Psychological and psychiatric issues in patients diagnosed with cancer: A review study

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Abstract
Getting diagnosed with cancer can be a tremendous stressor; it can even be recognized as an emotional trauma that can lead to several mental health problems and dysfunction in many aspects of one’s life. Recent studies demonstrated that mental health issues can affect the quality of life, compliance with cancer treatment, medication efficacy, mortality rate costs of health services, and economic loss of cancer patients. In this review study, we gathered the literature by searching the databases, including Web of Science, Scopus, and PubMed. Google Scholar search engine was also used to make an extensive search strategy. We chose articles based on reporting the prevalence rate of mental health problems and the psychological and psychiatric problems that can influence the treatment of patients with cancer. The literature review showed that one-third of all cancer patients suffer from psychiatric disorders and psychological dysfunctions, and the most common mental disorders that can be comorbid with cancer are depression spectrum and anxiety disorders.

Introduction
Cancer is a preventable disease with genetic defects caused in 5-10% of cases, and the remaining (90-95%) are linked to the environment and lifestyle (1). These diseases are the second most common cause of mortality globally, following ischemic heart disease. Lung, liver, and stomach cancers are the deadliest (2). In cases of gender difference, the deadliest cancers in females and males are breast and lung, respectively (3). Due to the high mortality rate and bad prognosis of this disease in patients with cancer, their mental health is an important aspect of spiritual well-being (4). These problems may influence both aspects of treatment and the progress of cancer and they are crucial to address in cancer care (5,6).

Previous studies on mental health problems in cancer patients have been limited in recent decades; however, there is a growing understanding of the mental processes involved in cancer treatment and the appropriate mental rehabilitation and therapies for these patients (7). This article provides information on various aspects of cancer patients’ dysfunctional mental health issues, including healthcare costs, mortality rates, mental disorders onset, prevalence, living beyond cancer with mental health issues, prognosis, specialized mental health care, the association between mental health problems and cancer treatment compliance, and cancer incidence and mortality rate in psychiatric patients. Mental health encompasses emotional, psychological, and social aspects, and is crucial in determining stress, relationships, and decision-making.

Key point
In a literature review of previous studies, we found that around one-third of cancer patients experience psychiatric disorders and psychological dysfunctions at different stages of cancer diagnosis and treatments; and providing mental health services is crucial to eliminating depression spectrum disorders and anxiety disorders as the most common mental disorders that can be comorbid with cancer.
Despite the prevalence of mental health problems, fewer than half of cancer patients seek mental health care services, and a quarter receive proper care.

**Health care costs and economic losses of cancer patients**
Being diagnosed with cancer (any cancer) can lead to a multi-layer of financial expenses. Patients often have to quit their jobs due to chemotherapy side effects and the pain caused by the cancer. In many cases, the family members who care for their ill loved one also need to quit their jobs because patients need a full-time caring agenda (8). Further, being diagnosed with a mental disorder or experiencing mental health problems can also affect the financial expenses even more by getting mental health care services. Cancer and mental disorders can bring dysfunction into different areas of one's life. One is economic loss by being unable to handle a job properly and losing many occupational chances (8,9). Even if the cancer treatment goes well and the patients experience a low range of cancer symptoms, the mental disorders symptoms will paralyze the mastery of the patients being occupied in a job (10).

**Mental health problems related to cancer mortality**
Research indicated that patients diagnosed with mental health problems may usually have a lower chance of surviving cancer (9). Mental health disorders magnify the fear of death, dim the light of hope for survival, and reduce patients' compliance in the process of cancer treatment (3). In terminally ill cancer patients who have less time to live, mental disorders significantly reduce their quality of life (11).

**The onset of mental disorders at the different stages of cancer**
Mental health problems can onset in different stages of being diagnosed with cancer. If the diagnostic process is latent, the chances will be higher for patients to develop mental disorder symptoms such as anxiety, depression, and even post-traumatic stress disorders (PTSDs) (9,12). Symptoms of mental disorders can also develop after being diagnosed with cancer and even after receiving cancer treatments (13). Some patients may also carry on the symptoms after the cancer is entirely treated, so they may live with mental health problems beyond cancer, usually carrying symptoms such as sexual disorders, anxiety, and depression disorders, drug abuse disorders, body dysmorphia, and even experiencing psychological symptoms such as demoralization, constant fear of cancer returning and fear of death (9,14).

**Prevalence of mental disorders in cancer patients**
Studies illustrated that one-third of cancer patients experience mental health disorder symptoms. Half of this population seeks mental health assessment, and only a quarter of this half receive mental health care services (15). Depression spectrum and anxiety disorders are prevalent in cancer patients, but prevalence is heterogeneous because of different expressions of these disorders and the way of diagnosis by different researchers (5,16). Statics show that 15% of cancer patients experience traits and symptoms of PTSD and sub-types of PTSD. Adjustment disorders (that refer to a patient's malfunctional emotional reactions to an event) also affect 20-25% of cancer patients. Somatic symptoms and mind-body-related symptoms may occur even after cancer treatment. 2-5% of cancer patients may experience neurocognitve smiled syndromes or disorders such as amnesia and delirium. Depending on the stage of the disease, delirium ranges from 10 to 80% prevalence rate among cancer patients. Sexual disorders and dysfunctions affect nearly 25-40% of patients, 37.7% of patients experience health anxiety, and 28.8% experience demoralization (6).

In comparison, the incidence rate of mental disorders in cancer patients is not greater than in the average population (15). However, the mortality rate due to mental disorders and the rate of not reaching mental health services is much higher in cancer patients compared to the average population. The reason can be that oncologists focus more on the treatment than the patients (9).

**Specialized mental health care and drug and psycho-therapies in oncology**
Recent research shows that psychiatric disorders and psychological symptoms such as demoralization, fear of death, experiencing meaninglessness, fear of cancer reoccurrence, and hopelessness can influence the treatment of cancer and chemotherapy in a destructive (6). Mental health problems can reduce the positive effect of chemotherapy, reduce compliance, bring more healthcare costs and economic losses, and even increase the mortality rate of cancer patients. Research has shown that integrated psycho-therapies can have short-term advantages on mental health problems in cancer patients, and psychiatric drugs can have more prolonged effects (6,8). Mental health services specialized for cancer patients need to be studied to find more effective psychiatric drugs that do not interfere with the chemotherapy and have fewer complications. Psychiatrists need to practice better prescriptions for cancer patients. Researchers have shown that “self-management” can play a vital role in healing patients from cancer and being cooperative in the treatment process (5). Effective self-management includes monitoring one's condition and affecting the cognitive, behavioral, and emotional responses required to maintain a satisfactory quality of life. Consequently, a dynamic and continuous process of self-regulation is established when an individual can manage the symptoms, treatment, physical and psychosocial consequences, and lifestyle changes inherent in living with a chronic condition.
Cancer incidence and mortality rate in psychiatric patients
In comparison, the chance of developing psychiatric disorders in cancer patients in an average population is closely even, but the mortality rate in cancer patients is much higher, which may be because oncologists focus more on the cancer treatment and less on the patients and psychological symptoms are miss-diagnosed with chemotherapy effects (6,13).

Conclusion
Research demonstrated that one-third of all cancer patients suffer from psychiatric disorders and psychological dysfunctions either before getting diagnosed, in the latency of getting diagnosed, after being diagnosed, or even after they get treatment for cancer. In some cases, the psychological effects (fear of cancer, demoralization, disabilities after being healed from cancer, post-traumatic stress, and anxiety disorders comorbid with depression) still stay with patients wholly healed from cancer. Due to that reason, providing mental health services has a significant role in patients diagnosed with cancer, before getting diagnosed, in the middle of treatment, and post-cancer to eliminate as much dysfunction as possible. The most common mental disorders that can be comorbid with cancer are depression spectrum disorders and anxiety disorders. Less common psychiatric disorders that can be comorbid with cancer are PTSD, sexual disorders, body dysmorphea, drug abuse, and even suicide.

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Validation: Anna Ghorbani Doshantapeh and Shahrzad Ghaafariyan.
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