Hopelessness and Related Variables Among Cancer Patients in the Southern European Psycho-Oncology Study (SEPOS)

LUIGI GRASSI, M.D., LUZIA TRAVADO, PH.D.
FRANCISCO GIL, PH.D., SILVANA SABATO, PH.D.
ELENA ROSSI, PH.D., MICHELE TOMAMICHEL, M.D.
LUCIANA MARMAI, M.D., BRUNO BIANCOSINO, M.D.
MARIA GIULIA NANNI, M.D., THE SEPOS GROUP

Background: Although hopelessness has been studied in cancer, no data are available in non-English-speaking countries. **Objective:** The authors sought to amass data from Southern European countries (Italy, Portugal, Spain, and Switzerland) in order to fill this void. **Method:** A group of 312 cancer patients completed the Mini-MAC Hopelessness subscale, the Hospital Anxiety and Depression Scale (HADS), the Cancer Worry Inventory (CWI), and a six-item Visual Analog scale (VAS) to measure intensity of physical symptoms, general well-being, difficulty in coping with cancer, intensity of social support from close relationships, leisure activity, and support from religious beliefs. **Results:** Regression analysis indicated that HADS–Depression, VAS Maladaptive Coping and Well-Being, and the CWI explained 42% of the variance. **Conclusion:** Hopelessness in cancer patients seems not exclusively to correspond to depression, but is related to various other psychosocial factors, such as maladaptive coping, as well.

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Hopelessness, as a subjective and affective state characterized by a negative view of the future, a sense of loss of control, confidence, courage, and the energy to achieve one's own goals, has been extensively studied over the last 20 years.^{1–3} Symptoms of hopelessness, as a specific cluster within affective disorders,⁴ have been shown to correlate more with each other than with other depressive symptoms and more than with other psychopathology symptoms.⁵ Hopelessness has also been reported not only as being present in depressive disorders, but to be the major indicator of demoralization, independent of the presence of clinical depression.⁶

Hopelessness is also one of the most frequent and important conditions described in medically ill patients.⁷ The feeling that hopes have been destroyed or that a dilemma cannot be resolved makes hopelessness common in

cancer patients. Hopelessness can threaten a patient's physical and psychological well-being and can affect the process of recovery and rehabilitation. Likewise, hopelessness has been found to be present among medically ill patients who meet the criteria for demoralization (i.e., the

Received December 30, 2007; revised March 23, 2008; accepted March 24, 2008. From the Dept. of Medical Science of Behaviour and Communication, Section of Psychiatry, University of Ferrara and Integrated Dept. of Mental Health and Drug Abuse, AUSL and S. Anna Hospital, Ferrara, Italy; the Clinical Psychology Unit, Centro Hospitalar de Lisboa Central, EPE, Hospital de S. José, Lisbon, Portugal; Psycho-Oncology Unit; the Hospital Duran i Reynals, Catalan Institute of Oncology, L'Hospitalet, Barcelona, Spain; and Medical Psychology Services, Cantonal Socio-Psychiatric Organization, Canton Ticino, Switzerland. Send correspondence and reprint requests to Luigi Grassi, M.D., Clinica Psichiatrica Università di Ferrara, Corso Giovecca 203-44100, Ferrara, Italy. e-mail: luigi.grassi@unife.it

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feeling of having failed to meet one's own expectations or those of other people; feeling unable to cope with a current urgent problem; feelings of helplessness, hopelessness, and/ or giving up), according to the Diagnostic Criteria for Psychosomatic Research (DCPR),⁸ rather than major depression, according to the DSM-IV.⁹

In oncology, a number of studies have focused on hopelessness as a maladaptive coping style. Hopelessness has been associated with poor adjustment to illness; this includes depression,^{10,11} low satisfaction with support received from interpersonal ties,¹² and poor quality of life.¹³ Hopelessness also contributed uniquely to the prediction of suicidal ideation, controlling for level of depression, among cancer patients in an advanced phase of illness.¹⁴ Furthermore, hopelessness and depression mediated the pathways between illness-related factors and desire for hastened death both in hospitalized¹⁵ and terminally-ill cancer patients.^{16,17} Research also seem to suggest the possibility of a connection between hopelessness and cancer prognosis. In a 10-year follow-up investigation of 450 breast cancer patients, hopelessness, rather than depression, was shown to predict both recurrence of illness and reduced survival time.¹⁸ Hopelessness has been shown to be a strong predictor of both incidence of and death from cancer, independent of depression and traditional biological risk factors in general-population studies.^{19,20}

No study has explored the concept of hopelessness in non-English-speaking countries. However, cultural issues have been indicated as important variables to be taken into account when examining emotional states and coping with cancer.²¹ Differences between Portuguese and American cancer patients have been described in terms of quality of life and social lifestyle.²² Satisfaction with medical care among French, Italian, Polish, and Swedish cancer patients has also been considered in relation to their respective cultural backgrounds.²³ Fatalism was found to be more prevalent among Portuguese than Italian patients.²⁴

With this background in mind, the aims of the present study were to examine the relationship between hopelessness and depression in high-functioning cancer patients with mildly-to-moderately advanced disease and to evaluate the role of other medical, psychosocial, and cultural factors in influencing hopelessness.

METHOD

Subjects

The study was carried out in university hospitals and affiliated cancer centers in Southern European countries

(Italy, Portugal, Spain, and Switzerland), as part of a larger research and educational investigation involving Mediterranean countries (the Southern European Psycho-Oncology Study-SEPOS).²⁴⁻²⁷ As described elsewhere,²⁴ a convenience sample of cancer patients was enrolled in the outpatient and day-hospital services of the participating centers. The selection criteria were the following: patients were age 18-70 years; had had a diagnosis of cancer for between 6 and 18 months; had no cognitive impairment due to the disease or side effects of treatment, as evaluated both at the clinical level (orientation to time, space, and person; short-term memory) and through the Mini-Mental State Exam (cutoff: 24).²⁸ Furthermore, since the original study also had the aim of evaluating the ability of physicians to assess their patients' psychosocial morbidity, only patients reporting a score ≥ 80 on the Karnofsky Performance Status Scale (KPSS)²⁹ were selected, in order to avoid the possibility of patients' poor physical condition negatively influencing the doctors' ability to assess psychosocial disorders, which are more complex to evaluate in the advanced stages of illness.³⁰ The study was approved by the ethical committees of the respective hospitals. Each patient received detailed information of the aim of the study and gave his or her written consent for participation.

Procedures

Each patient was individually interviewed by research psychologists administering an abbreviated semistructured interview developed for the study and evaluated in pre-research meetings. The first part of the interview collected information about previous psychiatric disorders before the diagnosis of cancer (lifetime history of psychopathology). On the basis of previous literature concerning the relationship between stress and depression in cancer patients,³¹ the second part of the interview investigated life events in the last 5 years.

A booklet with self-report psychometric instruments was then given to the patients. Hopelessness was measured with the Hopelessness factor of the Mini-Mental Adjustment to Cancer scale (Mini-MAC).³² The Mini-MAC and its more complete version, the MAC, are among the few scales that examine patients' cognitive and behavioral attitudes toward cancer. The Mini-MAC Hopelessness factor is an eight-item subscale on a 1-4 Likert scale (1: It definitely does not apply to me, to 4: It applies to me; score range: 8-32; Table 1), measuring the tendency to adopt a pessimistic and despairing attitude about the illness.

A series of other self-report instruments was also given to the patients in order to examine their association with hopelessness: the Hospital Anxiety and Depression Scale (HADS), the Cancer Worries Inventory (CWI), and the six-item, 0–10 per-item Visual Analog Scale (VAS).

The HADS³³ is a widely used questionnaire consisting of 14 items, which have been specifically developed to be applied in medical settings. It has been repeatedly used in oncology to assess anxiety (7 items) and depression (7 items), on a 0–3 Likert-scale (score range: 0–21), with several studies indicating the usefulness, reliability, and validity of the HADS in cancer settings.³⁴ Recommendation on the use of cutoff score >11 to identify “clinical cases” of depression³³ on the Anxiety subscale was also taken into account, with the hypothesis that hopelessness could be related to anxiety, along with depression.

The CWI³⁵ is a 15-item questionnaire examining, on a 1–4 Likert scale, several possible concerns, including physical problems (e.g., the effects of surgery, the effects of chemotherapy, physical symptoms), emotional problems (e.g., emotional symptoms, feeling different from others; concerns about the future), relationship worries (e.g., being a burden to the family; worries with respect to sexual life and the relationship with one’s own partner),

and economic worries (e.g., work-related issues, including housework; not being able to carry out one’s daily activities). Cronbach α reliability of the CWI was good ($\alpha=0.88$).

Last, given that the use of the VAS to measure single dimensions in cancer such as distress, mood, fatigue, and physical symptoms has been reported in the literature,^{36,37} patients also completed a six-item VAS, with the instructions: “Please read each situation concerning your illness and make a cross along the line in the place that best applies to you and to how you felt during the last 2 weeks.” Patients were asked to rate, on a scale of 0–10, the intensity of each single items (from 0: no problem/not at all; to 10: extreme problems/extreme), namely: “The intensity of my physical symptoms,” “My general well-being,” “The difficulty I have in coping with cancer,” “The support (emotional and/or practical) I receive from close persons,” “My leisure activity,” and “The support I have from my faith in giving meaning to my existence.”

Statistical Analysis

Statistical analysis was performed with the SPSS 10.4 package. Distribution and frequency analyses were used to

TABLE 1. Items of the Mini-MAC (Mental Adjustment to Cancer) Hopelessness Subscale and Interquartile Ranges

Items	Mean (SD)	Median	Interquartile Range
I feel like giving up.	1.45 (0.81)	1	25–1 50–1 75–2
I feel completely at a loss about what to do.	1.53 (0.78)	1	25–1 50–1 75–2
I can’t handle it.	1.69 (0.89)	1	25–1 50–1 75–2
I am not very hopeful about the future.	1.81 (0.96)	2	25–1 50–2 75–2
I feel there is nothing I can do to help myself.	1.61 (0.82)	1	25–1 50–1 75–2
I think it is the end of the world.	1.63 (0.89)	1	25–1 50–1 75–2
I feel that life is hopeless.	1.52 (0.79)	1	25–1 50–1 75–2
I can’t cope.	1.56 (0.84)	1	25–1 50–1 75–2

SD: standard deviation.

evaluate the samples. Correlational analysis was performed with Pearson's r coefficient test. Student's t -test, ANOVA (F), and chi-square tests (χ^2) were used to examine inter- and intra-samples differences. Univariate and two-way analysis of variance (ANOVA), multiple regression analysis, and ANCOVA were used when appropriate. Statistical significance was set at the 0.05 level.

RESULTS

A total of 313 patients were selected from the centers participating in the study (Italian-speaking area [Ferrara and Lugano, Italy]: $N=155$; Portuguese-speaking area [Lisbon, Portugal]: $N=90$; Spanish-speaking area [Barcelona, Spain]: $N=68$). Complete data on all measures were available for 312 patients. Most patients were women ($N=218$; 68.9%); one-third ($N=94$; 29.1%) were men. The mean age was 56.7 years (standard deviation [SD]: 13.14). Sociodemographic and clinical data are presented in Table 2.

The Hopelessness measure showed acceptable levels of reliability in this study (Cronbach α : 0.77). According to the HADS' identification of "caseness" of depression, Hopelessness scores were higher among "cases" ($N=28$; 8.7%) than among patients with depression scores in the normal range ($N=236$; 73.1%; 20.79 [6.75] versus 11.77 [4.28]; $F [2]=46.8$; $p=0.001$).

Patients with previous psychiatric episodes ($N=55$; 17.6%) had Hopelessness scores similar to those with no previous episodes (12.65 [4.33] versus 12.88 [5.25]; $t=0.34$; NS). Likewise, patients reporting stressful events in the previous year ($N=184$; 59%) did not differ on Hopelessness scores from those not reporting such life events (12.76 [4.98] versus 13.11 [5.38], $t=0.59$; NS).

No differences were found by stage of cancer ($F [2]=1.38$; NS) or type of treatment (chemotherapy, hormone-therapy, radiotherapy, no therapy; $F [3]=1.4$; NS). Patients with breast cancer ($N=150$) reported marginally lower Hopelessness scores than patients with other types of cancer ($N=162$; 12.3 [4.64] versus 13.53 [5.61]; $t=2.1$, $p=0.03$). There was also no difference in Hopelessness among centers ($F [4]=2.12$; $p=0.07$). Univariate ANOVA indicated no effect for gender or country on Hopelessness and no interaction between gender and country.

The Hopelessness mean score (12.72 [4.95]) was slightly higher than that reported in the English validation study, involving 565 patients (11.96 [3.91]; $t=2.5$; $p=0.013$). Hopelessness was marginally associated with age ($r=0.13$; $p=0.05$), and significantly associated with

HADS-Depression ($r=0.55$; $p=0.001$), HADS-Anxiety ($r=0.51$; $p=0.001$), CWI score ($r=0.49$; $p=0.01$), VAS General Well-Being ($r = -0.48$; $p=0.01$), Maladaptive Coping ($r=0.46$; $p=0.01$), and Leisure Activity ($r = -0.35$; $p=0.01$); correlations are shown in Table 3. Although statistically significant, lower correlations were found between Hopelessness and VAS-Symptoms ($r=0.15$; $p=0.014$) and Support From Others ($r = -0.18$; $p < 0.01$).

Regression Analysis

We then performed multiple-regression analyses on these psychological variables (i.e., HADS-Depression, HADS-Anxiety, Total CWI score, and 6-item VAS), which were regressed on the Hopelessness variable.

TABLE 2. Sociodemographic and Clinical Data of the Patients

Variable	N (%)
Sex	
Male	94 (29.1%)
Female	218 (68.9%)
Age, years, mean (SD)	56.7 (13.14)
Education, years, mean (SD)	8.82 (5.32)
Marital status	
Married	226 (72.2%)
Widowed	25 (8%)
Unmarried	35 (10.9%)
Separated/divorced	26 (8.3%)
Occupation	
Retired	131 (41.9%)
Employed	101 (32.3%)
Housewives	47 (15%)
Unemployed	9 (2.9%)
Other	24 (7.7%)
Cancer site	
Breast	105 (71.4%)
Gastrointestinal	27 (18.4%)
Respiratory	6 (4.1%)
Blood	5 (3.4%)
Genitourinary	4 (2.8%)
Stage	
Local disease	152 (48.7%)
Local-regional	96 (30.76%)
Metastatic	64 (20.51%)
Treatment	
No therapy	50 (16%)
Chemotherapy (with/without radiotherapy/hormone)	142 (45.5%)
Radiotherapy (with/without hormone-therapy)	52 (16.6%)
Hormone therapy	32 (10.2%)
Chemotherapy/radiotherapy/hormone therapy	23 (7.3%)
Other	13 (4.16%)

SD: standard deviation.

HADS–Depression entered the equation accounting for 30% of the explained variance, followed by CWI–Total, which accounted for an additional 8%, VAS–Maladaptive Coping (2%), VAS–Well-Being (1%), and VAS–Symptoms (1%), respectively. Together, all of these factors explained 42% of the total variance ($F=44.24$; $p=0.001$). A different model was used by excluding HADS–Depression and keeping all the other factors. CWI–Total explained 28% of the variance, followed by VAS–Maladaptive Coping (7%), VAS–Well-Being (4%), and VAS–Symptoms (1%), respectively (total variance explained: 39%).

In order to check for other possible differences, ANCOVA was also performed, with country-of-origin and gender included as discrete variables, and predictors previously included in the model were included as continuous variables. No statistically significant interaction was shown between the covariate and the predictor variables (F s ranging between 0.33 [$p=0.95$] and 1.75 [$p=0.08$]).

DISCUSSION

In this study, we examined the characteristics of hopelessness among Southern European cancer patients. Hopelessness was not exclusively related to depression, as measured by the HADS–Depression scale. In fact, although HADS–Depression explained a high proportion of variance, other factors intervened in the prediction of hopelessness in cancer patients. More specifically, hopelessness was associated with a series of cancer-related worries, such as feeling different from others, with the conjoint feelings of alienation, the negative impact of the illness in the relationship with one's partner, and the negative effects of surgery. This is in line with data showing that

specific worries caused by cancer influence the patients' subjective response, such as degree of threat assessed, the reporting of a response of helplessness, and perceived difficulty in resolving concerns. This, in turn, can favor the development of affective disorders over time.³⁸

Two other dimensions were predictive of hopelessness—namely, Maladaptive Coping (i.e., not being able to cope with cancer and its implications) and poor General Well-Being. Although it is understandable and expected that difficulty in coping with illness could be associated with hopelessness, as a specific component of coping dysfunction, it is important to point out that the subjective perception of poor well-being was also related to hopelessness responses. This underscores the need to consider the patient's subjective experience of his or her well-being and functional status in all phases of illness, and not only in advanced or terminal cancer, where poor well-being is, in fact, associated with hopelessness, depression, suicidal ideation, and poor quality of life.^{14,39}

Interestingly, no other psychosocial variables, even previous psychiatric episodes, stressful events in the last year, or spiritual beliefs, were related to hopelessness. Likewise, medical variables, such as stage and site of cancer or type of treatment, did not appear to influence hopelessness, although breast cancer patients reported lower scores than patients with other types of cancer.

Several limitations of the study should be considered. First, depression was evaluated with a psychometric instrument (the HADS–Depression scale), rather than a more structured clinical interview. Likewise, the Hopelessness subscale of the Mini-MAC has only face-validity, since no study examined its validity in comparison with other hopelessness scales in cancer patients. Second, the small size of the sample and the patients' high functioning level also limit the conclusions of the study. On the other hand, the fact that patients had mildly-to-moderately advanced disease, reinforces the results that have emerged from studies examining hopelessness in more-advanced cancer patients and in palliative care. A third limitation relates to the impossibility of generalizing the results to the whole cancer population of the three participating Southern European countries, even if the sample was representative of the centers where the study was carried out. The heterogeneity of the patient sample in terms of cancer site, stage, and treatment received, also prevents us from generalizing the results of the study.

We should also note that items belonging to the Hopelessness dimension, as measured by the Mini-MAC, have many overlaps with the criteria proposed by Kissane

TABLE 3. Correlations Between the Mini-MAC (Mental Adjustment to Cancer) Hopelessness and Psychosocial Measures

Psychosocial Measure	r	p
HADS Depression (HADS–D)	0.55	0.001
Cancer Worry Inventory (CWI)	0.49	0.001
VAS–Physical Symptoms	0.10	NS
VAS–Well-Being	–0.48	0.001
VAS–Leisure	–0.35	0.01
VAS–Social Support	–0.19	0.05
VAS–Maladaptive Coping	0.46	0.001
VAS–Support From Religion	–0.08	NS

HADS: Hospital Anxiety and Depression Scale; CWI: Cancer Worries Inventory; VAS: Visual-Analog Scale.

et al.⁴⁰ and Clarke and Kissane⁴¹ for the diagnosis of demoralization; these include affective symptoms of existential distress (i.e., hopelessness or loss of meaning and purpose in life); cognitive attitudes of pessimism, helplessness, sense of being trapped, personal failure, or lack of a worthwhile future; absence of drive or motivation to cope differently; associated features of social alienation or isolation; and perceived lack of support.

Likewise, the DCPR construct of demoralization, characterized by "feelings of hopelessness, helplessness, or giving up, and inability to cope with some pressing problems,"⁸ has been shown to be only partly associated with major depression, both in other medically ill patients⁹ and in cancer patients.^{42,43}

In summary, hopelessness appears to be a significant psychological dimension that merits further and more detailed research in oncology in order to better understand

the role of psychological factors in medical conditions⁴⁴ and develop more specific interventions.

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