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Psychiatric disorders and stress factors experienced by staff members in cancer hospitals: A preliminary finding from psychiatric consultation service at National Cancer Center Hospitals in Japan

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ABSTRACT

Objective: The purpose of this study is to identify psychiatric disorders and stress factors experienced by staff members in cancer hospitals who were referred to psychiatric consultation service, and to investigate the association between psychiatric disorders and stress factors.

Method: A retrospective descriptive study using clinical practice data on staff members referred to psychiatric consultation service, obtained for 8 years, was conducted at two National Cancer Center Hospitals in Japan. Psychiatric disorders were identified according to DSM-IV. Stress factors were extracted from a chief complaint at the initial visit in medical charts, using a coding approach, and grouped as job stress or personal stress. The frequencies of the stress factors were determined by two coders who were unaware of the categorized procedure. Fisher's exact test was used to determine the association between psychiatric disorders and stress factors.

Results: Of 8077 psychiatric consultations, 65 (1%) staff members were referred. The most common psychiatric disorder was adjustment disorder ($n = 26$, 40%), followed by major depression ($n = 17$, 26%). Eight stress factors were identified from 76 meaning units and were grouped into five job stresses and three personal stresses. Of the five job stresses, four were most frequently experienced in adjustment disorders, and "failure to adapt to job environmental change" was significantly associated ($p = 0.014$). Two of the three personal stresses were most frequently experienced in psychiatric disorders other than major depressive disorder and adjustment disorders, and "suffering from mental disease" was significantly associated ($p = 0.001$).

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Significance of results: We found that very few staff members were provided with psychiatric consultation service. A comprehensive support system for job stress might be needed to prevent adjustment disorders, as those are suggested to be the most common psychiatric disorders among staff members in cancer hospitals.

KEYWORDS: Psychiatric disorders, Stress factors, Staff in cancer hospitals, Psychiatric consultation service, Japan

INTRODUCTION

Psychological distress experienced by staff members in cancer hospitals has been mainly reported as burnout syndrome among physicians (Asai et al., 2007; Grunfeld et al., 2000; Ramirez et al., 1996, 1995; Travado et al., 2005) or nurses (Barnard et al., 2006; Catalan et al., 1996). These previous studies using self-reported measures have indicated that the level of psychological distress experienced in oncology settings was not particularly high compared with other medical settings. However, previous results could not provide sufficient information whether professional mental health treatment is indispensable or not. Information about psychiatric disorders satisfies the requirement for this purpose; however, to the best of our knowledge, there has been no study to date investigating psychiatric disorders among staff members in cancer hospitals.

Information about stress factors is important when determining a therapeutic strategy designed to reduce manageable stress factors. Stress factors related to cancer treatment have been reported to involve "feelings of difficulty in determining therapies that require considerations of both efficacy and side effects" (Holland & Rowland, 1990). In addition, stress factors related to patients' care have also been reported as follows: "delivering bad news to patients (cancer diagnosis, disease progression, etc) (Fallowfield & Jenkins, 2004)," "being involved in patients' anxiety or depression (Grunfeld et al., 2005)," and "being present at patients' death (Redinbaugh et al., 2003)." Furthermore, four job stress factors among physicians associated with burnout were identified (Ramirez et al., 1995): "feeling of overload and its effect on home life," "having organizational responsibilities and conflicts," "dealing with patients' sufferings," and "being involved with treatment toxicity and errors." These previously identified stress factors were job-related and did not include general stress experienced by staff members other than clinical staff. Information on stress factors associated with stress reaction must be available when considering actual preventive care for staff members.

Psychiatric consultation service for outpatients at National Cancer Center Hospitals in Japan has treated the psychological distress of staff members in hospitals and cancer patients' family members, as well as cancer patients. We previously reported on psychiatric disorders among cancer patients (Akechi et al., 2001) and cancer patients' family members (Akechi et al., 2006; Asai et al., 2008) in a retrospective descriptive study using clinical practice data. Here, we similarly identified psychiatric disorders and stress factors experienced by staff members in cancer hospitals and investigated their association. Although we could not directly adapt the present results to the current state of the overall staff in cancer hospitals, we assumed that this study would generate several suggestions regarding the establishment of a mental support system for staff members, after understanding the current utilization of psychiatric consultation service.

METHOD

Subjects and Procedure

Psychiatry Services of the National Cancer Center Hospital and National Cancer Center Hospital East share psychiatric consultation database records and information input by psychiatrists following patient examinations. This computerized database (Akechi et al., 2001) includes demographic variables and psychiatric disorders. Psychiatric disorders were diagnosed at the initial visit according to the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition (DSM-IV, 1994). Although each psychiatry division is independent, weekly case conferences are held to ensure consistency in psychiatric diagnosis and treatment.

In this study, we reviewed these psychiatric consultation database records covering the period from January 2000 to December 2007 to identify staff members who had been referred. Being a retrospective study using clinical practice data, informed consent was not obtained. Characteristics of referred staff members such as age, gender, marital status, employment status, and psychiatric disorders were obtained from the database records. Specialty of staff members and history of psychiatric disorder were obtained from medical chart records. This study was approved by the Institutional Review Board and the Ethics Committee of the National Cancer Center of Japan.

Data Analysis

Stress factors were extracted from a chief complaint at the initial visit in medical chart records, using a coding approach (Strauss & Corbin, 1990); two researchers (M.A., Y.M.) identified meaning units independently, and the obtained meaning units were conceptualized into categories as stress factors according to their similarities. Stress factors were then grouped as job stress or personal stress. Any inconsistencies were resolved by discussion among the authors.

Then, two coders who were unaware of the categorized procedure, independently determined whether each subject had made remarks that belonged to any of the stress factors, according to the definitions of each category. The mean of the concordance rate was 94% (range, 79–100). When their coding was inconsistent, they made the final judgment together after disucssion including primary researcher (M.A.). Using the final judgments, we then conducted descriptive analyses of the frequencies of the stress factors.

The association between psychiatric disorders and stress factors was investigated by using Fisher's exact test, which determines the presence of nonrandom associations between two categorical variables.

RESULTS

Characteristics of Staff Members who were Referred to Psychiatric Consultation Service

Of 8077 psychiatric consultation services, including 2257 for outpatients, 7820 (97%) were for cancer patients, 185 (2%) for family members of cancer patients, and 65 (1%) for staff members of the two National Cancer Center Hospitals.

The most frequent characteristics of the referred staff members shown in Table 1 are as follows: female ($n = 51$, 78%), nurse ($n = 40$, 62%), unmarried ($n = 51$, 78%), and full-time employee ($n = 63$, 97%).

Table 1. *Characteristics of staff members who were referred to psychiatric consultation service (*N = *65)*

	n (%)
Age (years)	
Mean ± *SD*	32 ± 10
Median	29
Range	21–59
Gender	
Male	14 (22)
Female	51 (78)
Specialty	
Doctor	2 (3)
Nurse	40 (62)
Clerk	6 (9)
Researcher	6 (9)
Secretary	3 (5)
Pharmacist	1 (2)
Cooking staff	1 (2)
Unknown	6 (9)
Marital status	
Married	9 (14)
Unmarried	51 (78)
Divorced	3 (5)
Unknown	2 (3)
Employment status	
Full time	63 (97)
Part time	1 (2)
Unknown	1 (2)
History of any psychiatric disorder	
Presence	14 (22)
Absence	51 (78)

Psychiatric Disorders and Stress Factors Experienced by Staff Members in Cancer Hospitals

The most common psychiatric disorders were adjustment disorders ($n = 26$, 40%), followed by major depression ($n = 17$, 26%) (Table 2).

A total of 76 meaning units were extracted from all the medical chart records. Job stress included five categories: (1) "failure to adapt to job environmental change ($n = 18$)" included stress experienced after securing their first employment, being transferred from other institutions, or changing fields of specialization; (2) "feeling of overload ($n = 10$)" involved stress resulting from staffing shortage or deadline-harried work or responsibility for junior fellows"; (3) "conflict in relationship with co-workers ($n = 9$)" encompassed stress resulting from collaboration with physicians, superiors or fellow workers; 4) "being involved with patients' psychological distress ($n = 8$)" experienced by nursing staff resulting from empathic attitudes toward cancer patients' suicidal ideation, desire for sedation, or fear of death; 5) "making mistakes in the job ($n = 6$)" included stress resulting from work-related incidents or accidents. Personal stress included three categories: (1) "suffering from mental disease ($n = 10$)" involved stress resulting from prior mental diseases such as anxiety disorder or major depressive disorder; (2) "facing domestic trouble ($n = 9$)" included stress resulting from divorce or burden of parental care; (3) "suffering from physical disease ($n = 4$)" stress resulting from prior physical diseases such as diabetes, menopause, or accident trauma.

Of the five job stresses, four were most commonly experienced in adjustment disorders, and "failure to adapt to job environmental change" was significantly associated ($p = 0.014$). Two of three personal stresses were most commonly experienced in psychiatric disorders other than major depressive disorder and

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Table 2. *Psychiatric disorders and stress factors experienced by staff members in cancer hospitals (*N=*65)*

Stress factors	Psychiatric disorders: Adjustment disorders n=26 n (%)	Major depressive disorder n = 17 n (%)	Other disorders[a] n = 14 n (%)	No diagnosis n = 7 n (%)	p
Job stress					
Failure to adapt to job environmental change	12 (67)	4 (22)	0	2 (11)	0.014*
Feeling of overload	6 (60)	3 (30)	0	1 (10)	0.293
Conflict in relationship with co-workers	6 (67)	2 (22)	1 (10)	0	0.270
Being involved with patients' psychological distress	2 (25)	3 (38)	1 (13)	2 (25)	0.576
Making mistakes in the job	4 (67)	1 (17)	1 (17)	0	0.478
Personal stress					
Suffering from mental disease	0	3 (30)	6 (60)	1 (10)	0.001**
Facing domestic trouble	2 (22)	2 (22)	2 (22)	3 (33)	0.225
Suffering from physical disease	1 (25)	1 (25)	2 (50)	0	0.385

[a]Other disorders include anxiety disorders (n = 6), sleep disorder (n = 1), bipolar disorder (n = 1), personality disorder (n = 1), dysthymic disorder (n = 1), brief psychotic disorder (n = 1), schizophrenia (n = 1), substance-reduced disorder (n = 1), and delirium (n = 1).
*P < 0.05, **P < 0.01
Note: Subject reported multiple stress factors.

adjustment disorders, and "suffering from mental disease" was significantly associated ($p = 0.001$) (Table 2).

DISCUSSION

In this study, we found that very few family members were provided with psychiatric consultation service at the two National Cancer Center Hospitals (1% of the total psychiatric consultation services). Adjustment disorders were the most common psychiatric disorders similar to our previous report on cancer patients (Akechi et al., 2001) and family members (Akechi et al., 2006; Asai et al., 2008) who were referred to psychiatric consultation service.

Several preliminary suggestions for the development of a mental support system for staff members have been deduced from the present results. The first suggestion is the creation of a support system for job stress. Four of the five job stresses in this study were equal to previous physicians' job stress factors (Ramirez et al., 1995). The other job stress "failure to adapt to job environmental change" was the most frequent response and was significantly associated with adjustment disorders. Adjustment disorders are psychological responses to an identifiable stressor causing significant emotional or behavioral symptoms that do not meet the criteria for more specific disorders. The primary treatment for adjustment disorders is psychosocial support in the form of counseling or psycho-education to reduce the pressure of the stressor and enhance patients' own coping abilities. Considering that very few staff members were provided with psychiatric consultation service, where adjustment disorders were directly treated by counseling, most staff members might not want the psychiatry staff members they work with to know that they are suffering from mental problems. In addition, four of the five job stresses were most commonly experienced in adjustment disorders. Therefore, indirect and preventive support, for example, job stress management education for staff members who experienced job environmental change, might be an alternative strategy for alleviating psychological distress experienced by staff members in cancer hospitals.

The second suggestion is the development of a support system for patients' psychological distress. One of the job stresses experienced by nursing staff is "being involved with patients' psychological distress." A previous study has reported that a caring staff member who experienced psychological distress felt it more difficult to work with dying people (Catalan et al., 1996). Empathic attitudes toward cancer patients' psychological distress might be essential in nursing care; however, there are cases when cancer patients developed major depressive disorders requiring indispensable mental professional treatment. In such cases, encouraging patients to consult psychiatric service for their psychological distress is the best policy for reducing psychological distress of staff members as well as cancer patients.

The third suggestion is the establishment of a support system for personal stresses. Two of the three personal stresses identified in this study were most commonly experienced in psychiatric disorders other than major depressive disorder and adjustment disorders, such as anxiety disorders, sleep disorder, bipolar disorder, personality disorder, dysthymic disorder, brief psychotic disorder, schizophrenia, substance-reduced disorder, and delirium. These psychiatric disorders require indispensable mental professional treatment, therefore, staff members who were suffering from mental or physical disease must be informed that psychiatric consultation service is available as needed.

This study has several limitations. First, a critical selection bias exists: we were only able to examine staff members who used the psychiatric consultation service. Thus, we could not comprehensively discuss the association between psychological disorders and stress factors among staff members because the accessibility to this psychiatric consultation service may influence the results. Second, this study has some methodological limitations because of its retrospective review of medical chart records: we were only able to identify stress factors described in medical charts at the initial visit, and those may not be an accurate indicator of stress factors experienced by staff members in cancer hospitals.

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