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A Systematic Qualitative Analysis of Psychoeducational Interventions for Depression in Patients With Cancer

Andrea M. Barsevick, DNSc, RN, AOCN®, Carole Sweeney, MSN, RN, AOCN®, Eileen Haney, and Esther Chung, BSN, RN

Purpose/Objectives: To determine whether research-based recommendations can be made about the clinical management of depression in patients with cancer.

Data Sources: Reports of scientific studies, qualitative or quantitative systematic reviews of scientific studies, and practice guidelines published from 1980–2000.

Data Synthesis: In all, 36 pieces of evidence supported the conclusion that psychoeducational interventions benefit depressive symptoms. Evidence included two well-conducted meta-analyses and nine well-designed randomized clinical trials with large samples ($N > 100$). With regard to intervention content, 70% of behavior therapy studies and 66% of counseling studies drew conclusions that supported the hypothesis. In addition, 58% of studies that tested behavior therapy or counseling in combination with cancer education had positive results.

Conclusions: The evidence supports the conclusion that psychoeducational interventions reduce depressive symptoms in patients with cancer and that behavior therapy or counseling alone or in combination with cancer education is beneficial.

Implications for Nursing Practice: Nurses can select from a variety of educational, behavioral, and counseling techniques to prevent or manage depression in their patients.

The overall goal of this review was to determine the extent to which research-based recommendations could be made about the management of depression in patients with cancer. The objective was to determine if psychoeducational interventions for patients with cancer significantly reduce depressive symptoms.

Defining depression for this analysis was not an easy task. Many of the studies selected for review evaluated psychosocial interventions that, although likely to reduce or manage depression, were targeted to a variety of negative emotional experiences of patients with cancer, such as anxiety, distress, sadness, vulnerability, and fear. Although unstated, there appeared to be an implicit assumption that most patients with cancer would experience these symptoms on an ongoing basis during their cancer experience. For purposes of this review, the authors adapted Holland's (1997) method of describing emotional states as a continuum.

Key Points . . .

- ▶ The term “depression” is used to denote the entire range of depressive symptoms, including normal sadness in response to loss as well as chronic depressed emotional affect and clinical depression meeting specific criteria for psychiatric disorder.
- ▶ The term “psychoeducational intervention” refers to therapeutic approaches that involve information giving and receiving, discussion of concerns, problem solving, coping skills training, expression of emotion, and social support.
- ▶ Evidence supports the benefit of psychoeducational interventions in reducing depressive symptoms in patients with cancer.
- ▶ Future studies should examine inclusion criteria that address the presence of depression and the relationship between dose of intervention and degree of response.

Goal for CE Enrollees

To enhance nurses' knowledge of psychoeducational interventions for depression in patients with cancer.

Objectives for CE Enrollees

On completion of this CE, the participant will be able to

1. Discuss variables used in the analysis of psychoeducational interventions.
2. Discuss limitations acknowledged in the review of studies for the analysis.
3. Discuss current state-of-the-art conclusions regarding the use of psychoeducational intervention for patients with cancer with depression.

Andrea M. Barsevick, DNSc, RN, AOCN®, is a director of nursing research and education, and Carole Sweeney, MSN, RN, AOCN®, is a research assistant, both at the Fox Chase Cancer Center in Philadelphia, PA; Eileen Haney is a student in the School of Nursing at LaSalle University in Philadelphia, PA; and Esther Chung, BSN, RN, is a student in the School of Nursing at the University of Pennsylvania in Philadelphia. This article is one of a series resulting from PRISM, a project funded through an unrestricted grant from Ortho Biotech Products, L.P. given to the ONS Foundation Center for Leadership, Information, and Research (CLIR).



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Depression includes a range of feelings and emotions expressed by individuals with cancer as they manage personal and illness-related problems. Depressive emotions include the normal sadness expected as a result of loss of health, well-being, disability, and possible death. When depressive emotions are greater than would be considered normal and interfere with functioning but are not severe enough to constitute a recognizable psychiatric problem, these are considered “subsyndromal” symptoms—that is, they do not meet the criteria for psychiatric diagnosis using the *Diagnostic and Statistical Manual IV (DSM-IV)* (American Psychiatric Association, 2000). When symptoms are more severe and meet DSM-IV criteria, they may be defined as a depressive syndrome (see Figure 1). The most common psychiatric diagnoses in patients with cancer are adjustment reactions with

- A. Five (or more) of the following symptoms have been present during the same two-week period and represent a change from previous functioning; at least one of the symptoms is either (a) depressed mood or (b) loss of interest or pleasure.
1. Depressed mood most of the day, nearly every day, as indicated by either subjective report (e.g., feels sad or empty) or observation made by others (e.g., appears tearful). *Note.* In children and adolescents, this can be irritable mood.
 2. Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day (as indicated by either subjective account or observation made by others).
 3. Significant weight loss when not dieting or weight gain (e.g., a change of more than 5% of body weight in a month) or decrease or increase in appetite nearly every day. *Note.* In children, consider failure to make expected weight gains.
 4. Insomnia or hypersomnia nearly every day
 5. Psychomotor agitation or retardation nearly every day (observable by others, not merely subjective feelings of restlessness or being slowed down)
 6. Fatigue or loss of energy nearly every day
 7. Feelings of worthlessness or excessive or inappropriate guilt (which may be delusional) nearly every day (not merely self-reproach or guilt about being sick)
 8. Diminished ability to think or concentrate, or indecisiveness nearly every day (either by subjective account or as observed by others)
 9. 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
- B. The symptoms do not meet criteria for a mixed episode.
- C. The symptoms cause clinically significant distress or impairment in social, occupational, or other important areas of functioning.
- D. The symptoms are not due to the direct physiological effects of a substance (e.g., a drug of abuse, a medication) or a general medical condition (e.g., hypothyroidism).
- E. The symptoms are not better accounted for by bereavement (i.e., after the loss of a loved one, the symptoms persist for longer than two months or are characterized by marked functional impairment, morbid preoccupation with worthlessness, suicidal ideation, psychotic symptoms, or psychomotor retardation).

Figure 1. Criteria for a Major Depressive Episode

Note. From *Diagnostic and Statistical Manual of Mental Disorders (4th ed.)*. Copyright 2000 by American Psychiatric Association. Reprinted by permission.

anxiety, depression, or mixed features (Derogatis et al., 1983). Major depression is diagnosed less frequently.

The term “depression” is used in this review to denote the entire range of depressive symptoms, including normal sadness in response to loss, as well as chronic depressed emotional affect and clinical depression meeting specific criteria for psychiatric disorder. Because studies of psychosocial interventions were unlikely to systematically rate depression levels as normal, subsyndrome, or syndrome, no information is provided about level of depression in the studies reviewed. The fact that the majority of studies reviewed did not require the presence of depression as an inclusion criterion for participation also is important. Only three studies (Greer et al., 1992; Telch & Telch, 1986; Worden & Weisman, 1984) restricted inclusion to people at risk for or experiencing depression.

Identification and Selection of Studies

The term “psychoeducational intervention” encompasses therapeutic approaches that involve processes, such as information giving and receiving, discussion of concerns, problem solving, coping skills training, expression of emotion, and social support. Using the information provided by the authors of each reviewed research report, the interventions were classified using the categories described in Table 1. Intervention categories, adapted from Meyer and Mark (1995), included behavior therapy, counseling/psychotherapy, education/information, and social support.

Articles published between 1980 and 2000 were included in the review. Types of articles included were reports of scientific studies, qualitative or quantitative systematic reviews of scientific studies, and practice guidelines based on research. Reports of scientific studies were included if a psycho-

Table 1. Definition of Psychoeducational Interventions

Intervention Type	Definition of Content
Counseling/psychotherapy	Interactive verbal interventions, including nondirective, psychodynamic, existential, supportive, general, or crisis intervention; no specific behavioral or coping skills are taught; include social support by professionals.
Behavior therapy	Methods focused on changing specific thoughts or behaviors or on learning specific coping skills; includes progressive muscle relaxation training, meditation, hypnotherapy, systematic desensitization, biofeedback, behavior modification or reinforcement, and cognitive therapy.
Education/information	The provision by a professional of sensory, procedural, or medical information about cancer or cancer therapy; coping information, if provided, does not include active rehearsal of new behaviors.
Social support	Supportive interventions provided by patients with cancer or family members or other laypersons but not by professionals
Other	Any unusual therapies of a psychosocial nature not mentioned in previous categories (e.g., music therapy)

educational intervention was evaluated and depression was a measured outcome. Systematic reviews also were needed to meet these criteria. In addition, systematic reviews had to examine specific hypotheses, describe the search strategy, and state conclusions explicitly. Treatment guidelines had to be evidence-based.

Initially, all types of interventions for depression were considered for inclusion. However, some were excluded later because of the small number of studies available for review. Specifically excluded were studies of children with cancer (Last & van Veldhuizen, 1996), spouses of patients with cancer (Blanchard, Toseland, & McCallion, 1996), as well as interventions that were not strictly psychoeducational, such as exercise (Mock et al., 1994, 1997) or complementary therapy (Wyatt, Friedman, Given, Given, & Beckrow, 1999). Also excluded were studies that used a comparison group, such as early versus late intervention (Edgar, Rosberger, & Nowlis, 1992), counseling versus pharmacotherapy (Holland et al., 1991), and patient versus professional support (Houts, Whitney, Mortel, & Bartholomew, 1986) rather than a usual care or attentional control group.

Strategies to obtain literature included searches of computerized databases, including the Cumulative Index to Nursing and Allied Health Literature, MEDLINE®, PsychLit®, and CancerLit®. Search terms included cancer/neoplasms, psychological depression, patient/client education, counseling, psychotherapy, cognitive therapy, behavioral therapy, relaxation, guided imagery, and support groups. Reference lists of relevant studies and reviews were examined to identify additional articles that met the criteria for inclusion.

The major variables included the sample characteristics of size, gender, and diagnosis. Intervention characteristics included the content of the experimental procedures tested in the study, the format of therapy (group versus individual), and the setting of the study. Study characteristics included procedures for allocation of participants to treatment groups, type of control group, and outcome measure. The outcome selected for analysis was depressive symptoms, whether measured by a separate scale or as part of a composite measure. Outcomes were coded according to the direction of treatment effect. Two advanced practice nurses coded the studies with the assistance of two nursing students.

All articles reviewed were rated according to the level of evidence criteria developed for the PRISM (Priority Symptom Management) review (see page 56). Quality criteria were based on study design characteristics, including sample size, allocation of participants to treatment groups, eligibility criteria, exposure to the experimental intervention, outcome evaluation, and consideration of potential confounding factors. Level of evidence criteria typically rates the quality of studies or reviews that are supportive of a specific hypothesis (Hadorn, Baker, Hodges, & Hicks, 1996). Because many of the studies included in this review had nonsignificant results, an additional rating (NS) was devised to capture information about these studies.

Critical Appraisal of Evidence

Quantitative Analyses

As seen in Tables 2 and 3, a robust body of literature has evaluated interventions for depression in patients with cancer. A total of 55 pieces of evidence were evaluated for this analy-

sis. These included 36 randomized clinical trials (RCTs), 7 quasi-experimental studies, and 5 descriptive studies (see Table 2). Three meta-analyses were included as systematic quantitative reviews; three qualitative systematic reviews also were included (see Table 3).

Study designs were primarily RCTs (N = 36); most of these used a usual care control group (N = 34). Quasi-experimental studies (N = 7) used a system other than randomization to allocate participants to study groups. Descriptive studies (N = 5) relied on pre- and post-test designs.

Thirty of 48 individual studies (63%) provided evidence in support of the benefit of psychoeducational intervention for depression in patients with cancer. Eleven studies provided level I, and 19 contributed level II evidence in support of the hypothesis (see Table 4).

With regard to sample characteristics, 11 RCTs had sample sizes greater than 100, a benchmark for level of evidence evaluation (Hadorn et al., 1996). The majority of studies included both males and females (N = 21). However, 15 studies included only female patients, whereas only 4 studies limited participation to males. All of the female-only studies concerned patients with breast cancer; the male-only studies included patients with testicular and prostate cancer, as well as two samples of mixed diagnoses treated at veterans administration hospitals. Only one sample evaluated hospitalized patients (Youssef, 1984); this study was published prior to the change to outpatient treatment of cancer. All other studies were conducted on ambulatory or mixed (inpatient and outpatient) samples.

Seventeen different measures of depression were used across studies. The Profile of Mood States (McNair, Lorr, & Droppleman, 1989) (N = 12 studies) and the Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1983) (N = 10) were the most frequently used measures.

The content of the experimental interventions was quite varied. The most frequently used single intervention was behavior therapy (N = 17 studies), including one or more of the following: relaxation training, biofeedback, or cognitive coping strategies. Nondirective counseling (N = 10) also was used as a single intervention. Seven studies tested education interventions. Fourteen studies tested a combination of two or more interventions. Twelve studies combined counseling or behavioral intervention with cancer education (see Table 5).

Qualitative Analyses

Three systematic qualitative reviews (Bottomley, 1998; Trijsburg, van Knippenberg, & Rijkman, 1992; Whatley & Milne, 1998) were reviewed. The qualitative reviews concluded that psychoeducational interventions benefit depression. Clinical treatment guidelines published by the National Cancer Center Network (NCCN) (Holland, 1997) were evidence-based and included recommendations for counseling psychotherapy in combination with pharmacologic treatment for patients with cancer with major depression.

Synthesis

Overall, the evidence supports the benefit of psychoeducational interventions in reducing depressive symptoms in patients with cancer. Two well-conducted meta-analyses and nine well-designed RCTs with larger samples provided level I evidence in support of this conclusion. Substantial level II and III evidence provides additional support.

Table 2. Reports Included in the Review by Category

Author	N	Diagnosis	Intervention	Number of Sessions	Control Group	Format	Level of Evidence
Randomized Clinical Trials (N > 100)							
Berglund et al., 1994	199	Mixed	Education/counseling: Structured thematic counseling (physical training, cancer information, coping skills)	11	A	G	NS
Bridge et al., 1988	154	Breast	Behavior therapy: G1: Muscle relaxation, deep breathing G2*: Relaxation, breathing, imagery	6	A	I	2
Burton & Parker, 1995	237	Breast	Counseling/psychotherapy: G1*: Preop interview and counseling G2*: Preop interview and "chat" G3*: Preop interview only G4: Usual care	1	UC	I	2
Edelman et al., 1999	124	Breast	Behavior therapy: Cognitive behavioral therapy (cognitive restructuring, relaxation, communication strategies)	12	UC	G	2
Forester et al., 1985	100	Mixed	Counseling: Psychotherapy (supportive educational, interpretive, cathartic)	10	UC	I	2
Greer et al., 1992	174	Mixed	Behavior therapy: Cognitive and behavioral techniques (cognitive restructuring, expression of feelings, communication strategies, relaxation)	6	UC	I	2
Helgeson & Cohen, 2000	230	Breast	Education/support: G1: Peer support only G2*: Education only	8	UC	G	2
Linn et al., 1982	120	Mixed	Counseling: Kübler-Ross model of counseling dying patients	NA	UC	I	2
McArdle et al., 1996	272	Breast	Counseling/education/support: G1*: Nurse education/counseling G2: Patient support G3: Patient support plus nurse education/counseling	NA	UC	G + I	2
McHugh et al., 1995	117	Mixed	Education: Audiotape of clinical interview with physician including diagnostic, treatment, and prognosis information	NA	UC	I	NS
McQuellon et al., 1998	150	Mixed	Education: Tour of clinic, description of clinic procedures, information about center, question and answer session	1	UC	I	2

A = attention; UC = usual care; G = group; I = individual; NA = information not available; NS = nonsignificant

* Indicates significant results for that condition

(Continued on next page)

Table 2. Reports Included in the Review by Category (Continued)

Author	N	Diagnosis	Intervention	Number of Sessions	Control Group	Format	Level of Evidence
Randomized Clinical Trials (N < 100)							
Bindemann et al., 1991	71	Mixed	Behavior therapy: Muscle relaxation	11	UC	I	NS
Burish & Jenkins, 1992	81	Mixed	Behavior therapy: G1: Electromyographic (EMG) biofeedback with relaxation G2: EMG biofeedback without relaxation G3: Skin temperature biofeedback with relaxation G4: Skin temperature biofeedback without relaxation G5: Relaxation only G6: No intervention	5	UC	I	NS
Burish & Lyles, 1981	16	NA	Behavior therapy: Muscle relaxation, imagery	5	UC	I	4
Cain et al., 1986	80	Mixed	Education/counseling: G1*: Group structured thematic counseling (cancer treatment, body image, sexuality, diet and exercise, relaxation, relationships and communication, goal setting) G2*: Individual structured thematic counseling (same themes)	8	UC	G vs. I	4
Christensen, 1983	20	Breast	Education/counseling	4	NA	I	4
Decker & Cline-Elsen, 1992	82	Mixed	Behavior therapy: Muscle relaxation and guided imagery	6	UC	I	4
Dodd, 1984	48	NA	Education: G1: Drug information G2: Side-effect management G3: Drug information and side-effect management G4: No intervention	1	UC	I	NS
Evans & Connis, 1995	72	Mixed	Behavior therapy versus counseling: G1*: Cognitive therapy, relaxation, and supportive network G2: Discussion and emotional expression	8	UC	G	4
Fawzy et al., 1990	66	Melanoma	Behavior therapy/education: Health education, problem-solving skills, relaxation, support	6	UC	G	4
Fukui et al., 2000	50	Breast	Behavior therapy/education: Health education, coping skills training, stress management, psychosocial support	6	UC	G	NS
Heinrich & Schag, 1985	51	Mixed	Behavior therapy/education/other: Health education, relaxation, cognitive therapy, problem solving, walking exercise	6	UC	G	NS

A = attention; UC = usual care; G = group; I = individual; NA = information not available; NS = nonsignificant

* Indicates significant results for that condition

(Continued on next page)

Table 2. Reports Included in the Review by Category (Continued)

Author	N	Diagnosis	Intervention	Number of Sessions	Control Group	Format	Level of Evidence
Jacobs et al., 1983	81	Hodgkin's	Education/counseling (two concurrent studies) Study 1*: Educational booklet and newsletters Study 2: Supportive therapy	Printed material 8	UC	G	8
Johnson et al., 1988	84	Prostate	Education: Treatment planning, radiation therapy, side effects, post-treatment	4 taped messages	UC	I	NS
Lerman et al., 1990	48	Mixed	Behavior therapy/education: Muscle relaxation, breathing, education booklet	1	UC	I	NS
Lyles et al., 1982	50	Mixed	Behavior therapy: Muscle relaxation, imagery	5	A/UC	I	NS
Marchioro et al., 1996	36	Breast	Behavior therapy: Cognitive therapy and family counseling	NA	UC	I	4
Moorey et al., 1998	57	Mixed	Behavior therapy: Cognitive and behavioral strategies for problem solving	8	A/UC	I	NS
Moynihan et al., 1998	73	Testes	Behavior therapy: Cognitive and behavioral strategies for problem solving	6	UC	I	NS
Pruitt et al., 1993	31	Mixed	Education: Radiation therapy, common concerns, communication	3	UC	I	4
Rainey, 1985	60	Mixed	Education: Radiation therapy personnel, equipment, treatment procedures, sensory information, misconceptions	Slide-tape program	UC	I	4
Spiegel & Bloom, 1983	54	Breast	Counseling: Supportive therapy	52	UC	G	4
Spiegel et al., 1981	58	Breast	Counseling: Supportive therapy	52	UC	G	NS
Telch & Telch, 1986	41	Mixed	Behavior therapy: G1*: Coping skills instruction G2: Supportive therapy	6	UC	G	4
Vasterling et al., 1993	60	Mixed	Behavior therapy versus other: G1: Muscle relaxation and imagery G2: Distraction (video games)	5	UC	I	NS
Watson et al., 1988	40	Breast	Education/counseling: Information, emotional support, practical advice	3	UC	I	4
Quasi-experimental Studies							
Capone et al., 1980	97	Mixed	Counseling: Crisis intervention counseling	4 (minimum)	UC	I	7
Gordon et al., 1980	217	Mixed	Counseling/education: Information, discussion of feelings, consultations and referrals	11 (mean)	UC	I	NS
LaRaja et al., 1997	100	Breast	Behavior therapy/counseling: Muscle relaxation, imagery, supportive psychotherapy	NA	UC	I	7

A = attention; UC = usual care; G = group; I = individual; NA = information not available; NS = nonsignificant

* Indicates significant results for that condition

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Table 2. Reports Included in the Review by Category (Continued)

Author	N	Diagnosis	Intervention	Number of Sessions	Control Group	Format	Level of Evidence
Maguire et al., 1980	152	Breast	Counseling; No description given	NA	UC	I	3
Vachon et al., 1981–1982	168	Breast	Education/counseling; Information, counseling	NA	UC	I	7
Worden & Weisman, 1984	117	Mixed	Behavior therapy: Problem solving, behavioral rehearsal, role play, relaxation	4	UC	I	3
Youssef, 1984	18	Breast	Counseling: Crisis intervention	18	UC	G	7
Descriptive Studies							
Baider et al., 1984	24	Breast	Counseling: thematic counseling, emotional and social support	12	-	G	NS
Cull et al., 1995	556	Mixed	Behavior therapy: Cognitive behavioral model	5 (mean)	-	I	8
DeVries et al., 1997	96	Mixed	Counseling: Experimental/existential	12	-	G + I	NS
Ford et al., 1990	10	Mixed	Counseling: Sharing issues, personal concerns	6	-	G	NS
Greer et al., 1991	44	Mixed	Behavior therapy: Cognitive therapy	6	-	I	7

A = attention; UC = usual care; G = group; I = individual; NA = information not available; NS = nonsignificant

* Indicates significant results for that condition

By definition, only RCTs with more than 100 participants could be assigned level I status, the highest level of evidence; RCTs with fewer than 100 participants could achieve no higher than level II status. Interesting to note is that the majority of RCTs that were not supportive of the hypothesis of this review had smaller samples. By contrast, only two studies with larger samples had nonsignificant results. Because the power of a statistical test to detect differences is dependent, in part, on sample size, this result raised the question whether these studies did not support the hypothesis or did not have sufficient power because of small sample size to detect real differences between groups.

With regard to the content of the interventions, 11 of 17 behavioral intervention studies (65%) and 7 of 10 counseling intervention studies (70%) had positive results. Four of seven education interventions (57%) were beneficial in relieving depression, and 7 of 12 combination interventions that included education (58%) had beneficial results. These findings suggest that behavior therapy or counseling alone or in combination with cancer education is beneficial in managing depression in patients with cancer.

Despite the positive overall effectiveness of psychoeducational interventions for depression, a closer look at subsets of the data reveals some limitations. First, consider the three quantitative meta-analyses that were included in this review (Devine & Westlake, 1995; Meyer & Mark, 1995; Sheard & Maguire, 1999). Each had somewhat different inclusion criteria, controlled for study quality in different ways, and drew different conclusions about the effect of psychosocial intervention on emotional outcomes. Table 6 provides some comparative information about the meta-analyses.

Sheard and Maguire's (1999) analysis was the most rigorous and restrictive review of only 20 experimental and quasi-experimental studies drawing the conclusion that routine psychological intervention does not benefit patients with cancer who experience depression. Had these investigators used a less restrictive outlier criterion, the opposite conclusion would have been drawn. In fact, Devine and Westlake (1995), who included a greater variety of interventions and used a more generous outlier criterion, drew the opposite conclusion: psychosocial interventions are beneficial in the management of depression.

Another important difference between these meta-analyses was that Devine and Westlake (1995) included "nursing" and "educational" intervention studies that would be of particular interest to nurses and other clinicians. Sheard and Maguire (1999) systematically excluded these because of concern about heterogeneity. In fact, Sheard and Maguire's analysis focused almost exclusively on counseling and behavior therapy and placed less emphasis on cancer education and information. They did not succeed in eliminating education from the analysis, however; several studies in this meta-analysis have education as an explicit component of the intervention in combination with counseling or behavior therapy. Also, in many of the studies, behavior therapy was intended to manage physical symptoms related to cancer treatment, such as nausea and vomiting or pain (Burish & Jenkins, 1992; Spiegel et al., 1981). One can hardly deny the educational component inherent in these interventions. When individuals are dealing with a complex problem like cancer, separating psychological from informational interventions may be somewhat artificial.

Table 3. Meta-Analysis Reviewed

Author	N ^a	Diagnosis	Intervention	Control	Level of Evidence
Systematic Quantitative Reviews					
Devine & Westlake, 1995	5,326	Mixed	BCES	A+UC	1
Meyer & Mark, 1995	2,840	Mixed	BCES	-	8
Sheard & Maguire, 1999	1,101	Mixed	BCE	-	NS
Systematic Qualitative Reviews					
Bottomley, 1998	5,326	Mixed	BCES	-	1
Trijsberg et al., 1992	2,840	Mixed	BCES	-	1
Whatley & Milne, 1998	N/A	Breast	C	-	1

^a Gender information not available; setting included inpatient and outpatient.

B = behavioral; C = counseling; E = education; S = peer support; A = attention; UC = usual care; NS = nonsignificant

The third meta-analysis (Meyer & Mark, 1995) evaluated emotional adjustment, an outcome that encompassed a variety of mood states, including but not limited to depression. Meyer and Mark concluded that psychoeducational interventions decrease depression. However, the magnitude of this effect was small ($d = 0.24$, 95% CI = 0.17–0.32) and its clinical significance is open to question. Although it is smaller than the effect size in a meta-analysis of psychotherapy outcome studies ($d = 0.35$) (Matt, 1989), Meyer and Mark argued that effect sizes in the range of 0.20–0.40 are typical for psychological interventions (based on a discussion by Hunter and Schmidt [1990]) and in the medical field, any effect, no matter how small, is important. On the other hand, Sheard and Maguire (1999) criticized an effect size this low as being clinically insignificant even though it has achieved statistical significance. In the end, Meyer and Mark’s quantitative analysis does not settle the question of benefit of psychoeducational interventions.

Both Sheard and Maguire (1999) and Meyer and Mark (1995) acknowledged that depression levels in most of the samples studied were low and most of the trials were preventive—that is, the participants were not selected on the basis of the presence or risk of depression. This could substantially reduce effect size because patients with cancer who are well adjusted before intervention would show little improvement afterward because of ceiling effects. Nevertheless, these two groups of authors take opposite stances on the significance of Meyer and Mark’s findings.

A confounding variable in research on depression in patients with cancer that has not been addressed in most studies relates to the patient’s medical condition. Patients with cancer have many physical symptoms caused by the disease and its treatment that can mimic depressive symptoms, and they take many drugs that can induce or mimic depression. Lethargy, fatigue, and anorexia are just a few symptoms that can be associated with cancer, its treatment, or clinical depression. Because only a few studies evaluated or controlled for physical symptoms (Gordon et al., 1980; Lyles, Burish, Krozely, & Oldham, 1982), changes in these symptoms rather than a psychoeducational intervention may have accounted for mood changes. In fact, Trijsburg et al. (1992) noted that psychological interventions yielded positive effects on physical symptoms and functioning as well as psychological effects.

With few exceptions, the studies reviewed for this article compared a psychoeducational intervention with usual care. Without a control group, the positive results could be ex-

plained as effects of attention from healthcare providers rather than a specific psychoeducational intervention.

Another issue that has not been addressed in any of these studies is the relationship between dose of intervention and degree of response. No studies compared time-limited with prolonged interventions. It is tempting to speculate that patients with breast cancer who continued therapeutic group counseling for as long as they wished could have obtained a survival benefit, as well as improvement in their mood (Spiegel, Bloom, Kraemer, & Gottheil, 1989). However, this hypothesis requires further systematic study before such conclusions can be drawn.

Comparing studies regarding the content of interventions is limited by the variety of treatment techniques and formats. In addition, combinations of interventions often were used in the studies reviewed, making it difficult to specify the essential elements that accounted for the success of a given intervention. These factors will need to be sorted out and evaluated before conclusions can be drawn about the most effective interventions.

Research Recommendations

This review has uncovered a number of methodological flaws and problems that should be addressed in future intervention research on depression.

Table 4. Characteristics of Reviewed Studies

Study Design	Size	N	Level of Evidence (N of studies)			
			I (1–3)	II (4–8)	III (9)	NS
Systematic reviews						
• Quantitative	N > 1,000	3	1	1	0	1
• Qualitative	-	3	3	0	0	0
Randomized clinical trials						
	N > 100	11	9	0	0	2
	N < 100	25	0	13	0	12
Quasi-experimental	All studies	7	2	4	0	1
Descriptive	All studies	5	0	2	0	3
Treatment guidelines	-	1	-	-	1	-

NS = nonsignificant

Table 5: Benefits of Specific Intervention Content

Treatment Group ^a	N	Level of Evidence		
		I	II	NS
Behavior therapy only	17	4	7	6
Counseling only	10	4	3	3
Education only	7	2	2	3
Counseling/education	8	1	5	2
Behavior therapy/education	4	-	1	3

^a Studies that compared or combined behavior therapy and counseling interventions are not included.

NS = nonsignificant

- All studies should have sample sizes with sufficient power to be able to detect real differences between groups.
- Research needs to control for physical symptoms and medical treatment variables either through design or analysis to eliminate alternative explanations that could account for beneficial effects.
- RCTs are needed that select individuals based on the presence of depression so that interventions can be evaluated with regard to the management rather than the prevention of depression.
- RCTs are needed to compare behavior therapy with counseling psychotherapy interventions so the superiority of a particular method can be assessed.
- RCTs are needed that address the relationship between dose of intervention and degree of response to determine whether efficacy is the result of intensity or longevity of intervention.
- RCTs need to compare therapeutic interventions with inert alternative interventions that control for time and attention to determine the extent to which attention from healthcare providers is therapeutic in the management of depression.

Recommendations for Clinical Assessment and Intervention

The clinical assessment of depression by oncology nurses is not equivalent to its measurement for research purposes (Gobel & Donovan, 1987). Busy clinicians do not require a highly sensitive instrument to measure small changes in affect or a comprehensive tool to diagnose a psychiatric disorder. Rather, clinicians need to identify a significant risk for or the presence of depression in the most efficient manner. To accomplish this, NCCN (Holland, 1997) adopted a two-stage approach to the measurement of symptoms, including pain, distress, and fatigue. This includes an initial screening for the symptom followed by an in-depth assessment of a problem experienced at a level that exceeds a chosen threshold.

Several clinical screening methods have been recommended for depression in patients with cancer. In the *NCCN Practice Guidelines for Distress* (Holland, 1997), a 0–10 scale is used to indicate the degree of distress experienced, and a checklist is used to indicate the causes of distress. Depression is listed as a cause of distress (see Figure 2). Screening by a member of the oncology team is recommended at the initial visit and at appropriate intervals. If distress is identified, an in-depth clinical assessment by a mental health, social work, or pastoral care professional is recommended. However, the guidelines do not identify a threshold indicative of the pres-

ence of distress; also, the 0–10 scale has not been evaluated in research.

Chochinov, Wilson, Enns, and Lander (1997) developed and evaluated a parsimonious screening measure of depression for patients with advanced cancer consisting of one item: “Do you often feel sad or depressed?” Endorsement of this statement is a more reliable indicator of depression than a visual analog scale or the short form of the Beck Depression Inventory (Beck & Beck, 1972). In a study of primary care patients, Mahoney et al. (1994) found that this single item was as effective as the Geriatric Depression Scale in screening for depression. They recommended that a positive response to the single item be followed by a more in-depth clinical evaluation.

Regardless of the screening method chosen, clinicians must recognize who is at increased risk for depression (Farrington, 1994; Ganz, Schag, & Heinrich, 1985; Lynch, 1995; Massie & Popkin, 1998; Much & Barsevick, 1999; Schag et al., 1993; Vinokur, Threatt, Caplan, & Zimmerman, 1989). Research has identified the following risk factors for depression.

- Younger age
- Increasing illness
 - Advanced stage of illness
 - Disease recurrence
- Unrelieved symptoms, particularly pain
- Medications with depressive side effects
- Body image changes
- Previous mental health problems
 - Individual or family history of depression
 - History of substance abuse

Once screening has identified the presence of depression, professional follow-up is appropriate. Moderate or high levels of distress require referral to mental health, social work, or pastoral care professionals according to NCCN guidelines (Holland, 1997). When the level of distress is mild, the guidelines recommended that the primary oncology team manage the problem with appropriate resources.

The findings of this qualitative analysis are congruent with NCCN recommendations. The majority of studies reviewed in this analysis evaluated psychoeducational approaches for patients with cancer with relatively mild levels of distress. Be-

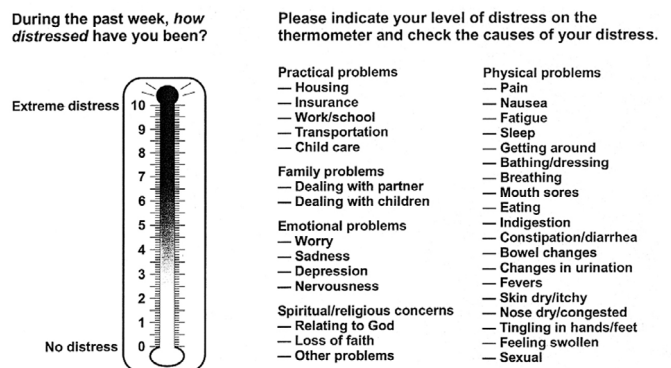


Figure 2. Distress Management Practice Guidelines

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Table 6. Comparison of Meta-Analyses

Author	N	Interventions	Outcome	Design	Type	Quality Evaluation	Result	Conclusion
Devine & Westlake, 1995	48	Education Counseling Behavior therapy Relaxation therapy	Depression	Randomized clinical trial Quasi-experimental Descriptive	Published and unpublished	Internal validity; generous outlier criteria	d = 0.54, homogenous	Benefit
Meyer & Mark, 1995	45	Education Counseling Behavior therapy Relaxation therapy	Emotional adjustment	Randomized clinical trial	Published only	None stated	d = 0.24, homogenous	Benefit
Sheard & Maguire, 1999	20	Psychotherapy Group support/therapy Relaxation	Depression	Randomized clinical trial Quasi-experimental	Published and unpublished	Reliability of design; strict outlier criteria	d = 0.36, heterogenous; d = 0.19, outliers removed	No benefit

havior therapy approaches most often were used successfully in this population. Clinicians can encourage the use of relaxation strategies on a regular basis to reduce distress (e.g., slow deep breathing, muscle relaxation, guided imagery). Oncology professionals are in an ideal position to use information and cognitive restructuring techniques to change patients' and family members' catastrophic ideas about the illness to more realistic views as appropriate. Likewise, physicians and nurses can use supportive counseling techniques, such as active listening and permission strategies, to encourage the expression of emotion. They also can reassure patients with cancer of the normalcy of these emotions. All of these techniques can be incorporated into busy practices with some forethought and planning. For example, patients and families can be referred to bookstores for resources to learn relaxation techniques. The oncology clinician then can provide coaching and encouragement in following through.

Summary

Forty-eight research studies of psychoeducational interventions, six reviews, and one treatment guideline were evaluated. Studies were compared regarding design, sample size, content

and format of intervention, effect on outcome, and level of evidence. Overall, psychoeducational intervention was effective in reducing depression. Several interventions (behavior therapy, counseling/psychotherapy, and either of these combined with education) were beneficial. However, because of a lack of comparisons among these interventions, recommendations cannot be made about the superiority of any specific type of intervention. Limitations of this cohort of studies include lack of control of potential confounding variables, including the patient's medical condition and the potential therapeutic effect of time and attention. Conclusions about the efficacy of psychoeducational interventions for depression would be strengthened if specific design issues were addressed, including inclusion criteria that address the presence of depression in the sample, examination of the relationship between dose of intervention and degree of response, comparison groups controlling for time and attention, and sample size that is sufficiently large to detect real differences between groups.

Author Contact: Andrea M. Barsevick, DNSc, RN, AOCN®, can be reached at AM_Barsevick@fcc.edu, with copy to editor at rose_mary@earthlink.net

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For more information . . .

- ▶ Association of Cancer Online Resources: Archives: Cancer and Depression
<http://listserv.acor.org/archives/cancer-depression.html>
- ▶ Talaria: Depression in Patients With Cancer Pain
www.stat.washington.edu/TALARIA/LS7.3.1.html
- ▶ aHealthyAdvantage: Depression and Cancer
www.ahealthyadvantage.com/topic/depcancer

These Web sites are provided for information only. The hosts are responsible for their own content and availability. Links can be found using ONS Online at www.ons.org.

The continuing-education examination and test form for the preceding article appear on the following pages.