

ORIGINAL RESEARCH ARTICLE

A comparison of group balancing
psychotherapy and group cognitive behavioral
therapy for generalized anxiety disorder in ChinaYuting Gao^{1,2} and Yonggui Yuan^{2,3*}¹Department/Unit of Student Affairs Office, The Mental Health Education Center, Nanjing University of Science and Technology, Nanjing, Jiangsu, China²Department of Psychosomatics and Psychiatry, Zhongda Hospital, Nanjing, Jiangsu, China³Jiangsu Provincial Key Laboratory of Brain Science and Medicine, Institute of Psychosomatics, Southeast University, Nanjing, Jiangsu, China

Abstract

Generalized anxiety disorder (GAD) is a mental health condition characterized by persistent and excessive worrying. While controlled clinical trials have demonstrated the effectiveness of cognitive behavioral therapy and balancing psychotherapy (BPT) in alleviating symptoms of GAD, there is a lack of research comparing BPT with alternative treatment modalities. This study aims to investigate the differential efficacy of group balancing psychotherapy (GBPT) compared to group cognitive behavioral therapy (GCBT) in the treatment of GAD. Patients with GAD were recruited through both online and offline channels and randomly assigned to one of two groups: GBPT or GCBT. Each Group received 8 weeks of group psychotherapy in addition to conventional treatment. The Hamilton Anxiety Scale, Patient Health Questionnaire-9, and Patient Health Questionnaire-15 were used to evaluate treatment outcomes. There were no notable differences in demographics or baseline levels of anxiety, depression, or somatization between the two groups ($p > 0.05$). Following the 8-week group psychotherapy intervention, there was a significant decrease in anxiety, depression, and somatization levels in both the GBPT group ($t = 8.74, p < 0.001$; $t = 3.77, p < 0.01$; $t = 4.92, p < 0.001$) and the GCBT group ($t = 9.31, p < 0.001$; $t = 5.57, p < 0.001$; $t = 2.24, p < 0.05$). The main effect of time was significant, but the main effect of intervention and the interaction effect were not significant. Both GBPT and GCBT effectively reduced anxiety, depression, and somatization in patients with GAD. Given its alignment with local cultural values, GBPT is a promising approach that warrants further investigation.

Keywords: Group psychotherapy; Balancing psychotherapy; Cognitive behavior therapy; Generalized anxiety disorder; Effectiveness

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1. Introduction

Anxiety is a prevalent and pervasive emotion experienced by individuals, manifesting in various ways, including cognition, emotion, and somatic reactions. When anxiety becomes pathologically intense or prolonged, it can lead to the development of anxiety disorders.¹ Generalized anxiety disorder (GAD) is characterized by excessive

worrying and often presents with physical symptoms such as muscle tension, palpitations, and headaches.² Individuals with GAD tend to worry about similar topics as the general population, but with a more catastrophic perspective. Their perception of the world is marked by worry, vigilance, and pessimism, as they constantly seek reassurance and certainty. Some individuals with GAD may even view worrying as a normal part of life, which may increase the risk of accidents and misfortunes. For these individuals, worrying behaviors serve as a coping mechanism.³ European epidemiological review studies have shown that the 12-month prevalence of GAD is between 1.7% and 3.75%.⁴ The peak incidence occurs in the elderly, with a prevalence of 2.8% in individuals over 55 years of age.³ There is a high incidence of psychiatric comorbidities in GAD; about 60% of patients with GAD have co-occurring depression or other anxiety disorders.⁵ Quality of life and social functioning are severely impaired, and premature mortality is several times higher than in the general population.⁶ In addition, the problem of low treatment-seeking rates and inadequate treatment for anxiety disorders is prevalent worldwide. One study revealed that among patients who met the diagnostic criteria for an anxiety disorder according to the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5) and had symptoms for more than 12 months, only 27.6% received treatment, with <10% receiving adequate treatment.⁷ Consequently, there is a pressing need to enhance awareness and improve the quality of treatment for anxiety disorders.

Currently, the management of GAD in local medical facilities primarily relies on pharmacological interventions, including antidepressants like sertraline and paroxetine, as well as benzodiazepines.⁸ However, some patients exhibit low tolerance and poor adherence to drug regimens, resulting in limited pharmacotherapeutic effectiveness.⁹ Simultaneously, psychological treatment modalities such as cognitive behavioral therapy, psychoanalytic therapy, and interpersonal psychotherapy are also employed to address anxiety-related symptoms.¹⁰

Group psychotherapy is a psychological intervention conducted in a group setting, emphasizing interactions among participants. It facilitates therapeutic progress by establishing a safe and supportive social environment. A range of therapeutic mechanisms, including the instillation of hope, information dissemination, behavioral modeling, and emotional catharsis, contribute to transformative change for group members.¹¹

Cognitive behavior therapy is a therapeutic approach aimed at improving psychological symptoms by correcting irrational thoughts and modifying behavioral responses.

Group Cognitive Behavior Therapy (GCBT) achieves therapeutic outcomes by correcting irrational beliefs, modifying behavioral patterns, assigning homework tasks, and implementing other structured interventions. Research has demonstrated the efficacy of GCBT in alleviating symptoms associated with anxiety disorders, enhancing quality of life, and increasing life satisfaction in individuals diagnosed with GAD.¹² According to a systematic review and network meta-analysis of randomized controlled trials, GCBT is more efficacious than a waiting list control group.¹³ GCBT has been shown to reduce negative emotions and restore cognitive functioning in patients with anxiety disorders.¹⁴ Furthermore, its cross-diagnostic approach has proven effective in treating patients with various anxiety disorder diagnoses.¹⁵ Neuroscientific research suggests that abnormalities in low-frequency fluctuations within the anterior cingulate cortex, left middle temporal gyrus, and lingual gyrus may constitute the neural basis of GAD. GCBT may induce the neurological changes necessary for symptom relief by rebalancing the default mode network.¹⁶

Balancing psychotherapy (BPT) is a therapeutic approach developed by Professor Yuan Yonggui and his team, incorporating Chinese cultural elements and informed by extensive clinical practice.¹⁷ Group balancing psychotherapy (GBPT) has demonstrated efficacy in alleviating anxiety and depression among individuals with GAD.¹⁸ Clinical studies have shown the effectiveness of BPT in treating major depressive disorder, panic disorder, GAD, and obsessive-compulsive disorder.¹⁹ Given its advantages over conventional therapeutic approaches, GBPT may serve as a valuable form of psychotherapy for this patient group.¹⁷

Prior research on the psychotherapy of GAD has largely relied on waitlist or mental health education control groups, thereby lacking comparative studies on different treatment techniques. This study aims to address this gap by exploring the comparative efficacy of GBPT and GCBT in treating GAD. Specifically, we compare the effectiveness of the two psychotherapies in improving symptoms of anxiety, depression, and somatization. Furthermore, this study investigates potential differences in their mechanisms of action to provide evidence and guidance for clinical practice.

Based on the objectives of this study and previous findings, the following hypotheses are proposed.

Hypothesis 1: Both GBPT and GCBT can effectively reduce the levels of anxiety, depression, and somatization in patients with GAD.

Hypothesis 2: GBPT and GCBT are equally effective in reducing anxiety, depression, and somatization in patients with GAD.

2. Methods

2.1. Participants

From March 2021 to April 2021, the initial recruitment of patients with GAD was conducted using a combination of online and offline methods. Online recruitment advertisements were published through multiple WeChat public accounts. In addition, recruitment posters were displayed in the outpatient and inpatient departments of the Department of Psychology and Psychiatry of Zhongda Hospital, Affiliated with Southeast University.

Participants with GAD were required to meet the following inclusion criteria: (i) no gender restrictions; aged 18–55 years (inclusive); (ii) met the DSM-5 diagnostic criteria for GAD and had a GAD 7-item (GAD-7) score ≥ 10 ; (iii) minimum education level of junior high school or above, clear consciousness, adequate written and verbal communication skills, and the ability to participate in group activities and complete questionnaires; (iv) voluntary participation and willingness to sign the “informed consent form.”

The exclusion criteria were as follows: (i) diagnosis of severe mental illnesses such as intellectual disability, bipolar disorder, schizophrenia, or alcohol/drug dependence; (ii) significant suicidal ideation currently or within the past 3 months; (iii) currently receiving individual/group psychotherapy; (iv) history of serious physical diseases affecting the heart, liver, kidneys, brain, or digestive system; (v) experiencing significant life stress or ongoing psychological problems (e.g., recent bereavement); (vi) history of poor treatment compliance or stated unwillingness to complete the entire study.

2.2. Instruments

2.2.1. General information questionnaire

The general information questionnaire was designed to collect comprehensive data on demographic information, personal history, and the treatment of mental illness. It included standard demographic fields such as name, gender, age, ethnicity, educational background, marital status, education level, and health status. The questionnaire also investigated participants' personality traits, early educational experiences, learning abilities, work skills, and interpersonal relationships. Finally, it gathered information on family history of mental illness (spanning two or three generations), previous clinical diagnoses, duration of illness, and medication usage.

2.2.2. GAD-7

GAD-7 is a simple screening tool to assess the severity and functional impact of anxiety symptoms over the past

2 weeks.²⁰ The seven-item scale uses a 4-point Likert scale of 0–3, where 0 means “not at all” and 3 means “nearly every day.” A total score ≥ 10 indicates moderate or higher levels of anxiety with clinical significance.²¹ The scale has demonstrated good reliability and validity and is suitable for use in the Chinese population.²²

2.2.3. Hamilton anxiety scale (HAMA)

HAMA is a widely used instrument with strong reliability and validity. It consists of 14 items that assess anxiety symptoms over the past week in terms of mood, cognition, and somatic experiences. Each item is scored on a 5-level scale ranging from 0 to 4 points, where 0 indicates no symptoms and 4 indicates very severe symptoms. A total score ≥ 14 denotes clinically significant anxiety symptoms.²³

2.2.4. Patient health depression questionnaire 9-item (PHQ-9)

PHQ-9 is a self-administered questionnaire commonly used to assess depression in both outpatient and inpatient settings in general hospitals in China.²⁴ It consists of nine items, each scored on a 4-point scale from 0 (“not at all”) to 3 (“nearly every day”). The total score ranges from 0 to 27, with higher scores indicating more severe depressive symptoms. A score ≥ 5 is considered indicative of depressive symptoms.²⁵

2.2.5. Patient Health Questionnaire 15-Item (PHQ-15)

The PHQ-15 is a brief self-report scale used to screen for and assess the severity of somatization symptoms in patients with mental illnesses. It includes 15 items scored on a 3-point scale: 0 (“not bothered at all”), 1 (“bothered a little”), and 2 (“bothered a lot”), with a total score range of 0–30. A PHQ-15 score ≥ 5 indicates the presence of physical (somatic) symptoms.²⁶

2.3. Procedures

A total of 73 participants were initially recruited for the study. The participant flow is detailed in the CONSORT diagram (Figure 1).

During the initial recruitment, a total of 54 individuals were screened for eligibility. Of these, 21 were excluded either for not meeting the inclusion criteria or for declining to participate. The remaining 33 participants were randomly assigned to GBPT ($n = 16$) and GCBT ($n = 15$) using a random number method.

Due to a high attrition rate in the initial GCBT group, a second GCBT cohort was recruited ($n = 13$). The combined GCBT group ultimately included 19 effective cases, with a combined attrition rate of 32.1% ($n = 9$).

Treatment adherence was defined as attending at least six of the eight sessions (an attendance rate of $\geq 75\%$).

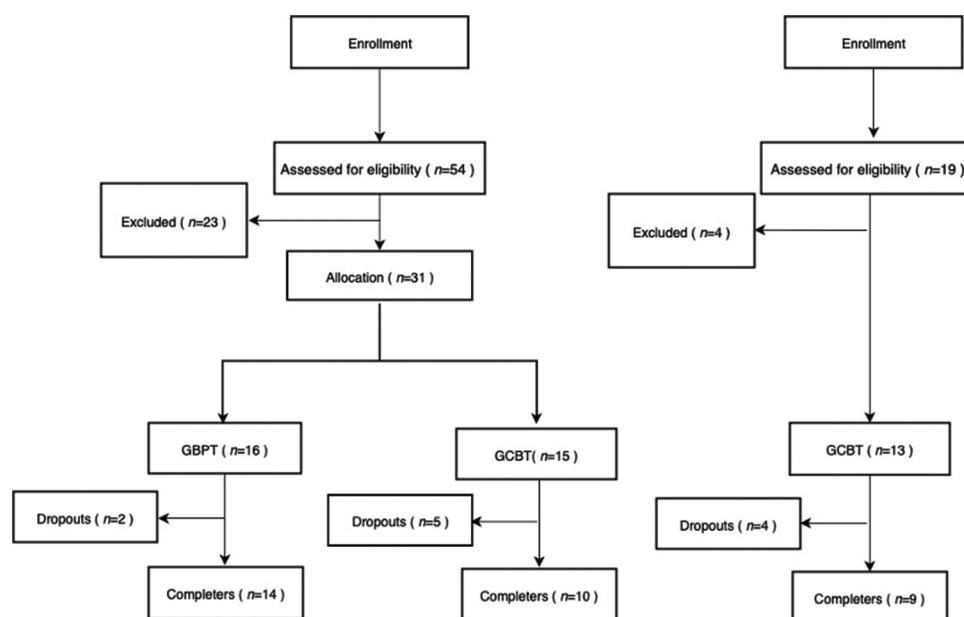


Figure 1. CONSORT flow-chart of participant allocation

Abbreviations: GBPT: Group balancing psychotherapy; GCBT: Group cognitive behavioral therapy.

A total of 33 participants met this criterion and were included in the final analysis, comprising 14 valid cases in the GBPT group and 19 in the GCBT group.

The GBPT group received a total of eight conventional treatment sessions, each lasting 1.5 h and held once/week. Homework assignments were given following the second through seventh sessions. The GCBT group received the same treatment as the GBPT group, with the integration of GCBT components. All other procedures for the GCBT group were identical to those of the GBPT group.

2.3.1. Enrollment interview

To better understand the treatment needs of patients with GAD and to enhance their willingness and confidence in treatment, each patient was interviewed individually before the commencement of group therapy.

Each interview lasted about 30 min. During the interview, investigators inquired about the participants' personal and family histories of mental illness, covering up to two to three generations. The interviews also covered participants' basic developmental experiences and personality characteristics.

Furthermore, investigators assessed the subject's familiarity with, assumptions about, and expectations for psychotherapy. The basic treatment framework and plan were also introduced.

Interview findings were communicated by the investigator to a supervisor and a senior physician for a

detailed case review. For patients excluded due to illness severity, the investigator recommended referral for inpatient hospitalization.

2.3.2. Specific intervention process

Before the intervention, participants completed a general information questionnaire and a set of baseline assessments. These included the HAMA, the PHQ-9, and the PHQ-15. These scales were re-administered at the end of the 8-week treatment period.

This study was reviewed and approved by the Clinical Research Ethics Committee of Zhongda Hospital, Southeast University (approval number: 2021ZDSYLL094-P01). Treatment proceeded only after participants had read, understood, and signed an informed consent form. To protect privacy, participants were permitted to use pseudonyms or codes when introducing themselves and communicating with others throughout the treatment process.

2.4. Measurement

The GBPT program (outlined in Table 1) is structured around the "balancing psychotherapy" framework, which consists of eight therapeutic procedures. It is designed to help participants understand anxiety as a result of relational discord and excessive self-ambition. The therapy aims to enhance interpersonal harmony through collaborative dialogue and sand table therapy. Its ultimate goal is to help individuals achieve balance across various life dimensions,

including personal, familial, social, cognitive, physical, emotional, and spiritual well-being.

The GCBT protocol (detailed in Table 2) was developed and implemented based on the principles outlined in the GCBT Clinical Practice Manual for Anxiety Disorders, authored by Huang.²⁷

The therapist was a master's candidate in clinical psychology with over 300 h of clinical experience and specialized training in cognitive behavioral therapy, BPT,

and group therapy. All sessions were conducted under the continuous supervision of a qualified supervisor.

3. Results

Data processing was performed using the Statistical Package for the Social Sciences 26.0 (IBM, United States of America). The Kolmogorov–Smirnov test indicated that the data were normally distributed ($p>0.05$). The Chi-square (χ^2) test was used for the

Table 1. Design of group balancing psychotherapy

Sequence	Theme	Content
1	Balanced cornerstone	Group members introduce themselves and build trust. The therapist introduces balancing psychotherapy and collaborates with members to establish group guidelines
2	Comprehending the concept of balance	Explain the composition and classification of anxiety; guide individuals to understand the rationality and duality of anxiety and reduce feelings of shame
3	Interpreting symptoms	Delve into the concept of equilibrium; explain the principles of balance; encourage effective interpersonal relationship management; facilitate discussion on how the four principles of balance relate to daily life
4	Communicating and supporting each other	Interpret balanced wisdom; distinguish between changeable and unchangeable situations; reconstruct positive narratives. Create a decision-making balance sheet using a work-related example
5	Group sand tray therapy	The therapist guides the participants through sand table therapy to help them understand their psychological defense mechanisms and their interactions within the group
6	Learning relaxation techniques	Introduce the concepts and applications of mindfulness; guide the group in mindfulness meditation and relaxation exercises; encourage focusing on experiences rather than thoughts
7	Emotional moderation and enrichment	Promote emotional balance, encourage seeking social support, and convey that happiness involves achieving interpersonal harmony—"peace with others and harmony with oneself"
8	Ending and farewell	Reviewing key insights from previous sessions; complete the balanced feedback form; discuss treatment experiences; and bid farewell

Table 2. Design of group cognitive behavioral therapy

Sequence	Theme	Content
1	Establishing a therapeutic relationship	Initiate a therapeutic alliance, facilitate member introductions, explore reasons for group participation, and collaboratively establish group norms
2	Introducing the etiology	Explore the origins of GAD; encourage introspection and self-observation focused on the tripartite components of anxiety
3	Theoretical learning of ABC	Introduce the ABC model; assist participants in recognizing emotional triggers and underlying beliefs; analyze cognitive schemas and evaluate supporting and opposing evidence for these beliefs
4	Cognitive strategy deepening+laryngeal breathing	Strengthen cognitive strategies by identifying bodily tension, practicing laryngeal breathing techniques, and maintaining physical control
5	Cognitive reconstruction+muscle relaxation	Guide members in identifying irrational beliefs and replacing them with adaptive cognitions. Introduce and practice muscle relaxation techniques
6	Scenario walkthroughs	Use role-play or sitcom scenarios to practice "positive self-talk" and respond to situations with new behavior patterns
7	Imaginal exposure	Manage anxiety by practicing imagined exposure to anxiety-provoking situations. Combine breathing and muscle relaxation to reduce physical and psychological symptoms
8	Review and summary	Review session objectives, summarize the therapeutic experience, reflect on progress, and complete the cognitive behavioral therapy feedback form

Abbreviations: ABC: Adversity, behavior, consequences; GAD: General anxiety disorder.

analysis of categorical data. Paired sample *t*-test for two paired samples and an independent sample *t*-test were conducted to compare scores within and between two groups, respectively.

The study investigated the efficacy of two treatments: GBPT and GCBT. Baseline analysis confirmed that there were no significant demographic differences between the two treatment groups (Table 3), including age, gender, marital status, education level, and psychiatric medication use. Furthermore, at baseline, there were no significant differences in levels of anxiety, depression, and somatization between the GBPT and GCBT groups ($p > 0.05$; Table 4).

Following the 8-week treatment period, both the GBPT and GCBT groups showed significant reductions in HAMA, PHQ-9, and PHQ-15 scores. Specifically, HAMA scores were significantly reduced in both the GBPT group ($t = 8.74, p < 0.001$) and the GCBT group ($t = 9.31, p < 0.001$). Similarly, PHQ-9 scores were significantly reduced in the GBPT group ($t = 3.77, p < 0.01$) and the GCBT group ($t = 5.57, p < 0.001$).

A repeated-measures analysis of variance revealed a significant main effect of time ($p < 0.001$), indicating that scores improved over the course of treatment. However, there was no significant main effect of group or a significant interaction effect (Table 5), suggesting that the two treatment methods were comparable in their overall efficacy.

Table 3. Demographics of the sample

Items	GBPT (n=14)	GCBT (n=19)	t/χ^2	p-value
Age ^a	28.14±6.80	29.84±8.51	-0.62	0.54
Gender ^b				
Male	4	11	2.80	0.10
Female	10	8		
Marital status ^b				
Married	6	5	0.99	0.32
Single	8	14		
Education status ^b				
Master's degree	7	10	1.82	0.40
College	7	7		
High school/ secondary	0	2		
Medicine ^b				
Yes	2	7	2.07	0.24
No	12	12		

Notes: ^aIndependent-sample *t*-test; ^bChi-square (χ^2) test.

Abbreviations: GBPT: Group balancing psychotherapy; GCBT: Group cognitive behavior therapy.

4. Discussion

4.1. Efficacy of GBPT and GCBT in symptom reduction

After an 8-week intervention that combined conventional treatment with group psychotherapy, both the GBPT and GCBT groups demonstrated significant reductions in anxiety, depression, and somatization scores. The effectiveness of both GBPT and GCBT in significantly reducing these symptoms in patients with GAD is consistent with findings from previous studies.^{12-14,17-19}

According to BPT, psychosomatic disorders originate from a disruption of an individual's internal homeostasis,

Table 4. Symptom scale scores between the group balancing psychotherapy and the group cognitive behavioral therapy groups

Instrument	Timeline	GBPT (n=14)	GCBT (n=19)	<i>t</i>	p-value
HAMA	Before	19.79±5.63	19.45±4.59	0.41	0.68
	After	7.14±2.98	9.74±2.94	-2.49	<0.05
PHQ-9	Before	10.21±4.82	10.63±4.60	-0.25	0.80
	After	5.36±3.00	5.79±2.97	-0.41	0.68
PHQ-15	Before	11.64±3.34	9.26±4.34	1.71	0.10
	After	6.64±3.97	7.11±3.97	-0.33	0.74

Abbreviations: HAMA: Hamilton Anxiety Scale; PHQ-9: Patient Health Questionnaire 9-Item; PHQ-15: Patient Health Questionnaire 15-Item; GBPT: Group balancing psychotherapy; GCBT: Group cognitive behavioral therapy.

Table 5. Results of two-way analysis of variance for intervention, time, and intervention×time on different symptom scores between groups

Parameter/instrument	<i>F</i>	p-value	Partial (η^2)
Intervention main effect			
HAMA	0.617	0.438	0.020
PHQ-9	0.133	0.718	0.004
PHQ-15	0.637	0.431	0.020
Time main effect			
HAMA	166.575	0.000*	0.843
PHQ-9	41.96	0.000*	0.575
PHQ-15	25.275	0.000*	0.449
Intervention×time (interaction effect)			
HAMA	3.824	0.060	0.110
PHQ-9	0.000	0.992	0.000
PHQ-15	3.985	0.055	0.114

Note: * $p < 0.05$.

Abbreviations: HAMA: Hamilton Anxiety Scale; PHQ-9: Patient Health Questionnaire 9-Item; PHQ-15: Patient Health Questionnaire 15-Item.

caused by unresolved conflicts within the conscious and subconscious mind. Through therapeutic dialogue, the therapist helps the patient identify the subconscious roots of this imbalance. The therapist then guides the patient through techniques such as expressive speech therapy and sand table therapy to facilitate the achievement of internal balance.¹⁷

Following the 8-week intervention that combined conventional treatment with GCBT, the GCBT group also demonstrated significant decreases in anxiety, depression, and somatization symptoms, which are consistent with prior research.²⁸ GCBT has been shown to effectively reduce worry, depression, and rumination through a combination of techniques, including functional analysis skills, psychoeducation, relaxation techniques, and cognitive training, which promote the development of alternative behaviors.²⁹ The structured and interconnected nature of GCBT facilitates the gradual deepening of learning, correction, and cognitive reconstruction. Ultimately, this approach helps patients develop a deeper understanding of anxiety, attain a healthier psychological state, and use relaxation response training to foster mental calmness, inner peace and alleviate anxiety.³⁰

4.2. Differences between GBPT and GCBT in patients with general anxiety disorder

The study indicates that the dropout rate in the GBPT group (12.57%) was notably lower than that in the GCBT group (32.14%), suggesting that GBPT's emphasis on group cohesion may contribute to more favorable therapeutic outcomes.

A key challenge for group GCBT is the effective correction of irrational beliefs, a difficulty documented in some case studies.²⁹ Individuals who experience slow progress or lack confidence may drop out, which can diminish overall group morale. Additionally, CBT requires a robust framework and places high demands on patients' cognitive abilities, self-reflection skills, and readiness for change. In contrast to GBPT, the lower flexibility of GCBT can make it difficult for participants to reintegrate after an absence, potentially leading to feelings of detachment. Furthermore, the correction of cognitive processes is closely intertwined with emotions, as emotional processing significantly influences the modification of an individual's experiential state.³¹ The emotional intensity experienced during GCBT sessions was comparatively reduced, which may diminish cathartic effects and potentially affect the therapeutic efficacy.

Rooted in Eastern philosophical principles, GBPT incorporates the concepts of "relationship" and

"harmony" to encourage a broader perspective on the sources of anxiety. The coexistence of Confucianism, Buddhism, and Taoism has profoundly shaped Chinese culture,³² influencing the theoretical underpinnings of GBPT. This approach aligns with the traditional value of "moderation" and fosters group cohesion and collective wisdom, thereby offering a culturally resonant alternative to the more structured approach of GCBT. Unlike GCBT, GBPT uses interventions such as sandplay therapy and psychodynamic techniques to enhance psychological awareness, which enables active engagement in the therapeutic process and facilitates anxiety reduction.³³

GBPT emphasizes respecting the internal logic of patients' experiences, thoughts, and emotions, suggesting that seemingly negative emotions can serve as catalysts for personal growth and development.³⁴ By rejecting the dichotomous classification of emotions and encouraging patients to find fulfillment amidst dissatisfaction, GBPT aligns with the principles of the Second-Wave Positive Psychology,³⁵ aiding in the enhancement of patients' resilience to uncertainty and in the reduction of anxiety levels. Notably, GBPT groups exhibit higher levels of cohesion, a crucial factor for the efficacy of group therapy.³⁶ Both the quality of the working alliance and group cohesion positively correlated with attendance rates and negatively correlated with dropout rates.³⁷

4.3. Limitations and future directions

This research has several limitations that should be noted. First, the limited sample size of 33 effective participants and the supplementary recruitment for the GCBT group introduced a potential source of bias. This prevented complete randomization and may affect the generalizability of the findings. As such, the study exhibits characteristics of a quasi-experimental design. Second, significant participant attrition was observed in both groups, which may compromise group cohesion and interaction, potentially influencing the observed treatment outcomes. Third, as a relatively novel therapy, GBPT lacks systematic standardization, and the specific mechanism of action was not conclusively determined in this study, limiting the interpretability of the results.

Further research should incorporate more precise measurement protocols and extended follow-up periods to empirically evaluate the specific mechanisms underlying the observed changes. Given the diverse range of issues experienced by individuals with personality disorders and subsyndromal personality disorders, establishing and enhancing individualized treatment goals is crucial for this population.³⁸

5. Conclusion

In conclusion, this research offers promising preliminary evidence that both GBPT and GCBT effectively alleviate anxiety, depression, and somatization symptoms in patients with GAD. GBPT appears to be a promising approach, rooted in its alignment with local culture values that emphasize emotional expression and relational harmony. Future studies should aim to provide a more robust understanding of therapeutic effects through larger, multicenter trials with long-term follow-up and empirical assessment of the mechanisms of change.

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Conflict of interest

Yonggui Yuan is the Editor-in-Chief of this journal but was not involved in the editorial or peer-review process for this paper, either directly or indirectly. Separately, other authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this paper.

Author contributions

Conceptualization: Yonggui Yuan

Data curation: Yuting Gao

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Investigation: Yonggui Yuan

Methodology: Yuting Gao

Writing—original draft: Yuting Gao

Writing—review & editing: Yuting Gao

Ethics approval and consent to participate

This study was reviewed and approved by the Clinical Research Ethics Committee of Zhongda Hospital, Southeast University (approval number: 2021ZDSYLL094-P0). Written informed consent was obtained from all participants for participation in the study.

Consent for publication

Written informed consent was obtained from all participants for the publication of the data obtained in this study.

Availability of data

The research data are not publicly available due to ethical restrictions.

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