

SOUTH BAYLO UNIVERSITY

**CLINICAL REPORT ABOUT ANXIETY DISORDER
IMPROVED BY YI GAN SAN**

by

MIN YOUNG JEONG

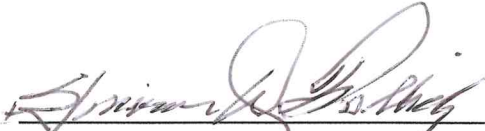
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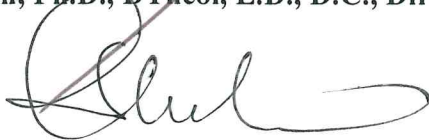
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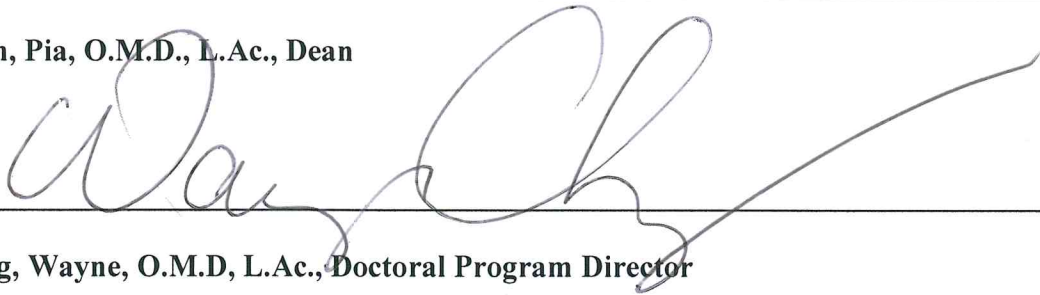
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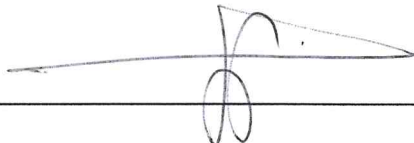
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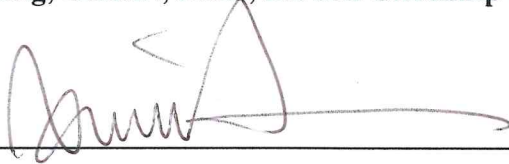
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CLINICAL REPORT ABOUT ANXIETY DISORDER

IMPROVED BY YI GAN SAN

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SOUTH BAYLO UNIVERISTY AT ANAHEIM, 2017

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ABSTRACT

Objectives: Anxiety disorder is one of the most serious mental healthcare problems. Despite their widespread prevalence, anxiety is usually conventional assessment and treatment. As a result, anxiety disorders have been decreased treatment response. Therefore, complementary and alternative medicine (CAM) can be alternative treatment plan. Herbs are the most commonly used complementary and alternative medicine products and are particularly popular with those with psychiatric disorders. The aim of the present research was to investigate the effect of the herbal medicine Yi Gan San (YGS) on anxiety disorder.

Methods: This study investigated 6 cases with anxiety disorder. Patients were treated with YGS. The effect of treatment was measured by Perceived Stress Scale (PSS) and Beck Anxiety Inventory (BAI).

Results: After treatment, anxiety symptoms were subsided. After 3 month of herbal treatment, the PSS score dropped from an average 30.5 to an average 12.3 and the BAI score dropped from an average 40 to an average 13.8

Key words: Anxiety disorder, Yi Gan San (YGS), Perceived Stress Scale (PSS) and Beck Anxiety Inventory (BAI)

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I. INTRODUCTION

An anxious feeling is a normal reaction to stress and can be beneficial in some situations. It can alert us to dangers and help us prepare and pay attention. But anxiety disorders differ from normal feelings of nervousness or anxiousness.

Anxiety disorder symptoms include restlessness or feeling wound-up or on edge, being easily fatigued, difficulty concentrating or having their minds go blank, irritability, muscle tension, difficulty controlling the worry, sleep problems (difficulty falling or staying asleep or restless, unsatisfying sleep)⁽¹⁾. The causes of anxiety disorders are currently unknown but likely involve a combination of factors including genetic, environmental, psychological and developmental. Anxiety disorders can run in families, suggesting that a combination of genes and environmental stresses can produce the disorder.⁽²⁾

Anxiety disorders are generally treated with psychotherapy, medication, or both. Psychotherapy or “talk therapy” can help people with anxiety disorders. To be effective, psychotherapy must be directed at the person’s specific anxieties and tailored to his or her needs. A typical “side effect” of psychotherapy is temporary discomfort involved with thinking about confronting feared situations.

Cognitive Behavioral Therapy (CBT) is a type of psychotherapy that can help people with anxiety disorders. It teaches a person different ways of thinking, behaving, and reacting to anxiety-producing and fearful situations. CBT can also help people learn and practice social skills, which is vital for treating social anxiety disorder.

Two specific stand-alone components of CBT used to treat social anxiety disorder are cognitive therapy and exposure therapy. Cognitive therapy focuses on identifying,

challenging, and then neutralizing unhelpful thoughts underlying anxiety disorders.

Exposure therapy focuses on confronting the fears underlying an anxiety disorder in order to help people engage in activities they have been avoiding. Exposure therapy is used along with relaxation exercises and/or imagery. One study, called a meta-analysis because it pulls together all of the previous studies and calculates the statistical magnitude of the combined effects, found that cognitive therapy was superior to exposure therapy for treating social anxiety disorder. CBT may be conducted individually or with a group of people who have similar problems. Group therapy is particularly effective for social anxiety disorder. Often “homework” is assigned for participants to complete between sessions.

Some people with anxiety disorders might benefit from joining a self-help or support group and sharing their problems and achievements with others. Internet chat rooms might also be useful, but any advice received over the Internet should be used with caution, as Internet acquaintances have usually never seen each other and false identities are common. Talking with a trusted friend or member of the clergy can also provide support, but it is not necessarily a sufficient alternative to care from an expert clinician.

Stress management techniques and meditation can help people with anxiety disorders calm themselves and may enhance the effects of therapy. While there is evidence that aerobic exercise has a calming effect, the quality of the studies is not strong enough to support its use as treatment. Since caffeine, certain illicit drugs, and even some over-the-counter cold medications can aggravate the symptoms of anxiety disorders, avoiding them should be considered.

The family can be important in the recovery of a person with an anxiety disorder. Ideally,

the family should be supportive but not help perpetuate their loved one's symptoms.

Medication does not cure anxiety disorders but often relieves symptoms. Medication can only be prescribed by a medical doctor (such as a psychiatrist or a primary care provider)

Medications are sometimes used as the initial treatment of an anxiety disorder, or are used only if there is insufficient response to a course of psychotherapy. In research studies, it is common for patients treated with a combination of psychotherapy and medication to have better outcomes than those treated with only one or the other.

The most common classes of medications used to combat anxiety disorders are antidepressants, anti-anxiety drugs, and beta-blockers. Some medications are effective only if they are taken regularly and that symptoms may recur if the medication is stopped.

Antidepressants are used to treat depression, but they also are helpful for treating anxiety disorders. They take several weeks to start working and may cause side effects such as headache, nausea, or difficulty sleeping.

Anti-anxiety medications help reduce the symptoms of anxiety, panic attacks, or extreme fear and worry. The most common anti-anxiety medications are called benzodiazepines. Benzodiazepines are first-line treatments for generalized anxiety disorder. With panic disorder or social phobia (social anxiety disorder), benzodiazepines are usually second-line treatments, behind antidepressants.

Beta-blockers, such as propranolol and atenolol, are also helpful in the treatment of the physical symptoms of anxiety, especially social anxiety. Physicians prescribe them to control rapid heartbeat, shaking, trembling, and blushing in anxious situations.⁽³⁾

In Traditional Chinese Medicine (TCM), anxiety disorder is understood as a disorder of Shan You Si or anxiety and preoccupation, and is thought to affect the Zang Organs.

While the Heart Zang is said to store the Shen or spirit, which includes emotional responses to stimuli, traditional theory also holds that each of the Zang Organs plays a role in the emotions as well.

For example, the Spleen Zang is associated with excessive worry; the Liver with anger; the Kidney with fear and fright; and the Lung with grief, the inability to let go, and anxiety. When there is a disturbance in one or more of these Zang from any cause, an imbalanced emotional state can occur. Conversely, an imbalanced emotional state can cause a Zang disturbance. In all cases, however, the Shen is disturbed.

While an anxiety disorder always affects the Shen, either primarily or secondarily, TCM classifies the cause of the disorder according to the extent to which individual Zang Organs demonstrate signs and symptoms of disturbance and the extent to which their Qi is affected. A typical differential diagnosis includes the following categories:

Heart/Spleen Qi Deficiency: This Pattern of Disharmony manifests as anxiety, preoccupation, obsessive worry, aversion to speaking, palpitations, insomnia, fatigue, poor appetite, abdominal distention, a pale tongue, and weak pulse.

Lung Qi Deficiency: This Pattern of Disharmony manifests as anxiety, preoccupation, rapidly changing moods, an inability to "let go," aversion to speaking, shortness of breath, fatigue, sweating easily upon exertion, a weak cough, a pale tongue with a thin white coating, and a thin pulse.

Liver Qi Stagnation Affecting the Spleen: This Pattern of Disharmony manifests as anxiety, preoccupation, feelings of irritability, moodiness, poor appetite, hypochondriac tightness or pain, muscular tension, fatigue, alternating constipation and loose stools, a pale or dusky tongue with distended sublingual veins, and a wiry-weak pulse.

Kidney Qi Deficiency: This Pattern of Disharmony manifests as anxiety, preoccupation, feelings of fear and dread, and may be accompanied by lower back and knee weakness, lack of sexual responsiveness, a pale tongue, and a weak pulse.⁽⁴⁾

Anxiety disorders are the most prevalent mental health conditions. Although they are less visible than schizophrenia, depression, and bipolar disorder, they can be just as disabling.⁽⁵⁾ Anxiety disorders are present in up to 13.3% of individuals in the U.S. and constitute the most prevalent subgroup of mental disorders.⁽⁶⁾ Despite their widespread prevalence, these disorders have not received the same recognition as other major syndromes such as mood and psychotic disorders; in addition, the primary care physician is usually the principal assessor and treatment provider.⁽⁷⁾ As a result of this management environment, anxiety disorders can be said to account for decreased productivity.⁽⁸⁾ Therefore, complementary and alternative medicine (CAM) can be alternative treatment plan. Herbs are the most commonly used complementary and alternative medicine (CAM) products and are particularly popular with those with psychiatric disorders. Anxiety is one of the strongest predictors of herbal remedy utilization.⁽⁹⁾ There were many researches on Wen Dan Tang, Gui Zhi Jia Long Gu Mu Li Tang, An Shen Si Wu Tang, Gan Mai Da Zao Tang, Shao Yao Gan Cao Tang, Ling Gui Zhu Gan Tang, Ban Xia Hou Po Tang, Jia Wei Xiao Yao San for anxiety symptom treating formula. However, it was hard to find a research on YGS for anxiety.

YGS in the “Bào yīng cuō yào”, the synopsis for Protecting Infant written by Xue Kai during the Ming dynasty (1555) in China as a remedy for restlessness and agitation in children. It was introduced to Japan in the late 17th century, and a formula for use in adults was developed in the late 18th century. At present, YGS is in widespread use as a

traditional herbal medicine, which has approved by the Japanese Ministry of Health, Labor and Welfare as a remedy for neurosis, insomnia, and irritability and night crying in children.⁽¹⁰⁾

YGS has been used in treatment of psychological symptoms of dementia and has anxiolytic effects on anxiety in Japan. Furthermore, YGS could be useful as one of the therapeutic drugs for the treatment of anxiety disorders and various mental disorders that have comorbid anxiety.⁽¹¹⁾⁽¹²⁾⁽¹³⁾ This research would be very valuable to see if this formula will be effective on anxiety symptoms.

II. MATERIALS & METHODS

1. Subjects:

Six male of age 35 to 64 years old who have visited IC Oriental Clinic from Oct 2016 to Dec 2016 for anxiety symptoms such as restlessness, being easily fatigued, have irritability, difficulty controlling the worry, feelings of panic, fear, uneasiness, problems sleeping, cold or sweaty hands or feet, shortness of breath, heart palpitations, not being able to be still and calm, dry mouth, numbness or tingling in the hands or feet, nausea, muscle tension, dizziness. Patients are informed and signed consent agreement that due to the research; they are not allowed to get any anxiety medication under herbal treatment.

Table 1. The information of Participants

	Sex/Age	Sx Onset	Tx duration	PSS* score	BAI* score
Patient 1	M/35	Feb 2016	Oct - Dec 2016	35	45
Patient 2	M/43	Jan 2016	Oct - Dec 2016	34	41
Patient 3	M/53	Oct 2015	Oct - Dec 2016	28	37
Patient 4	M/59	Aug 2015	Oct - Dec 2016	30	40
Patient 5	M/62	May 2015	Oct - Dec 2016	27	38
Patient 6	M/64	Dec 2015	Oct - Dec 2016	29	39

Abbreviations: * PSS-Perceived Stress Scale * BAI-Beck Anxiety Inventory

2. Interventions:

Herbal medicine: Yi Gan San

The detailed clinical contents of YGS are shown in Table 2,3,4.

Extract granules, three times per day (7.5g / day), 1 hour before meals

The purpose of extract granules is to draw out the therapeutic constituents of the herbs in to the water. Granule is more easily absorbed by the patient. After taking into the stomach, the effective substances in the granule will be absorbed through the gastrointestinal system and into the blood within half to one hour. The result is much quicker than with other formulations. Herbal formulas are best taken 1 to 2 hours before eating to allow for maximum digestion and absorption of the herbs.

Table 2. Components of Yi Gan San ⁽¹⁴⁾

Herbs		Dosage
Cang Zhu	Atractylodes Lancea Rhizome	4.0 g
Fu Ling	Poria Sclerotium	4.0 g
Chuan Xiong	Cnidium Rhizome	3.0 g
Gou Teng	Uncaria Hook	3.0 g
Dang Gui	Angelica Root	3.0 g
Chai Hu	Bupleurum Root	2.0 g
Gan Cao	Glycyrrhiza	1.5 g

Manufactured and Distributed by: Tsumura & Co.

Table 3. Herb actions ⁽¹⁵⁾

Herbs	Actions
Cang Zhu	Tonifies the Spleen, tonifies Qi and dries Dampness.
Fu Ling	Promotes urination, resolves Dampness, strengthens the Spleen and harmonizes the Middle Jiao.

Chuan Xiong	Activates the Blood and regulates Qi.
Gou Teng	Extinguishes Wind, stops spasms, drains Liver Heat and pacifies Liver Yang.
Dang Gui	Tonifies, harmonizes and invigorates the Blood and regulates menses.
Chai Hu	Resolves Shao Yang disorders, reduces fever, spreads Liver Qi, relieves Stagnation and raises Yang Qi.
Gan Cao	Moderates and harmonizes the effects of the other herbs.

Table 4. Pharmacology

Anxiolytic effect	Oral administration of YGS showed an anxiolytic-like effect in performance of an improved elevated-plus maze in mice. ⁽¹⁶⁾ A similar effect was observed in cerebrovascular ischemia rats ⁽¹⁷⁾ and aged rats. ⁽¹⁸⁾
Ameliorative effects on aggressiveness	Oral administration of YGS ameliorated aggressiveness observed in amyloid precursor protein transgenic mice ⁽¹⁹⁾ , intraventricularly amyloid β protein-injected mice ⁽²⁰⁾ , and zinc-deficient rats. ⁽²¹⁾
Ameliorative effects on sleep disturbance	Oral administration of YGS ameliorated the shortening of pentobarbital-induced sleeping time in socially isolated mice. ⁽²²⁾
Action mechanism	Ameliorative effects on aggressiveness

	<p>(1) Inhibition of glutamate release</p> <p>YGS inhibited the increase of the hippocampal extra-cellular glutamate concentration in zinc-deficient rats ⁽²³⁾; it also inhibited exocytosis in hippocampal brain slices of zinc-deficient rats orally administered YGS.⁽²⁴⁾</p> <p>(2) Modulation of glutamate transport</p> <p>YGS ameliorated thiamine deficiency-induced decreases in glutamate transport, protein, and mRNA ex-pression of glutamate transporters in cultured rat corti-cal astrocytes.⁽²⁴⁾</p> <p>(3) Down-regulation of serotonin (5HT)2A receptors</p> <p>Oral administration of YGS induced down-regulation of 5-HT2A receptors in the prefrontal cortex and inhib-ited the 2,5-dimethoxy-4-iodoamphetamine (DOI; 5-HT2A receptor agonist)-induced head-twitch response in mice.⁽²⁵⁾</p> <p>(4) 5-HT1A receptor partial agonistic effect</p> <ul style="list-style-type: none"> • Oral administration of YGS ameliorated the increase in aggressive behavior and decrease in social behav-ior of ρ-chloroamphetamine-treated rats⁽²⁶⁾ and so-cially isolated mice.⁽²⁷⁾ These ameliorative effects were counteracted by co-administration of WAY-100635 (5-HT1A receptor antagonist). In an <i>in vitro</i> receptor binding assay, YGS showed a partial agonistic effect on 5-HT1A receptors.⁽²⁸⁾
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	<ul style="list-style-type: none"> • Anxiolytic effect of YGS in elevated plus-maze test was inhibited by WAY-100635 (5-HT1A receptor antagonist)⁽²⁹⁾⁽³⁰⁾
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3. Evaluation methods

Six patients were measured each month by Perceived Stress Scale (PSS)⁽³¹⁾ and Beck Anxiety Inventory (BAI)⁽³²⁾ score to evaluate effect of treatment while three months. After three month of YGS treatment, comparison of score will show the effectiveness on this study.

The PSS is the most widely used psychological instrument for measuring the perception of stress. It is a measure of the degree to which situations in one's life are appraised as stressful. Items were designed to assess how unpredictable, uncontrollable, and overloaded respondents find their lives to be. The scale also includes a number of direct queries about current levels of experienced stress. The questions in the PSS ask about feelings and thoughts during the last month. In each case, respondents are asked how often they felt a certain way. PSS scores are obtained by reversing responses (e.g., 0 = 4, 1 = 3, 2 = 2, 3 = 1 & 4 = 0) to the four positively stated items (items 4, 5, 7, & 8) and then summing across all scale items. A short 4 item scale can be made from questions 2, 4, 5 and 10 of the PSS 10 item scale. The PSS has a range of scores between 0 and 40. A higher score indicates more stress.⁽³³⁾ The BAI is a brief measure of anxiety with a focus on somatic symptoms of anxiety that was developed as a measure adept at discriminating between anxiety and depression. The BAI is administered via self-report and includes assessment of symptoms such as nervousness, dizziness, inability to relax, etc. Scoring is

easily accomplished by summing scores for items. The total score ranges from 0–63. The following guidelines are recommended for the interpretation of scores: 0–9, normal or no anxiety; 10–18, mild to moderate anxiety; 19–29, moderate to severe anxiety; and 30–63, severe anxiety.⁽³⁴⁾⁽³⁵⁾⁽³⁶⁾⁽³⁷⁾

III. RESULTS

Patient #1

1. Gender/ Age: M / 35
2. Height / Weight: 5' 6" / 180 lbs
3. Marital status / Occupation: Married / Manager
4. Symptom Onset: Feb 2016
5. Chief Complaints: anxiety, preoccupation, feelings of irritability, moodiness, poor appetite, hypochondriac tightness or pain, muscular tension, fatigue
6. Present illness: Patient complains that he gets lots of stress from work and family. 6 months ago, patient was suffering from anxiety symptoms such as anxiety, irritability, difficulty controlling the worry, sleep problems. Anxiety symptoms become more severe, he was getting medical treatment from internal medicine, and psychiatrists, did not relieve the symptoms.
7. Medical history: migraine
8. Family history: None
9. Question:
 - a. Fever & Chill: normal
 - b. Perspiration: normal
 - c. Thirst: dry mouth
 - d. Appetite: poor
 - e. Digestion: dyspepsia
 - f. Bowel movement: alternating constipation and loose stools
 - g. Urine: normal

- h. Sleep: insomnia
- i. Pain: neck pain

10. Tongue / Pulse: red tongue, dry tongue / wiry pulse

11. Diagnosis: liver qi stagnation affecting the spleen

12. Treatment: Patient was given YGS extract granules and directed three times per day (7.5g / day) for one month. The patient repeats this process again until end of three month study.

13. Case result: October, 2016, patient was suffering from anxiety symptoms such as anxiety, irritability, difficulty controlling the worry, sleep problems. His initial PSS score was 35, but after a month of YGS treatment his score dropped to 27, and then in the last month dropped to 14. His initial BAI score was 45, but after a month of YGS treatment his score dropped to 29, and then in the last month dropped to 15.

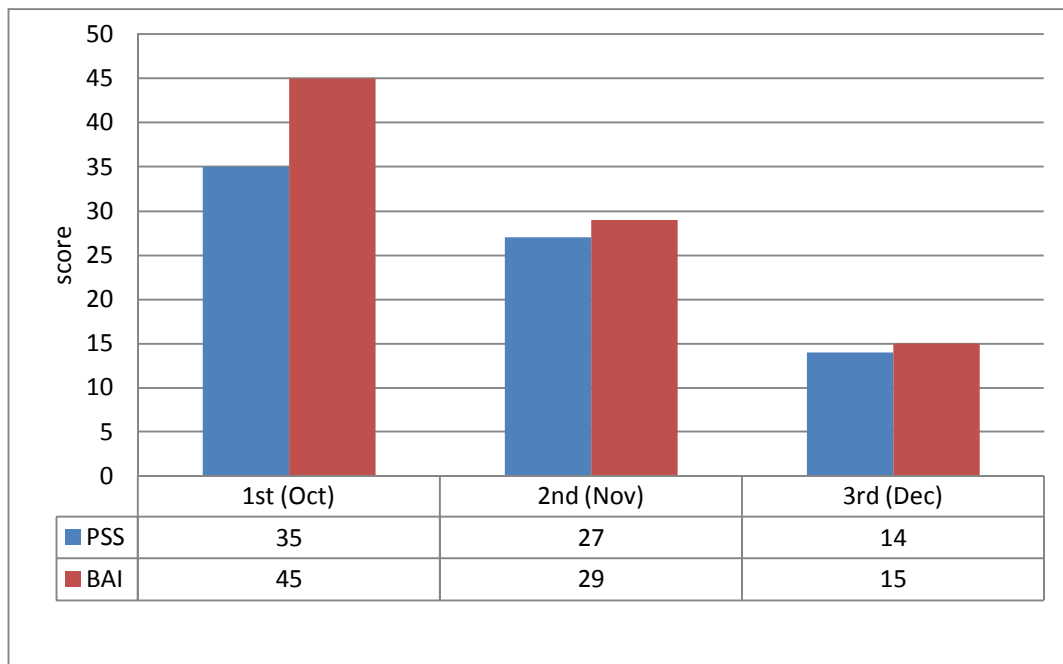


Figure 1. Patient#1 PSS, BAI score

Patient #2

1. Gender/ Age: M / 43
2. Height / Weight: 5' 8" / 190 lbs
3. Marital status / Occupation: Married / Office work
4. Symptom Onset: Jan 2016
5. Chief Complaints: anxiety, preoccupation, feelings of irritability, headache, muscular tension, fatigue
6. Present illness: Patient complains that he gets lots of stress from work. 9 months ago, patient was suffering from anxiety symptoms such as anxiety, preoccupation, feelings of irritability, headache, muscular tension, fatigue. He started medication therapy, medication does not cure anxiety but often relieves symptoms. but stopped a month after due to worry of side effects.
7. Medical history: Hypertension, gastroesophageal reflux disease
8. Family history: Hypertension (father)
9. Question:
 - a. Fever & Chill: little fever
 - b. Perspiration: sweat a lot
 - c. Thirst: thirst
 - d. Appetite: normal
 - e. Digestion: heartburn
 - f. Bowel movement: normal
 - g. Urine: normal
 - h. Sleep: normal

i. Pain: back pain

10. Tongue / Pulse: red tongue / wiry weak pulse

11. Diagnosis: liver qi stagnation

12. Treatment: Patient was given YGS extract granules and directed three times per day (7.5g / day) for one month. The patient repeats this process again until end of three month study.

13. Case result: October, 2016, patient was suffering from anxiety symptoms such as anxiety, preoccupation, feelings of irritability, headache, muscular tension, fatigue. His initial PSS score was 34, but after a month of YGS treatment his score dropped to 26, and then in the last month dropped to 15. His initial BAI score was 41, but after a month of YGS treatment his score dropped to 30, and then in the last month dropped to 20.

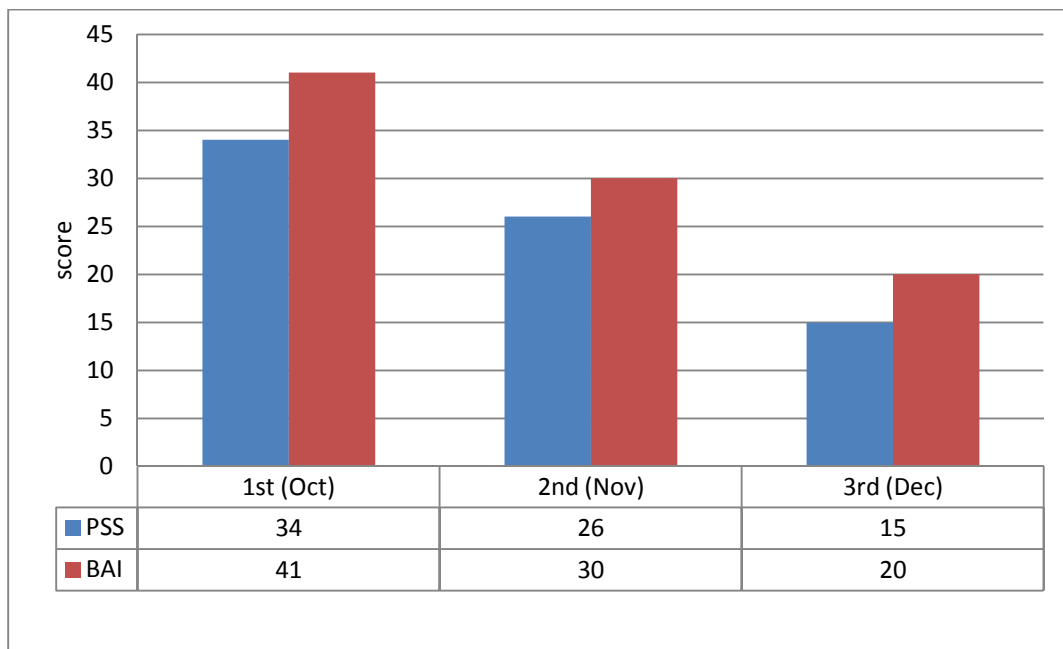


Figure 2. Patient#2 PSS, BAI score

Patient #3

1. Gender/ Age: M / 53
2. Height / Weight: 5' 3" / 150 lbs
3. Marital status / Occupation: Married / Office work
4. Symptom Onset: Oct 2015
5. Chief Complaints: Anxiety, palpitations, insomnia, fatigue, poor appetite, abdominal distention
6. Present illness: After October 2015, patient started to have a symptom, as symptoms get worse, he came in to the clinic to relieve the symptoms.
7. Medical history: lateral epicondylitis
8. Family history: None
9. Question:
 - a. Fever & Chill: used to feel cold
 - b. Perspiration: none
 - c. Thirst: no thirst
 - d. Appetite: poor
 - e. Digestion: abdominal distention, bloating
 - f. Bowel movement: constipated
 - g. Urine: normal
 - h. Sleep: insomnia
 - i. Pain: shoulder pain (right side more)
10. Tongue / Pulse: pale tongue / weak pulse
11. Diagnosis: heart, spleen qi deficiency

12. Treatment: Patient was given YGS extract granules and directed three times per day (7.5g / day) for one month. The patient repeats this process again until end of three month study.

13. Case result: October, 2016, patient was suffering from anxiety symptoms such as Anxiety, palpitations, insomnia, fatigue, poor appetite, abdominal distention. His initial PSS score was 28, but after a month of YGS treatment his score dropped to 19, and then in the last month dropped to 11. His initial BAI score was 37, but after a month of YGS treatment his score dropped to 22, and then in the last month dropped to 12.

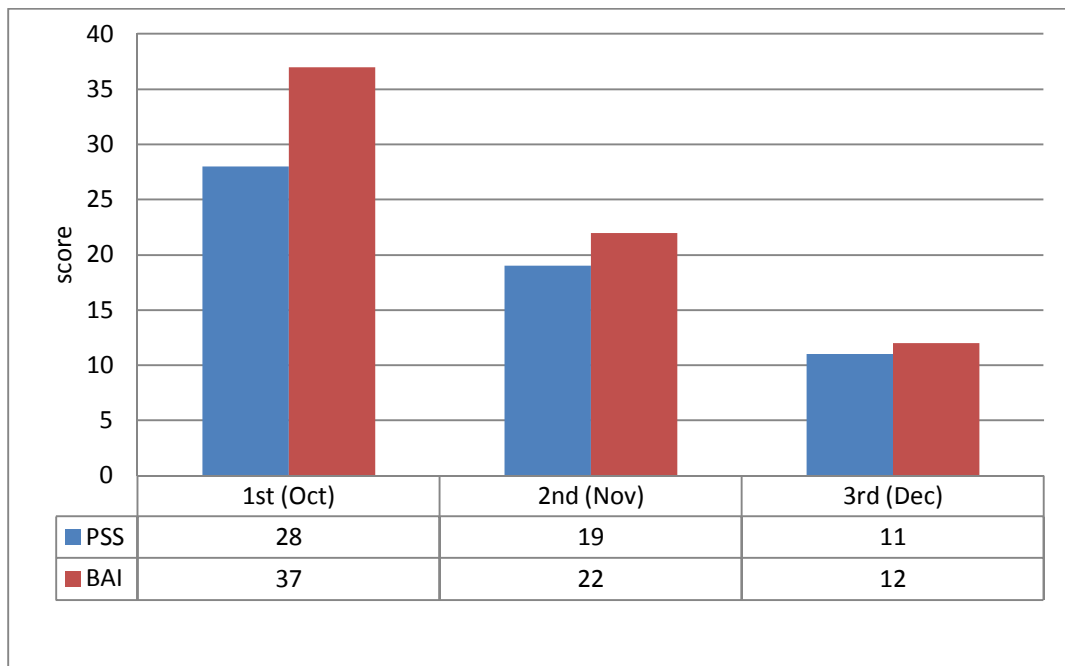


Figure 3. Patient#3 PSS, BAI score

Patient #4

1. Gender/ Age: M / 59
2. Height / Weight: 5' 4" / 175 lbs
3. Marital status / Occupation: divorced / business
4. Symptom Onset: Aug 2015
5. Chief Complaints: Anxiety, preoccupation, feelings of fear, lower back pain and knee weakness, lack of sexual responsiveness
6. Present illness: After Aug 2015 patient started to have anxiety symptoms, as symptoms gets worse over time, he came in to the clinic to relieve the symptoms.
7. Medical history: none
8. Family history: none
9. Question:
 - a. Fever & Chill: chill
 - b. Perspiration: none
 - c. Thirst: none
 - d. Appetite: normal
 - e. Digestion: indigestion
 - f. Bowel movement: normal
 - g. Urine: weak
 - h. Sleep: insomnia
 - i. Pain: low back pain, knee pain
10. Tongue / Pulse: pale tongue, and a weak pulse
11. Diagnosis: kidney qi deficiency

12. Treatment: Patient was given YGS extract granules and directed three times per day (7.5g / day) for one month. The patient repeats this process again until end of three month study.

13. Case result: October, 2016, patient was suffering from anxiety symptoms such as anxiety, preoccupation, feeling of fear, lower back pain and knee weakness, lack of sexual responsiveness. His initial PSS score was 30, but after a month of YGS treatment his score dropped to 24, and then in the last month dropped to 12. His initial BAI score was 40, but after a month of YGS treatment his score dropped to 31, and then in the last month dropped to 17.

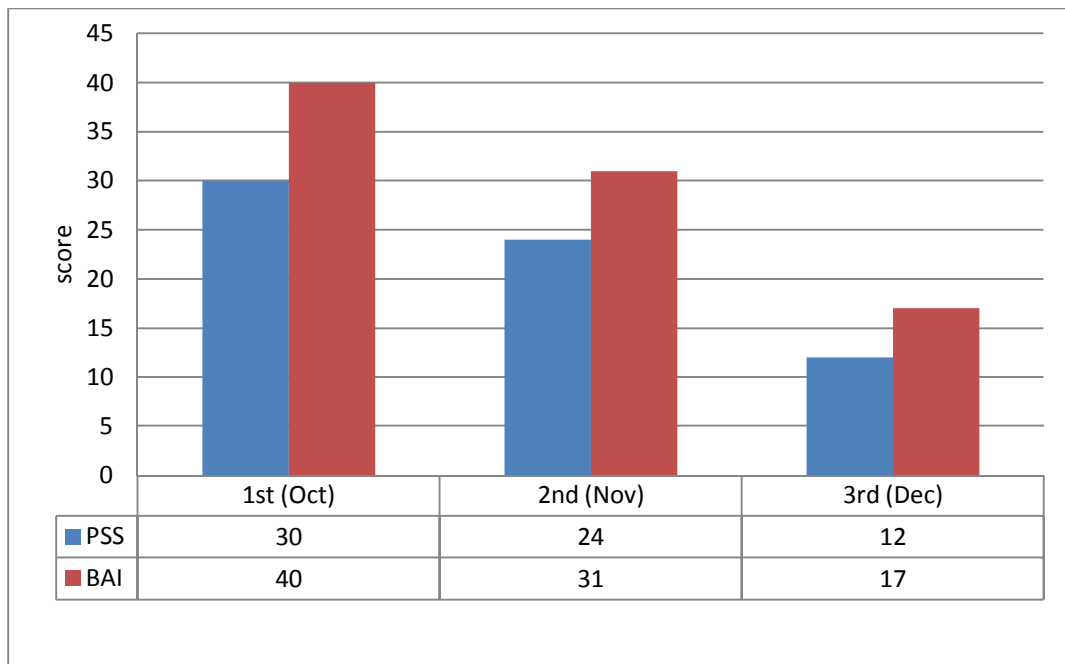


Figure 4. Patient#4 PSS, BAI score

Patient #5

1. Gender/ Age: M / 62
2. Height / Weight: 5' 3" / 143 lbs
3. Marital status / Occupation: Married / Professor
4. Symptom Onset: May 2015
5. Chief Complaints: restlessness, problems sleeping, cold or sweaty hands or feet, dry mouth, numbness or tingling in the hands or feet, nausea, muscle tension, dizziness.
6. Present illness: After May 2015 patient started to have anxiety symptoms, as symptoms gets worse over time, he came in to the clinic to relieve the symptoms.
7. Medical history: knee surgery
8. Family history: liver cancer (mother)
9. Question:
 - a. Fever & Chill: normal
 - b. Perspiration: sweat hand or feet
 - c. Thirst: dry mouth
 - d. Appetite: poor
 - e. Digestion: normal
 - f. Bowel movement: normal
 - g. Urine: night urination
 - h. Sleep: insomnia
 - i. Pain: low back pain, knee pain
10. Tongue / Pulse: pale tongue / weak pulse
11. Diagnosis: kidney yin deficiency

12. Treatment: Patient was given YGS extract granules and directed three times per day (7.5g / day) for one month. The patient repeats this process again until end of three month study.

13. Case result: October, 2016, patient was suffering from anxiety symptoms such as restlessness, problems sleeping, cold or sweaty hands or feet, dry mouth, numbness or tingling in the hands or feet, nausea, muscle tension, dizziness. His initial PSS score was 27, but after a month of YGS treatment his score dropped to 17, and then in the last month dropped to 9. His initial BAI score was 38, but after a month of YGS treatment his score dropped to 26, and then in the last month dropped to 10.

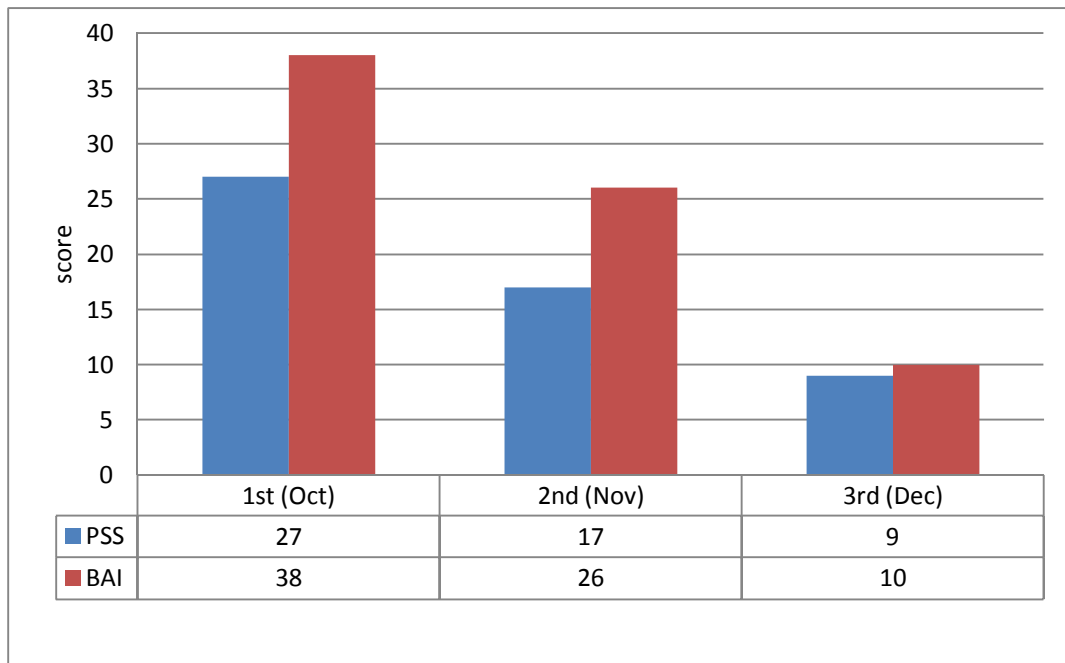


Figure 5. Patient#5 PSS, BAI score

Patient# 6

1. Gender/ Age: M / 64
2. Height / Weight: 5' 6" / 130 lbs
3. Marital status / Occupation: Married / Retired
4. Symptom Onset: Dec 2015
5. Chief Complaints: anxiety, insomnia, cold feet, dry mouth, numbness feet, low back pain, dizziness, tinnitus
6. Present illness: After Dec 2015 patient started to have anxiety symptoms, anxiety symptoms become more severe, he was getting medical treatment from internal medicine, did not relieve the symptoms. He came in to the clinic to relieve the symptoms.
7. Medical history: peptic ulcer / lumbar disc herniation
8. Family history: dizziness (mother)
9. Question:
 - a. Fever & Chill: cold feet
 - b. Perspiration: none
 - c. Thirst: dry mouth
 - d. Appetite: poor
 - e. Digestion: normal
 - f. Bowel movement: normal
 - g. Urine: weak urination
 - h. Sleep: insomnia
 - i. Pain: low back pain
10. Tongue / Pulse: pale tongue / weak pulse

11. Diagnosis: kidney qi deficiency

12. Treatment: Patient was given YGS extract granules and directed three times per day (7.5g / day) for one month. The patient repeats this process again until end of three month study.

13. Case result: October, 2016, patient was suffering from anxiety symptoms such as anxiety, insomnia, cold feet, dry mouth, numbness feet, low back pain, dizziness, tinnitus. His initial PSS score was 29, but after a month of YGS treatment his score dropped to 22, and then in the last month dropped to 13. His initial BAI score was 39, but after a month of YGS treatment his score dropped to 27, and then in the last month dropped to 9.

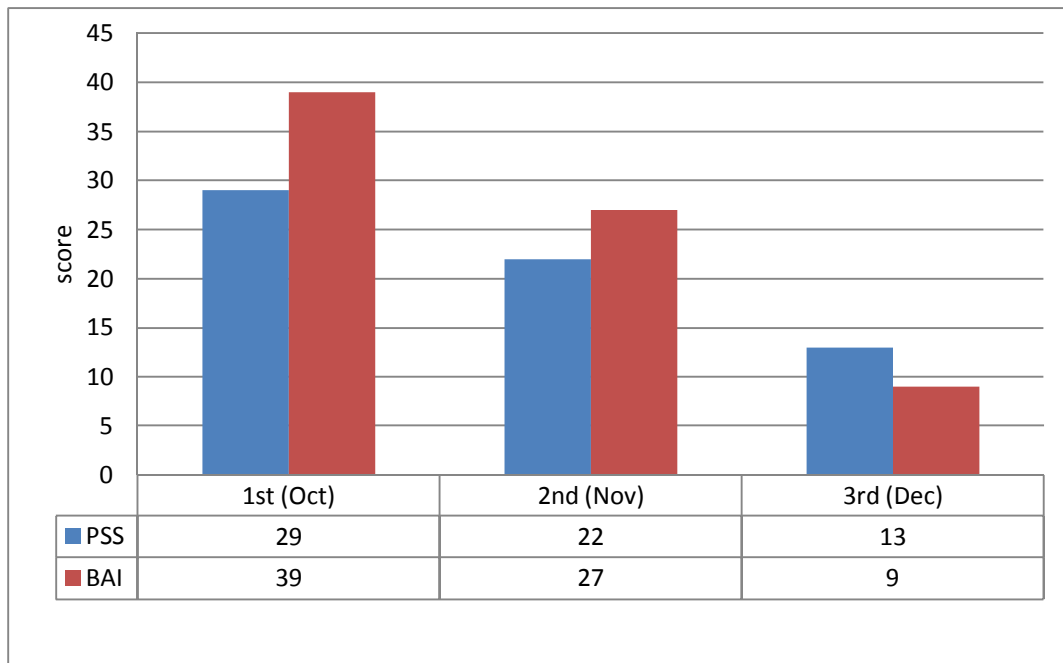


Figure 6. Patient#6 PSS, BAI score

IV. DISCUSSION

Patient was measured each month by Perceived Stress Scale (PSS) and Beck Anxiety Inventory (BAI) score to evaluate effect of treatment while three months. After three months of YGS treatment, comparison of score shows the effectiveness on this study. The PSS is the most widely used psychological instrument for measuring the perception of stress. It is a measure of the degree to which situations in one's life are appraised as stressful. The PSS has a range of scores between 0 and 40. A higher score indicates more stress. The BAI is a brief measure of anxiety with a focus on somatic symptoms of anxiety that was developed as a measure adept at discriminating between anxiety and depression. The BAI is administered via self-report and includes assessment of symptoms such as nervousness, dizziness, inability to relax, etc. The total score ranges from 0–63. The following guidelines are recommended for the interpretation of scores: 0–9, normal or no anxiety; 10–18, mild to moderate anxiety; 19–29, moderate to severe anxiety; and 30–63, severe anxiety. Therefore, the score decreasing indicates that the patient's anxiety symptoms improved.

On Patient #1, Initial PSS score was 35, but after a month of YGS treatment his score dropped to 27, and then in the last month dropped to 14. Initial BAI score was 45, but after a month of YGS treatment his score dropped to 29, and then in the last month dropped to 15. This is 60% decrement on PSS score and 66.6% decrement on BAI score.

On Patient #2, Initial PSS score was 34, but after a month of YGS treatment his score dropped to 26, and then in the last month dropped to 15. Initial BAI score was 41, but after a month of YGS treatment his score dropped to 30, and then in the last month

dropped to 20. This is 55.8% decrement on PSS score and 51.2% decrement on BAI score.

On Patient #3, Initial PSS score was 28, but after a month of YGS treatment his score dropped to 19, and then in the last month dropped to 11. Initial BAI score was 37, but after a month of YGS treatment his score dropped to 22, and then in the last month dropped to 12. This is 60.7% decrement on PSS score and 67.5% decrement on BAI score.

On Patient #4, Initial PSS score was 30, but after a month of YGS treatment his score dropped to 24, and then in the last month dropped to 12. Initial BAI score was 40, but after a month of YGS treatment his score dropped to 31, and then in the last month dropped to 17. This is 60% decrement on PSS score and 57.5% decrement on BAI score.

On Patient #5, Initial PSS score was 27, but after a month of YGS treatment his score dropped to 17, and then in the last month dropped to 9. Initial BAI score was 38, but after a month of YGS treatment his score dropped to 26, and then in the last month dropped to 10. This is 66.6% decrement on PSS score and 73% decrement on BAI score.

On Patient #6, Initial PSS score was 29, but after a month of YGS treatment his score dropped to 22, and then in the last month dropped to 13. Initial BAI score was 39, but after a month of YGS treatment his score dropped to 27, and then in the last month dropped to 9. This is 55.1% decrement on PSS score and 76% decrement on BAI score.

Table 5. Final Results of Treatment

	PSS				BAI			
	1st	2nd	3rd	%*	1st	2nd	3rd	% *
Patient#1	35	27	14	60%	45	29	15	66.6%
Patient#2	34	26	15	55.8%	41	30	20	51.2%
Patient#3	28	19	11	60.7%	37	22	12	67.5%
Patient#4	30	24	12	60%	40	31	17	57.5%
Patient#5	27	17	9	66.6%	38	26	10	73%
Patient#6	29	22	13	55.1%	39	27	9	76%

*The decrement from Oct to Dec.

After treatment, anxiety symptoms were subsided. After 3 month of herbal treatment, the PSS score dropped from an average 30.5 to an average 12.3 and the BAI score dropped from an average 40 to an average 13.8.

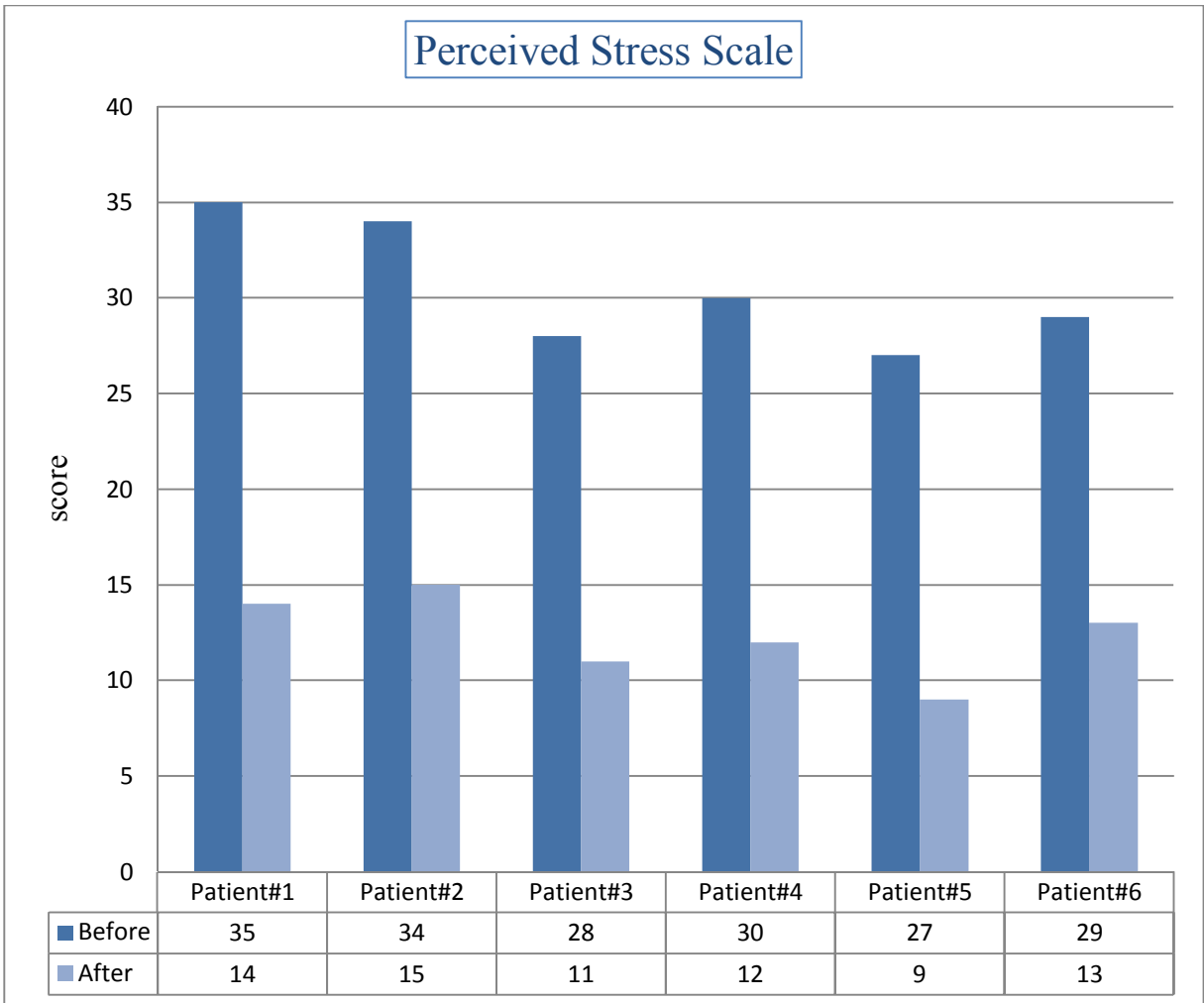


Figure 7. Comparison of stress levels assessed by PSS score in before and after YGS treatment group

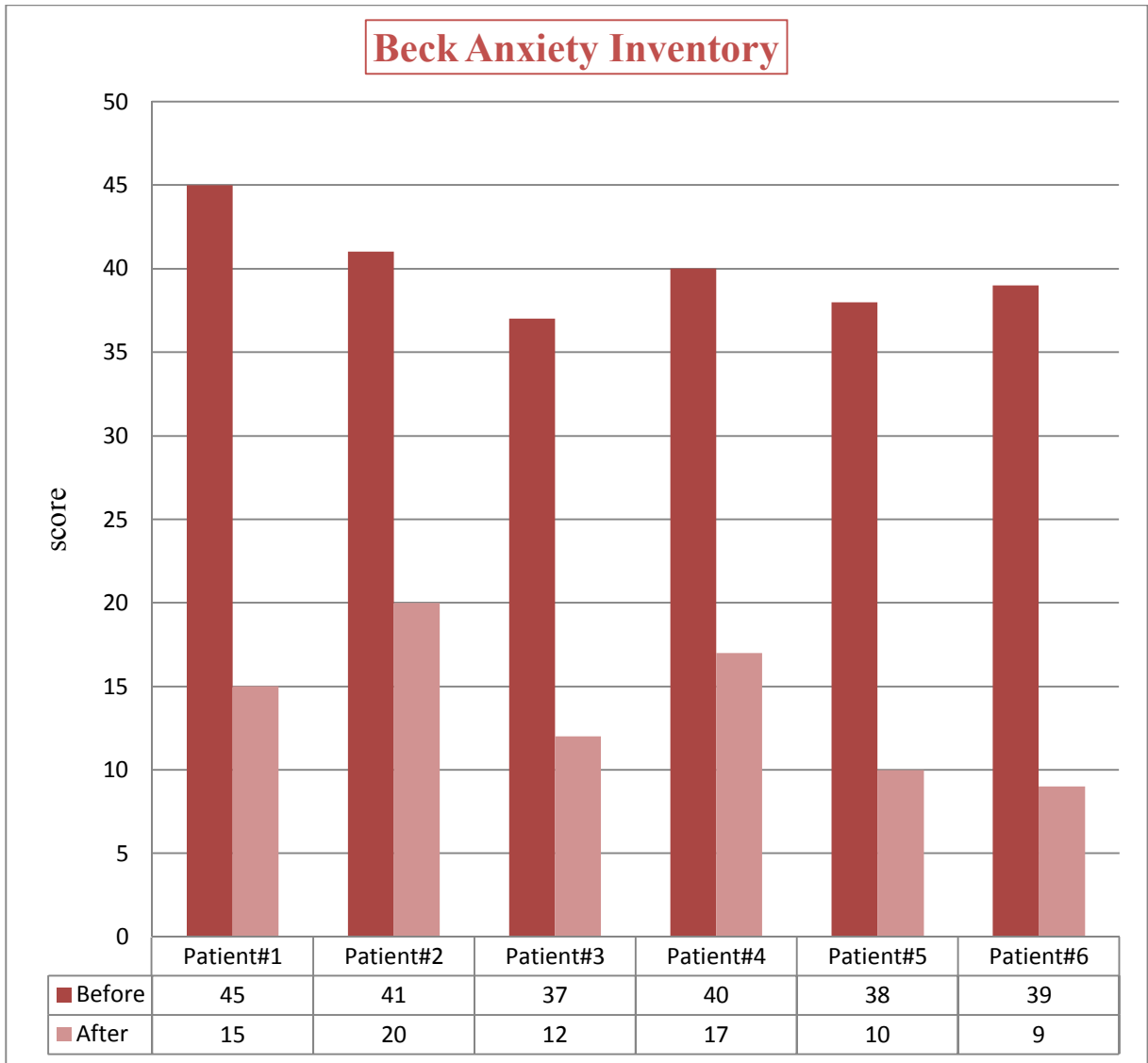


Figure 8. Comparison of anxiety levels assessed by BAI score in before and after

YGS treatment group

V. CONCLUSION

From this research, herbal medicine has anxiolytic effects on anxiety symptoms. Especially, YGS showed great improvement on psychological symptoms. Furthermore, YGS could be useful as one of the therapeutic drugs for the treatment of anxiety disorders and various mental disorders. It is difficult to treat all of anxiety disorder with one formula. However, by using this YGS, further research and study can be done to development early stage treatment protocol or prevention program on anxiety disorder.

Anxiety is one of the most serious healthcare problems. Despite their widespread prevalence, anxiety is usually conventional assessment and treatment. As a result, anxiety disorders have been decreased treatment response. Therefore, Oriental medicine doctors should continue to test alternative methods for treating and preventing anxiety disorders and to help patients whose anxiety is resistant to conventional treatments. Furthermore, Practitioner needs to consider the patient's feelings about mental illness and address their responses early in treatment. Finally, this clinical report will enhance the care of patients with anxiety.

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