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Original Paper

Improving the Quality and Quantity of Life Among Patients with Cancer: a Review of the Effectiveness of Group Psychotherapy

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Cancer patients suffer from a number of psychosocial problems related to the progression of their disease as well as standard medical interventions. Fortunately, there is empirical evidence suggesting that group psychotherapy is effective at ameliorating psychological distress and in some cases improving survival. For this literature review we examined the psychological morbidity, particularly anxiety and depression, among cancer patients. Further, we conducted a critical examination of the current evidence regarding the effectiveness of group psychotherapy for improving the quality as well as the quantity of life in cancer patients. Finally, we explored the specific components of effective group psychotherapy, which has been associated with enhanced survival. We conclude that there is compelling evidence indicating that group psychotherapy improves the quality of life of cancer patients. Furthermore, there is a growing body of evidence suggesting that group psychotherapy improves survival of cancer patients. © **1999 Elsevier Science Ltd. All rights reserved.**

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RATIONALE FOR PSYCHOTHERAPEUTIC INTERVENTION WITH CANCER PATIENTS

THE DIAGNOSIS of a life threatening illness can be devastating to patients and their families. Patients are suddenly confronted with a sense of their own mortality, and for most this causes acute psychological stress. For example, up to one-third of patients suffer psychiatric morbidity relating to diagnosis and treatment, which may become disabling and prolonged [1–3]. Moreover, Grassi and Rosti [1] found that just over one-third of long-term survivors of cancer were found to suffer maladjustment to diagnosis and medical treatment, and remain symptomatic 6 years later.

Furthermore, cancer patients are particularly vulnerable to psychiatric disorders. A significant proportion of cancer patients—as high as 50% in some studies—suffer sufficient emotional stress to qualify for a psychiatric diagnosis, especially anxiety or depression [4–6]. For oncology patients, the rate of depression is up to four times higher than in the general population. Chochinov and colleagues [7] found that 20% of terminally ill patients are depressed; however the number of depressed patients increases to 60% among those requesting physician-assisted suicide [7]. This is indicative of psychological distress being related to disease progression such that the proportion of depressed patients increases as the disease progresses.

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PSYCHOSOCIAL EFFECTS OF DISEASE PROGRESSION

Studies of disease progression have emphasised tumour biology at the expense of understanding host resistance processes. Our understanding of disease progression will be greatly enhanced by systematic assessment of both the disease itself as well as the psychosocial and biological factors involved in fighting it. Psychosocial factors have been linked to disease progression. For example, shorter survival in cancer patients has been positively associated with emotional distress [8–10], and increased psychological distress has been shown to correlate with disease progression and poorer health [11]. Moreover, Pennebaker found that patients who used a greater proportion of negative emotion-laden words demon-

strated improved health benefits [12]. Also, cancer patients who express strong feelings appear to cope more effectively with their illness [13–19]. In addition to affective expression, coping styles have been associated with disease progression. Less adaptive coping styles such as avoidance and suppression of cancer-related thoughts have been associated with a greater likelihood of cancer recurrence [20]. In addition to affect and coping, social support has been associated with improved health. For example, social activities have been linked to increased survival time in cancer patients [21, 22].

Effects of social relationships on health

Recent research provides growing evidence for a causal relationship between social relationships and health [23]. Decreased survival in humans has been found to be associated with poor quantity or quality of social relationships in several prospective studies [24–29]. For example [30], Berkman and Syme followed 6928 adults for 9 years and found that individuals with many social ties had lower mortality rates than individuals with fewer social ties. Also, higher mortality rates are often reported during the first year after the loss of a spouse and married cancer patients have been found to survive longer than unmarried persons [27].

PSYCHOTHERAPEUTIC INTERVENTIONS AND HEALTH OUTCOME

Providing social support interventions for isolated individuals under stress has been found to be related to improved health outcome [18, 25, 31–35]. Social support has been shown to be an important factor in mediating individuals' ability to cope with stress. Forester and colleagues [36] found that both mood disturbance and physical symptoms of anorexia, fatigue and nausea and vomiting were significantly improved compared with those of a matched control group in a sample of 48 cancer patients.

Table 1 shows the characteristics of several research trials examining the efficacy of group intervention on quality of life and survival. Although many studies have looked at the effects of group intervention on psychosocial outcome [48, 49], only seven have directly examined the effects of psychotherapy on survival [18, 40–44, 50]. Prior work in our laboratory [18] has shown that participation in psychosocial group treatment for metastatic cancer patients prolongs survival time 2-fold from the point of randomisation; that is, by an average of 18 months. 50 women with metastatic breast cancer randomly assigned to a year of weekly support groups with training in self-hypnosis for pain control, survived an average of 18 months longer than 36 control patients who had been randomly assigned to routine care. This difference is clinically, as well as statistically, significant. Further analyses suggest that these findings of associations between intervention and increased survival occurred independently of differences between groups in subsequent medical treatment or health behaviours [51]. Studies are currently underway with metastatic cancer patients at Stanford, U.S.A. and in Toronto, Canada by Goodwin and colleagues [52, 53] to replicate these findings and to investigate mediating variables in the relationship between psychotherapy and survival.

Two other randomised trials have also demonstrated a psychosocial effect on survival time among cancer patients. Richardson and colleagues [44] utilised a 4-cell design among patients with lymphomas and leukaemias. Patients were assigned either to a routine care condition or to one of three educational and home-visiting supportive interventions. The control group had significantly shorter survival time than patients allocated to the intervention. There were also differences in patients' adherence with medical treatment as measured by allopurinol intake. The survival differences held even when differences in medication adherence were controlled.

Fawzy and colleagues published psychosocial, immunological, recurrence and survival results of a randomised trial involving 80 patients with malignant melanoma. Half were assigned to routine care and the other half to a structured series of 12 support groups. These weekly meetings were designed to help patients cope better with the illness and its effects on their families. In the first reports [39], they found significant reductions in mood disturbance on the Profile of Mood States and the use of more active coping strategies in the intervention sample. In a companion report [54] they observed significant differences in immune function at 3-month follow-up but not earlier. They found a predicted increase in natural killer cytotoxicity and an increase in LEU56 cells in the intervention sample. A 6-year follow-up [40] demonstrated a significantly lower rate of mortality among intervention patients (3/34 versus 10/34), consistent with the findings among breast cancer patients in our laboratory.

Some studies show no effect of psychosocial treatment on medical outcome. The apparent beneficial effect of psychosocial support on survival time of 34 breast cancer patients in another study [42], disappeared when time from cancer diagnosis to programme entry was controlled. This lack of difference has recently been confirmed in a long-term follow-up of the same sample [41]. Two trials, both randomised, also found no survival benefit to psychotherapy for cancer patients. Linn and colleagues [50] offered individual psychotherapy to a group of patients with a variety of cancers, including those of lung and pancreas in a randomised protocol. There was no difference in survival time. It may be that since virtually all of the patients died during the follow-up year, their disease was too far advanced to be significantly influenced by psychotherapeutic support. Similarly, Ilnyckyj and coworkers [43] found no survival advantage for breast cancer patients randomly assigned to one of several group psychotherapies, some peer-led. Neither was there any demonstrable psychological benefit. In this case, the relative inefficacy of the intervention may account for the lack of medical effect.

There are several research trials which utilise a random controlled design with at least 3-month follow-ups, making it possible to make causal inferences from the data (see Table 1). The majority of intervention studies demonstrated improved psychological adjustment [17, 37–40, 45, 47] (Table 1). Group psychotherapy has also been demonstrated as effective in reducing pain in cancer patients [55, 56]. As mentioned above, not all of the outcome studies on supportive group therapy reviewed in this article demonstrated improved psychosocial adjustment. First, Ilnyckyj and colleagues [43] found no significant differences in psychological distress between control and treatment groups. We believe that an important factor, which may explain this difference, is that the majority of patients were in the early stages of disease progression, but they had a variety of tumour sites and stages of cancer. This may have made it more difficult to form a cohesive group, which is a crucial factor in group effectiveness [57]. Similarly,

Table 1. *Efficacy of group interventions in a quality of life and survival studies*

First author [ref.]	Number of participants	Type of Cancer	Type of intervention/follow-up	Psychosocial measures	Psycho-social/survival outcome
Berglund [37]	199 men and women; 192 females and 7 males. (Rx group $n = 98$; control $n = 101$)	Heterogeneous, but the majority had breast cancer ($n = 159$)	Psycho-educational: 11 sessions of 2-h duration for 7 weeks Follow-up 12 months	Hospital Anxiety and Depression Scale; Cancer Inventory of Problem Situations; The Quality of Life Scale; the Mental Adjustment to Cancer Scale	At 12-month follow-up the intervention group showed significant improvement in coping, greater information regarding cancer and treatment, and improved physical capabilities
Cain [38]	80 women (Rx group $n = 28$; Rx individual $n = 21$; control $n = 31$)	Gynaecological cancer; endometrial cervical, ovarian, vaginal or vulval	Thematic Counselling Model given in individual and group modes. 8 sessions/week. 6-month follow-up	Hamilton Depression Rating Scale; Psychosocial Adjustment to Cancer Scale (PAIS)	Individual and group interventions were equally effective in significantly reducing anxiety, depression and improving adjustment to the illness at 6-month follow-up
Fawzy [39]	66 patients (Rx group $n = 38$; control $n = 28$)	Malignant melanoma stage I (no metastases) or II (local node metastases)	Cognitive Behavioural. Once a week for 6 weeks for 90 min. 6-week follow-up	Profile of Mood States; Dealing with Illness—Coping Inventory	At 6-week follow-up the intervention group demonstrated higher vigour and more active coping. At 6-month follow-up the treatment group showed decreased total mood disturbance, depression, fatigue, confusion and higher vigour.
Fawzy [40]	68 patients (Rx group $n = 34$; control $n = 34$)	Malignant melanoma	As above 5-year follow-up	As above	Higher baseline Total Mood Disturbance and higher active coping scores were associated with lower recurrence and death rates. Enhanced survival
Gellert [41] Follow-up of Morgenstern [42]	34 programme participants; 102 non-participants	Breast cancer, primary and metastatic	Exceptional Cancer Patients Programme. Weekly for 90 min for peer support, family therapy, individual counselling and use of positive imagery	Not reported	No survival benefit
Ilnyckyj [43]	127 patients, Rx group $n = 96$; control $n = 31$	Breast; lymphoma; colon; ovarian; and other	Supportive-educational Groups. One hour weekly sessions for 6 months	State Trait Anxiety Inventory; Beck Depression Scale; Health Locus of Control	No significant differences between groups on state trait anxiety; Beck depression scale and Locus of Control scale. No survival effect.
Morgenstern [42]	Rx = 34; control = 102	Breast cancer	Exceptional Cancer Patients Programme	Not reported	No survival benefit
Richardson [44]	94 patients, 59 males and 35 females. (control, $n = 25$ and three treatment conditions focused on increasing adherence to medical regimes)	Haematological malignancies	3 educational groups. 1. Education and home visit 2. Education and shaping 3. Education, shaping and home visit. 6-month follow-up	Not assessed	Low disease severity, high allopurinol compliance, and allocation to an educational programme predicted enhanced survival.
Spiegel [45]	58 women Rx group $n = 34$; control $n = 24$	Metastatic breast cancer	Supportive–Expressive. Once a week for 90 min for 1 year. One year follow-up.	Profile of Mood States; Health Locus of Control; Janis Field Scale (self-esteem); Maladaptive coping response; Phobias; A denial measure	Compared with the control group, the intervention group at 1-year follow-up demonstrated significantly less tension, depression, fatigue, confusion, greater vigour, less maladaptive coping responses and fewer phobias.
Spiegel [18]	86 women; Rx group $n = 50$; control $n = 36$	Metastatic breast cancer	As above	As above	Intervention group had significant reduction in anxiety, depression and pain. Women in the supportive expressive group lived twice as long as the women in the control group, an average of 18 compared to 36 months
Telch [46]	41 cancer patients (27 women; 14 men)	Heterogeneous breast, Hodgkin's lymphoma; lung, ovarian, colon, melanoma	Intervention groups: 1. group coping skills education 2. non-directive supportive group therapy 3. 6 weekly, 1.5-h sessions	Profile of Mood States (POMS); Cancer Inventory of Problem Situation; Perceived Self Efficacy	Overall coping skills intervention superior to non-directive supportive therapy and control. Coping skills group showing significantly lower depression, anxiety, anger, fatigue and confusion, greater vigour, improved self-efficacy, and few disease-related problems compared with other groups
Wiesman [47]	117 patients Rx = 59; control = 58	Heterogeneous	Cognitive Behavioural Four group sessions over course of 6 weeks. 6-month follow-up	Profile of Mood States; The Index of Vulnerability; Inventory of Current Concerns	At post-intervention and at the 6-month follow-up, the intervention group demonstrated improved coping, communication and psychological well-being compared with the control group.

Rx, radiotherapy.

Telch and Telch [46] did not find improved psychological adjustment with a non-directive social support group. This study also included a heterogeneous sample of cancer patients.

Much of the research evidence indicates that group psychotherapy is effective at reducing psychological distress in cancer patients. Specifically, there are two types of group therapy (described below) which have demonstrated improved quality of life and show early promise of enhancing survival [18, 40].

CHARACTERISTICS OF SUCCESSFUL GROUP PSYCHOTHERAPEUTIC INTERVENTIONS

Cognitive behavioural therapy

Cognitive Behavioural Therapy is a highly structured model that has four main components: psycho-education, stress management, problem solving and social support [39, 40]. The psycho-education component provides information to melanoma patients regarding cancer prevention (e.g. nutrition, exercise, use of protective clothing and sunscreens). Patients are encouraged to continue their routine activities, especially those activities they enjoyed in a safe manner. During the group sessions patients are taught stress management skills such as stress awareness and relaxation training. This approach involves teaching cognitive techniques to manage anxiety. These include learning: to identify emotions as they develop, to analyse sources of emotional response, and to move from emotion-focused to problem-focused coping. These approaches help the patient take a more active stance towards the illness. Rather than feeling overwhelmed by an insoluble problem, they learn to divide problems into smaller and more manageable ones. The problem-solving component of the therapy teaches patients in a group setting to confront potential problems by showing them a series of pictures illustrating common dilemmas in cancer so as to initiate discussion and resolution. Patients are encouraged to apply this problem-solving approach to their own personal problems. The pictures relate to situations of loneliness and isolation, fear and anxiety, doctor–patient communication, changes in body image and sexuality, and depression. The social support component encourages patients to share their concerns and experiences. Patients discuss many issues including disease-related concerns, family issues and doctor–patient communication.

Our clinical programme differs from the cognitive approach in emphasising the facilitation of emotional expression and social support in a group context. There are seven important components in our Supportive–Expressive Therapy: social support, emotional expression, detoxifying death and dying, reordering life priorities, family support, communication with physicians and symptom control.

Social support

Psychotherapy, especially in groups, can provide a new social network with the common bond of facing similar problems [19]. Just at a time when the illness makes a person feel removed from the flow of life, when many others withdraw out of awkwardness or fear, psychotherapeutic support provides a new and important social connection. Indeed, the very thing that damages other social relationships is the ticket of admission to such groups, providing a surprising intensity of caring among members right from the beginning. Thus, constructing new social networks for cancer patients via support groups and other means is doubly important: it comes at a time in life when natural social support may erode, and when more is needed [58].

Emotional expression

The expression of emotion is important in reducing social isolation and improving coping. Yet it is often an aspect of cancer patients' adjustment which is overlooked or suppressed. Emotional suppression and avoidance are associated with poorer coping [16, 17] and reduced intimacy in families, limiting opportunities for direct expression of affection and concern. Both group and individual psychotherapies can do much to facilitate the expression of emotion appropriate to the disease. The repressive coping strategy, which reduces expression of positive as well as negative emotion, is itself reduced by group and individual psychotherapy. Indeed, there is evidence that those who are able to express strong feelings directly cope better with cancer [15–21].

Detoxifying death and dying

This component of the therapy involves facing up to the threat of death rather than avoiding it. The goal is to help those facing the possibility of death see it from a new point of view. When worked through, life-threatening problems can come to seem real but not overwhelming [20]. Following a diagnosis of cancer, a variety of coping strategies come into play, including positive reappraisal and cognitive avoidance [59]. However, denial and avoidance have their costs, including an increase in anxiety and isolation. Facing even life-threatening issues directly can help patients shift from emotion-focused to problem-focused coping [60, 61]. The process of dying is often more threatening than death itself. Direct discussion of death anxiety can help to divide the fear of death into a series of problems: loss of control over treatment decisions, fear of separation from loved ones, anxiety about pain. Discussion of these concerns can lead to means of addressing, if not completely resolving, each of these issues. Thus, even facing death can result in positive life changes. One woman with metastatic breast cancer described her experience in this way:

> What I found is that talking about death is like looking down into the Grand Canyon (I don't like heights). You know that if you fell down, it would be a disaster, but you feel better about yourself because you're able to look. I can't say I feel serene, but I can look at it now [19].

Even the process of grieving can be reassuring at the same time that it is threatening. The experience of grieving for others who have died of the same condition constitutes a deeply personal experience of the depth of loss that will be experienced by others after one's own death.

Reordering life priorities

The acceptance of the possibility of illness shortening life carries with it an opportunity for re-evaluating life priorities. When cure is not possible, a realistic evaluation of the future can help those with life-threatening illness to make the best use of remaining time. One of the costs of unrealistic optimism is the loss of time for accomplishing life projects, communicating openly with family and friends, and setting affairs in order. Facing the threat of death can aid in making the most of life [19, 45]. This can help patients take control of those aspects of their lives they can influence, while grieving and relinquishing those they cannot. Having a domain of control can be quite reassuring.

Family support

Psychotherapeutic interventions can also be quite helpful in improving communication, identifying needs, increasing role flexibility, and adjusting to new medical, social, vocational and financial realities. There is evidence that an atmosphere of open and shared problem-solving in families results in reduced anxiety and depression among cancer patients [55]. Facilitating the development of such open addressing of common problems is therefore a useful therapeutic goal. The group format is especially helpful for such a task, in that problems in expressing needs and wishes can be examined among group members as a model for clarifying communication in the family.

Communication with physicians

Support groups can be quite useful for facilitating better communication with physicians and other healthcare providers. Groups provide mutual encouragement to get questions answered, to participate actively in treatment decisions, and to consider alternatives carefully. Such groups must be careful not to interfere with medical treatment and decisions, but rather to encourage clarification and the development of a cooperative relationship between doctor and patient.

Symptom control

Many group and individual psychotherapy programmes teach specific coping skills designed to help patients reduce cancer-related symptoms such as anxiety, anticipatory nausea and vomiting, and pain. Techniques used included specific self-regulation skills such as self-hypnosis, meditation, biofeedback and progressive muscle relaxation [62–68].

CONCLUSION

Cancer patients suffer considerable emotional and social distress with a significant number of patients suffering from persistent psychosocial problems. Moreover, there is compelling evidence that group interventions are effective in reducing mood disturbance and pain, and in improving quality of life in patients with cancer. Furthermore, there is promising evidence that psychotherapy may extend the survival of cancer patients.

Results from well-designed randomised controlled trials examining the effects of psychotherapy on survival are promising, but are not conclusive, and need to be interpreted cautiously. A more definitive resolution of possible mechanisms linking psychotherapy to survival awaits future research.

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