

RESEARCH ARTICLE

Research progress on psychological treatment of breast cancer in China

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Cancer is now the world's second-largest public serious health disease. At present, traditional drug therapy and radiotherapy are often accompanied by a series of adverse reactions, such as fever, pain. These adverse reactions are interrelated and may produce synergistic effects, leading to depression, anxiety, insomnia, etc. in patients, and present a dynamic and long-term clinical course. Historically, the research on tumors was mainly focused on drug development. The existing limitations in clinic turn our attention to other treatments, especially since the breast is an organ affected by emotions and psychological factors. Numerous studies show that effective psychological intervention can significantly reduce cancer patients' symptoms and mental pain, promote endocrine and immune function, boost quality-of-life and prolong survival time. This article adopts the narrative literature review method to sort out the currently commonly used psychological therapies in tumor clinics in China, the current research status of tumor psychology, and evaluates and prospects its future development. Clinical oncology psychology is mainly used as an auxiliary application for postoperative adjuvant chemotherapy and palliative care. China mainly uses group supportive therapy to promote breast cancer patients' adaptability to tumor treatment; cognitive behavioral therapy (CBT) changes their incorrect thinking and behavior patterns to improve their emotional problems and quality-of-life; mindfulness therapy (MT) allows patients to focus on the present without judgment, encourage them to stabilize their emotions, reduce stress and quality-of-life; traditional Chinese medicine (TCM) psychotherapy is used in the remedies like Chinese medicine, acupuncture, qigong, etc. In accordance with the new therapeutic model of bio-psycho-social medicine.

Keywords: breast cancer, psycho-oncology, traditional Chinese medicine (TCM) psychotherapy, cognitive behavioral therapy (CBT), mindfulness therapy (MT), group supportive therapy, complementary and alternative medicine

INTRODUCTION

Tumor is a systemic non-communicable disease caused by a variety of pathological factors. It is also the second leading cause of death in humans today. There will be approximately 20 million cancer patients in the world in 2022, with nearly 9.74 million deaths (WHO, 2024b). Breast cancer is currently the most common malignant tumor among women worldwide, accounting for 11.5%

of global cancer incidence and 6.8% of mortality; at the same time, it accounts for 23.8% of the global female cancer incidence and 15.4% of death toll, which has now exceeded the incidence of lung cancer in female patients (see Figure 1 & Figure 2); due to demographic reasons, China's new cases and deaths rank first in the world, and they are getting younger, China has become a real "cancer country" (Yuan *et al.*, 2020; Cai, Huang, & Yuan, 2021; Cao *et al.*, 2021; Yang *et al.*, 2024; WHO, 2024c).

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According to the latest data released by the National Bureau of Statistics of China, in 2021, the malignant cancer mortality rate in urban China was 158.7 per 100,000 people (116.76 per 100,000 for women), and malignant cancer mortality rate in rural China was 167.06 per 100,000 people (119.11 per 100,000 for women) (see Figure 3) (Cao *et al.*, 2020; China National Data, 2024). Although cancer diagnosis and treatment technology has made certain achievements, cancer treatment is a long and dynamic process, traditional therapies for the treatment of tumors are often accompanied by a series of toxic side effects and adverse reactions, such as fever, trauma, pain, etc., these symptoms are interrelated and can produce synergistic effects (Osypiuk *et al.*, 2020a; Cai *et al.*, 2022; Chen *et al.*, 2022; Tao *et al.*, 2024; Li, 2019). These reasons will aggravate the occurrence of negative emotions such as anxiety, depression, restlessness, and pessimism in patients (Zamanian *et al.*, 2021; Schulze *et al.*, 2022; Cathcart-Rake & Ruddy, 2023). In particular, suffering from cancer itself is a stressful event, and people will have strong psychological reactions during the illness, this huge psychological blow and change involves a wide range of areas, lasts for a long time, is complex and changeable, and will have a huge impact on the patient's treatment and prognosis (Berterö & Chamberlain Wilmoth, 2007; Michalczyk *et al.*, 2022).

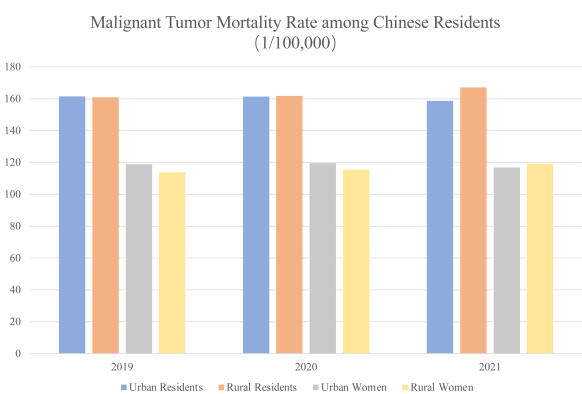


Figure 3. Malignant tumor mortality rate among Chinese residents

and development, the limitations of existing clinical options have led us to turn our attention to other treatment modalities. Oncology psychology research in China started relatively late, and psychological counseling and treatment have not yet been widely promoted, with the deepening of cancer research, medical staff should realize that dealing with the psychological problems of cancer patients should also become an important part of the treatment process, medication and psychotherapy are interlinked and complementary to each other, and both are indispensable. Based on the above related content, this article combines the comprehensive research on the clinical treatment of breast malignant tumors in China with psychotherapy by researchers at home and abroad in recent years.

PSYCHOSOCIAL ONCOLOGY

Health is a state of good physical, mental and social well-being and is not merely the absence of disease or infirmity, it is the interaction between biological, psychological and social factors (WHO, 2024c). Comprehensive treatment of breast cancer is a clinical treatment method for tumor patients with the purpose of controlling tumor growth, improving the patient's quality-of-life, and prolonging the patient's survival (Shao, Shen, & Xu, 2018). Psychotherapy, as a comprehensive treatment method, means that the doctor is patient-centered, bases on psychological principles at multiple levels such as physical, psychological, and social, uses targeted language or other appropriate methods, acts on the patient's higher nerve center to eliminate or improve the patient's psychological, emotional and functional status (Qian, 2022; Rao & Yang, 2020; Zeng *et al.*, 2022). After the physical health of cancer patients has deviated, how to balance the health of the human body and other aspects of daily life, such as family, work, finance, etc., is a research direction in the social psychology of cancer (Zabora *et al.*, 2001). Patients' tumors and mental illnesses are closely related to the social system, in the

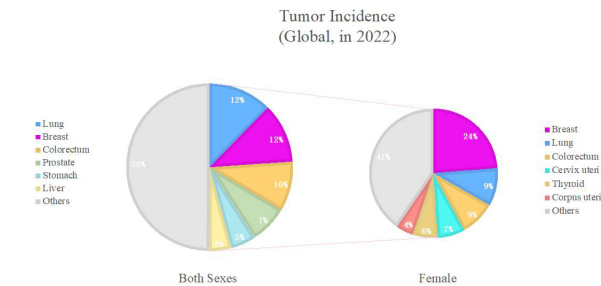


Figure 1. Global tumor incidence

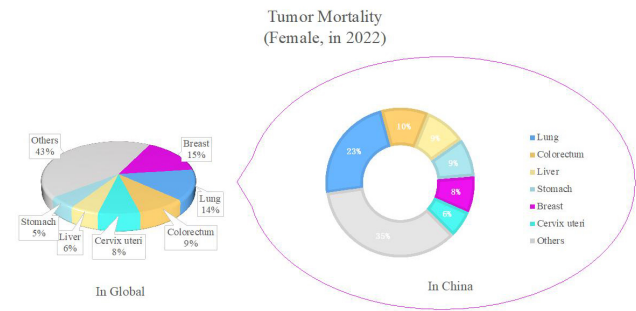


Figure 2. Tumor mortality rate in women

At present, the focus of clinical treatment is still on surgery and drug treatment. Our previous in-depth research on tumors was mainly focused on drug research

1970s, Engel proposed a new treatment model of biopsychosocial medicine, that is, it must be studied from the combination of the whole person, the group, and the ecological environment system (Ye, 2018; Rao & Yang, 2020; Cai, Huang, & Yuan, 2021). With the rapid development of the global economy and changes in medical treatment models, people's requirements for physical and mental comfort are constantly increasing. This means that there is an urgent need for medical workers to change their concepts, while solving the patient's physical pain, we also need to consider multiple aspects to help the patient alleviate the physical and mental pain (Anderson, 2021; Ching & Mok, 2022).

Psychosocial oncology is an emerging interdisciplinary discipline proposed in the 1970s. It covers oncology, psychology, rehabilitation and sociology, and provides social-psychological-biomedical support for breast cancer survivors (Holland, 2002; Berterö & Chamberlain Wilmoth, 2007; Ban, 2022; Tang, 2022). Its main research is on the prevention, occurrence and development of tumor diseases in terms of psychosocial behavior; change patients' lifestyles and their psychological suffering due to cancer as a disease, as well as treatment methods and recovery methods (Sperner-Unterweger, 2011; Kovács *et al.*, 2021; Bergerot *et al.*, 2023). Cancer psychotherapy in China started relatively late, and psychosocial therapy for tumors is still a relatively new treatment method in China, in 2016, the first book with guiding significance for clinical psychological diagnosis and treatment of cancer in China—"Guidelines for the Psychological Treatment of Cancer in China" was officially published (Tang, 2022; Zeng *et al.*, 2022). A large amount of evidence shows that effective psychosocial oncology interventions, such as psychological support, individual psychotherapy, group psychotherapy, etc., it can significantly alleviate the symptoms and psychological pain of patients with malignant tumors, improve the patients' quality-of-life and even extend their survival (Zamanian *et al.*, 2021; Schulze *et al.*, 2022; Zeng *et al.*, 2022). With the development of psychological research and the transformation of medical care models, attention to the mental health of cancer patients should also increase in the future.

PSYCHOLOGICAL STATUS OF BREAST TUMOR

The poll rate of breast cancer now ranks first among female tumors, and it is also the most common cancer among Chinese women, it has now become the main cause threatening women's health (Cao *et al.*, 2020; Anderson, 2021; Nardin *et al.*, 2020). Currently, the main treatments for tumors are surgery, chemotherapy, and radiotherapy (Shao, Shen, & Xu, 2018; Liu *et al.*, 2022;

WHO, 2024a), most patients who have undergone breast cancer surgery will develop a series of physical manifestations such as lymphedema of the affected limb, nerve damage, and upper limb dysfunction, which may last for life (Osypiuk *et al.*, 2020b; Anderson, 2021; Brunet, Price, & Baillot, 2021; Nardin *et al.*, 2020; Cathcart-Rake & Ruddy, 2023); in addition, radiotherapy and chemotherapy not only affect tumor cells, but also kill normal cells, these causes patients to experience common adverse reactions such as constipation, hair loss, insomnia, pain, and bone marrow suppression, as well as negative emotions such as pain, anxiety, depression, and irritability; in Clinic, these symptoms are diverse and complex, and present a long-term dynamic process (Jung, Kim, & Chung, 2020; Cai *et al.*, 2022; Chen *et al.*, 2022; Cathcart-Rake & Ruddy, 2023). Although symptom burden is a common problem, it does not occupy an important clinical treatment task and has certain treatment strategies, psychological care for patients is often ignored by therapists during the treatment process (Cai *et al.*, 2022; He *et al.*, 2022; Zeng *et al.*, 2022). All of the above situations will cause patients to develop stress and cancer-related fatigue, as well as thoughts of despair and mental disorders, under the dual influence of physical symptoms and psychological symptoms, patients may even fail to cooperate with treatment in the future, which directly affects the prognosis of the disease (Cai *et al.*, 2022; Grigelat & Mumm, 2023).

China is an Eastern country with Confucian culture as the mainstream, and most Chinese people are conservative and reserved in character (Li, 2018; Ye *et al.*, 2019; Ching & Mok, 2022; Tang, 2022). Under the influence of the cultural background of traditional concepts, most breast cancer patients will regard their cancer experience as private, and will become avoidant, feel self-blame, and have a sense of shame, and they are not used to confiding such things and emotions to others, even their close partners and family members (Xu *et al.*, 2021; Ban, 2022; Ching & Mok, 2022). In the meantime, because it is often difficult for patients to directly accept their true condition and do not actively seek professional psychological support, negative emotional disorders such as pessimism are more serious (Chu *et al.*, 2021; Ching & Mok, 2022). Due to the special nature of the breast as a female organ, the diagnosis of cancer requires patients not only to bear the blow from the cancer itself, especially patients who have undergone mastectomy also face the trauma of damaged body image caused by breast loss, which leads to a significant decrease in patients' self-esteem and loss of female self-identity (Brandt-Salmeri & Przybyla-Basista, 2018; Berhili *et al.*, 2019; Nardin *et al.*, 2020; Michalczyk *et al.*, 2022; Pereira *et al.*, 2022); on the other hand, patients also face multiple pressures such as life threats, work life, sexual

dysfunction, and economic impact (Hulett & Armer, 2016; Corey *et al.*, 2020; Ban, 2022; Cai *et al.*, 2022). The scope of mental illness and psychological distress caused by cancer has been assessed in the medical world for many years, the level of depressive symptoms experienced by breast cancer patients is relatively high among all cancer patients, and nearly 40% of breast cancer patients suffer from psychological problems (Chen *et al.*, 2022). Research shows that the prevalence of depression among breast cancer survivors in Asia can be as high as 31% (Kang *et al.*, 2023); the incidence rate of moderate and high stress among tumor patients is even as high as 78.1% (Hu *et al.*, 2024). On the other hand, because patients do not understand the importance of psychological rehabilitation, lack knowledge of psychological expertise, and the current social support system in China is not perfect and mature, which causes patients to feel anxious, fearful and powerless, resulting in a consistently low mental state (Zamanian *et al.*, 2021; Cai *et al.*, 2022; Zeng *et al.*, 2022).

PSYCHOLOGICAL TREATMENT OF BREAST TUMORS

Tumor is a complex, chronic, systemic, and life-threatening disease caused by the combined action of multiple pathological factors, the recurrence and metastasis of tumors cannot be underestimated (Casellas-Grau, Ochoa, & Ruini, 2017; Berhili *et al.*, 2019; Baudry *et al.*, 2022; Ching & Mok, 2022; WHO, 2024b). Cancer, as a source of stimulation, can trigger intense psychological reactions in individuals, causing stress, insecurity, etc., causes individuals to be in a state of strong fear, depression, anxiety and other negative emotions for a long time. This negative psychological state weakens the individual's defense mechanism and invades the body's immune system, thereby affecting the patient's clinical treatment (Reich, Lesur, & Perdrizet-Chevallier, 2008; Antoni & Dhabhar, 2019; Berhili *et al.*, 2019; Li, 2019; Kacel, Pereira, & Estores, 2019). A bad mental state can stimulate the body's sympathetic nervous system and promote the occurrence of tumors, the correlation between mental factors and the incidence and treatment of breast cancer has been generally recognized by domestic and foreign scholars (Reich, Lesur, & Perdrizet-Chevallier, 2008; Cheng *et al.*, 2019; Sun *et al.*, 2019; Lee *et al.*, 2021; Liu *et al.*, 2022). An abundance of studies has now confirmed that mental factors are not only one of the risk factors for breast cancer, but also harm the psychological and physical health of breast cancer patients (Lee *et al.*, 2021; Cai *et al.*, 2022; Drochioiu, 2023). In addition, severe negative emotions and trauma suppression are associated with poorer prognostic tumor characteristics, and are more likely to occur in younger women than in older women (Casellas-Grau *et al.*, 2016; Corey *et al.*, 2020; Baranovitch *et al.*,

2022). Research by He *et al.* showed that the proportion of psychological problems among patients with breast cancer is significantly higher than that among patients with esophageal cancer and liver cancer (Chen *et al.*, 2022; He *et al.*, 2022); Sun *et al.* also compared the psychological state of patients with nasopharyngeal cancer, colon cancer, and leukemia, and the results were consistent with He's (Sun *et al.*, 2019). Current research reveals that the main mechanism of action in the treatment of breast cancer is to inhibit the proliferation and apoptosis of tumor cells, inhibit angiogenesis, and enhance the body's immune function (Yang *et al.*, 2024). In the current research direction of psycho-oncology, the main focus is to stimulate patients' own cure rate, research on the pathways through which psychophysiology affects the occurrence and development of tumors mainly focuses on the psychological-neuro-endocrine-immune axis (Hulett & Armer, 2016; Rao & Yang, 2020; Zheng, 2021). In addition, the development of tumors will affect the expression levels of epinephrine, glucocorticoids and other related hormones in the body (cortisol is the most common marker of psychoneuroimmunology), stimulates the central nervous system and causes mood changes, such as depression and anxiety-like behaviors, then due to its immunosuppressive effect, it can eventually lead to persistent immune dysregulation of the body (Hulett & Armer, 2016; Li, 2019; Lee *et al.*, 2021; Baranovitch *et al.*, 2022; Eseadi & Ngwu, 2023). It is generally believed that psychotherapy can act on the patient's central nervous system, regulate endocrine systems, and improve autoimmunity to achieve anti-tumor effects (Li, 2019; Baranovitch *et al.*, 2022). Studies have shown that a positive attitude has a significant positive impact on the quality-of-life of cancer patients and improves the patients' physiological conditions (Li, 2018; Xia *et al.*, 2018; Sun *et al.*, 2019). Since the breast is a special emotional organ of the human body, the impact of environmental factors and negative emotions cannot be underestimated, and psychological therapy for breast cancer care should not be ignored (Lee *et al.*, 2021; Baranovitch *et al.*, 2022).

In current medical treatment, psychotherapy for tumors is more often used as an auxiliary treatment for tumors. Its main research direction is also focused on improving the quality-of-life and survival time of patients, and it has not been popularized in clinical treatment of tumors (Dominic *et al.*, 2018; Tang, 2022). Similarly, there is a lack of targeted, unified, and objectively measured tumor psychotherapy methods for breast tumor psychotherapy (Myers *et al.*, 2019; Tang, 2022). At present, the intervention time of psychological intervention is mainly concentrated in patients after surgery or during the treatment period of chemotherapy and radiotherapy (Tang, 2022). The more common methods of psycholo-

gical treatment and care for cancer are as follows (Figure 4).

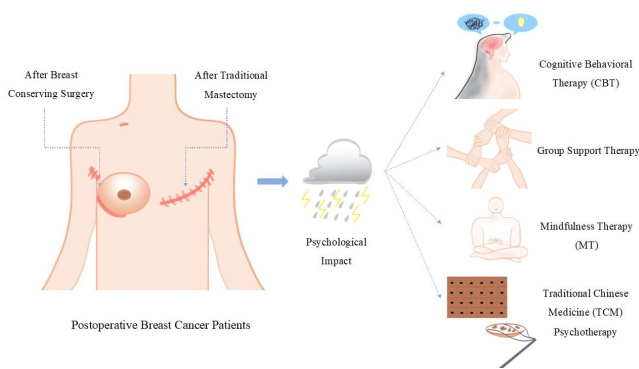


Figure 4. Psychological treatment of breast cancer patients in China

Group support therapy

Supportive psychological intervention can help patients deal with painful emotions and strengthen their potential strengths. It is one of the most commonly used treatment methods, is often conducted in a group setting, preferably for those with similar cancer types and stages, and it can promote the adaptability of breast cancer patients to tumor systemic treatment (Tang, 2022). Wang *et al.* used meaning-themed group support therapy to conduct semi-structured interviews with 21 cancer patients, and conducted data transcription and analysis through NVivo12 software, and a portion of patients have also developed positivity and acceptance of cancer, reflecting the feasibility of active treatment in clinical oncology practice in China (Wang *et al.*, 2023a). In the same year, Wang *et al.* conducted another quantitative experiment, 66 people were divided into an experimental group (a total of 8 meaning-centered group support treatments in 4 weeks) and a control group of 33 people each. The research revealed that patients after psychological intervention have positive effects on the meaning of life and post-traumatic growth, which is the same as the conclusion of previous qualitative research (Wang *et al.*, 2023b). It can be seen from the above that group support psychotherapy can reduce the anxiety and depression of breast cancer patients, improve the quality-of-life, and improve family functions.

Cognitive behavioral therapy (CBT)

Cognitive behavioral therapy is a psychotherapy method that combines cognitive therapy and behavioral therapy, is a relatively common psychotherapy method for tumors. Its purpose is to improve patients' irrational behaviors influenced by incorrect beliefs and help them improve their emotional problems and quality-of-life by changing their thinking or behavior patterns (Boesen, 2011; Xiao *et al.*, 2017; Jelvehzadeh *et al.*, 2022). Xiao *et al.* conducted a meta-analysis of depression in 13 studies on

933 post-operative breast cancer patients using depression scales (SDS & HAMD) and anxiety scales (SAS & HAMA). The research results clearly showed that individual cognitive behavioral therapy has an improving effect on patients with severe depression after breast cancer surgery and interacts with the patients' quality-of-life (Xiao *et al.*, 2017). Ren randomly divided 392 breast cancer patients included in the experiment into 3 groups, 196 in the usual care (UC) group, 98 in the self-care management (SCM) group, and 98 in the CBT group to conduct a controlled trial; and used the Hamilton Anxiety Scale (HAMA) and the Hamilton Depression Scale (HAMD) to statistically analyze anxiety and depression after 6 treatments (24 weeks). The results manifested those patients in the CBT group had significantly lighter symptoms of anxiety and depression than those in the other two groups (Ren, 2019). A series of reports have shown that cognitive behavioral therapy can regulate the quality-of-life, anxiety and depression of cancer patients during postoperative chemotherapy treatment.

Mindfulness therapy (MT)

Mindfulness is a meditation method with an Eastern holistic view derived from Buddhist meditation, allows patients to focus on the present moment without judgment, stabilize their emotions and reduce stress, face breast tumors and related treatments with an accepting and relaxed attitude (Zhao, 2020; Liu *et al.*, 2022). Mindfulness therapy is the most common psychological intervention in the research literature on post-cancer treatment-related symptoms, mainly mindfulness-based stress reduction (MBSR) and mindfulness-based cognitive therapy (MBCT) (Hulett & Armer, 2016; Chen *et al.*, 2022; Wang *et al.*, 2023). Zhao used MT to observe its impact on the sleep quality of breast cancer patients, and then divided 136 patients equally into the experimental group and the control group. After 6 weeks of intervention treatment, at baseline, after intervention, after 3 months and after 6 months of follow-up, they conducted research using the insomnia severity index (ISI), The Five Facet Mindfulness Questionnaire (FFMQ) and actigraphy device. The results indicated that patients who received MBCT had reduced insomnia severity, fewer sleep disorders, and sleep quality that was significantly higher than that of the control group (Zhao *et al.*, 2020). Liu and others randomly divided 136 early-stage breast cancer patients who received routine care into a treatment group and a control group, and used mindfulness yoga to intervene in their bad mental state for 8 weeks. The experiment used the Hospital Anxiety and Depression Scale (HADS) and the Health-related Quality-of-Life Scale (FACT-B) to conduct questionnaire statistics at the 1st week of baseline, 8th week and 20th week after intervention. Then the data analysis results suggested that patients who received mindfulness

yoga had significantly better anxiety, depression, and quality-of-life than patients in the control group (Liu *et al.*, 2022). Now more and more clinical staff are choosing mindfulness therapy as the main psychological intervention for cancer patients, and based on the Eastern cultural characteristics of mindfulness, it can also be an effective auxiliary therapy for some patients who are unwilling to use other drugs.

Traditional Chinese medicine (TCM) psychotherapy

Traditional Chinese Medicine (TCM) Psychology is a comprehensive observation, research and application of psychological phenomena based on Chinese traditional way of thinking, adopts the concepts and frameworks of modern psychology, and the two are integrated to form a psychology with a unique Chinese theoretical system; its common treatment methods include five element music therapy, Qigong, etc. (Tao *et al.*, 2015; Zhuang & Wang, 2019; Osypiuk *et al.*, 2020b). For the TCM psychological treatment of breast cancer, patients can be treated with TCM, acupuncture and massage, five element music therapy, qigong therapy, etc. based on the theory of the unity of form and spirit and the theory of the five internal organs in TCM psychology; then it can significantly alleviate symptoms such as physical disorders, joint pain, insomnia, anxiety, and depression in cancer patients (Tong *et al.*, 2018; Gong *et al.*, 2022; Cathcart-Rake & Ruddy, 2023; Hung *et al.*, 2023). Hung *et al.* used semi-structured interviews to study 67 breast cancer patients who were included in the study and were treated with adjuvant TCM, and the article reported that patients' sleep and fatigue were improved, and their belief in treatment was improved (Hung *et al.*, 2023). Gong and others conducted a meta-analysis and used the FACT-B Scale and the Anxiety Scale (SAS & HADS) to conduct 7 studies on 537 post-operative breast cancer patients by Baduanjin, and the research results clearly manifested that Baduanjin has a significant positive effect on the quality of life and psychological state of breast cancer patients (Gong *et al.*, 2022). At the same time, in international oncology psychology, other treatment methods of TCM psychology, such as Tai Chi, moxibustion therapy, massage therapy, dietary therapy, etc., are gradually included in the comprehensive treatment of oncology psychology, be accepted by more and more patients, and fills the treatment gap that Western medicine cannot fully fill (Ben-Arye *et al.*, 2016; Kacel, Pereira, & Estores, 2019; Hung *et al.*, 2023).

CONCLUSION AND DISCUSSION

As a non-drug treatment method, psychotherapy has the characteristics of no toxic side effects, low cost, low risk, easy operation and wide applicability, and has irreplaceable advantages (Dominic *et al.*, 2018; Osypiuk *et*

al., 2020a; Haggstrom *et al.*, 2022; Eseadi & Ngwu, 2023). Regarding breast cancer-related topics that have plagued clinical research for a long time, current research on psychological intervention and treatment is still in its infancy, moreover, cancer patients at different stages have different psychological problems, and medical staff's communication and psychological intervention on patients have different impacts. The staging of breast cancer and the type of psychological pain also need to be evaluated (Zheng, 2021; Tang, 2022). In the future, the development and standardization of cancer psychotherapy cannot be separated from the support of a large amount of high-quality evidence. This article summarizes the effects of different psychological treatments on tumor treatment, extends the blueprint for the future psychological treatment of breast malignant tumors in China, and lays the foundation for its further clinical application.

Since most of the first-line medical staff who see patients' problems and challenges are clinical front-line medical staff and are not professional psychologists, paying attention to patients' physical and mental health issues in addition to tumor treatment should also be the main treatment direction of medical staff (Ching & Mok, 2022). Furthermore, in the future treatment, in addition to physical treatment, attention should also be paid to the patient's psychological changes and treatment, let patients correctly understand the dialectical relationship between psychological factors and cancer, and combine psychotherapy with comprehensive cancer treatment methods. These behaviors cannot only assist and enhance the effect of treatment, but also greatly improve systemic immunity and quality-of-life, and prolong the survival time of patients; these are also key points for future research. (Dominic *et al.*, 2018). An interesting study shows that patients with advanced cancer who are actively receiving anti-cancer treatment have relatively low levels of psychological distress compared with patients who do not receive any treatment, although they have obvious physical symptoms; it may be that active anti-cancer treatment can bring hope to patients; the experience of anti-cancer also causes some patients to experience post-traumatic growth (He *et al.*, 2022; Michalczyk *et al.*, 2022).

However, due to the huge differences in cultural background, ideology, social and medical environment with Western countries, the rehabilitation model of European and American countries cannot be replicated in China. Chinese therapists must not only fully consider the individual differences of patients and the complexity and variability of diseases and symptoms, but also pay attention to the current social environment and background, while constantly accumulating experience in clinical practice, we should also constantly refer to the latest scientific research progress, further development

of psychosocial oncology that combines characteristics of physical and psychological disorders, provide accurate and beneficial clinical services to breast cancer patients to achieve healthy goals.

DECLARATION

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Author contributions

Lan Yang: Conceptualization, Literature search, Writing-original draft preparation, Writing-reviewing and editing.

Hao Luo: Literature search, Data curation, Writing-reviewing and editing.

Di Wang: Literature collection, Clinical perspective support, Writing-reviewing and editing.

Qicheng Zhang: Conceptualization, Supervision, Writing-reviewing and editing.

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Not applicable

Informed consent

Not applicable.

Conflict of interest

The author has no conflicts of interest to declare.

Use of large language models, AI and machine learning tools

Not applicable.

Data availability statement

No additional data are available.

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