

e.g. tumor site, stage at diagnosis, predicted outcome, symptoms and functional losses, required treatments, and availability of rehabilitation; (2) patient-related factors, e.g. level of cognitive and psychologic development, ability to cope with stressful events, emotional maturity, ability to accept altered or unachieved life goals, prior experiences with cancer, concurrent life stresses, and the support of family and friends; and (3) societal factors, e.g. attitudes toward cancer and treatment, stigma associated with diagnosis, and health care policies. Using criteria from the DSM-III classification of psychiatric disorders, the Psychosocial Collaborative Oncology Group (Derogatis, Morrow, & Fetting, 1983) at three cancer centers determined that the distress of 47% of surveyed cancer patients met the diagnostic criterion for a psychiatric disorder and that 90% of these disorders diagnosed on the basis of responses to disease or treatment, typically involved anxiety and depression.

Specific Aims

The primary aim of this study was to explore issues related to the process by which a cancer patient re-organizes (a) his or her standard routine and (b) beliefs/values, in order to deal with the effects of this disease. It was anticipated that patients' dreams would provide self-relevant data with which to describe and draw inferences about the nature of self-transformation in the face of severe stress.

Method

Authorization for the study was provided by the Internal Review Board of [HOSPITAL OMITTED] and Dr. [NAME OMITTED] of the hospital Hematology and

Oncology Center. The study proposal also received clearance by the [OMITTED] Human Subjects Committee. Twenty-eight cancer patients were recruited in the oncology and hematology outpatient clinic at [NAME AND LOCATION OF HOSPITAL OMITTED]. Arrangements with hospital staff ensured that patient recruitment and participation did not disturb the requirements of treatment, i.e. chemotherapy or irradiation.

Data collection was more problematic than originally anticipated. Patient recruitment was limited by circumstances affecting the staffing, management, and financial status of the clinic. Recruitment was also restricted by the age and mental acuity of many cancer patients. Chemotherapy, medication, and stress may also have altered dream recall and a greater number of patients than anticipated reported that they never recalled a dream in their life or at their current age.

Procedure

Twenty-eight patients (fourteen males and fourteen females) were recruited for participation between July 1 and August 22, 1989. The physician introduced each patient to the study following his routine evaluation. After the patient consented to participation, the physician introduced the interviewer to the patient, and the interview was conducted in the privacy of the examination room prior to the administration of chemotherapy. A consent form was reviewed and signed by the patient, after which the interviewer switched on a tape recorder and proceeded with questioning. At the conclusion of the interviews, which ranged in duration from fifteen minutes to one hour, the patient completed a questionnaire (Quality of Life Inventory) which assessed symptoms. The patient was given a stamped envelope (pre-addressed to the hospital) and written instructions

specifying the manner in which the patient would compile a two-week dream diary, at which point the diaries were mailed. Upon receipt of the diaries, the interviewer reviewed the dreams and formulated questions designed to round out the patient's account of the dreams. Follow-up interviews were performed in the examination room at the time of the patient's next appointment. Nine patients recalled a dream only after being granted an extension of the two-week collection period, and their follow-up interviews were done by telephone.

Participants

The twenty-eight patients (fourteen males and fourteen females) ranged in age from forty to seventy-four (with a median of fifty-eight).

Measures

The following types of information were gathered from each participant's medical records or by means of direct questioning in an attempt to appreciate the cancer-related stresses with which he or she must cope.

(1) Type of Cancer. Cancer is a family of diseases named for the primary site of tumor development. Lung cancer is the most common of the cancers in terms of number of deaths and new cases, followed by cancer of the colon and rectum, breast, prostate, uterus, ovary, oral cavity, bladder, pancreas, lymph system, stomach, and skin.

(2) Stage of Cancer. Cancer patients were further subdivided according to parameters associated with the extent of the cancer at the time of diagnosis. The TNM system was published in 1992 as a result of 40 years of research by the American Joint Committee on

Cancer (AJCC) and a uniform agreement between the AJCC and Union Internationale Contre le Cancer (UICC) on the international application of this staging system. TNM is an acronym referring to three criteria used to classify the development of a cancer: (T) the size and cellular differentiation of the primary tumor, (N) the presence or absence and extent of regional lymph node metastasis, and (M) the presence or absence of distant metastasis. A unique staging system for each type of cancer has been derived from the TNM classification, e.g. a tumor “greater than 3 centimeters (T2) in diameter...with metastases to ipsilateral hilar region (N1)...(but) no distant metastases (M0)” represents a Stage II disease (Bonomi, Keller, & Wagner, 1996). Once established, these stages remained unchanged in the medical record, and thus the stage has been considered in tandem with the number of years since diagnosis and events related to the status of the disease at the time of the interview, i.e. progression or remission.

(3) Disease Status at Time of Interview. Patient cancers varied according to their responsiveness to various types of treatments. Thus, despite his stage III cancer diagnosed in 1984, patient 1 was no longer regarded as a serious case after the malignancy disappeared under radiation and chemotherapy in 1984, again following recurrence in 1991, and has begun to diminish for a third time after a recent 1987 recurrence. Conversely, since diagnosis in 1986, the stage I ovarian cancer of patient 4 metastasized to the lungs and liver, where it began increasing in size in 1987. Some patients not only do not benefit from treatment, but suffer toxicities of the treatment added to any symptoms that they may have from the cancer. Patients 3, 9, and 13 reported unprecedented levels of nausea and anxiety during the weeks surrounding their first cycles of chemotherapy.

(4) Blood chemistry. Physicians rely on periodic analyses of blood chemistry for an assessment of the effects of cancer. For example, abnormally high levels of bilirubin, a bile pigment manufactured by red blood cells and transported to the liver, frequently signify liver metastases.

To assess blood chemistry, as well cancer type, stage, and status, permission was obtained from each patient to review their medical charts.

(4) Quality of Life. Blood abnormalities and increases in the size and spread of cancer were not as informative of appreciable illness as felt sensations. Hypothetically, cancer may progress for some time before manifesting itself as symptoms which discomfort patients and disrupt their daily routines. Various “Quality of Life” indices were employed to explore certain issues which presumably change with the stage of cancer, passage of time, and complications associated with the disease process. These issues include physical symptoms and disability, treatment side effects, psychological stress, social interaction, self-image, and satisfaction with care. The Fact-L Quality of Life Inventory (see Appendix A) was administered to patients at the conclusion of their initial interviews.

This inventory assesses the patient’s perceived well-being for the past seven days. It consists of six separate scales, each measuring the level of symptomatology associated with a different aspect of well-being: (1) physical well-being, (2) social/family well-being, (3) emotional well-being, (4) functional well-being, and (5) relationship to doctor, and (6) additional concerns. The number of items per scale vary from two items assessing relationship to doctor, to nine items assessing additional concerns. Each item was assessed on a scale consisting of five labeled points: 0, labeled “not at all”; 1, labeled “a

little bit”; 2, labeled “somewhat”; 3, labeled “quite a bit”; and 4, labeled “very much.” Since the inventory consists of a preponderance of negative items, e.g. “I have nausea,” compared to relatively fewer positive items, e.g. “I get emotional support from my family,” positive items were inverted in the calculation of means and standard deviations. Outstanding responses are listed in the body of the results devoted to individual cases. Outstanding responses include negative items rated as “somewhat,” “quite a bit,” or “very much,” and positive items rated as “somewhat,” “a little bit,” or “not at all.”

Interview. The interview focused on two types of questions: how patient routines or lifestyles were altered by the diagnosis of cancer, and whether they have had any significant dreams since diagnosis. The effects of cancer can be perceived by patients in many ways, thus the interview obtained information concerning how patients define the changes caused by their cancer, i.e. as philosophical changes in attitude/outlook, material changes in comforts/securities, and/or psychological changes related to growth/self-development, or self-concept. As a semi-structured inquiry designed to obtain individualized information about each patient, the interview proceeded according to guidelines aimed at maximizing flexibility. Accordingly, patients were encouraged to elaborate on any question they considered to be personally important. Although the sample questions listed below were phrased abstractly, within the interview they assumed a form which best suited the content of previous responses.

A) Coping. Patients may adopt new activities or coping strategies to manage the effects of their cancer. Specifically, the interview inquired about activities which enable

the patient to cope with various sources of cancer-related stress. The inquiry into these coping activities had the following form: (1) “What do you do to make the effect of cancer more tolerable or manageable?”; (2) “Is this something you normally did prior to your diagnosis of cancer or have you brought this activity into your life since you were diagnosed?”; (3) “Have conditions recently obstructed you from participating in any of these activities to your satisfaction?”

It was also presumed that patients relinquish activities following diagnosis for various reasons, e.g. some activities may lose meaning to post-diagnostic patients, or patients may no longer possess the time or resources for the activity. Questions addressing these issues included: (1) “What sacrifices have you had to make -- what hobbies have you had to give up-- since being diagnosed with cancer?”; (2) “What abilities have been impaired since diagnosis; what could you no longer do that you relished doing prior to diagnosis?”; (3) “What needs stopped being met after you were diagnosed?”; (4) “What goals have you had to relinquish or redefine since being diagnosed?”; (5) “Has cancer negatively affected your life in any way that you have not yet discussed?”; (6) “Is there anything in which you lost interest (anything which lost its meaning or significance) after you have been diagnosed?”; (7) “In what ways, if any, did you lose control over your daily life?”

Presumably, patients replace or balance some of their losses to maintain a level of comfort or meaning with which they can live. For this reason, the question “What have you been able to do to make up for (or cope with) this loss?” was asked after each of the preceding questions.

B) Attitude Changes. Questions concerning attitude changes included: (1) “Do you

view your life any differently now than you have previously?"; and (2) "In what ways, if any, have you changed as a person since you were diagnosed with cancer?"

C) Stability. It was also presumed that within the volatility of the life as a cancer patient, i.e. busyness, problems, and adjustment, patients require a source of stability to maintain their self-concepts and their connectedness to life before cancer. Questions addressing these sources of stability included: (1) "What aspects of your life have not changed as a result of your diagnosis; what is it that you continue to do for your happiness, meaning, or personal expression? Is there anything you need to remain the same? Do any of these activities manage an effect of cancer?"

D) Dreams. Questions concerning changes in dreaming included: (1) "Did you experience dreams of any significance since diagnosis, dreams you found unusual or that affected you in any way?"; (2) How would you describe the personal significance of this dream?"; (3) "Have the dreams you have experienced since diagnosis differed in any way from those experienced prior to diagnosis?"; (4) "Are you dreaming regularly of characters, places, or objects of which you did not dream regularly prior to diagnosis?"; (5) "Have you dreamed of anything you considered unusual since diagnosis?"; and (6) "Has your dreaming taken on any new characteristics since you have been diagnosed with cancer?"

Dream Diary. Patients were asked to maintain a written diary of their dreams or to dictate them into a tape recorder. They were also asked to submit a write-up or audiotape of up to five significant dreams experienced since diagnosis. They were provided with a written copy of the following instructions for documenting these dreams: "Please record

any significant dreams you have experienced since being diagnosed with cancer. If you did not experience dreams of any significance to you, please indicate briefly that you have experienced no significant dreams. When recording a dream, please give priority to your thoughts and feelings in the dream and to that aspect of the dream experience which makes the dream special. These may include anything, for example, actions you were able to perform in the dream, moods you experienced either in the dream or upon awakening from the dream, events which satisfied a need, objects/settings which strike you artistically pleasing or physically impossible, etc.

Please do not submit any more than five dreams. If the number of significant dreams is greater than five, you may summarize a group of dreams as one dream by describing one of the dreams in detail and then describing the similarities which moved you to consider this dream as similar to others (without having to include the details of every dream).”

Follow-Up Interview. The follow-up interview was based on a review of their dream material and conducted to obtain additional reflections from patients concerning the significance of dreams experienced during this period as well the potential association of these dreams to aspects of their current waking experience. Generally, the interviewer solicited details of the dreams and asked patients to affirm or deny certain dream characteristics frequently implied in a written account, e.g. sudden changes in the location of the dream (i.e. shifts).

The interviewer opened the follow-up interview by reading the written accounts to refresh patient memories for their dreams. The interviewer then read the dream again, pausing after each sentence to ask the patient to elaborate on relevant details.

The follow-up interview also identified changes in the life of the patient since the initial interview. Questions concerning waking experience included: (1) “Did you experience any new challenges, demands, or sources of stress last week beyond the ordinary?”; (2) “Of the activities which help you manage the effects of cancer, were there any in which you were not permitted by circumstances to participate to your satisfaction?”

Finally, the patient was asked to describe any similarities or differences between the dream experience and current waking experiences. “Does the dream seem to correspond at all to (or differ in any way from) your current waking experience?”

Specific issues to be investigated

Dream Anomalies in Relation to Waking Experience

Presumably, the need to make physical or psychological changes in one’s life in response to stressful or novel stimuli results in dreams with relatively higher rates of anomaly. It was, therefore, tentatively hypothesized that patients reporting higher levels of life changes would have dreams containing more process and content anomalies.

Process Anomalies. Process anomalies refer to violations within dreams of the space-time continuum, e.g. condensation and displacement. For example, in a dream, two people who were not alive at the same time could engage in a conversation, or the dreamer’s location may shift suddenly from his or her kitchen to a fictitious church on the top floor of a 100-story skyscraper in the Arctic Circle. Thus, dream material was coded as a process anomaly if it could not possibly exist or happen in waking life due to space or time restrictions. Furthermore, the dream material was coded as a process anomaly if it

could not practically happen in waking life due to social norms, e.g. people eating a meal indifferent to the group sex occurring on the same dining room. Process anomalies thus refer to aberrations of generic experience and were tallied for each dream.

Content Anomalies. Content anomalies refer to themes which are permitted by space, time, and social norm, but which are antithetical to a person's own waking life. Content anomalies refer to a less universal type of aberration, an abnormality given the regularities or boundaries of his or her current routine, lifestyle, or environment. A content anomaly is a feature of the dream which does not qualify as a process anomaly but which does not correspond to (i.e. misrepresents) some aspect of waking reality, e.g. "I dreamed I received notification of my acceptance to UCLA (though in waking life, I had recently received a letter from UCLA denying me admissions)." Any dream image was qualified as a content anomaly provided two conditions were first satisfied: (a) that it does not literally hold true for the dreamer in waking life and (b) that it does not qualify as a process anomaly. Content anomalies were tallied for each dream. (Procedures for coding anomalies are provided as part of the coding manual in Appendix B). (Interjudge reliability over a sample of fourteen dreams provided by four patients was .83).

The relationship between changes in waking experience and the relevance of anomalies for death was explored.

Dream Distortion Analysis

Another issue for exploration includes dream distortion. Rychlak & Brams (1963) divided the experience of a dream into its component narrative contents, i.e. location, action, actors, moods, and implements, and identified those aspects of each narrative

content which “demonstrated an unusual quality, such as a shift, an alteration, an about face, or a weird connotation according to customary standards or expectations” (p. 228). This method of dream analysis can serve as an alternative to the relatively more frequent practice of categorizing anomalies in dreams by process or content. The value of this method rests not only on the fact that it addresses specific aspects of the dreamer’s experience, but also on evidence from Rychlak showing significant relationships to such measures of personality as the Manifest Anxiety Scale (Taylor, 1953), the Minnesota Multiphasic Personality Inventory (Hathaway & McKinley, 1951), and the Personal Preference Schedule (Edwards, 1954). The Edwards Schedule scale measures a person’s tendency to favor flux (i.e. change) over stability. Of specific interest to the study of cancer patients is Rychlak’s (1963) finding that participants reporting unusual qualities associated with location scored high in the change scale of the Personal Preference Schedule. Location distortion refers to unusual characteristics associated with “where the dream is taking place,” (p. 228) as when a location suddenly shifts from a dance floor to a skating rink. Accordingly, patients experiencing either confusion in daily life, or adjustments contributing to personal growth and development, may have dreams containing more distortions in location.

The relationship between the life of the cancer patient and the other narrative categories of distortion, i.e. action, actors, moods, implements, described by Rychlak (1963) were also explored.

Results