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[Article]

Cognitive-behavioral interventions to manage depression in patients with cancer: research and theoretical initiatives

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Abstract

: The incidence of depression is rising worldwide, possibly due to urban crowding and insufficient resources. This pandemic raises the possibility that disabling depression among patients with cancer will increase. Already, about one-third of patients with cancer present with depression. Although many progressive cancer centers are instituting psychooncology services, the projected decline in numbers of psychiatrists in the coming decade suggests that these programs may flounder unless nurses are able to provide adjuvant support. Consequently, this article describes the theoretical and emerging research data base regarding the treatment of cancer-related depression with cognitive-behavioral therapy. Implications drawn from this review suggest that nurses can take an active role in preventing and managing cancer-related depression in direct care environments by developing critical pathways for screening, prevention, treatment, and outcomes assessment using theory-based research.

By some estimates, depression is a major health problem worldwide, with a pandemic expected in the 21st century if trends in population growth, urbanization, and crowding continue (1). Currently, about 11 million Americans and one in four patients experience depression as defined by the *Diagnostic and statistical manual of mental disorders* (DSM-IV)(2-4). Among patients with cancer, incidence is highest in the terminal stages of disease and among bone marrow transplantation survivors (5,6).

Depression is a costly psychopathology. In the United States, depression is one of the top 10 costly diseases, with estimated expenditures being $44 billion in 1990 (3). When associated with medical illness, depression elevates health care costs. For example, Levenson et al.(7) showed that medical inpatients who were highly anxious and depressed had 40% longer median lengths of stay and 35% greater mean hospital costs than medical patients who were not depressed. Conducting group psychotherapy among medically depressed outpatients enrolled in the Harvard Community Health Plan, Hellman and associates (8) found that office costs of group participants dropped after psychotherapy. The average cost saving was $3,900 per patient.

Despite the significance of the problem, the projected shortage of psychiatrists in the next 10 years threatens to undermine quality of care given to depressed patients unless nurses take a more active role in meeting patients' psychologic needs (9). Consequently, this article reviews approaches to managing medically related depression in adult patients with cancer — a patient population at high risk of developing psychopathology. Nursing interventions, theory development, and research based managements are proposed.

CANCER-RELATED DEPRESSION

Cancer-related depression is a pathologic affective response to loss of normalcy and certainty of one's personal world because of a cancer diagnosis, treatment, or impending complications. Similar to grief, depression presents with symptoms of sadness, tearfulness, feelings of panic, and yearning for the lost object (10). In the absence of mood-suppressing medications listed in Table 1, grief resolves as indicated by patients' decisions to do something about their situations or to enjoy their lives as much as possible (11-14). Depression is suspected when symptoms of sadness persist and are accompanied by increasing dysfunction, feelings of worthlessness, lowered self-esteem,

suicidal preoccupation, or inability to anticipate anything with pleasure (11-14). In patients with cancer, depression may be associated with unrealistic fears of death, abandonment, loss of social value, and financial dependence (10,13). Somatic complaints(weakness, lethargy, headaches, backaches, insomnia, gastrointestinal disorders) are unreliable signs of depression in patients with cancer because they mimic symptoms of cancer (10). Risk of suicidal depression increases with terminal-stage disease (15,16). Other risk factors for suicide among patients with cancer are: history of affective disorders, alcohol abuse, previous suicide attempts, poorly controlled symptoms, disinhibition secondary to pain control medications, and lack of social supports(particularly, through the recent death of friends or spouse (15-17).

Alpha methyldopa
Reserpine
Barbituates
Diazepam
Steroids (prednisone, dexamethasone)
Propranolol
Vincristine
Vinblastine
Procarbazine
L-asparaginase
Amphotericin B
Interferon

(From: Massie MJ, Shakin EJ. Management of depression and anxiety in cancer patients. In Breitbart W, Holland JC, eds. *Psychiatric aspects of symptom management in cancer patients.* Washington DC: American Psychiatric Press, Inc. 1993, pp. 1–21).

TABLE 1. Medications associated with cancer depression

Since the 1980s, comprehensive cancer care has incorporated treatment of medically related depression into therapeutic regimens (18,19). The emphasis is on providing symptom relief without in-depth psychiatric assessment of psychologic development. Using a cognitive-behavioral framework, patients are entered into therapy as soon as it becomes clear that sadness is*not* a transient reaction (4,13). Consistent with National Institutes of Health guidelines for the treatment of depression (20), the goal of cognitive-behavioral therapy is to challenge faulty assumptions and perceptions that exaggerate fear, isolation, or strain relationships. Therapy also aims to increase morale, improve coping with loss or disability, enhance personal control, and divert attention to living a fulfilling life throughout the cancer trajectory (17,21,22). Patients with high ego strength, open communications with family members, and predisposition to hardiness (i.e., optimism, resourcefulness, and general life satisfaction) are likely to respond to therapy (22). Family histories of depression, recent negative life events, conflictual marital relationships, absence of close confiding relationships, lack of social support, long-term insufficient self-esteem, and overpersonalization of the therapeutic relationship may jeopardize outcomes unless the therapist is highly skilled (23,24). Generally, treatment lasts 10-20 weeks (23). Throughout therapy, the patient is treated as an independent adult, and dependence on family or health care professionals is discouraged (12,17).

COGNITIVE-BEHAVIORAL THEORIES OF DEPRESSION

Most therapeutic interventions are derived from cognitive-behavioral theories of depression. These theories emphasize the pathologic significance of current, unresolved stressors, negative attitudes, and negative self-defeating thoughts (15,25). In the following paragraphs, cognitive-behavioral frameworks of depression are described in order of development.

Behavioral Theory

The behavior theory of depression evolved in the mid-1800s from the work of Russian physiologists (Sechenov, Pavolv, and Bechterev)(20,26), who found that behavior could be shaped by reinforcement or extinction schedules. Briefly, behavioral theory suggests that depression is conditioned by stimuli within the environment that evoke and reinforce self-defeating behavior. Borrowing from learning theories, behaviorists (i.e., Watson, Jones, Dunlap, Thorndike, and Skinner) developed strategies to reinforce "well behaviors" and "weaken" associations between environmental stimuli and depressive responses (8,27). Treatment is successful when self-defeating behaviors are extinguished and replaced by self-promoting behaviors.

Cognitive Theory

Cognitive theory evolved in the 1950s under the influence of Beck (17-29). According to this theory, depression is not mediated by stimuli within the environment, but rather the individual's attendance to selected stimuli within the environment (27). Usually, the stimuli attended to reinforce errors in information processing or perceptual distortions (27). Perceptual distortions are caused by automatic, negative assumptions and thoughts (schema). Shaped by critical incidents during growth and development, these negative schema are activated by stressful situations (27), causing patients to interpret events in their worst possible context (Fig. 1). Under the influence of these schema, patients are predisposed to making arbitrary inferences based on insufficient evidence, taking information out of context, overgeneralizing, magnifying trivia, personalizing events (i.e., inappropriately attributing situations as being their fault), and dichotomizing information as being either good or bad.

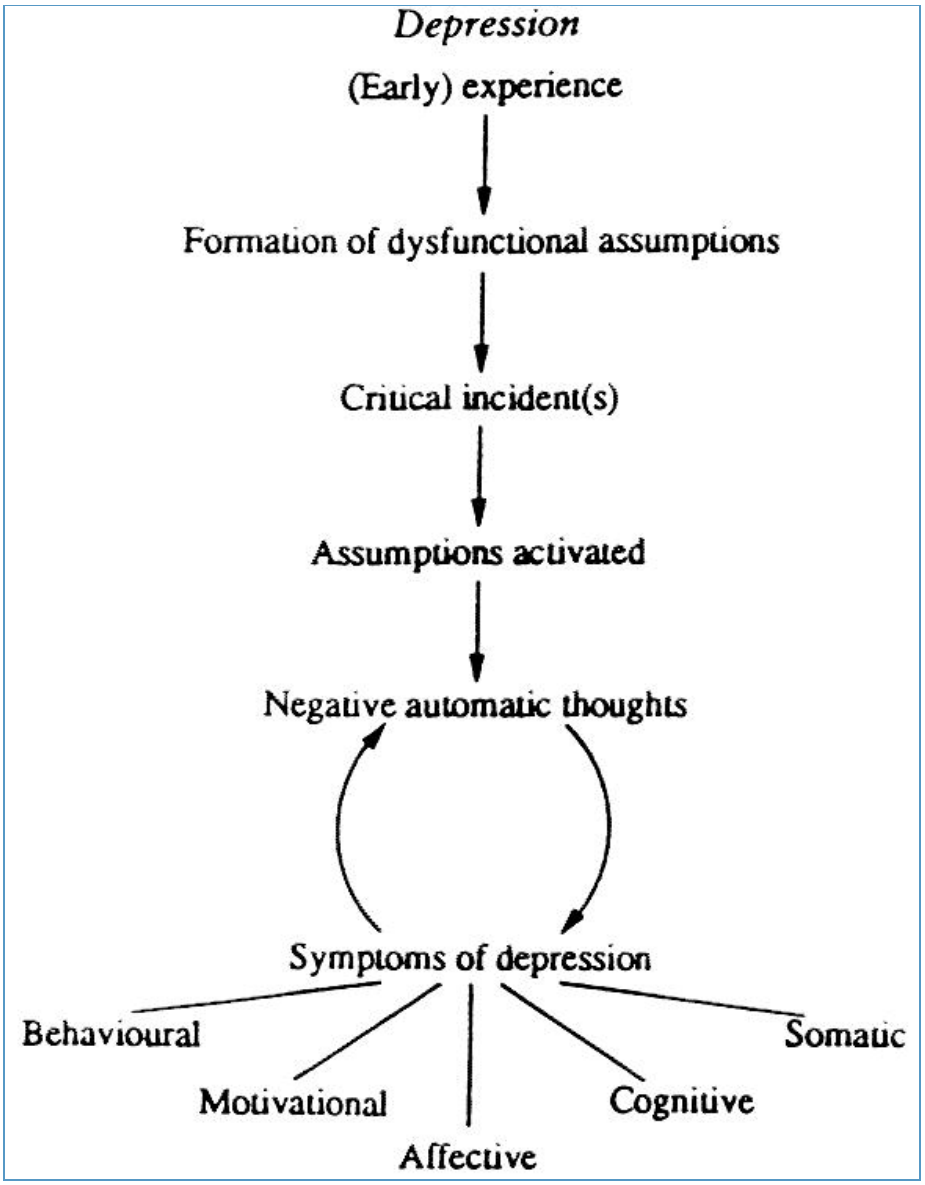

FIG. 1. A cognitive model of depression. (From: Houghton K, Salkovskis PM, Kirk J, Clark DM. *Cognitive behaviour therapy for psychiatric problems: a practical guide*. Oxford: Oxford University Press, 1989:171. Copyrighted material. With permission.)

Frequently, self-defeating negative thoughts develop around three issues: the need for love, control, and success (24). Specifically, the depressed patient feels that he or she is isolated, unloved, or rejected by significant other(s); unrealistically, incapable of controlling any aspect of the situation; or unable to perform satisfactorily (8,17). Consequently, patients are preoccupied with failure, feelings of isolation or rejection, inadequacy, helplessness, and hopelessness: "The chemotherapy is not working and I'm hopeless"(12, p. 16). This type of thinking promotes situational inertia (12). With therapy, patients learn to recognize and correct abnormal thought patterns and to undertake constructive behaviors (15,24,30). Depression is relieved when narcissistic ideations, perfectionist assumptions, and inflexible thought patterns are replaced with realistic alternatives and behaviors that engender a sense of mastery and pleasure (12,24,25,27).

Cognitive-Behavioral Theory

Cognitive-behavioral theory represents the "phenomenologic" approach to depression, drawing both from behavioral and cognitive theories of depression (18,30,31). Both erroneous thinking and self-defeating behaviors leading to depressive episodes are challenged and corrected with cognitive and behavioral techniques (14,17). During therapy, the therapist takes an active role in modeling appropriate behavior and teaching patients to adopt healthier behaviors. Learning is facilitated by active learning strategies and didactic homework assignments (19,28). Therapy is complete when patients demonstrate self-promoting behaviors and constructive thought patterns.

COGNITIVE BEHAVIORAL TREATMENT STRATEGIES

The goal of therapy for cancer-related depression is to enhance quality of life as quickly and cost-effectively as possible without in-depth psychiatric treatment (18). Usually, treatment begins by breaking the patient's cancer experience into a series of incremental problems and solutions. For example, the dying patient who is with-drawn and in pain may be encouraged to participate in treatment decisions, feel close to loved ones, and develop effective pain control strategies (14,22). Successful outcome depends on the therapist's ability to develop a positive relationship, empathize with the patient's perception of his or her cancer situation, provide reassurance where realistic, and assist the patient to proceed "where he or she wishes to go" (18, p. 120).

General Strategies

Strategies that seem to "fit" most patient situations are (18):

* Reframing

* Role reversal

* Clarifying the meaning of the medical illness

* Relaxation/distraction

With *reframing*, patients are asked to look at a frightening cancer situation from an unconsidered but equally plausible viewpoint, enabling the patient to tolerate the situation more easily. For example, a patient with a colostomy may be helped by viewing it as a sign of improved health and reduced cancer risk rather than a disfiguring alteration of body image (18). In *role reversal*, the patient projects problems onto family members and imagines the situation from their perspectives. For example, a patient, who talks about terminating cancer therapy in the face of optimistic outcomes, is asked to consider how he or she would feel about the situation if a loved family member voiced similar reservations. *Clarifying the meaning of the illness* enables the patient to reveal undisclosed worries, allowing the therapist to explore possible solutions with the patient. For example, among men treated for prostate cancer, undisclosed worries about sexual performance that are amenable to prosthetic aids are common (32).

Relaxation techniques are used when conversion reactions accompany depression and therapists do not want to challenge the symptom's psychogenic origins. Passive relaxation techniques focus on generating sensations of warmth. Progressive relaxation involves tensing and relaxing successive muscle groups. Often, relaxation techniques and imagery (or visualizations of pleasant scenes or experiences) are combined to redirect negatively focused thoughts to more positive experiences (15,17) (see Cognitive Therapy section). *Distraction* is another general strategy. This technique blocks negative thoughts by engaging patients in absorbing mental activities, such as doing a crossword puzzle or counting by sevens (15,23,27). Another distraction technique is hypnosis, a form of therapy that requires intensely focused concentration. This technique may be too taxing for many patients with cancer (15,23).

Behavioral Strategies

Behavioral techniques used in shaping self-promoting behaviors and extinguishing self-defeating behaviors include (23,26) the following.

* Contingency management

* Systematic desensitization

* Graded task management

* Goal/activity scheduling

* Biofeedback

Contingency management reinforces only "well" behaviors, extinguishing behaviors that are not mood enhancing or that are dysfunctional (15,17). In instances in which complaints result in secondary gains in the form of attention and affection from family, contingency management rewards attention and affection only when patients exhibit these same behaviors. During the extinction process, the therapist ignores ruminative thoughts but treats legitimate complaints matter-of-factly (17). With *systematic desensitization*, patients incrementally create images of themselves selves participating in health-promoting activities or participating in procedures which they fear (e.g., undergoing computed tomography scanning). In the latter instance, patients create mental images of worst-case scenarios that exceed any reality that they could possibly encounter (15,17). Similar to systematic desensitization, *graded task management* breaks goals into manageable, small steps so as to encourage task performance (15,23).

Activity scheduling, goal setting, and *biofeedback* are other useful techniques (14). Activity scheduling encourages patients to identify and engage in constructive, pleasurable pursuits, such as exercise or return to work (when realistic)(14,29). Benefits from these activities include positive reinforcement from the patient's own environment (14,29). Initially, goal setting or activity scheduling is limited to 30-minute intervals, with scheduled intervals lengthening as the depression responds to therapy. Examples of long-term activities include taking a long-wanted trip to Europe or writing a book (23). When patients resist long-term goal setting, the therapist and patient explore issues of quantity versus quality of life (23).

Biofeedback techniques require retraining autonomic physiologic responses through visual or auditory feedback. Although useful in inducing relaxation and interrupting negative cognitions, these techniques require constant reinforcement to maintain therapeutic effect and may be too taxing for patients with cancer (15,23).

Cognitive Therapy

Strategies used in modifying negative cognitive structures(i.e., negative, self-defeating thoughts, images, attitudes, etc.) include (10,12,15,23,27-29) the following.

* Evocative imagery

* Socratic questioning

* Psychoeducation

* Cognitive/imagery rehearsal

* Time projection

* Downward comparison

With *evocative imagery*, patients reexperience "What they actually thought and felt in the real-life situation"(12, p. 14). This technique facilitates identification of sources of hopelessness and enables the therapist and patient to break the problem down into manageable pieces. In *Socratic questioning,* patients answer thought-provoking questions designed to enable them to reevaluate their cancer experience and/or self-defeating ideas from a more positive viewpoint. For example, the patient who blames him/herself for developing lung cancer is asked if they would blame their daughter or son for developing this disease (12). When patients express doubts about the veracity of diagnostic information, the aim is to encourage substitution of positive alternatives, such as: "The doctor is telling me what he knows. He is not able to predict treatment outcome"(12, p. 17). When patients are unable to formulate alternatives to their negative views, the therapist may confront them with logical, positive alternatives. For example, a depressed patient who says,"I feel that nothing is important anymore" might be confronted with the notion that "Your illness is serious, but you have..a great family, a good job, and great friends to support you"(12, p. 18). When patients recognize that negative perceptions and assumptions result in self-defeating behaviors, the therapist teaches them to ask questions that lead to rational cognitions and responsible actions (23,27). Exemplary questions are:

* "Is there another way to look at the data?"

* "Who can I ask to verify or refute my negative impressions?"

* "If a situation is true, is it as bad as I have made it to be?"

* "What is the most productive thing to do?"

* "What are the advantages (secondary gains) to this negative way of thinking?"

Psychoeducation (also known as *bibliotherapy* or the*didactic method*) attempts to involve patients in constructing schema that will enable them to cope with the cancer experience through instructive materials and media that describe cancer, the cancer trajectory, and ways to cope with common cancer stressors (12,15).*Imagery rehearsal* (also known as *mental rehearsal*) attempts to alter the patients' inadequate schema by asking them to imagine themselves coping effectively with their depression and enjoying life despite having cancer. A special form of imagery rehearsal is *time projection*. Time projection asks the patient to imagine himself or herself engaging in pleasurable and constructive activity within a specific time frame in the near future. Presumably, this activity stimulates appropriate, goal-oriented behaviors (12).*Downward comparison* is another form of imagery rehearsal that involves comparing oneself with another whose condition is worse. This technique allows the patient to assess their situations realistically (33). Examples of downward comparison cited by Hagopian et al.(33, p. 360) include: "My neighbor had to have chemotherapy and radiation therapy. I only needed radiation therapy." or "My counts stayed up all during treatment. My friend had to stop her treatments because her white counts were low."

Cognitive-Behavioral Strategies

In cognitive-behavioral therapy, the therapist takes an active role as teacher and role model (23, p. 492). Although the therapist draws on both cognitive and behavioral strategies, there is heavy reliance on the following strategies to promote learning and constructive behavior changes (12,15,17,23,26).

* Role playing/behavioral rehearsal/modeling

* Homework/role enactment

Through *modeling* techniques, such as behavior rehearsal, assertiveness, and social skills training, the patient develops skill in responding appropriately to a person with whom he or she anticipates having a problem, with the therapist taking the role of the coach and providing corrective feedback (23,26). Success is measured by improvements in the ability to make requests of others (physicians, nurses) without undue anxiety; the capacity to refuse unacceptable requests; the ability to identify and express feelings in a forthright manner; and a willingness to display tenderness and affection (23,26).

The sina qua non of cognitive behavioral strategies is*homework*(12,17,23). Homework is saved until the patient begins to feel more secure. Initially, homework assignments sensitize patients to their automatic, negative thoughts and perceptions and then to formulating ways to avoid making arbitrary inferences (i.e., jumping to conclusions on the basis of inadequate evidence; thinking in extremely positive or negative terms; and personalization—taking responsibility for all that happens)(23,26). Sometimes, homework involves recording situational impressions in a journal and describing whether negative or positive associations initiated actions (23,26). Later, homework involves practicing desirable behaviors (i.e., role enactment) as in the exemplar case study below (12,17).

CASE REPORT

Katy was a 37-year-old married teacher and mother diagnosed with inoperable breast cancer. Within 2 years of diagnosis, she experienced metastases to the lung and brain. Katy's treatment regimen included chemotherapy, prednisone. Theo-Dur, oxygen therapy, and trazodone for depression. Before diagnosis, Katy received emotional gratification from being in control and having mastery over her life — at work as a teacher and at home as a wife and mother of two children, ages 7 and 11. Coming from a family in which females maintained dominant family roles, Katy was an emotionally hardy person. Although physically compromised, Katy initially maintained a part-time teaching position. However, she experienced a severe cancer-related depression and sought psychotherapy services from a doctorally prepared nurse psychotherapist.

Consistent with the cognitive model of depression shown in Fig. 1, Katy's depression resulted from dysfunctional assumptions engendered during childhood by an intensely controlling mother who reinforced the notion that movement outside their family environment was dangerous. Katy adopted a similar operational style within her nuclear family. She was the major decision-maker in the family. This structure worked well until she was diagnosed with breast cancer. No longer in control over her destiny and that of her loved ones. she attempted to cope by

exhaustively searching for medical information and self-help approaches to understand her diagnosis and treatment. She experienced ruminative negative thoughts concerning "not being there to mother" her children. During these times, Katy experienced affective, somatic, motivational, and behavioral symptoms consistent with depression: tearfulness, fear, sadness, feelings of helplessness, and irritability. Her depressed mood exacerbated feelings of fatigue.

Keenly aware of the limited time available to Katy, the therapist worked with her to resolve her concerns about her children's future. The therapeutic goal was to reduce her fear of "not being there to mother her children." Through Socratic questioning and homework assignments, Katy slowly gained insights and mastery over her negative thinking. She discovered that her fear of "not being there" was most intense when she thought about her negative prognosis. Katy found that she did not think that her children were prepared for her declining health and eventual death.

Using psychoeducation techniques, the nurse psychotherapist provided Katy with didactic materials about how children understand and experience the death of their mothers. On her own, Katy read additional articles, sharing content with her husband, Joe, and the therapist. Katy and the therapist (with the support and presence of Joe) conducted rehearsals about how Katy could talk with her children about her declining health and imminent death. When prepared, Katy spoke to her children in a family session about her terminal illness and her love for them as their mother. Joe supportively added his feelings and intentions to love, nurture, and guide them when their mother was no longer there. The children expressed their feelings about the anticipated loss of their mother. Empathetically, the therapist reinforced the family's positive attempts to help each other.

Through goal and activity scheduling techniques, the therapist encouraged Katy and Joe to devise ways to share parenting and household management responsibilities. At times, each had difficulty changing prior modes of operating, with Katy being overinvolved and controlling, and Joe being distant and passive. They continued to enact altered roles despite setbacks, knowing that these changes were necessary. Katy's (and her family's) successes in preparing for her death helped ease her negative thinking. Katy died 3 months after starting therapy. Joe was able to cope with his grief, reorganize his thinking, and undertake responsibility for his and his children's lives with 6 months of additional therapy.

RESEARCH BASE

Information regarding effectiveness of various cognitive-behavioral therapy techniques in treating cancer-related depression among adults was retrieved by computer searches of Medline and CINAHL and hand searches of publications from 1981 to the present. This article reviews publications of experimental or quasiexperimental research only. Briefly, retrieved studies suggest that the knowledge base for management of cancer-related depression with cognitive behavioral therapy techniques among patients with good (34-37) and poor prognoses (22,38,39) is in the beginning phases of development. Similar baseline information exists for patients undergoing radiation treatment (40-43), first surgery (34), chemotherapy with anticipatory nausea (35), and severely depressed patients referred to psychologic or psychiatric services for treatment (30,44,45). Diagnostic categories having baseline information include: breast cancer (21,22,34,37,39,40), melanoma (36,46), and hematologic malignancies (35). Publications include longitudinal studies (21,30,37,38,40,41,43,46,47). These studies suggest tentative parameters for therapy frequency, duration, and outcomes. Tables 2 and 3 summarize study methods.

Population	Sample/design	Intervention	Instrument/schedule[a]	Outcomes	Reference
Patients with anticipatory nausea to cancer chemotherapy	Convenience sample with random assignment to treatment (n = 8) or control (n = 8) condition	*Treatment* Relaxation training with guided imagery at baseline, before, and after two subsequent chemotherapy sessions *Controls* Usual care	MAACL at baseline and after first and second treatment	Patients receiving therapy less depressed after second sessions than controls ($p < .05$).	13
Male patients with terminal metastic disease	Convenience sample with random assignment to treatment (n = 9) or control (n = 12) condition	*Treatment* Psychoeducation, activity therapy with goal setting *Controls* Usual care	POMS at 0, 4, 12, 24, 36, 52 weeks	Depression significantly decreased at 12 weeks but not thereafter. Counseling enhanced quality but not quantity of survival.	42
Patients undergoing radiation for 6 weeks	Randomly selected for treatment (n = 48) or control (n = 52)	*Treatment* 30 minutes of patient directed therapy for ten weeks: Socratic questioning; issues clarification, psychoeducational cognitive rehearsal	SADS at 0, 3, 6, 10 and 14 weeks	Emotional distress decreased in both groups during radiotherapy. After radiotherapy treatment group continued to improve while control group worsened.	24
Outpatients referred to psychiatric services for cancer related depression	Convenience sample Cases (n = 44) served as own controls	*Treatment* 2 to 8 60-minute sessions with cognitive behavioral strategies: goal setting, imagery rehearsal, role playing activity scheduling, Socratic questioning, distraction, homework	HAD at 0 and 8 weeks	Depression decreased at 8 weeks ($p < .001$).	29
Ambulatory patients with cancer referred to psychological services 1 to 12 months after diagnoses	Consecutive sample with random assignment to treatment (n = 72) or control (n = 84) condition	*Treatment* Average of 5 60-minute cognitive behavioral treatments (see above) *Control* Usual care	HAD at 0, 8, 16 weeks	Treatment reduced depression from 40% at 0 weeks to 18% at 16 weeks. Controls experienced little change in depression (30% to 23%) at 16 weeks.	30
Outpatients with stage I, II breast cancer undergoing 6 radiation treatments	Consecutive sample random assignment to treatment (TH) (n = 48), treatment with homework (TWH) (n = 44), or control (n = 48) condition	*TH* 30-minute weekly relaxation sessions for 6 weeks with taped instructional homework; *TWH* (see above) plus imagery, taped homework *Controls* Attention (talk about themselves and interests)	POMS, SAD at 0, 6 weeks	Less depression (POMS) in treatment groups compared with matched controls ($p < .05$).	11
Inpatients/outpatients referred to psychology service	Consecutive, convenience sample receiving cognitive therapy (n = 25), behavior therapy (n = 10), cognitive behavioral therapy (n = 6), or control (n = 489) condition	*Treatment* 60-minute intake interview with average of four 30-minute weekly therapy sessions *Controls* Usual care	HAD at baseline; therapy completion (2 to 12 sessions)	Treatment significantly relieved depression ($p < .001$).Five or more problems correlated with depression ($p < .001$).	16
Females diagnosed with breast cancer for 1 to 60 months	Self initiated treatment (n = 136) or control (n = 59) condition	*Treatment* Use of downward comparison *Control* Usual self care	IES, baseline only	Downward comparison reduced distress ($p < .03$).	31

[a]Names of instruments are abbreviated as indicated: Hospital Anxiety and Depression Scale (HAD), Impact of Event Scale (IES), Leeds General Scales for Anxiety and Depression (SAD), Multiple Affect Adjective Check List (MAACL), Profile of Moods States (POMS).

TABLE 2. Research on cognitive behavioral therapy to treat individuals with cancer depression

Population	Sample/design	Intervention	Instrument/schedule[a]	Outcomes	Reference
Patients receiving "bad news" about their cancer	Convenience sample with randomization to treatment (n = 39) or control (n = 28) condition	*Treatment* Psychoeducation regarding prognoses, recorded by audiotape *Control* Psychoeducation only	HAD at 0, 4, 24 weeks	No difference in depression at baseline (p = n.s.). At 24 weeks, more depression in patients assigned to treatment who had poor prognoses versus good (p, .01).	45
Outpatients with terminal, metastatic breast cancer	Random assignment to treatment (n = 16) or control (n = 14) groups	*Treatment* Co-led group therapy with 90-minute, weekly sessions for 52 weeks: clarifying meaning reframing desensitization goal setting, activity scheduling role modeling *Controls* Usual care	POMS at 0, 16, 32, 52 weeks	Treatment group less depressed at 52 weeks (p < .05). No difference between groups at 0, 16, 32 weeks (p = n.s.) Dying detoxified.	50–52
Post-mastectomy patients with Karnofsky scoes >90	Convience groups: Group A (n = 11) English speaking women or Group B (n = 13) Hebrew speaking women	*Treatment* 12 co-led therapist determined psychoeducation sessions	PAIS and BSI pre-post interval (unspecified)	PAIS more sensitive to intervention effects than BSI. PAIS scores improved when group seen as helpful (p < .05) and decreased when group not seen as helpful (p < .05).	8
Outpatients with Stage I/II melanoma following excision	Convenience sample with random assignment to treatment (n = 38) or control (n = 28) group	*Treatment* Distraction, issue clarification, psychoeducation imagery rehearsal, goal/activity scheduling role modeling, role enactment	POMS at 0, 6, 24 weeks	No change in depression with treatment until 24 weeks (p < .05). At 24 weeks controls used more passive depressive strategies (keeping feeling to self, preparing for worst) than treatment group (p < .01) Treatment group (n = 34) survived longer than controls (n = 34) at 5–6 year follow-up (p < .05). Survival related to high distress and use of active behavior coping at baseline, controlling for Breslow depth (p < .05).	21, 22
Survivors of breast cancer mastectomy	Purposive recruitment in cohorts of 6 with assignment to treatment (n = 10) or matched control (n = 12) group	*Treatment* Co-led weekly psychotherapy for 8 weeks focusing on clarifying issues and adapting *Controls* Usual care	BDI at 0, 24, weeks, 4 years, 8 years	Survivors tended to be from treatment group (p < .10). Survivors experienced more depression after diagnoses than before.	34
Patients undergoing radiation	Random sample, random assignment to therapy (n = 24) or control (n = 24) group	*Treatment* 90-minutes of patient directed therapy for 10 weeks: Socratic questioning, issues clarification, cognitive rehearsal, psychoeducation *Controls* Usual care	SADS at 0, 3, 10, 14 weeks	No change in treatment groups until 10 and 14 weeks (p < .01). Patients with the highest SADS scores experienced greatest relief regardless of group assignment (p < .01).	25
Patients undergoing radiation	Convenience sample with random assignment to cognitive behavioral group therapy (n = 27), "social support" therapy (n = 21), or control group	*Treatment* weekly 60-minute goup therapy for 8 weeks with **structured therapy:** psychoeducation, cognitve rehearsal, homework or **"social support" therapy:** evocative imagery, imagery issues clarification *Controls* Usual care or crisis intervention upon request	CES-D at 0, 8, 24 weeks	Treatment group less depressed at 8 weeks than controls (p < .01). "Social support" group least depressed at 24 weeks (p < .01).	18

[a]Names of instruments are abbreviated as indicated: Beck Depression Inventory (BDI), Brief Symptom Distress Scale (BSI), Center for Epidemiological Studies Depression Scale (CES-D), Psychosocial Adjustment to Physical Illness Scale (PAIS), Profile of Moods States (POMS), Schedule of Affective Disorders and Schizophrenia (SADS).

TABLE 3. Research on cognitive behavioral therapy to treat groups with cancer depression

Individual Therapy

Consistent with psychoanalytic traditions, researchers first examined the effectiveness of cognitive behavioral therapy provided to depressed individuals with cancer. Several tested the effectiveness of single treatment techniques (35,47). Hypothesizing that sense of control would relieve anticipatory nausea, Burish and Lyles (35) tested the effects of a total of five relaxation training sessions before and after emetic chemotherapy. Not only was the therapy effective in relieving depression, but patients experienced relief from anticipatory nausea. At the South Manchester University Hospital, McHugh and associates (47) determined whether a brief psychoeducation intervention would facilitate positive cognitive restructuring and relieve depression among patients after they received information concerning their cancer diagnoses. Specifically, patients assigned to the treatment condition were given an audiotape (and tape recorder if needed) of diagnostic information provided to them by their physicians. At 6-month follow-up, patients with audiotapes recalled more information about their conditions than controls did, but prognoses determined whether the intervention relieved depression. Patients with poor prognoses (i.e., node positive, metastatic disease) who listened to their diagnostic tapes experienced more depression than patients with good prognoses did(i.e., cancers with a 90% cure rate).

Widening the range of therapeutic treatment techniques, Bridge and associates (40) determined whether six weekly sessions of relaxation therapy and taped reinforcement with and without imagery and homework (i.e., a minimum of 15 minute of relaxation practice daily) would relieve depression among patients with breast cancer receiving radiation treatments at St. Mary's Hospital, London. Controls talked among themselves. Treatments were effective, with the greatest reductions in depression being experienced by women age 55 years or older (up to 70 years) who received the combination intervention. Whether results were influenced by frequency of practice was not determined. Addressing the same patient population at Columbia Presbyterian Medical Center, New York City, Forester and colleagues (42) determined whether weekly psychotherapy emphasizing clarification, support, psychoeducation, cognitive rehearsal, and Socratic questions would relieve depression. Depression intensified during

radiation treatments whether or not patients with breast cancer received therapy. Four to 8 weeks after completion of radiation treatment, patients who received therapy experienced less depression (regardless of payment status or gender) than controls did.

Relying on an extensive array of cognitive behavioral interventions, Greer et al.(44, 48) determined whether a limited number of cognitive behavioral strategies administered weekly (five sessions) relieved cancer-related depression among patients referred to psychiatry services at the Royal Marsden Hospital, Surrey, England. Strategies included (a) clarification of perceptions of cancer and its implications and (b) activity/goal therapy— what the patient thinks or does to reduce the threat posed by cancer. Challenged by Socratic techniques, patients moved out of denial and appropriately developed coping skills. Therapy reduced depression. Conducting a partial replication study, Greer et al.(45) studied duration of therapy effectiveness of eight weekly therapy sessions. Therapists were trained in the study protocol by audiotapes. Treatment strategies included imagery rehearsal, Socratic questions, goal/activity scheduling, and role playing. Therapy relieved depression at the end of therapy and results persisted for 16 weeks from baseline.

Focusing on the dying, Linn and associates (38) examined the effects of counseling on depression among terminally ill male veterans receiving cancer treatment from the Miami Veterans Administration Hospital. Therapists were trained in cognitive therapies of clarifying meaning and social support by Kubler-Ross. Behavioral strategies included goal/activity. Patients received therapy coincident to medical treatments. During the first 3 months of therapy, depression decreased significantly among patients in therapy but not among controls. Thereafter, both groups experienced depression, possibly due to the rapid deterioration in health experienced by patients assigned to either treatment or control condition.

Group Interventions

Considering the beneficial effects of group interactions as well as economic and practical considerations, researchers focused on the efficacy of using group cognitive behavioral therapy to relieve cancer-related depression. Theoreticaly, groups offer patients more role models, more sources of support, and greater exposure to options for coping with cancer-related problems. Active participation in groups also relieves depression by restoring feelings of power and usefulness in helping others.

Among the first to study the effects of group therapy on cancer-related depression, Spiegel and associates (39) at Stanford University provided female patients with metastatic breast cancer 1.5-h weekly therapy sessions for 1 year. Each group was led by two trained leaders(psychiatrist, or social worker and counselor who was a breast cancer survivor). Strategies included reframing, clarification, desensitization, goal/activity scheduling, role rehearsal, and modeling. Groups were observed through a one-way mirror by a psychiatrist with the consent and knowledge of group members (22). Reliability of observations was established by concurrent (randomly selected) observations by a second observer (22). Depression did not abate until completion of therapy (39). Subsequent analyses of qualitative and quantitative data (22) showed that women did not experience reactive depression when a member of the group experienced a rapidly deteriorating health status, but they did relinquish use of denial during these periods. The authors concluded that confrontations with dying detoxified the subject, enabling members to deal with the reality of personal death. Unexpectedly, 10-year follow-up showed that women who received group therapy survived longer than controls did (21).

Studying a similar patient group at the Hadassah University Hospital, Jerusalem, Baider and others (34) conducted a quasiexperimental study to test the effects of directed cognitive restructuring on cancer-related depression. Groups met weekly for 12 weeks. Co-led by a psychologist and social worker, groups discussed specific topics. Using evocative imagery techniques, therapists asked patients to describe their feelings with respect to discovery of lump, diagnoses, body image, sexuality, family roles, family communication, and anticipatory mourning at two points in time: before and after mastectomy. Role modeling, role enactment, and Socratic questioning spontaneously evolved among group members. Although less depressed after therapy, only half found the group helpful. Women who benefited from therapy reportedly enjoyed sharing feelings. These women were also nonjudgmental, newly treated, and not extremely depressed.

Also concerned about women with breast cancer, Halttunen and colleagues (37) studied the effects of eight weekly sessions of group psychotherapy on depression. Women entered therapy immediately after surgery. Interventions consisted of clarifying the meaning of the illness and contingency management of environmental stressors. At 8-year follow-up, survivors from the treatment group tended to be less depressed than controls. Nevertheless, 73% of survivors indicated that they were more prone to depression than before their illness.

Focusing on patients with good prognoses, Fawzy et al.(36) conducted an experimental group-intervention study of patients within 3 months of surgical excision of stage I or II malignant melanoma at the John Wayne Cancer Clinic, UCLA. Groups met for 1.5 h weekly for 6 weeks. Excluded were patients with previous psychiatric care or major depression according to DSM-II criteria (2) and patients undergoing adjuvant therapy that could affect their neuroimmune status. Co-led by two psychiatrists, therapy consisted of structured cognitive behavioral strategies used in Project Omega (49): issue clarification, distraction (relaxation), psychoeducation(reducing risks associated with sun exposure, positive coping strategies), goal/activity scheduling, role modeling, and role enactment with respect to specific cancer-related problems. Pictures served as stimuli. The effects of the therapy were apparent at 6 months from initiation of therapy, but not earlier. Five to 6 years later, group therapy continued to exert a therapeutic effect and promote survival (46).

Seeking to compare the effectiveness of individual versus group therapy, Forester and associates (43) randomized patients undergoing radiation treatments at Columbia-Presbyterian Medical Center to group therapy sessions (n = 6 each) or usual care conditions. Excluded were patients with abdominal cancer and lymphoma. A single leader provided nonstructured therapy. Patients progressed from denial of concerns to an open discussion of meaning of illness through Socratic questioning and imagery rehearsal. Groups met weekly for 10 therapy sessions. At the end of therapy, composite emotional distress of group members was less than that of controls. The improvement was less than that experienced by similar patients who received individual cognitive behavioral therapy in an earlier study (42).

Adding another dimension of complexity to the field of inquiry, Evans and Connis (41) compared the effects of two different group therapy interventions among patients undergoing first radiation treatment of stage II cancer at the Veterans Administration Hospital in Seattle, Washington. One treatment group received directed cognitive behavioral therapy using psychoeducation specific to selected cancer-related topics, cognitive rehearsal, and homework techniques. A second treatment group received "social support": clarification, evocative imagery, cognitive rehearsal, and role modeling. Controls received usual care and crisis intervention on request (n = 2 availed). Social workers experienced in study interventions led the group sessions. Both types of therapy relieved depression within 8 weeks. At 6-month follow-up, only survivors receiving "social support" therapy experienced less depression than controls did, suggesting that directed cognitive-behavioral restructuring is less effective than voluntary restructuring.

Related Research

In related research, Hagopian and others (33) studied the cognitive strategies of women with recently diagnosed breast cancer to determine whether downward comparison influenced outlook. Patients were drawn from radiation and hematology-oncology clinics of two urban hospitals; most (60%) were undergoing initial treatments. Excluded were illiterate patients and patients with psychologic handicaps (i.e., clinical depression, schizophrenia, prior diagnosis of malignancy, and preterminal disease). Questions used to assess use of downward comparison included: "How well do you think you are doing physically in comparison with others in the same situation?" and "How do you compare your medical condition with that of the average person treated with cancer?" Analysis indicated that downward comparison was associated with positive outlooks.

DISCUSSION

Studies consistently suggest that regularly scheduled cognitive-behavioral therapy sessions are more effective in relieving cancer-related depression than are haphazard schedules determined by the patient's need for medical treatment (38). Several studies suggest that simple, brief therapy (six weekly sessions or less) provide effective relief from milder cases of cancer-related depression (that is, patients who are not referred for psychiatric services). These interventions include: audiotapes of diagnostic information pertaining to a "good prognosis"(47), downward comparison (33), and relaxation therapy with or without taped instructional homework (35,40). A few studies suggest that individual, brief cognitive-behavioral therapy offers patients with "good prognoses" and patients undergoing first therapy more immediate relief from depression than group techniques (22,40), but confirmation is needed. Other studies suggest that the severely depressed respond best to individual, cognitive-behavioral therapy (30,44,45).

Composite data suggest that group composition and choice of intervention influence therapeutic outcomes (34,37). When cognitive restructuring is directive, benefits accrue to patients who are newly treated, able to share feelings, and are not extremely depressed (34,41). When content is determined by group members, time for therapeutic effect may take longer (up to 4-6 months) but be more enduring than directive restructuring (i.e., therapist-initiated psychoeducation concerning prespecified topics)(21,34,39,41). Inclusion of members with deteriorating health is not counter-productive to long-term psychotherapy in functional groups and facilitates cognitive restructuring of death-related issues (19).

Serendipitous findings include the discovery by Burish et al.(35) that older women are more responsive to relaxation techniques coupled with imagery and homework assignments than younger women are, suggesting that age should not be a deterrent to psychotherapy. Cull and associates'(30) finding that number of problems and incidence of cancer-related depression correlate presents an alternative method of screening for cancer-related depression. Reports of recurrent depressive episodes among long-term survivors who received psychotherapy during or immediately after treatment suggest that episodic evaluation and refresher interventions are needed to prevent relapse (22,37). Other studies suggest that effective therapy early in the cancer trajectory prolongs survival (21,46).

IMPLICATIONS

Practice

This review underscores the need to provide patients with options for treatment of cancer-related depression (1,27,34,41,43), although the scope of these options may be determined by agency resources (30). The preponderance of evidence supports the need for regularly scheduled(weekly) therapy sessions rather than interventions offered coincidentally to medical treatment (38). Nevertheless, cognitive behavioral theories of depression underscore the importance of managing the environments of patients to protect them from unnecessary stressful events that may arouse negative schema. Examples of nursing activities to prevent stressful events include maintaining adequate symptom control; preparing patients for special procedures, and delivering timely direct care (50). With appropriate education and credentialing, nurses may incorporate cognitive behavioral techniques in patient education (including imagery rehearsal, goal setting, role enactment, and homework). Nurses may also challenge unrealistic thinking (personification, magnification of detail, exaggerated hopes or fears) and introduce patients to others who are more or less fortunate to assist them in understanding their reality. When patients' viewpoints are unnecessarily negative, nurses can pose alternative, positive interpretations. Working with liaison psychiatry (18,51,52), nurses can develop protocols for screening and treatment of cancer-related depression. With interdisciplinary assistance, nurses can also develop critical pathways for achieving and maintaining patient outcomes consistent with depression-free survival: placing value on themselves despite their cancer diagnosis, relying on themselves, and setting goals that promote enjoyment in living rather than fearing abbreviated futures (24).

Theory Development

Although the cognitive behavioral model of depression suggests that nurses can contribute to prevention of cancer-related depression by minimizing environmental stressors, borrowed theories may improve the specificity of these interventions. Pertinent theories include information-seeking, communication, family theory, interpersonal conflict, and conflict resolution. For example, the Information-Seeking Model (53) suggests that manner of information disclosure is important. When information is presented within a hopeful context, patients experience more hope and favorable overall emotional adjustment than patients receiving information framed within a negative context. Inclusion of alternative models of depression may also extend the robustness of depression-prevention interventions (1,31). For example, the psychobiologic model (1) suggests that depression is more likely to occur among patients with fewer resources than the norm. Hence, implications for depression prevention include treating all patients equally despite ability to pay or present themselves in an appealing manner.

Research

The present research base cannot direct practice without replication studies. Of special interest are studies involving brief interventions to prevent and relieve cancer-related depression. If directed by rigorous research methods with well-defined intervention schedules and strategies, study results will advance nurses' abilities to prevent and manage cancer-related depression. Maintaining consistency among therapists and teams of researchers will improve the internal validity of replication studies and facilitate transfer of knowledge to practice. Additionally, interdisciplinary research extending knowledge of therapeutic parameters (i.e., treatment intensity, duration) in view of patient and/or disease characteristics— diagnoses, prognoses, symptom severity — are needed. Tests of interventions guided by derived theories are also needed (5,51,54). Descriptions of the cost effectiveness and health outcomes associated with critical pathways to prevent and relieve cancer-related depression may enable agencies to develop appropriate services. Similarly, Cull and colleagues (30) call attention to the relative absence of published data regarding cost effectiveness of psychooncology service models within and between countries. These researchers also point out the need to describe resources of designated psychooncology services (30). Without an adequate research base to guide treatment, cancer-related depression may become chronic and compromise the quality of life cancer survivors work so hard to preserve (3).

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Key Words: Depression; Human neoplasms; Psychotherapy; Cognitive therapy; Behavior therapy; Relaxation; Imagery

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IMAGE GALLERY

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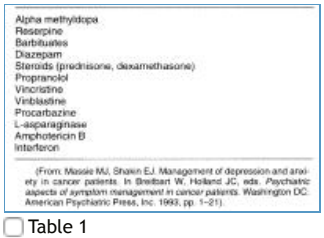

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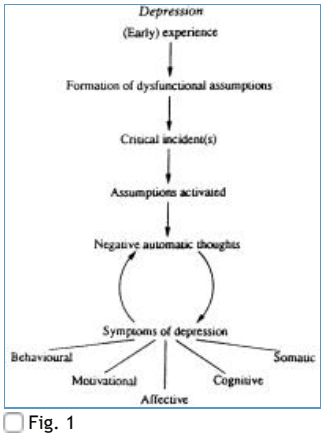
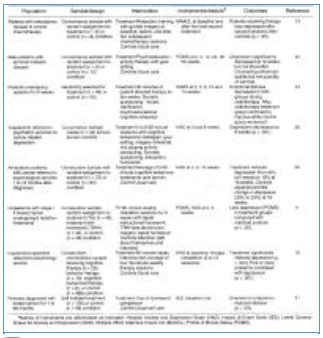


Fig. 1



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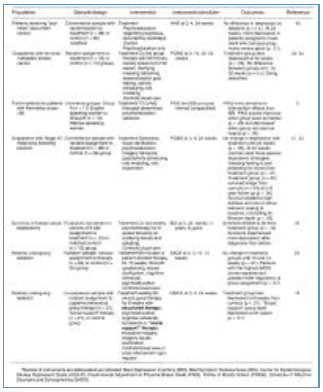

Table 3

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