

# Treatment and Prognosis of Hwabyung

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## Abstract

**Objective** This paper is to review studies on treatment and prognosis of hwabyung, an anger-related culture-bound syndrome in Korea. **Materials and Methods** Clinical studies into the treatment and prognosis of hwabyung were reviewed with a brief description of the clinical correlates of hwabyung. **Results** As in the case of other psychiatric disorders, hwabyung should be treated in an integrated way, by combining psychosocial therapy, including psychoanalytic therapy and cognitive-behavioral therapy, and drug therapy. It is also necessary for psychiatrists to enrich their treatment strategies by borrowing from traditional healing methods and religious healing methods. Few clinical studies have been performed on its prognosis, however it seems to be a chronic illness. **Conclusion** Further research is needed for the purpose of conceptualizing this anger disorder, based on studies of both hwabyung itself and other clinical syndromes related to subjective anger.

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## Introduction

Hwabyung (火病), whose literal meaning is anger disease or fire disease, is known as a Korean culture-related syndrome. In Korean, hwa (火) means anger as well as fire, and hwabyung is referred to as an anger syndrome.

Four to five percent of the general population are reported as having hwabyung<sup>1-3</sup>. Hwabyung is reportedly found frequently in middle-aged or older women of the lower social class<sup>4-6</sup>. The etiology of hwabyung has been described by patients as being anger and/or other anger-related negative emotional reactions including "uk-wool" and "boon", which have been accumulating for a certain period of time. "Uk-wool" is a term used to describe a feeling of anger which results from being a victim of unfair and wrong understanding, while "boon" is a term used for describing a feeling of anger arising from a situation involving failure due to indefensible external reasons. The etiological life events involved are situations involving external violence or psychosocial injustice, which include chronic familial conflicts and other anger-provoking social situations including economic loss<sup>1-12</sup>. Most patients know that hwabyung is a psychogenic disorder, reactive to distressful experiences such as anger<sup>1,5,6,9</sup>.

It has been argued by a group of psychiatrists that hwabyung develops due to anger and its incomplete suppression, accumulation and somatization<sup>6,9,10-13</sup>. Patients with hwabyung are aware that their illness is related to anger-provoking life events and explain that they have had to suppress or inhibit their anger, so as not to jeopardize peace in the family or harmonious social relationships. According to the patients' explanation, if such situations continue or are repeated, anger, uk-wool and/or boon "accumulates, becomes dense", and is finally expressed in symptoms of hwabyung.

The symptoms are characterized by heat/hot sensation in the body (including hot flushing or intolerance to hot environment), feeling of something pushing-up (rising-up) in the chest, chest oppression/stifling/choking, sighing, mass in the epigastrium or chest, impulse to go-out or to escape from closed or hot situations, and dry mouth as well as general neurotic symptoms<sup>1,6-9,14</sup>. Their bodily behavioral symptoms seem to symbolize the nature of fire and heat and/or the suppression of these elements. In spite of their depressed mood, which involves tears and a nihilistic attitude, the patients are very talkative. If hwabyung is understood as being the product of the interplay between external causes and an internal responding personality, there should be researches on personality characteristics of patients with hwabyung. Min et al<sup>1,9</sup> suggested their characteristics to be hasty (typically described as "fire-like" or "convulsive"), timid, sensitive, introverted and poorly sociable. Roberts et al<sup>15</sup> reported that, in research using MMPI-2, Hy-O (hysterio-obvious, which measures the development of physical symptoms in response to stress), Hs (which measures somatic complain), and HEA (health concerns) among previously existing MMPI-2 scales had been correlated highest with hwabyung. And other components which seem to be related to hwabyung were hopelessness and anger. Hwang<sup>16</sup> related hwabyung to the narcissistic/masochistic personality of the patients. Regarding diagnosis, there are two issues. One is whether hwabyung is culture-bound syndrome or not. Another is how hwabyung is diagnosed in DSM or ICD system. hwabyung has been considered as a Korean culture-bound or culture-related syndrome<sup>1,6,7,10,17,18</sup>, or, if not culture-bound, as a "culturally patterned way of expression"<sup>8,19</sup> for Koreans experiencing depression and related conditions or as reflecting the "Korean way"<sup>20</sup>. However, some Korean psychiatrists have

argued that hwabyung is no more than a general term for a stressful or depressed state or psychological conflict<sup>6, 17, 21, 22</sup>. When diagnosed according to DSM-III-R, most patients with self-diagnosed hwabyung were found to have a combination of depressive and somatization disorders or depressive, somatization and anxiety (panic) disorders<sup>2, 4-6, 23</sup>. Western psychiatrists considered that hwabyung is a kind of a variant of depression<sup>7, 21, 24</sup> or somatization disorder<sup>25, 26</sup>.

### Culture-relatedness

Culture influences the expression of not only psychopathology but anger (Tseng<sup>27, 28</sup>). Triandis<sup>29</sup> suggested that anger expression is more suppressed in a "collectivist" culture, to which Korea seems to belong, than in "individualistic" cultures that prevailing in the United States of America. In this regards, the concept of hwabyung has been shaped by Koreans' cultural experiences through history. The Korean culture related to hwabyung is considered to be ① A Korean traditional local folk medical concept including concepts about the nature<sup>30</sup>, old Chinese medicine<sup>31, 32</sup> and traditional shamanism<sup>6, 33, 34</sup>, ② a culture of "relationship"<sup>35</sup> as in collective culture which seems to be rooted mainly traditional Confucian teachings<sup>36</sup>, ③ The collective mood of Koreans, which is referred to as "haan", has been argued to be strongly related to hwabyung<sup>1, 10, 16</sup>. Haan is thought to be a chronic mixed depressed angry mood which is essentially a reaction to the tragic collective national history, as well as to a miserable personal life history. Through a long period of endurance and forbearance from generation to generation, Koreans' suppressed and accumulated anger (uk-wool or boon) has been transformed into a collective haan<sup>37-41</sup>. If haan is culturally unique for Koreans, as many Korean social scientists have argued, hwabyung is also a culture-related sickness. differ between generations.

## Materials and Methods

Clinical studies into the treatment and prognosis of hwabyung which have been published in literature were reviewed.

## Results

### Treatment

As there are no anger-based diagnostic categories for hwabyung, no scientific research has so far been done and, therefore, there are as yet no guidelines for the anger assessment and specific treatment of hwabyung. Accordingly the general recommendations which are usually made for "anger reduction", anger management, the treatment of aggression or general treatment of somatization symptoms can also be applied to the treatment of hwabyung.

**Target of treatment** As in the case of other medical diseases, the treatment of hwabyung should be based on its etiology. As hwabyung is basically an anger syndrome, the treatment should first be directed toward anger, which is either pathologic or dysfunctional. Conceptually dysfunctional anger<sup>42</sup> is a syndrome comprising ① emotional experience (e.g. feeling angry or furious), ② psychophysiological arousal (e.g. short, rapid breathing, hot sensation, increased muscle tone, such as clenched jaw) and ③ cognitive processes (e.g. hostile attributions, images of revenge and retaliation, labeling as fire), and ④ individual distress leading to significant adverse consequences (e.g. damaged relationships, impaired work performance, legal problems. Interventions for the purpose of

anger reduction, therefore, should target different aspects of the cognitive-emotional-physiological experiences, the relationship of anger to its triggers, and/or behavior or thought.

Studies to date on anger reduction have tended to involve the definition of a specific anger-involvement population, such as angry medical patients with hypertension, angry veterans or angry drivers, and then to define a strategy of intervention designed for that particular population. Therefore, the results cannot be directly applied to patients group with hwabyung.

The treatment of hwabyung should not be limited to anger reduction. Hwabyung is closely related to an oppressive environment and may be related to personality problems, so that an individual psychotherapeutic approach, as well as social and familial interventions, are needed. To date, many treatment methods have been suggested, but the effectiveness of these methods remain to be proved by systemic scientific research. Until an agreed-upon anger-based diagnosis is available, research should continue, in order to carefully describe the demographics, background factors of hwabyung, and how anger is experienced and expressed, how anger affects patients and others around them, and other psychosocial correlates and risk factors. Research is needed to explore biological components of anger, and its interaction with psychosocial correlates leading to the production of hwabyung.

**Physicians' recommendations** Most Korean psychiatrists (75.5%) recommended combined psychotherapy and drug treatment, while others (16.2%) recommended only psychotherapy<sup>17</sup>. As patients with hwabyung were aware of the cause of their illness, Lee<sup>6</sup> recommended short-term supportive psychotherapy and catharsis, but not necessarily psychoanalysis. However, psychoanalysis or psychoanalytical psychotherapy should not be excluded from the treatment options. In terms of the drug treatment, most psychiatrists (78.5%) suggested the combined use of antidepressants and antianxiety drugs<sup>17</sup>.

Most traditional herb physicians recommended Chinese medical treatment (34.4%), psychiatric treatment (8.8%) and religious treatment (6.2%). Traditional herb medicine is used to suppress "hwa-ki" (force of fire) in the body<sup>17</sup>.

**Patients' recommendations** In a survey<sup>6</sup>, hwabyung patients considered various treatment methods including self-control (79.3%), familial efforts to resolve conflicts (58.6%), dialogue (communication) with family or relatives (56.3%), psychiatrists' psychotherapy (51.2%), psychiatrists' drug therapy (32.8%), religious self-training (16.1%), herb medicine (16.1%) and shaman ritual (6.3%).

### Folk Medicine

**Researches on help-seeking behavior** Ordinary people, especially educated people, preferred recommended psychological approaches (so-called counseling) for the treatment of hwabyung, while older people preferred pharmacological or medical treatment<sup>21</sup>.

Before coming to see a psychiatrist, many hwabyung patients had already sought help from various treatment modalities<sup>1</sup>. Of 56 hwabyung patients, 40 (71.4%) had visited physicians, including internists other than psychiatrists. Others were pharmacists (55.3%), traditional herb physicians (66.1%), and psychiatrists (21.4%). It is noteworthy that some patients sought help from Christian faith healing (confirming prayer) (12.5%) and shaman rituals ("goot") (7.1%). Patients with hwabyung visited psychiatrists less frequently than non-hwabyung patients did. Before consulting a psychiatrist, hwabyung patients had already attempted 2.4 treatment modalities on average. In

another study with 100 hwabyung patients<sup>9</sup>, previous treatment included medical treatment in 66 patients, Chinese herb medicine in 58 patients, drugs prescribed by pharmacists in 59 patients, psychiatric treatment in 21 patients, Christian praying in 14 patients and shaman's "goot" in 12 patients.

In a survey with psychiatrists and herb doctors<sup>17</sup>, many psychiatrists believed that more patients were visiting traditional herb physicians and general physicians (internists or family doctors) than psychiatrists, while many traditional herb physicians believed that most hwabyung patients were visiting traditional herb physicians or seeking religious help.

**Traditional folk methods** Traditional folk methods would provide some insights for development of new medical treatment methods for hwabyung. Korean lay people have recommended "poo-ri" to cope with anger, uk-wool, boon or haan. In the Korean language, poo-ri has many different meanings, such as to solve, resolve, dissolve, disentangle, untie, unbind, release, unfasten, melt or unpack. Usually poo-ri means expressing, releasing, resolving and/or finally reconciling: "Hwa-poori" for anger, boon-poo-ri for boon and "haan-poo-ri" for haan. Hwa-poo-ri (anger solving) sometimes includes the direct expression of anger, which may be destructive. Haan-poo-ri is usually completed through the release of sadness or anger, wish-fulfillment, obtaining success against all odds, restoration of self-esteem, or even revenge.

"Sak-i-da", meaning fermentation or digestion, is another term used for "poo-ri" of hwa (anger). However, fermentation, a way of sublimating anger leading to its transformation, generally takes time and is sometimes considered to have healing, constructive or creative power. The positive, creative, healing or power-supporting aspect of haan is explained as being comparable to productive fermentation and to the creative transformation of anger.

**Shamanism** Traditionally, one of the social systems which has been developed for the "poo-ri" of haan, anger, "uk-wool" or for relieving guilt or curing illness, is the ritual of "goot" (a shaman ritual). In this ritual, evil spirits, who have caused all these bad things to occur, are expelled through rituals involving soothing (comforting) or threatening by calling on the stronger power of another spirit. The shaman ritual takes place in an altered state of consciousness, in order to communicate with spirits, which are usually the souls of the deceased who harbor anger (uk-wool). The shaman acts on behalf of the spirits of the dead or gods, in order to comfort the evil spirits or ask them to leave, or to ask good and strong spirits (gods) to come to expel the evil spirits. The healing power in a shaman ritual is thought to come from resolving bad emotions. In rituals, shamans call and identify the souls of the dead who had hatred, anger or haan. During rituals these bad emotions are expressed and released, and then through symbolic ritual behaviors, the wishes of the dead are fulfilled and through forgiving, mutual accepting and finally reconciling between the dead and the live and letting souls of the dead go free and in peace to the other world of death.

Shaman ritual itself seems to have healing effects. Shaman rituals, as in other festive activities, consists of songs, music and dances. During the ritual procedure in the altered state of consciousness, this identification and reconciliation are extended not only to other people, but to the nature or universe. These festive activities and extended consciousness are accompanied by joy. This joyful spirit is referred to as shin-myung (divine-brightness). Imagined wish-fulfillment, reconciliation and joy appear to have healing effects.

This process of haan-poo-ri in the shaman ritual suggest ways

of developing treatment methods for hwabyung. For example, inducing joy-making and reconciliation can be combined with conventional medical treatment. This process of solving haan or hwa (anger) with joy is commonly found in other creative artistic activities.

**Herb medicine** Folk or Chinese herb medicines have been prescribed for hwabyung for a long time. The prescription is based on traditional Chinese medical theories, in which medicine with water-ki (force of water) can cure the ill condition due to fire-ki (force of fire)<sup>32</sup>. Many Korean patients with hwabyung visit Chinese herb doctors and receive herb drugs or herb tonic (bo-yak). Recently, new herb medicines such as aroma therapy are being advertised as having good effects for controlling anger or hwabyung. However, scientific research is needed to prove their effectiveness, which may be simply placebo effects.

## Psychosocial Interventions

**Psychotherapy** Catharsis or abreaction seem to be effective in relieving pent-up anger. Actually after patients with hwabyung have talked about, generally with tears, their long painful life history related to suppressed anger, haan, "uk-wool and boon" and other psychological pains, they state that they feel calm or relieved, while wiping tears and smiling.

Empathy seems to be important for treatment of hwabyung. Listening, understanding, recognition, supporting and praising seem to be effective. From his own experience of treating hwabyung patients, the author found that simple comfort, acceptance and recognition of their suffering, endurance and sacrifice for the sake of their children and the peace of the family had a good therapeutic effect. Based on Kohut's theory of empathy, which is defined as accepting, confirming, and understanding the human echo evoked by the self, Hwang<sup>16</sup> suggested empathy as constituting the core of psychotherapeutic techniques. Lee et al<sup>6</sup>, also reported that many hwabyung patients need more concrete attention from important others.

Because hwabyung is thought to be mainly related to external causes, there has been a suggestion that psychoanalysis is not necessary for its treatment. However it is generally accepted that there is no reason not to use psychoanalysis for the purpose of exploring the internal psychodynamic factors. The folk labeling of anger as fire (hwa) and the simple folk sagacity in treating anger (fire) as the source of the depression or somatization disorder is intriguingly suggestive of the psychoanalytic etiological formulation of those mental disorders<sup>25</sup>. Understanding of defense styles and coping strategies relating haan and hwabyung is helpful for dynamic psychotherapy of hwabyung. Defense styles and coping strategies related to haan were reported to be somatization, splitting-projection, passive-aggressiveness, oral consumption, primitive idealization, stimulus reduction, self-pity and shared-concerns and dependency<sup>24</sup>. Meanwhile, those related to hwabyung were somatization, oral consumption, suppression-inhibition-withdrawal, avoidance of stimulus and tension, externalization, help-seeking complaining, impulsiveness, pseudoaltruism, omnipotence, self-pity, fatalism and fantasy<sup>13</sup>. These similarities and differences between haan and hwabyung suggest that hwabyung is a pathologic form of haan.

When considering family problems related to hwabyung, family therapy or marital therapy are sometimes essential, together with individual therapy.

In summary, dynamic oriented supportive psychotherapy was highly recommend, but systemic research on the effects of psychotherapy is needed.

**Anger management** Acute anger can be lowered by various techniques of anger management, including behavioral methods and cognitive-behavioral techniques including even self-control. Hwabyung is a chronic condition and may not be a good indication for cognitive behavioral techniques. However, these techniques may be helpful to control anger attacks in hwabyung or major depression.

**Behavioral approach-relaxation** Relaxation protocols target the emotional and physiological elements of anger syndrome. The logic is that if patients reliably employ relaxation when angered, they will be able to calm down, face provocations and frustrations, and access calmer thinking, problem solving, assertion, conflict management, and other skills that they possess and with which they can address the sources of the anger. The procedure includes ① teaching basic relaxation responses, ② training for triggering relaxation, ③ training in becoming more aware of the situations that elicit anger and the ways in which they can respond, ④ training in the application of relaxation for anger reduction within therapy, and ⑤ transferring relaxation skills to the external environment<sup>42</sup>.

**Cognitive intervention** Cognitive interventions target anger-engendering information processing. These include hostile appraisal and attributions, angry self-dialogue, ineffective problem solving, rigid expectations and demands, overgeneralized and catastrophic thinking, aggressive supportive expectancies and attitudes and the like. The logic is that if an individual can record the events themselves, as well as their capacity to cope with these events, in more realistic, less demanding, more benign ways, and if they can cognitively guide themselves through a provocative situation in more calm, task-oriented ways, then intense anger will not be elicited, and they will be able to cope more effectively. As such events are construed in less anger-engendering ways and patients can react to situations in less angry ways, anger is lowered, and they are less likely to react impulsively and aggressively, since they are able to access competencies typically associated with calmer thinking, feeling and reflection<sup>42</sup>.

**Social/communication skills** Most anger is experienced in an interpersonal context. Individuals with problematic anger tend to rush to judgment, be abrasive and abrupt in their communication and react impulsively and antagonistically toward others. Anger and interpersonal conflicts escalate as the person reacts in such a manner and expresses him/herself in less controlled or constructive ways.

Social skills interventions target these interpersonal communication styles and behaviors. The logic is that when angry individuals develop and deploy more effective communication and conflict management skills, they can communicate more effectively and reduce or abort anger, as they acquire the skills required to prevent these escalating cycles of anger. These techniques include becoming aware of the impact of one's behavior on others, basic listening skills without interruption and paraphrasing to clarify understanding, assertive expression of thoughts, feelings and preferences, skills in giving positive and negative feedback to others, interpersonal negotiation and compromise and taking time out. Some behaviors, such as talking in a calmer tone, not using profanity and listening without interruption, are recommended for discussion, modeling and rehearsal. Homework assignments are given to transfer and solidify the learned behavior in the external world.

**Cognitive-behavioral-skill approach (multi-component intervention)** The different cognitive and behavioral techniques

can be integrated to provide a multi-component intervention. For example, the cognitive-relaxation intervention simultaneously targets the cognitive, emotional and physiological elements of anger. The cognitive-relaxation-skill approach is effective in lowering anger. Park<sup>43</sup> reported on group cognitive-behavioral treatment, in which various programs for relieving hwabyung symptoms were introduced. These were ① guiding the patient to ward positive cognitive changes, ② forming a supportive network by creating a group dynamic, and ③ using relaxation techniques for the control of body and mind. Her up-coming studies will focus on the development of intervention strategies that can promote the self-care ability of women with hwabyung.

**Religious counseling** Min et al<sup>1</sup> reported that many hwabyung patients resorted to religion, especially christianity, for the cure of their illness and that some patients had even converted to christianity after they had begun to suffer from hwabyung. He argued that christianity provides teachings about forgiveness, love, sacrifice and hope for the future, with which the suppressed anger of victims of social violence or people suffering from hardship can be resolved.

If it is indeed a dysfunctional form of anger or a pathologic form of haan, hwabyung can be treated with religious methods that deal with anger. Oh<sup>44</sup> proposed forgiveness as a method of haan-poo-ri. A christian, reverend Suh<sup>40</sup>, proposed a concept which he referred to as the "priest of haan", in which he proposed christian ways of solving haan, including the confession of anger and hatred, forgiving, reconciliation and sharing. This approaches can be applied to the treatment of hwabyung. Hwang<sup>16</sup> thought that, hwabyung patients use christianity as a means of acquiring the power and control that they otherwise would lack. He introduced a new relationship of empathy with God, that is neither abusive, manipulative nor coercive, through which the healing of hwabyung is made possible. In this regard, a pastoral counselor helps the counselee understand his/her representation of God. By obtaining this insight, narcissistic persons may identify him/herself with God and will gradually give up his/her defensive mechanism. The figure of Jesus, who always forgives and accepts sinners, will provide him/her with a different God, in the form of a loving image. Imaginative rituals such as touching, hugging with loving hands help the counselee to become acquainted with the newly formed God-representation.

**Community approaches** Haan, as a strong emotion, has provided supporting energy to overcome frustration through the sublimation or transformation (like fermentation, by which unique Korean foods are made) of the energy associated with negative emotion toward positive and creative energy. Korean traditional folk art, including songs (pan-so-ri), poems, mask dances and making ceramics, are known to originate from the process of haan-poo-ri or sak-i-da (fermentation or digestion, or cultivation of emotions). As haan can be transformed or sublimated into creativity, it is praised as a "mut" (smartness, elegance or gusto). Haan has enabled people to endure not only personal hardship, but also national hardship. Collectively, historically or socially, haan has provided people in the lower classes with the power required to overcome injustice in society or even to rise in revolution.

If hwabyung is related to unfair social oppression as in haan, society has the responsibility to do something for these patients. Society should be restructured to support disadvantaged people. The unfair treatment of women and the socially disadvantaged should be removed. The laws or system should be reformed in order to help those in an inferior situation more efficiently.

Support groups should be organized to help the disadvantaged in the community. Public, private or religious organizations should be founded for the purpose of providing counseling, protection (e.g. shelter for the victims of domestic violence) and other forms of help. The healing of hwabyung can not be accomplished if the existing haan-full social structure, including the oppressive, patriarchal or sexist culture, is not corrected. Experiencing acceptance and respect as an equal human being in the community will facilitate healing.

Religious organizations or other community organizations can provide an emphatic and compassionate environment. Christian churches in particular can help patients with the transformation of the narcissistic structure, as well as in dealing with the social causes of hwabyung<sup>16</sup>. Actually, throughout its history, it is well known that the Korean church has been a place of tearful prayers, where generations of wives and mothers, moved by the story of Jesus who suffered as they did, came to breathe, pour out or lift up their haan-full hearts and return to the world from which they came, in order to tolerate abuse for the rest of their days. However, the church should not be confined to providing "a place where people can come to breathe". The church must also be a place where the root causes of women's suffering, which originate in the harmful social structure, can be resolved or righted.

### Pharmacotherapy

In terms of drug treatment, the available information on the biological or neurochemical nature of anger itself is not yet sufficient. Instead, based on a review of drug treatment for aggressive behaviors, impulsivity and violence in various psychotic disorders, intermittent explosive disorder and aggressive behaviors in children and adolescents, some drugs can be recommended for anger management or hwabyung.

**Antiaffective drugs** To date, for aggression, anticonvulsants, lithium and beta-blockers have been studied, as well as the general use of antipsychotic drugs, anti-anxiety drugs or antidepressants<sup>45-51</sup>. Although aggression, impulsivity or violence is not the same as anger, these drugs can be helpful to control anger through controlling behaviors and physiological arousal, as in the case of aggressive behavior.

Antipsychotic drugs, including second generation drugs, have been found to be effective for the treatment of the aggressive behaviors associated with a number of psychiatric disorders, including schizophrenia, bipolar disorder, borderline personality disorder, dementia, mental retardation and disruptive disorders in children. Lithium is known to have antiaggressive effects not only in patients with mania but also in prisoners. Lithium was found to reduce the number of fights among prisoners. The antiaggressive effects of lithium was proven in children and adolescents.

Based on the epileptoid model of aggression, anticonvulsants have been used to control aggressive behaviors<sup>47</sup>. Anticonvulsants are effective in sudden, explosive, unprovoked or nonpredatory aggressive behaviors, which are supposed not to be associated with any particular background psychological state. This kind of aggression is frequently found in intermittent explosive disorder.

Depressive mood, anxiety and tension related to anger may be controlled by antidepressants and anti-anxiety drugs. There have been many studies on the relationship between aggression (including violence, impulsivity, suicide and anger) and serotonergic deficits in the brain. Cocaaro<sup>46</sup> also reported on the effects of SSRIs, especially that of fluoxetine on aggressiveness

in borderline personality disorder.

**Antianger drugs** There is little information available on the drug treatment of anger. However, for the pharmacological treatment of anger, it is noteworthy that Fava et al.<sup>47-51</sup> conducted a series of studies on the effect of fluoxetine on anger attacks in major depressive disorders. Fava et al.<sup>51</sup> suggested that SSRIs, including sertraline and TCAs, might have similar anti-anger effects.

These effects suggested the existence of a relationship between anger or aggression and the serotonin system in the brain. This relationship between reduced serotonin function and aggressive behaviors has been suggested in various studies<sup>52,53</sup>, which reported that reduced 5-HT function was found in male offenders with DSM-III-R personality disorders and those with a history of repeated self-harm. This state was inversely correlated with impulsivity rather than with aggression. However the relationship between 5-HT function and subjective anger has not been reported in the literature.

**Physical symptoms of hwabyung** The physical symptoms of hwabyung, such as palpitation, and other autonomic arousals, such as hot flushing, heat sensation, and cold sensation may be relieved with beta-blockers or antiadrenergic agents. Hypnotics can be used for insomnia. Bodily pains, indigestion and other physical symptoms may be well controlled with conservative medication.

### Prognosis

Hwabyung is known to be a chronic syndrome. Min et al.<sup>1</sup> reported that, when visiting psychiatrists, patients report that they already have hwabyung for a mean duration of 12.9 years, with this duration ranging from 7 months to 46 years. However systemic research on its prognosis is rare.

Lee<sup>6,54</sup>, in his papers, proposed that hwabyung developed through 4 stages, namely ① shock, in which hwa-ki, hot temper, is predominating with anxiety and irritability, ② conflict, ③ resignation (give-up), in which heavy temper is predominating and ④ finally remaining in haan. However Min<sup>1</sup> suggested that hwabyung is a mixed form of these various conditions, which includes active angry feelings (shocks) "uk-wool" and/or "boon", conflict, resignation and haan (sublimation). In hwabyung, part of the anger is suppressed, while the other part is partially or indirectly expressed. Hwabyung is like an inactive volcano, under which there is hot flame and boiling lava ready for eruption or from which smoke and lava are leaking. In this metaphor, an anger attack is like an active volcano with an explosive eruption of flame and lava, and haan is like an extinct volcano which may look beautiful.

Lee et al.<sup>5</sup> reported that about 80% of hwabyung patients considered that hwabyung would be cured anyway but it would take long time.

In a study involving 48 patients with hwabyung<sup>56</sup>, onset was reported to occur from 18 to 63 (SD=11.5) years of age and the duration of illness was from one to 40 years, with the mean being 11.4 (SD=10.1) years. Of these 48 patients, 43 (89.6%) reported that they had received psychiatric treatment. Of the 24 patients who were receiving treatment at the time of the survey, 16 were receiving psychiatric treatment, 3 patients were receiving other medical treatment, 3 patients were receiving traditional herb (Chinese) medical treatment and 2 patients were receiving drugs obtained from pharmacists. Of 49 patients who had received psychiatric treatment, 19 (39.6%) patients reported that their illness had improved much, 17 (35.4%) patients

reported mild improvement, 5 patients (10.4%) reported little improvement, 6 patients (12.5%) reported waxing and waning progress, and 1 patient (2.1%) reported aggravation. On average, 75% of the patients had experienced improvement. Of the 48 patients, 30 (62.5%) believed that hwabyung could be cured and 13 (27.1%) reported incurability.

Among the 19 patients who reported much improvement, 6 patients attributed this improvement to problems being resolved. Others attributed it to resignation or changes in family situation. As for the most helpful treatment, 17 patients (35.4%) reported that it was drug treatment, 5 patients reported that it was religion, 4 patients reported that it was "mind control" by him/her self, 3 patients reported that it was psychiatric consultation, 3 patients reported that it was physical exercise and 2 patients reported that it was the drugs given by pharmacists. Others attributed their improvement to talking with friends, treatment by other specialists, shopping and traveling.

As for the most effective curative method, making the mind peaceful and willing oneself to control the symptoms were recommended in 16 patients (36.4%), ignoring or suppressing the symptoms in 4 patients (8.3%), drug treatment in 11 patients (22.9%), resolving conflicts in 11 patients (14.6%). Other methods were help from the family, physical exercise, religion and working.

In a comparison between the improved and unimproved groups, there was no difference in the demographical data, duration of illness, past history or family history. However, there were more patients currently receiving treatment in the unimproved group.

## Discussion

After providing a brief description of the clinical correlates of hwabyung, an anger-related culture-bound syndrome in Korea, clinical research into the treatment and prognosis of hwabyung were reviewed. As in the case of other psychiatric disorders, hwabyung should be treated in an integrated way, by combining psychosocial therapy, including psychoanalytic therapy and cognitive-behavioral therapy, and drug therapy. It is also necessary for psychiatrists to enrich their treatment strategies by borrowing from traditional healing methods and religious healing methods.

### Further researches beyond the culture-relatedness on anger

In reviewing the literature related to anger, anger appears consistently across cultures and time, and seems to be the most fundamental human emotion. Anger is considered as one of the vital signs of health and disease<sup>56</sup>. Recent research has suggested that anger is one of the most critical psychological factors in cardiovascular diseases, including hypertension and coronary heart diseases, cancer and pain. Nevertheless anger or anger disorder appear rarely in psychiatric literature. Anger has not received proper attention in psychiatry<sup>57</sup>.

However, anger-related syndromes may be universal, including anger attacks in American patients with major depression<sup>49-51</sup>, *ataques de nervios*, a culture-bound syndrome of Mexico related with anger and acute aggression<sup>58</sup> and hwabyung. Their core clinical manifestations seem to be a combination of partly suppressed anger and partly expressed anger.

### Differential diagnosis of hwabyung

How hwabyung is different from other DSM disorders related to anger or aggressive behavior? Depression is related to anger<sup>59</sup>. However, in major depression, anger seems to be successfully repressed, resulting in there being little sign of anger and anger is not included in the diagnostic criteria of depressive disorders. In the criteria of intermittent explosive disorder, included not anger but assaultive acts or destruction of property. In hwabyung, however, suppression may not always be strong enough so as to be expressed partly in a direct way, such as in the form of "anger attacks", but not in violence. At the same time, anger may be partly repressed, resulting in a sad mood, or it may be transformed into anger-specific somatic symptoms (in Korean, fire-like). Sometimes, unbearable anger may be suppressed by dissociation, as in the case of symptoms such as "absent mindedness", by projection as in the case of paranoid feelings or by obsessive-compulsiveness. This group of anger-related symptoms suggest that anger-related syndromes like hwabyung are different from all other emotional disorders.

### DSM or ICD classification and hwabyung

When the phenomenological descriptions of hwabyung are examined, it is clear that the current DSM or ICD classification schemes apply poorly to hwabyung and that this results in unsatisfactory, ill fitting diagnosis. If words are limited to describe things and events in DSM, a syndrome that cannot be described by its limited language could inadvertently be excluded or trivialized. If hwabyung is considered as a variant form of depression<sup>7, 21, 24</sup> the present diagnostic schema for the major depressive disorder of DSM-IV needs to be expanded to allow for its diagnosis in individuals who are culturally different in terms of their expression of mood<sup>26</sup>.

In this regard, American psychiatry and its DSM system may also be criticized as being cultural<sup>26</sup>. The question could be asked as to whether American psychiatry isn't itself a "cultural psychiatry" having a Eurocentric cultural heritage or the product of a particular Euro-American biomedically based psychiatry, dominated by the language categories and epistemologies of scientific objectivism.

The possible universality of anger syndromes and the failure of the DSM or ICD diagnostic systems to include anger-related disorders suggest that there is a need to develop a new concept of anger disorder to be included in an international classification system.

### Anger disorder

If the basis for the formulation of a psychiatric diagnosis are symptoms or behavioral phenomena<sup>61</sup>, a disorder (syndrome), in which subjective anger and its physiological and behavioral symptoms are predominant symptoms, may be categorized beyond its culture-relatedness<sup>62</sup>. For each emotion, emotional disorders have been conceptualized: mania for pleasurable affects, depressive disorder for sadness, and anxiety disorders for fear.

Therefore, there is no reason not to have anger disorder for anger. Anger, like other emotions, may be expressed in specific symptoms and signs. If we identify the symptoms related to anger, we can formulate a new concept of anger disorder. Therefore, it is necessary to study if a syndrome related to anger like hwabyung is found in other cultures. Beyond culture-relatedness, hwabyung will be a good starting point for developing these new ideas about anger disorder. First, research

diagnostic criteria should be established for anger disorder in a universal language. Second, an international cross-cultural study should be conducted with the same protocol. If we can identify the core phenomena commonly shared by these syndromes, then anger disorder can be formulated based on these symptoms.

### Biological studies

Fava et al<sup>49-51</sup> reported that fluoxetine treatment appeared to be beneficial in reducing anger in these patients. This suggests that anger, hwabyung or anger syndrome may have some specific biological basis. One of the future directions for the study of anger might be to investigate the relationship between anger and the central serotonin system and treatment of anger syndrome with serotonin-related drugs such as serotonin reuptake inhibitors<sup>47-53</sup>.

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