Article

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Comparison of Disease Severity, Anxiety and Depression in Obsessive-Compulsive Disorder Patients with Different Insight

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Abstract

Background: Significant individual differences exist in the insight of patients with obsessive-compulsive disorder (OCD), and the clinical characteristics of OCD patients with varying levels of insight are not entirely uniform. This study aims to investigate disparities in disease severity, anxiety, and depression status among OCD patients with differing levels of insight, with the goal of generating novel treatment strategies for OCD.

Methods: A total of 114 patients diagnosed with OCD were recruited from the Department of Psychology at Affiliated Mental Health Center & Hangzhou Seventh People's Hospital to participate in this research. Based on their Total Insight and Treatment Attitude Questionnaire (ITAQ) scores, the patients were divided into two groups: Group OCD with high insight (referred to as Group OCD-HI, ITAQ score $\geq$20 points, n = 80) and Group OCD with low insight (referred to as Group OCD-LI, ITAQ score <20 points, n = 34). Subsequently, the Yale-Brown Obsessive-Compulsive Scale (Y-BOCS), Hamilton Anxiety Scale (HAMA), and Hamilton Depression Scale (HAMD) scores were compared between the two groups. All questionnaires for this study were completed by experienced psychiatrists.

Results: The Y-BOCS scores for YB1, YB2, YB4, YB5, YB6, YB9, and the total Y-BOCS scores in Group OCD-HI were significantly higher than those in Group OCD-LI ($p < 0.05$). Conversely, Group OCD-HI exhibited significantly lower HAMA and HAMD scores compared to Group OCD-LI ($p < 0.05$). Furthermore, the total ITAQ score displayed a significant negative correlation with the total Y-BOCS, HAMA, and HAMD scores ($p < 0.05$).

Conclusions: This study revealed that certain OCD patients exhibit incomplete insight, and this lack of insight is strongly associated with increased disease severity and heightened levels of anxiety and depression. It is hoped that by enhancing the insight of OCD patients, the goal of ameliorating disease symptoms and alleviating negative emotions can be attained.

Keywords

insight; obsessive compulsive disorder; severity; anxiety; depressed

Introduction

Obsessive-compulsive disorder (OCD) is a chronic and recurrent neuropsychiatric condition primarily characterized by obsessive beliefs and compulsive behaviors, which significantly impact the psychological and physical health of patients [1]. OCD often coexists with various psychiatric comorbidities, such as depression, bipolar disorder, substance abuse disorder, and psychosis, suggesting potential shared etiological factors [2]. Obsessive beliefs entail thoughts, images, or intentions that persistently intrude into the patient's consciousness in a stereotypical manner. Compulsive actions refer to repetitive and stereotyped behaviors or rituals undertaken by patients to alleviate the distress caused by these obsessions. Common symptoms of OCD include concerns with cleanliness, correction mania, numerical compulsion, and compulsive examinations [3,4]. Treatment approaches for OCD encompass both pharmacotherapy and cognitive-behavioral therapy [5].

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Insight pertains to the cognitive awareness of patients with psychological or mental disorders regarding their own symptoms, states, behaviors, and their implications [6]. Insight can be categorized into two types: conscious insight and conceptual insight. Conscious insight relates to whether a patient recognizes the presence and severity of a mental or psychological illness, as well as the importance and effectiveness of treatment. Conceptual insight involves the patient's comprehension level and depth of understanding regarding their condition. The absence or impairment of insight is frequently regarded as a significant symptom of mental or psychological illness [7].

Unlike other types of mental disorders, individuals with OCD possess a capacity for self-awareness and introspection. Consequently, earlier research commonly assumed that OCD patients maintain full insight into their condition. However, ongoing clinical observations have revealed substantial variability in the insight of OCD patients. Some individuals with OCD exhibit poor insight, and in extreme cases, complete loss of insight has been documented [8]. Furthermore, variations in the clinical characteristics of OCD patients with differing levels of insight have been observed, although research findings on this topic remain contentious.

Research indicates that OCD patients frequently exhibit varying degrees of anxiety symptoms [9]. This phenomenon can be attributed to several factors. Firstly, individuals with OCD often experience repetitive or persistent intrusive thoughts and compulsive behaviors, which can lead to confusion, fear, and depression. Secondly, while some OCD patients may recognize that their thoughts and behaviors are irrational and devoid of meaning, they struggle to break free from these patterns, thereby exacerbating their anxiety.

Depression and OCD often exhibit an interconnected relationship and mutually influence each other [10,11]. On one hand, individuals with OCD may experience feelings of being out of control, self-blame, and frustration stemming from their symptoms. These feelings may be compounded by a profound sense of loss in daily life or the relentless nature of intrusive thoughts, ultimately contributing to the development of depression. On the other hand, depressive symptoms can impair patients' psychological well-being, emotional regulation, and decision-making capacities. During periods of heightened depressive emotions, individuals may become ensnared in "trough" thought patterns and behaviors, which can impede their ability to cope with OCD symptoms effectively and hinder their management of the disease [12,13].

Currently, it is widely recognized that the level of insight among OCD patients holds significant importance in treatment outcomes. Patients with good insight can provide accurate descriptions of their symptoms and reactions, thereby aiding in the prevention of misdiagnosis. Additionally, their insights assist clinical professionals in evaluating treatment effectiveness and devising subsequent therapeutic strategies, ultimately facilitating the patient's recovery. However, there exists limited research investigating the correlation between OCD patients' insight, disease severity, and adverse emotional states. Building upon this gap, this study aims to investigate variations in disease severity, as well as anxiety and depression levels, among OCD patients with varying degrees of insight. Through this exploration, novel insights can be gleaned to inform the development of more effective treatment approaches for OCD.

Methods

Study Participants

The present study was conducted at the Department of Psychiatry, Affiliated Mental Health Center & Hangzhou Seventh People's Hospital, Zhejiang University School of Medicine, following approval by the Institutional Ethical Committee (2021-Ethical Review No. 100). Prior to participating, all individuals provided written and informed consent. The study comprised 114 OCD patients, consisting of 52 males and 62 females, with an average age of (26.58 ± 8.97) years and an average education duration of (13.25 ± 3.44) years. All patients had been prescribed Selective Serotonin Reuptake Inhibitors (SSRIs). This study adhered to the principles outlined in the Declaration of Helsinki.

Inclusion criteria as follows:

a. Meeting the Diagnostic and Statistical Manual of Mental Disorders-5 (DSM-5) [14] for diagnosis of OCD;
b. Total score of the Yale-Brown obsessive-compulsive scale (Y-BOCS) scale ≥16 points;
c. Having hemodynamic stability;
d. Having never taken anti-obsessive medication or stopped taking it for at least 2 months;
e. Junior high school or above;
f. To be able to read and understand Chinese.

Exclusion criteria as follows:

a. Secondary obsessive-compulsive symptoms caused by other mental disorders;
b. Higher risk of suicide;
c. Major physical diseases;

d. Family history of major mental disorders;
e. Central nervous system (CNS) disorders (e.g. head trauma, seizures and multiple sclerosis);
f. Pregnant and lactating women.

Method of Measurement

Experienced psychiatrists completed the questionnaire for this study. Prior to data collection, all personnel underwent training to ensure standardization and consistency in scale assessment. Additionally, all personnel underwent assessment themselves. Only team members who passed the assessment provided the eligible subjects with basic information and administered the Insight and Treatment Attitude Questionnaire (ITAQ), Y-BOCS, Hamilton Anxiety Scale (HAMA), and Hamilton Depression Scale (HAMD) scales. To mitigate the potential impact of patient fatigue on measurement accuracy, patients were permitted to take breaks of five minutes one to two times during the test, depending on their condition. All questionnaires were collected immediately after subjects completed them independently.

Scales Used in the Study

The Insight and Treatment Attitude Questionnaire (ITAQ), developed by McEvoy in 1989, comprises four dimensions: awareness of the disease (items 1 and 3), awareness of hospitalization (items 2 and 4), awareness of medication treatment (items 5 and 6), and awareness of disease recurrence and seeking help (items 7, 8, 9, 10, and 11), totaling 11 items. Each item is scored on a 3-level scale (0 for no awareness, 1 for comparative understanding, and 3 for full recognition). A higher score reflects better self-awareness. Insight is classified based on the ITAQ score: a score of ≥20 indicates complete insight, scores between 5 and 19 indicate partial insight, and scores <5 indicate no insight. The 114 OCD patients were divided into two groups: Group OCD with high insight (abbreviated as Group OCD-HI, ITAQ score ≥20 points) and Group OCD with low insight (abbreviated as Group OCD-LI, ITAQ score <20 points).

The Yale-Brown Obsessive-Compulsive Scale (Y-BOCS), developed by Goodman *et al.* [15] in 1989, comprises two parts. The first part consists of 10 items designed to assess the severity of obsessions and compulsions. These items are: (1) YB1: How much of a day do compulsive thoughts occupy you? (2) YB2: How much do compulsive thoughts affect your daily life? (3) YB3: When obsessive thoughts occur, how much does it bother you? (4) YB4: When a compulsive thought occurs, how much ef-

fort do you put into resisting it? (5) YB5: Can you control your obsessive thoughts? (6) YB6: How much of your day is occupied by compulsive behaviors? (7) YB7: How much does compulsive behaviors affect your daily life? (8) YB8: When compulsive behaviors occur, how much do they bother you? (9) YB9: When compulsive behaviors occur, how much effort do you put into resisting them? (10) YB10: Can you control your compulsive behaviors? Each item is rated on a 5-point scale (0 = none, 1 = mild, 2 = moderate, 3 = severe, 4 = extremely severe), with higher scores indicating more severe OCD symptoms. This study focuses solely on the first part of the scale.

The Hamilton Anxiety Scale (HAMA), developed by Hamilton in 1959, comprises 14 items organized into 8 dimensions: anxiety, tension, fear, insomnia, physical symptoms of anxiety, cognitive impairment, depression, and behavior during the interview. Each item is rated on a 5-point scale (0 = none/nonexistent, 1 = mild/slightly present, 2 = mild to moderate, 3 = moderate to severe, 4 = extremely severe), with higher scores indicating greater severity of anxiety symptoms.

The Hamilton Depression Scale (HAMD), developed by Hamilton in 1960, encompasses 17 dimensions and 21 items related to depression symptoms. These dimensions include depression, guilt, suicidal ideation or attempts, insomnia (early/middle/late), disturbances in work and activities, psychomotor retardation or agitation, mental and somatic anxiety, as well as somatic symptoms such as gastrointestinal, systemic, sexual, genital, paranoia, weight loss, lack of insight, and diurnal mood or symptom fluctuations.

Fifteen items are scored on a 5-point scale (0 = none/nonexistent, 1 = mild/slightly present, 2 = mild to moderate, 3 = moderate to severe, 4 = extremely severe). One item is scored as "0-2 points", while nine items are scored as "1-2 points". Higher scores indicate greater severity of depression.

Statistical Analysis

After completing the study, the results were compiled and entered into Excel. All data underwent normal distribution testing using the Kolmogorov-Smirnov test. For normally distributed data, continuous variables were presented as mean and standard deviation (SD), and group comparisons were conducted using independent samples *t*-tests. For non-normally distributed data, continuous variables were presented as median (minimum-maximum), and group comparisons were performed using the Mann-

Table 1. Demographic parameters.

Parameter	Group OCD-HI* (n = 80)	Group OCD-LI† (n = 34)	$T/Z/\chi^2$-value	p-value
Age (years)	26.88 ± 8.67	25.88 ± 9.74	0.539	0.591
Age of first diagnosis (years)	23.19 ± 7.90	21.76 ± 8.81	0.849	0.397
Gender (male:female)	40:40	12:22	2.080	0.149
Course of disease (month)	79.3 (1–372)	97.3 (1–500)	−0.440	0.660
Years of education (years)	13.54 ± 3.44	12.59 ± 3.39	1.353	0.179

* Group OCD-HI (OCD with high insight), † Group OCD-LI (OCD with low insight).

Table 2. Y-BOCS scores.

Y-BOCS‡	Group OCD-HI* (n = 80)	Group OCD-LI† (n = 34)	T-value	p-value
YB1	2.74 ± 0.84	3.18 ± 0.67	2.704	0.008
YB2	2.34 ± 0.69	2.91 ± 0.90	3.693	<0.001
YB3	2.83 ± 0.63	2.97 ± 0.83	1.019	0.310
YB4	1.76 ± 0.82	2.71 ± 1.03	5.212	<0.001
YB5	2.85 ± 0.68	3.15 ± 0.66	2.162	0.033
YB6	2.46 ± 0.79	2.85 ± 0.82	2.376	0.019
YB7	2.19 ± 0.86	2.38 ± 0.85	1.111	0.269
YB8	2.84 ± 0.74	2.65 ± 0.81	1.224	0.223
YB9	1.96 ± 1.04	2.88 ± 0.88	4.525	<0.001
YB10	2.88 ± 0.80	3.15 ± 0.86	1.624	0.107
total scores	24.83 ± 3.98	28.91 ± 2.78	5.440	<0.001

* Group OCD-HI (OCD with high insight), † Group OCD-LI (OCD with low insight), ‡ Y-BOCS (Yale-Brown Obsessive-Compulsive Scale).

Whitney U test. Categorical variables, such as gender, were expressed as counts and percentages (n %) and compared using the Chi-squared test. Correlation analysis was conducted using either *Pearson's* correlation test or *Spearman's* correlation test. A *p*-value of <0.05 was considered statistically significant. Data analysis was carried out using IBM SPSS Statistics Version 23 (SPSS Institute, Inc., Chicago, IL, USA).

Results

Table 1 shows the demographic details of all the participants.

There was no significant difference in age, age of first diagnosis, gender, course of disease and years of education between Group OCD-HI and Group OCD-LI ($p > 0.05$).

ITAQ Scores

Among the 114 patients in this study, 80 scored ≥20 on the ITAQ (indicating complete insight), while 34 scored between 5 and 19 (indicating partial insight); no patients scored ≤5 (indicating non-insight). The ITAQ score for Group OCD-HI was (21.48 ± 0.87) points, whereas for Group OCD-LI, it was (17.65 ± 2.71) points. A statistically significant difference was observed between the two groups ($t = 11.392, p < 0.001$).

Table 2 shows the mean and standard deviation of Y-BOCS scores.

The Y-BOCS scores for YB1, YB2, YB4, YB5, YB6, YB9, and the total Y-BOCS scores in Group OCD-HI were significantly lower than those in Group OCD-LI ($p = 0.008$; $p < 0.001$; $p < 0.001$; $p = 0.033$; $p = 0.019$; $p < 0.001$; $p < 0.001$, respectively). However, there were no statistically significant differences between the two groups in Y-BOCS scores for YB3, YB7, YB8, and YB10 (all $p > 0.05$).

Table 3 shows the median (min-max) deviation for the HAMA scores and HAMD scores.

Group OCD-HI's HAMA scores and HAMD scores were significantly lower than those of the Group OCD-LI ($p \leq 0.001$; $p \leq 0.001$, respectively).

Correlation Test

Figs. 1,2,3 depict the correlation analysis between the total scores of the ITAQ scale and the Y-BOCS,

Table 3. HAMA scores and HAMD scores.

Score	Group OCD-HI* (n = 80)	Group OCD-LI† (n = 34)	Z-value	p-value
HAMA	8.9 (0–31)	16.5 (8–32)	−5.263	<0.001
HAMD	12.8 (0–39)	22.8 (12–37)	−5.020	<0.001

* Group OCD-HI (OCD with high insight), † Group OCD-LI (OCD with low insight), HAMA (Hamilton Anxiety Scale), HAMD (Hamilton Depression Scale).
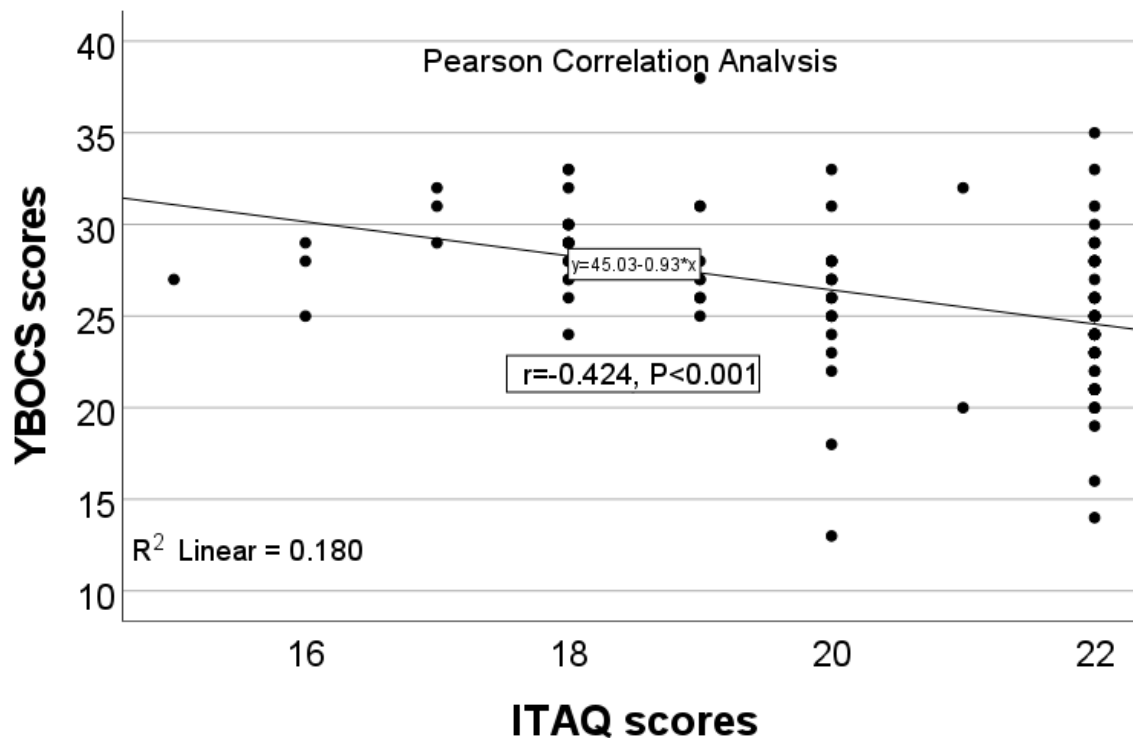

Fig. 1. The *Pearson* correlation analysis between the total score of the ITAQ scales and the Y-BOCS scales. ITAQ, Insight and Treatment Attitude Questionnaire; Y-BOCS, Yale-Brown Obsessive-Compulsive Scale.

HAMA, and HAMD scales, respectively. As illustrated in Figs. 1,2,3, the total score of the ITAQ exhibited a significant negative correlation with the total scores of the Y-BOCS, HAMA, and HAMD scales (r = −0.424, −0.546, −0.553 respectively, all $p < 0.01$).

Discussion

Insight is a multifaceted and crucial psychological construct encompassing an individual's cognition, emotions, desires, and behaviors towards themselves [16]. It entails comprehension of one's personality, values, personal beliefs, emotional responses, behavioral tendencies, and other dimensions [17]. Individuals with insight can effectively discern their strengths and weaknesses, comprehend their reactions in various situations, and acknowledge the consequences of these reactions on themselves and others

[18]. Insight holds profound significance in the diagnosis, treatment, and prognosis of mental disorders [19].

Among the 114 patients in this study, 80 exhibited an ITAQ score of ≥20 (indicating complete insight), 34 scored between 5 and 19 (indicating partial insight), and none scored ≤5 (indicating non-insight). This finding indicates that while some OCD patients (29.82%) displayed incomplete insight, the majority of cases were mild. Notably, this percentage exceeds the 12.8% reported in surveys such as de Avila RCS [20]. This variance may stem from significant individual differences in insight among OCD patients, influenced by factors such as sample size, geographical region, and scoring criteria. Moreover, insight assessment primarily relies on subjective judgment, potentially introducing bias.
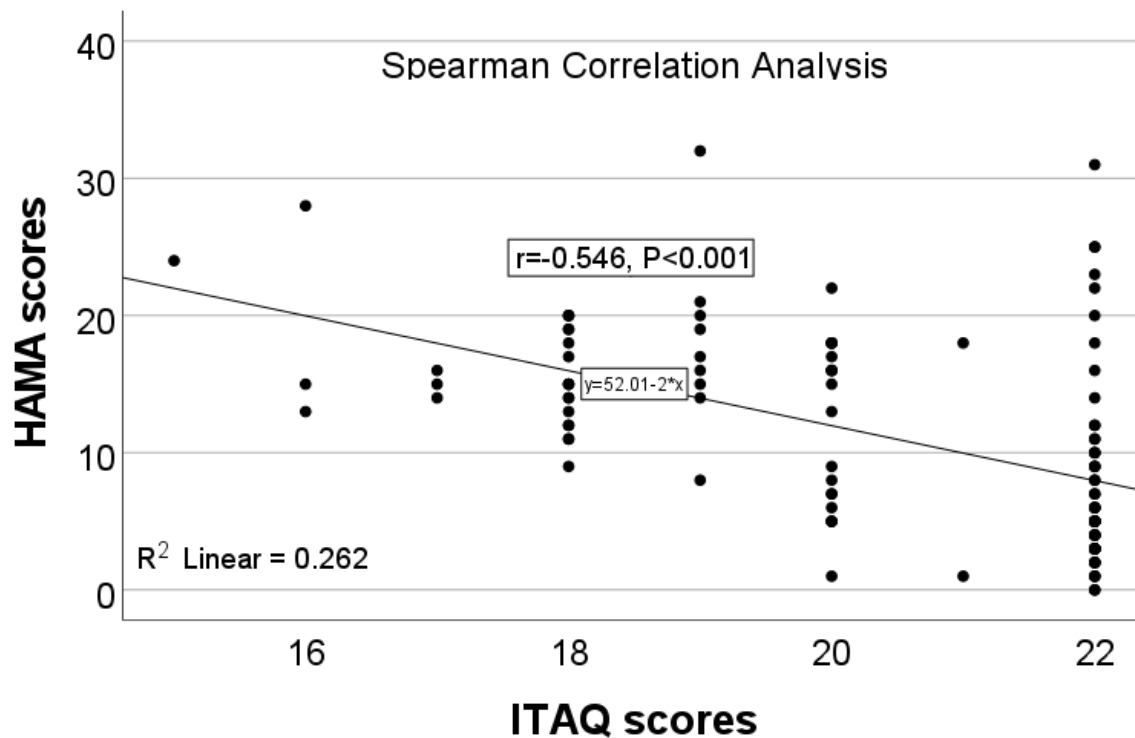
Fig. 2. The *Spearman* correlation analysis between the total score of the ITAQ scales and the HAMA scales. ITAQ, Insight and Treatment Attitude Questionnaire; HAMA, Hamilton Anxiety Scale.

Insight plays a pivotal role in influencing the condition and treatment outcomes of OCD. Patients with OCD exhibit varying degrees of symptom severity based on their level of insight [21,22]. In this study, the Y-BOCS scores for YB1, YB2, YB4, YB5, YB6, YB9, and the total Y-BOCS scores in Group OCD-HI were significantly lower than those in Group OCD-LI, and a significant negative correlation was observed between the total ITAQ score and the total Y-BOCS score. These findings suggest that OCD patients with lower levels of insight tend to experience more severe symptoms.

The rationale behind this analysis may be as follows: OCD patients with poor insight often fail to recognize their illness during acute phases and possess limited knowledge about their condition, making it challenging to accurately identify clinical symptoms and their severity. Additionally, those with poor insight may have a limited understanding of psychiatric medications and may harbor skeptical beliefs regarding their necessity and potential side effects. Consequently, they may be more inclined to reduce or discontinue medication, leading to non-compliance with treatment, heightened resistance, and exacerbation of symptoms. Guillén-Font MA *et al*. [23] also observed a strong correlation between insight and OCD, noting that patients

with more severe OCD symptoms typically exhibit lower levels of insight, while those with milder OCD symptoms tend to have higher levels of insight, aligning closely with the findings of this study.

Insight bears a close relationship with an individual's anxiety state [24]. Enhanced insight can effectively alleviate anxiety symptoms by fostering the ability to recognize and understand one's emotions and behaviors, establish realistic expectations and goals, and maintain a certain level of confidence, self-esteem, and self-worth. Consequently, individuals with improved insight may experience reduced anxiety levels concerning themselves and their environment.

In this study, the HAMA scores of Group OCD-HI were significantly lower than those of Group OCD-LI, and a significant negative correlation was observed between the total ITAQ score and the total HAMA score. These findings suggest that OCD patients with poor insight tend to exhibit more severe anxiety symptoms. Several factors may underlie this association: individuals with heightened insight possess a clearer understanding of their personal needs, abilities, limitations, and shortcomings, enabling them to more rationally cope with stressors and life challenges,
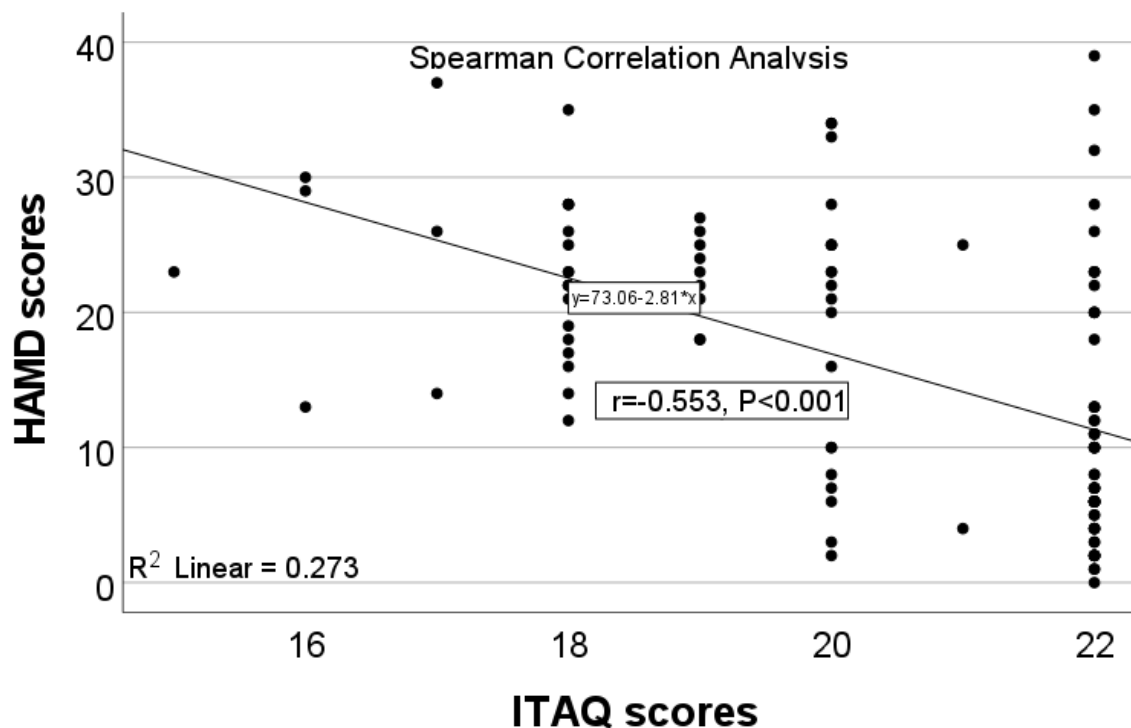
Fig. 3. The *Spearman* correlation analysis between the total score of the ITAQ scales and the HAMD scales. ITAQ, Insight and Treatment Attitude Questionnaire; HAMD, Hamilton Depression Scale.

thereby reducing the risk of anxiety. Additionally, individuals with greater insight may better comprehend their behaviors and emotions and their connection to the disease, enabling them to identify and avoid anxiety-inducing situations more effectively, thereby enhancing disease management and anxiety symptom control [25,26].

In contrast, He H *et al*. [27] explored patients with major depressive disorder and bipolar depression and found that higher anxiety factor scores on the HAMD-17 scale were independent influencing factors for insight, indicating that more severe anxiety symptoms were associated with higher levels of insight. However, these conclusions differ from those of our study, likely due to differences in the types of diseases investigated and the insight of OCD patients may vary from that of individuals with other mental disorders.

OCD patients frequently grapple with significant pressure and distress, often feeling helpless and hopeless due to their inability to manage their thoughts and behaviors, which can contribute to depression.

Furthermore, OCD symptoms commonly interfere with patients' social functioning (including work, learning, and interpersonal relationships), potentially leading to di-

minished self-worth and exacerbating depressive feelings [28,29]. Despite these challenges, there is currently limited research examining the relationship between the insight level of OCD patients and their depressive state. In our study, the HAMD scores of Group OCD-HI were notably lower than those of the Group OCD-LI, and a significant negative correlation was observed between the total ITAQ score and the total HAMD score. These findings suggest that OCD patients with poor insight often exhibit higher levels of depression.

Several factors may contribute to this association: individuals with high insight in OCD typically recognize their own thinking and behavioral patterns, allowing them to employ effective strategies to alleviate depressive symptoms. Conversely, OCD patients with poor insight may struggle to understand and manage their depressive emotions, potentially leading to reluctance to seek external assistance and treatment, consequently exacerbating depressive symptoms. Gan J *et al*. [30] highlighted that poor insight in OCD patients correlates with more severe depressive emotions and proposed insight deficiency as a core deficit in OCD.

Limitations of the Study

There are still several shortcomings in this study. Firstly, the relatively small sample size and the absence of multicenter research may introduce information bias to some extent. Secondly, numerous social and psychological factors influence OCD, and the scope of variables considered in this study is limited. It cannot be ruled out that other potential factors may impact the research results. Additionally, the Y-BOCS, HAMA, and HAMD scales all belong to consciousness-level questionnaire surveys, which may lead to recall bias among patients during the filling process and susceptibility to environmental influences at the time. To address these limitations, future research will involve large-scale, multicenter experiments, supplemented by biological indicators such as EEG and brain imaging, to further validate the conclusions drawn from this study.

Conclusions

In conclusion, this study reveals that some OCD patients exhibit incomplete insight, challenging the traditional notion that all OCD patients possess complete insight. Furthermore, it confirms significant disparities in disease severity, anxiety, and depression levels among OCD patients with varying degrees of insight. Poor insight is closely associated with heightened disease severity and elevated levels of anxiety and depression. It is hoped that by enhancing the insight of OCD patients, there can be advancements toward improving disease symptoms and alleviating negative emotions.

Availability of Data and Materials

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Author Contributions

CZ and ZMX designed the research study. YQH, XYJ and WJZ performed the research. YL and WXT analyzed the data. All authors contributed to editorial changes in the manuscript. All authors have participated sufficiently in the work and agreed to be accountable for all aspects of the work. All authors read and approved the final manuscript.

Ethics Approval and Consent to Participate

The present study was conducted in the Department of Psychology, the Affiliated Mental Health Center & Hangzhou Seventh People's Hospital, after approval by Institutional Ethical Committee (2021-Ethical Review No. 100), and was conducted according to the Declaration of Helsinki. The informed consent has been obtained from every patient and their family members.

Acknowledgment

Not applicable.

Conflict of Interest

The authors declare no conflict of interest.

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