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# Assessment of Psychological Stress Status among Iranian Cancer Patients

Ghahremanfard F [1], Behnam B [1]*, Ghorbani R [2], Naseri Zadeh K [1], Aleboye F [1], Zahmatkesh M [1]

1. Semnan University of Medical Sciences, Semnan, Iran.
2. Research Center for Social Determinants of Health, Semnan University of Medical Sciences, Semnan, Iran.

***Corresponding Author:** Behnam B, **Email:** Behnamfar46@yahoo.com*

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## Abstract

**Objectives:** We aimed to assess psychological stress status among Iranian patients with cancer compared with non-cancer individuals.

**Patients and Methods:** In a case-control study one hundred consecutive cancer patients who referred to Fatemieh hospital in Semnan, Iran (regardless of the type of cancer and its stage) were enrolled. One hundred matched non-cancer individuals were selected as controls. The status of psychological stress was assessed using a questionnaire.

**Results:** The prevalence of psychological stress was 70% among cancer patients and 40% among controls (p<0.001). In a multivariate logistic regression model, the prevalence of psychological stress was shown to be higher among cancer patients compared to controls (OR = 3.01, 95% CI: 1.46- 6.19, p=0.003) (Table 1).

**Conclusion:** Regardless of the type of cancer, Iranian cancer patients suffer a high level of psychological stress which indicates the need for screening for stress among them.

**Keywords:** Stress; cancer; psychology, Iran.

## Introduction

Psychological stress among cancer patients is mainly originated from inability to manage or control cancer-related abnormal conditions as well as from daily life disabilities. Distress is a major factor affecting cancer patients' quality of life leading to poor prognosis [1]. Nearly half of the patients with cancer are reported to have high distress which may be deteriorated by some factors including physical and mental problems, as well as some baseline factors including a lower socioeconomic level [2]. It seems that the population characteristics can potentially affect the incidence of psychological stress among cancer patients. We aimed to assess psychological stress status among Iranian patients with cancer compared with controls.

## Patients and Methods

In this case control study 100 consecutive Iranian cancer patients who referred to Fatemieh hospital in Semnan, Iran (regardless of the type of cancer and its stage) were enrolled. Control group were randomly selected from non-cancer individuals.

Baseline information was collected by interviewing patients or by reviewing hospital recorded files. The status of psychological stress was assessed using a questionnaire comprised of 26 items, which consisted of a uniform five-point Likert scale ranging from ''very low" to ''very high'' and scored 0 to 100. The score 50 was considered as the cut-off point and higher scores indicated higher levels of psychological stress.

### Statistical analysis

For statistical analysis, results were presented as mean (±SD) for quantitative variables and were summarized by absolute frequencies and percentages for categorical variables.

## Results

The cancer and control groups were comparable

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**Table 1:** Multivariate logistic model for determining association between cancer and stress status.

| Variable | p-value | Odds Ratio | 95% Confidence Interval | |
|---|---|---|---|---|
| **Stress** | 0.003 | 3.01 | 1.46 | 6.19 |
| **Family History** | 0.001 | 4.09 | 1.74 | 9.61 |
| **Current Smoking** | <0.001 | 12.55 | 6.01 | 26.21 |

in gender (48% males in both groups) and also the average age. The family history of cancer was significantly different in the two cancer and control groups (42% versus 14% respectively, p <0.001). Also, current cigarette smoking was significantly higher among cancer patients compared with the controls (81% versus 26%, p < 0.001). The prevalence of psychological stress was 70% among cancer patients and 40% among controls showing a significant difference (p<0.001). In a multivariate logistic regression model, the prevalence of psychological stress was shown to be higher among cancer patients compared to controls (OR = 3.01, 95% CI: 1.46- 6.19, p=0.003) (Table 1).

## Discussion

The present study found a considerably higher prevalence of psychological stress among Iranian cancer patients in comparison with controls (70% versus 40% respectively). A comprehensive cancer study on young adults in the United States found that 19-23% experienced significant psychological stress [3]. Also a notable number of cancer patients have shown symptoms meeting the criteria for post-traumatic stress disorder [4]. Our survey found a much higher stress rate among Iranian cancer patients in comparison with western countries [5,6], emphasizing the importance of screening for stress among our cancer patients.

## Conclusion

Regardless of the type of cancer, Iranian cancer patients suffer a high level of psychological stress which indicates the need for screening for stress among them.

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