T3 vs. T1′–T3′ (p value)
Distress	6.29 (1.66)	4.71 (1.57)	4.71 (1.40)	<0.01	<0.01	6.00 (1.77)	5.79 (2.01)	5.76 (2.04)	0.06	0.05	<0.01	<0.01
Breathing rate	19.90 (5.42)	18.90 (5.00)	19.39 (5.44)	<0.01	<0.01	20.34 (4.29)	20.31 (4.13)	20.45 (3.67)	0.92	0.34	<0.01	<0.01
Systolic pressure	126.71 (16.44)	120.10 (15.52)	124.48 (21.24)	<0.01	0.06	127.66 (19.31)	128.07 (18.90)	130.38 (21.42)	0.96	0.27	<0.01	<0.01
Diastolic pressure	77.84 (11.91)	75.00 (9.32)	74.81 (10.74)	0.02	0.02	77.97 (16.03)	78.66 (14.23)	78.31 (15.01)	0.58	0.94	0.03	0.03
Pulse rate	91.00 (14.51)	86.97 (15.62)	87.87 (15.40)	<0.01	0.06	89.76 (11.83)	91.72 (11.83)	89.66 (10.78)	0.07	0.72	<0.01	0.09
Skin temperature	86.76 (6.00)	89.22 (5.18)	88.56 (4.91)	<0.01	<0.01	87.34 (5.31)	88.78 (6.00)	87.81 (5.57)	0.02	0.50	0.05	0.03
Skin response	0.96 (1.05)	0.75 (0.65)	0.73 (0.65)	<0.01	<0.01	0.93 (0.78)	0.95 (0.97)	0.97 (1.01)	0.33	0.81	0.13	<0.01

Distress = psychological distress based on distress thermometer, breathing rate = breathing per minute, systolic and diastolic blood pressure in mmHg, pulse rate = pulse per minute, skin surface temperature in °F measured using Dr. Lowenstein's stress thermometer SC911, galvanic skin response in microsiemens measured using Mindfield eSense Skin Response Biofeedback System, the within-group changes (T1 vs. T2 and T1 vs. T3) were analyzed with Wilcoxon signed-rank test, the between-group (5 minutes of mindful breathing vs. normal listening) differences in changes were analyzed using Mann–Whitney test. T1 = Time point before intervention, T2 = time point immediately after intervention, T3 = 10 minutes after intervention.

At the end-stage of life, palliative care cancer patients experience a high level of distress. There is a need for a nonpharmacological or alternative therapy with rapid efficacy for the reduction of distress in this group of patients. Five-minute MB therapy is a simple, quick, and easy to practice therapeutic option. It produces a rapid reduction of perceived distress in terminally ill cancer patients. It also reduces the stress-related physiological responses in the patients. In view of the risk of recurrence of distress, it is advisable to have regular practice of 5-minute MB to achieve a sustainable reduction of perceived distress among the palliative cancer patients.

Summary

- Psychological distress is a common comorbid of cancer that should not be overlooked
- Cancer patients are encouraged to maintain a stable supportive social network
- Intrinsic faith and more practices of religious activities can be a form of strength and determination in facing cancer
- 5-minite mindful breathing, a brief, quick and easy to administer psychological intervention reduces distress rapidly in palliative care patients

Thank you