

Cancer patients' emotional distress, coping styles and perception of doctor-patient interaction in European cancer settings

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Abstract

Objective. As a part of a European study, we cross-culturally examined the rate of emotional distress and maladaptive coping and their association with cancer patients' satisfaction with their interactions with the physician responsible for their care.

Methods. Cancer patients (n=302) from one Middle European (Austria) and two Southern European (Italy, Spain) countries completed the NCCN Distress Thermometer (DT), the Mini-Mental Adjustment to Cancer (Mini-MAC) Anxious Preoccupation (AP) and Hopelessness (H) sub-scales, and the Physician Patient Satisfaction with Doctors Questionnaire (PSQ).

Results. The prevalence of emotional distress (DT caseness) was 60% (26.1% mild, 18.8% moderate, and 14.9% severe distress). Maladaptive coping (Mini-MAC cases) was found in 22.8% (hopeless cases) and 22.5% (anxious preoccupation cases). PSQ-MD was significantly correlated with Mini-MAC/H and Mini-Mac/AP, while PSQ-PS was negatively correlated with Mini-MAC/H. DT cases and those with higher levels of hopelessness reported higher scores on PSQ-MD and lower on PSQ-PS than non-cases. Some differences were found between countries both as far as patients' coping and perception of the interaction with doctors. In hierarchical multiple regression analysis, after adjusting for socio-demographic and medical variables, Mini-MAC/H significantly predicted the scores on PSQ-MD (positive direction) and PSQ-PS (negative direction).

Significance of Results. The study confirms that about one out of three cancer patients have moderate to high level of emotional distress and about one out of four, clinically significant maladaptive coping. Also, patients showing hopelessness and distress tended to perceive their doctors as both disengaged and less supportive. These results support the need for physicians to monitor their patient's level of distress and coping mechanisms and to adjust their own relational and communication style according to patients' psychological condition. Also, cross-cultural issues should be taken into account when exploring psychosocial variables and cancer patients' perception of and satisfaction with the interaction with their doctors.

Introduction

Over the last 30 years it has been repeatedly demonstrated that 25-30% of cancer patients present symptoms of emotional distress and maladaptive coping, secondary to the disease and treatment, irrespective of the stage of disease (Mitchell et al., 2011). Since distress and psychosocial disorders have been reported to negatively influence cancer patients' quality of life, screening and assessment result to be mandatory in clinical settings (Donovan et al., 2014; Grassi et al., 2015). Some aspects related to this topic, that have not the object of specific attention, merit however, to be considered. A first aspect is that only a few studies have been cross-culturally conducted regarding psychosocial distress, by analyzing the differences existing according to the cultural context. In the Southern European Psycho-Oncology Study (SEPOS), for example, Portuguese cancer patients showed higher levels of fatalism and lower levels of anxiety and depression with respect to Italian cancer patients, as well as higher levels of spirituality (Grassi et al., 2014; Travado et al., 2010). In another cross-cultural study, differences were found on health, vitality and emotional symptoms, with South Korean cancer patients reporting lower scores compared to German and Japanese patients (Shim et al., 2006). Also differences were found between German and Chinese cancer patients in a further cross-cultural study analyzing anxiety, depression and unmet psychosocial needs (Lam et al., 2011). A second aspect regards the implications that distress and psychosocial symptoms have within the doctor-patient relationship, with a possible influence in the communication process (Brédart et al., 2005). The interaction of patients with their doctors may impact in fact the experience of disease at many levels. Some studies have for example shown that poor abilities of doctors in listening and addressing emotional concerns and needs has been associated to patients' dissatisfaction (Ross et al., 2013), and that physician disengagement and scarce perceived support in the doctor-patient relationship were related to poorer health-related quality of life (Landen et al., 2003). In line with these findings, attention and emotional support by oncologists, physician's empathy, caring attitude and a patient-centered and facilitative approach have been reported to favor patients' satisfaction with care (Wan et al., 2013), psychological adjustment (Gilbar and Zusman, 2007), and lower levels of anxiety (Takayama et al., 2001) and distress (Zachariae et al., 2003). It is however important to underline the potential reciprocity and mutual influence of this relationship and patient coping style in cancer settings and the fact that patients' characteristics and coping styles may have a strong effect on the interaction itself, with more positive (or negative) communication from one participant leading to possibly similar responses from the other (Ong et al., 1999; Street et al., 2007).

With this as a background and in order to extend our understanding of this area, the aim of the present study was twofold, (i) to examine the rate of and the differences between emotional distress

and maladaptive coping in three European countries, namely southern and middle European countries and (ii) to measure the association of cancer patients' subjective perception of the interaction with their doctors with emotional distress and coping, also taking into account cultural factors.

Subjects and methods

Participants

The study was conducted at the departments of oncology in three European countries, Italy (University of Ferrara and S. Anna Hospital, Ferrara as the coordinating center, Cancer Institute of Romagna, Forlì and regional area; Cà Foncello Hospital, Treviso); Spain (Hospital de la Santa Creu i Sant Pau, Barcelona; University Hospital Sant Joan de Reus, Reus); and Austria (Medical University, Graz). As detailed elsewhere (Grassi et al., in press), patients referred to cancer outpatient clinics and day-hospital services were consecutively recruited if the following inclusion criteria were met: age between 18 and 65; cancer diagnosis at any site; no cognitive deficits due to disease or treatment during clinical evaluation; a Karnofsky Performance Status Scale ≥ 60 . The study was approved by the ethical committees of the participating hospitals, and each patient received detailed information regarding the aim of the study and gave his or her written consent to participate. Each patient was given by a research psycho-oncologist a booklet with self-report psychometric instruments to be completed. For the purposes of the present report, the NCCN Distress Thermometer, the Mini-MAC Anxious Preoccupation and Hopelessness subscales, and the Patient Satisfaction with Doctor Questionnaire (PSQ) were analyzed.

The Distress Thermometer (DT) is a 1-item instrument indicating patients' general distress level on a 0-10 visual analogue scale (0=no distress; 10=extreme distress), developed by the National Comprehensive Cancer Network (NCCN) panel, within their guidelines for the management of emotional distress (NCCN, 2014). The DT has been used in a number of international studies, with a cut-off ≥ 4 accepted as the optimal score to identify 'cases' with clinically significant levels of distress and caseness rated as mild (score of 4/5), moderate (score of 6/7), and severe (score ≥ 8) (Mitchell et al., 2011).

The Mini-Mental Adjustment to Cancer (Mini-MAC) scale (Watson et al., 1994) was used to assess the patients' cognitive and behavioral attitudes towards cancer, specifically Hopelessness (H) and Anxious Preoccupation (AP) (Grassi et al., 2004). Both subscales consist of 8 items, the first measuring the tendency to adopt a pessimistic and despairing attitude about the illness; the second measuring the tendency to feel worried and preoccupied about illness. Each item is rated on a 1-4 Likert scale (from 1= it definitely does not apply to me, to 4= it definitely applies to me) (range

score for both H and AP = 8-32). Cut-off scores on H and AP (mean score \pm 1SD) were also used to identify “caseness” of maladaptive coping.

The Physician Patient Satisfaction with Doctors Questionnaire (PSQ) (Loblaw et al., 1999; Loblaw et al., 2004) was used to measure the patients’ satisfaction with their interactions with the physician responsible for their care. The PSQ is a 24-item scale (each item rated on 1–4 response scale: 1=lower end of agreement; 4= higher end of agreement), on two factors: (i) medical disengagement (PSQ-MD), consisting of 13 items measuring the extent to which patients appraise their physicians as being interested only in the medical aspects of the disease (e.g. “It seemed to me that the doctor was not really interested in my emotional well-being”); and (ii) perceived support (PSQ-PS), consisting of 11 items measuring the extent to which patients perceive their physicians as supportive, and aligned with the patient’s best interests (e.g., “The doctor was interested in me as a person and not just my illness”).

Statistical analysis was performed with the SPSS 20 package. Distribution and frequency analyses were used to evaluate the samples. Correlational analysis was performed with Pearson’s r coefficient test. Student’s t -test, ANOVA (F), and χ^2 test were used to examine inter- and intra-samples differences. Internal reliability of the scales was examined by using Cronbach’s alpha coefficients. Hierarchical multiple regression analysis was used to examine the role of psychosocial variables (DT, Mini-MAC AP and Mini-MAC H) in predicting patients’ perception of the interaction with doctors (PSQ-MD and PSQ-PS, as dependent variables), after adjusting for socio-demographic (age, sex, education) and medical variables (stage). Statistical significance was set at the 0.05 level.

Results

The general characteristics of the patients are reported elsewhere (Grassi et al., in press). In summary, a total of 302 patients participated in the study (Italy, $n= 143$, Spain, $n=89$; Austria, $n=70$). The mean \pm SD age was 53.3 ± 9.6 years. Most patients were females ($n=180$, 59.6%), half had a metastatic illness, with primary tumor sites including mainly breast (31%) and gastrointestinal (31%) cancer (see Table 1 for details).

General data on emotional distress and maladaptive coping

In Table 1 the descriptive results for the psychosocial data are presented separated by country and in the total sample. The prevalence of cases on the DT (cut-off ≥ 4) was similar in the three

countries (χ^2 0.09, p =ns), with a total caseness of 60% (n =181). Likewise, no difference was shown between countries according to the grade of caseness (mild, moderate, severe: χ^2 4.5, p =ns) .of according, with 26.1% (n =79) having mild distress, 18.8% (n =57) moderate distress, and 14.9% (n =45) severe distress (Table 1). Females showed a higher prevalence of DT caseness than males (65.9% vs 51.6%, χ^2 =6.1, df ,1, p =0.01), and higher scores on the DT (F =5.3, df ,1, p =0.02). Regarding coping, both Mini-MAC sub-scales showed good internal consistency properties in the three countries (Table 1) and globally (H α =0.84; AP α =0.82). There was no difference between countries regarding H and AP caseness (apart from a slightly higher rate in Italy than Spain and Austria, on both H , χ^2 =5.24, p =0.07, and AP , χ^2 =4.64, p =0.09) with a prevalence in the whole sample of cases on hopelessness of 22.8% (n =69) and 22.5% on anxious preoccupation (n =68). Females showed higher scores on AP (F =8.37, df ,1; p =.001) and H (F =3.9, df ,1; p =0.05) than males. Mini-MAC sub-scales were significantly correlated with DT scores in both the three countries and the global sample (H : r =.44, p =0.01; AP : r =.45, p =0.01). Analysis of the differences on the mean scores in the three countries indicated lower scores on AP and H among Spanish patients compared to Italian and Austrian patients (F =4.4, df ,2; p =0.01; F =5.8, df ,2, p =0.01). No difference on the DT and Mini-MAC were found according to age, education, stage, type of cancer.

Doctor-patient relationship and association with psychological variables

The PSQ showed good levels of internal consistency in the three countries (Table 1) and globally (PSQ-MD α =.87; PSQ-PS α =.91). PSQ-MD and PSQ-PS were negatively correlated each other (r =-.65; p =0.001). There were no difference on PHQ-MD and PHQ-PS scores in relation to socio-demographic and medical variables, while, in the comparison, between countries, Italian patients showed higher scores on PSQ-MD and lower scores on PSQ-PS than Spanish and Austrian patients (F =10.9, df ,2, p =0.01; F =6.4, df ,2, p =0.01, respectively).

Compared to non-cases, DT cases reported higher scores on PSQ-MD (p =0.05) and lower scores on PSQ-PS (p =0.04). These findings were confirmed by ANOVA within caseness, according to distress level severity, with severely distressed cases showing the highest scores on PSQ-MD and the lowest on PSQ-PS in comparison with no cases (t =2.1, p =0.03; and t =2.96, p =0.01, respectively) (Table2).

Regarding the Mini-MAC, a significant correlation was shown between Mini-MAC/ H and both PSQ-MD (r =.34, p =0.01) and PSQ-PS (r =-.31, p =0.01), while Mini-Mac/ AP score was associated only with PSQ-MD (r =.31, p =0.01). Also, Mini-MAC Hopelessness cases showed higher scores on PSQ-MD and lower scores on PSQ-PS than non cases (p =0.001) (Table 2).

In hierarchical multiple regression, analyses were conducted by first entering socio-demographic (sex, age, education), followed by medical (Karnofsky score, tumor stage), and then psychological variables (DT, Mini-MAC/H and AP), regressed on PSQ-MD and PSQ-PS (dependent variables). In the prediction of PSQ-MD, after adjusting for socio-demographic and medical variables (none of which reached a level of statistical significance: Step 1 $F=1.1$, $p=ns$; Step 2 $F=1.5$, $p=ns$), Mini-MAC/H was the only factor among psychosocial variables fitting the model (Step 3 $F=5.2$, $p=0.001$) and entering the equation ($b=0.58$, $SEb=0.13$, $Beta=.39$, $t=5.9$, $p=0.001$). In the prediction of PSQ-PS, after adjusting for socio-demographic and medical variables (none of which reached a level of statistical significance: Step 1 $F=1.7$, $p=ns$; Step 2 $F=1.5$, $p=ns$), Mini-MAC/H also was the only factor among psychosocial variables fitting the model (Step 3 $F=3.9$, $p=0.001$) and entering the equation ($b=-.39$, $SEb=.11$, $Beta=-.34$, $t=-3.78$, $p=0.001$).

Discussion

In this study we examined the rate of emotional distress and maladaptive coping styles and its relationship with cancer patients' perception of the interaction with their physicians, in three European countries.

As regards the first aim of the study, about one-third of the patients reported moderate or severe distress needing clinical attention. These data are in line with other studies [1,13], showing that symptoms of psychological distress repeatedly indicated as the 6th vital sign, should be constantly monitored across the cancer trajectory (Bultz and Carlson, 2006). Also, about one-fourth of the patients reported maladaptive coping to cancer, specifically hopelessness-helplessness and anxious preoccupation, confirming the need to integrate the psychosocial domain in clinical practice as a way to improve the quality of care of cancer patients (Jacobsen and Wagner, 2012). Age, education, tumor status did not influence caseness, while, as reported in other studies, females were more prone to show distress and maladaptive coping to cancer (Grassi et al. 2004). Unlike other cross-cultural studies carried out in different parts of the world (e.g. Europe vs. Asia) (), a few differences were found between Southern (Italy, Spain) and Middle European (Austria) centers, confirming what already shown in a previous European study (Grassi et al., 2004).

Relevant to the second aim of the study, psychological variables were significantly associated to the patients' perception of their interaction with their physicians. More specifically, in all three countries, patients showing hopelessness, and, in part, emotional distress, tended to appraise their physicians as disengaged, in a hurry, scarcely empathic and interested only in the medical aspects of

the disease, rather than being supportive and aligned to the person with his/her emotional concerns and desire to be listened. These results support other studies indicating that greater patient satisfaction, increased self-efficacy, and emotional well-being were associated with their physicians' attentiveness and empathy. This underlies the importance of the doctor-patient relationship as a keystone of quality healthcare across the trajectory of cancer (Arora et al., 2009) and the need to implement communication skills training aimed at increasing oncologists' emotional support towards their patients and to rapidly identify their symptoms of emotional distress and depression (Gysel et al., 2005). As far as inter-country differences, Austrian physicians were perceived as more engaged and supportive and less cold than Italian physicians. The interpretation of this finding is not easy since we did not explore some factors, such as the experience of physicians on communication according to their specific cultural background (Surbone, 2008), and the several dimensions as far of doctor-patient relationship that may influence trust and satisfaction (Seetharamu et al., 2007). As shown in other cross-cultural studies the different level of training of doctors in communication skills and the possible impact upon the relationship with their patients is a significant area to be explored in a more detailed way (Travado et al., 2005). There are limitations in the study that should be considered. The first is that, because of the relatively small number of patients participating in the study, we cannot generalize our findings, as a larger sample may allow. Also, given the cross-sectional nature of the study, we cannot infer causality or direction regarding the association between the doctor-patient relationship and emotional symptoms and coping mechanisms over time, acknowledging that needs of communication may actually change over time (Neumann et al., 2007; Thorne et al., 2014). A second limitation is that many other variables implicated in determining or influencing distress and maladjustment to cancer, such as patients' personality characteristics, family and social support, stressful life events and previous psychological disorders (Grassi et al., 1997; Inoue et al., 2003), and the possible interaction of these factors in the perception of doctor-patient relationship were not examined here. A third issue is that we limited our investigation to the perceptions of the patients through a self-report questionnaire, while more specific methods (e.g. video-taping of the encounter) would have been allowed to better examine the content and characteristics of the communication, (e.g. verbal and non-verbal cues, empathic statements, open questions etc.), as other authors have done (Zandbelt et al., 2007; Pollack et al., 2010). Likewise we did not study physician variables, such as personality (e.g. empathic attitude, locus of control) and burnout, that have been considered important in doctor-patient interaction and in patient's satisfaction (Libert et al., 2006; De Vries et al., 2014).

In spite of these limitations, the study suggests that, given the high prevalence of emotional distress

and maladaptive coping among cancer patients, physicians would benefit if they both monitor these variables and adjust their communication and relational style accordingly. Also, cultural variables should be taken into account when examining psychosocial variables and when models of communication-skills training curricula are applied in clinical settings (Barth et al., 2001; Kissane et al., 2012). Attention to both these issues is to be paid in guide-lines relative to screening, assessment and referral of distressed cancer patients.

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Table 1. Socio-demographic and clinical data of the patients (% in parentheses)

	Italy; n=143 (47)	Spain; n=89 (30)	Austria; n=70 (23)
Sex			
Male	53 (37.1)	33 (37.1)	36 (51.4)
female	90 (62.9)	56 (62.9)	34 (49.6)
Education (yrs)	54 ± 9	51 ± 11	54 ± 9
Marital status			
Never-married	14 (10)	9 (10)	9 (13)
Separated/divorced	12 (8)	12 (14)	13 (19)
Married	112 (78)	64 (72)	47 (67)
Widowed	4 (3)	3 (3)	1 (1)
Unknown	1 (1)	1 (1)	0 (0)
Occupation			
Employed	74 (52)	44 (49)	35 (50)
Unemployed	3 (2)	6 (7)	0 (0)
Housewives	18 (13)	4 (4)	2 (3)
Retired	48 (33)	28 (32)	28 (40)
Students	0 (0)	3 (3)	0 (0)
Other	0 (0)	3 (3)	5 (7)
Unknown	0 (0)	1 (1)	0 (0)
Cancer site *			
Gastrointestinal	44 (30)	26 (29)	47 (67)
Breast	53 (37)	25 (28)	16 (23)
Genito-urinary	11 (8)	13 (14)	5 (7)
Respiratory	22 (15)	8 (9)	1 (1)
Blood	7 (5)	17 (19)	1 (1)
Other	6 (4)	0 (0)	0 (0)
Stage			
Local and loco-regional	79 (55.6)	39 (53.8)	37 (54.3)
Metastatic	63 (44.4)	50 (56.2)	39 (55.7)
Surgery			
Yes	110 (77)	59 (66)	50 (71)
No	33 (23)	30 (34)	20 (29)

* p< 0.05

Table 2. Emotional distress (DT), coping (Mini-MAC) and perception of interaction with the physician (PSQ)

	Italy (n=143)	Spain (n=89)	Austria (n=70)	Total (n=302)
Distress Thermometer (DT)	4.39 ± 2.62	4.31 ± 2.9	4.11 ± 2.5	4.3 ± 2.7
Mini-MAC				
Hopelessness (H)	α=0.92 12.9 ± 4.4	α=0.91 11.1 ± 3.4	α=0.89 12.6 ± 3.4	12.3 ± 4.1
Anxious Preoccupation (AP)	α=0.89 18.9 ± 5.3	α=0.92 16.9 ± 5.3	α=0.85 18.7 ± 4.3	18.3 ± 5.1
Physician Satisfaction Questionnaire (PSQ)				
Medical Disengagement	α=0.91 22.9 ± 5.5	α=0.89 19.5 ± 7.2	α=0.87 19.5 ± 5.9	21.2 ± 6.3
Physician Support	α=0.87 34.8 ± 4.3	α=0.88 36.3 ± 5.9	α=0.84 37.3 ± 4.8	35.8 ± 5.5
Caseness on DT (≥4)	60.6%	60.7%	60.4%	60.1%
Mild (4/5)	26.8%	24.7%	27.7%	26.6%
Moderate (6/7)	16.9%	21.3%	22.9%	19.6%
Severe (≥8)	16.9%	14.6%	9.8%	14.8%
Caseness on Hopelessness	28.7%	18%	17.1%	22.8%
Caseness on Anxious Preoccupation	28.1%	18%	17.4%	22.5%

Table 3. Correlations among variables by country

	PSQ-MD			PSQ-PS		
	Italy	Spain	Austria	Italy	Spain	Austria
DT	.26*	.31*	.21	-.12	-.35*	-.26°
H	.29*	.37*	.38*	-.18°	-.36*	-.24°
AP	.19°	.24°	.11	-.14	-.17	-.16

* p< 0.01; ° p< 0.05

Table 4. Differences on the PSQ-MD and PSQ-PS according to distress and maladaptive coping “caseness”

	PSQ-MD		PSQ-PS	
DT case (n=181) DT non-case (n=121)	21.8±6.4 20.3±6.2	F=3.7 p=0.05	35.3±5.1 36.5±5.1	F=3.9 p=0.04
DT mild case (n=79) DT moderate case (n=57) DT severe case (n=45)	21.5±5.8 21.5±6.1 22.8±7.7*	t=2.1 p=0.02	36.1±4.4 35.5±5.5 33.9±5.3*	t=2.9 p=0.01
H case (n=69) H non-case (n=233)	24.1±6.1 20.3±6.3	F=19.6 p=0.001	33.8±4.6 36.4±5.1	F=13.7 p=0.001
AP case (n=68) AP non-case (n=234)	22.1±7.1 20.9±6.1	F=2.01 p= ns	36.1±4.9 35.8±5.1	F=0.36 p= ns

* t-Student differences with DT non-cases