



Johyeonbyung (attunement disorder): Renaming mind splitting disorder as a way to reduce stigma of patients with schizophrenia in Korea

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ABSTRACT

The term schizophrenia, which comes from the Greek roots “skhizein” and “phren,” was translated as “*Jungshinbunyeolbyung*” in East Asian Countries, including Japan, Korea, and China. The term literally means “mind-splitting disease.” This term has generated a misconception of the disorder as an untreatable chaotic personality, thus instilling stigma and causing suffering in patients and their families. This socio-cultural connotation has impeded medical treatment of schizophrenia. Recent neuroscience research has suggested neural network dysfunction in schizophrenia. Accordingly, a new term, “*Johyeonbyung* (attunement disorder)”, was coined in South Korea. This term literally refers to tuning a string instrument, and metaphorically it describes schizophrenia as a disorder caused by mistuning of the brain’s neural network. We expect that the term *Johyeonbyung* will incite less prejudice and that its metaphoric description of the disorder may help patients to access medical treatment in the early phase. The name of a psychiatric disorder can influence others’ attitudes toward patients; thus, discretion is crucial in naming psychiatric disorders.

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1. Background

Kraepelin (1899) introduced a dichotomy in the understanding of psychosis, distinguishing between dementia praecox and manic-depressive illness. Based on his 8-year follow-up observation of 647 patients with “schizophrenia” in the Burghölzli Hospital, Bleuler described “schizophrenia” as unrelated to other forms of dementia and without early onset, as in Kraepelin’s dementia praecox. Thus, Bleuler (1908) coined the term “schizophrenia” in 1908 without using adjectives or nouns derived from the term dementia praecox. Additionally, Bleuler emphasized the psychological process of schizophrenia and described the disorder as a splitting of different psychological functions (Heckers, 2011). In proposing the term schizophrenia, he also suggested that the term had a linguistic advantage over dementia praecox in that it could give rise to an adjective (e.g., the “schizophrenic” patient). Unfortunately, he did not foresee that labeling a patient as

“schizophrenic” could imply that the person, rather than the illness, is to blame for the symptoms (Stotz-Ingenlath, 2000).

In English-speaking countries, the word schizophrenia is informally used to mean weird, contradictory, and unpredictable. Recent studies have shown that the word schizophrenia was used metaphorically 28% and 11% of the time in US and UK newspapers, respectively (Chopra and Doody, 2007; Duckworth et al., 2003). Illnesses with etiologies considered to be mysterious are prone to be used as metaphors, and such metaphorical use of illness makes the illness shameful (Sontag, 1978). Thus, the misuse of the word schizophrenia may contribute to stigmatization, or at least cause distress, in patients and their caregivers (Chopra and Doody, 2007).

In 1937, the Japanese Society of Psychiatry and Neurology approved the translation of the term as “*Seishin-bunretsu-byo* (精神分裂病 in Chinese characters)”. This term became commonly used in the Chinese character cultural sphere, including Korea. In Chinese it is pronounced “*Jing-shen-fen-lie-zheng*”, in Japanese, “*Seishin-bunretsu-byo*”, and in Korean, “*Jungshinbunyeolbyung*”. Unlike the word “schizophrenia”, whose meaning is not comprehensible unless one knows the Greek roots *skhizein* (σχίζειν, to split) and *phren* (φρήν, mind), translated into Chinese characters, the term conveys its literal meaning (i.e., mind-split disease) to the people of far east countries. Schizophrenia has become

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misinterpreted as split personality disorder, thus instilling stigma and causing suffering in patients and their families through the misconception that it is untreatable and is characterized by a chaotic personality. Consequently, its socio-cultural connotation has impeded its early detection and early treatment.

Because of the stigmatizing effect of the term, the Japanese Society of Psychiatry and Neurology replaced the old term with “*Togo-shitcho-sho* (統合失調症; integration disorder)” in 2002 at the request of the National Federation of Families of the Mentally Ill in Japan. In Japan, the new term was rapidly disseminated once the term was revised from “*Seishin-bunretsu-byo*” to “*Togo-shitcho-sho*”, presumably because of the negative connotation of the former term. Additionally, most Japanese psychiatrists indicated that the new term was much easier to use in notifying and explaining the diagnosis, as well as in psychoeducation (Sato, 2008). In a study of stigma using the Implicit Association Test in Japan, the old term was strongly associated with “criminal”, and this association became significantly weaker with the new term (Takahashi et al., 2009). In Hong Kong, the term “*Si-jue-shi-diao* (思覺失調; dysregulation of thought and perception),” which means psychosis, has been used instead of “*Jing-shen-bing* (精神病)” in an effort to make psychiatric services more accessible to young people with psychosis (Chung and Chan, 2004).

The stigma of schizophrenia can be resulted from the disease itself, as some people with schizophrenia exhibit bizarre thought or behavior. In South Korea, the name of “*Jungshinbunyeolbyung*” has led to aggravation of the general public's schizophrenia-related stigma and prejudice. Thus, prejudice against people with schizophrenia and mental illness is conveyed in South Korean news articles through misuse of the term. Surprisingly, in 12.8% of news articles, these words were used to belittle or criticize a person regardless of disease state (Kim et al., 2011). Thus, patients with schizophrenia and their families in Korea have greatly suffered from the stigmatizing effect of this misleading term.

2. Selection of the new term, “*Johyeonbyung*”, and its implications

In September 2007, a Korean internet schizophrenia advocacy group submitted a petition bearing 3689 signatures to the Korean Society of Schizophrenia Research, leading them to declare renaming schizophrenia an official goal. Renaming “*Jungshinbunyeolbyung*” was selected as the most urgent and important project to be launched in response to the patients' and their families' earnest requests, the trend in Asia toward renaming schizophrenia, the unique cultural nature of the Sinosphere, and the importance of the name to matters of treatment. In the fall of 2008, more than 30 candidate names for schizophrenia were proposed by psychiatrists in Korea. The Korean Neuropsychiatric Association and Korean Society of Schizophrenia Research changed the term from “*Jungshinbunyeolbyung*” to “*Johyeonbyung* (調絃病, attunement disorder)” in 2011 after collecting diverse opinions. In 2012, renaming schizophrenia in South Korea was finished as the law including new term for schizophrenia was passed in the National Assembly in Korea (Lee et al., 2013).

The new term, *Johyeonbyung*, metaphorically describes schizophrenia as a disease of inadequate tuning of the neural network or the mind. The word “*Johyeon*” means to tune a string instrument, which is derived from a passage in a Buddhist text: “Studying is like tuning the strings of a *geomungo* (Korean string instrument) in which tightness and looseness must be befitting”. This Buddhist passage refers to the story of Buddha teaching one of his disciples that, in the pursuit of enlightenment, hastening will bring upon sickness, whereas procrastinating will result in laziness; “*Johyeon*” emphasizes the importance of the middle way for a mindful peace. There is also a Korean metaphoric expression, “to let the mind

string go”, which refers to a mentally healthy person when he/she is not being vigilant. Thus, the “mind string” symbolizes the functional unit of the brain. *Johyeonbyung* metaphorically implies that schizophrenia is a disease in the brain where neural circuitry is inadequately tuned.

Wernicke, Meynert, Dejerine, and others suggested that psychiatric disorders, including schizophrenia, originate from dysfunctions in brain connectivity (Bullmore and Sporns, 2009). Mesulam (1990) proposed a system of simultaneously operating and interacting components as a model of complex behavior that is based on a flexible computational architecture. He extended the concept of neural circuitry to neural network theory, which explains the activity patterns of brain components involved in cognition and behavior. In schizophrenia, both structural and functional abnormalities in brain connectivity can be found (i.e., structural changes in fiber connectivity at the neuronal level and abnormal modification of synaptic plasticity at the synaptic level). Abnormal microcircuits in the prefrontal cortex and hippocampus that involve glutamatergic pyramidal neurons and GABAergic parvalbumin-containing interneurons have been found in schizophrenic patients (Meyer-Lindenberg, 2010). These microcircuits generate oscillations that play an important role in brain activity, plasticity, and connectivity (Kwon et al., 1999; Buzsáki and Draguhn, 2004). The cortico-cerebello-thalamo-cortical circuit (CCTCC) is hypothesized to function as a feedback structure composed of diverse converging nodes that are involved in supervising and modifying flexible mental activity. Andreasen et al. (1999) proposed that a disruption in CCTCC activity induces cognitive dysmetria that eventually leads to cognitive disorder and diverse clinical manifestations in schizophrenia. The importance of the CCTCC as a neural substrate for complex mental activities such as language and episodic memory has been theoretically and empirically supported. Evidence for abnormal macrocircuitry includes neuroimaging findings of disturbed prefrontal-hippocampal functional connectivity and a deficit in corticothalamic structural connectivity in schizophrenia (Kim et al., 2007; Meyer-Lindenberg et al., 2005). Accordingly, the “string” in *Johyeonbyung* is a metaphorical representation of neuronal connectivity (e.g., white matter connectivity and connectivity between brain regions involved in diverse functions) and concisely describes the key pathology in schizophrenia.

Using a metaphoric term has the advantage of avoiding directly eliciting opinions that lead people to speculate about the true meaning. Thus, indirect meanings can prevent future stigmatization. Additionally, analogies have been used in medicine to explain physiological and pathological processes, name and classify diseases, learn new ideas or propositions, and reason about a strategy to solve problems (Pena and Andrade-Filho, 2010). Whereas “mind splitting” implies a permanent breakdown of mind structures, “*Johyeonbyung*” implies that the brain or mind is simply not functionally attuned. The new analogic term is also useful for explaining the complex pathophysiology of schizophrenia in a simplified manner to non-experts. For example, positive symptoms related to hyperdopaminergic activity and negative symptoms related to hypodopaminergic activity can be explained as an analogy to tightness and looseness in tuning a stringed instrument. The word “*Johyeon*” can also refer to the strategy for the treatment of schizophrenia, which is to achieve a balanced functioning of neurotransmitters.

It is suggested that the diagnostic criteria of the DSM-IV and the DSM-5 lack a distinctive and actual Gestalt in the schizophrenic experience (Maj, 2012; Parnas and Henriksen, 2013). On the while, the English translation of *Johyeonbyung*, “attunement disorder,” reflects the concurrent phenomenological understanding of schizophrenic Gestalt. Stranghellini suggested “attunement disorder” to conceptualize schizophrenic vulnerability. He regarded

attunement disorder as being formed by eccentricities in the structure of personal values and beliefs (Stanghellini, 2000).

One caveat with respect to the new term is that the word “*Johyeon*” is an old Korean expression that cannot be immediately deciphered. Thus, without an explanation, its meaning cannot be conveyed, and this may hinder the dissemination of the term to the general public. However, this disadvantage was not considered significant, as the Korean Neuropsychiatric Association and Korean Society of Schizophrenia Research placed a higher priority on abolishing prejudice and preventing new prejudice. Additionally, the meaning of the new term may be too broad and may also be applied to neurosis. However, the term “schizophrenia” or the Japanese term “integration disorder” has a broad meaning as well and could have described other psychiatric disorders if it had not been used for schizophrenia. Furthermore, a recent Korean study found that *Johyeonbyung* induced significantly less prejudice and stigma than did *Jungshinbunyeolbyung* (Kim et al., 2012).

3. Conclusion

The name of a disease can have a significant impact on the attitude toward people who are diagnosed with the disease. The term, *Jungshinbunyeolbyung*, written in Chinese characters, unintentionally and frequently negatively implied a splitting of personality or an intractable, chaotic state. This has played an important role in increasing social stigma and prejudice toward persons with schizophrenia in Korean society as well as in the Sinosphere more broadly. The stigma has become an obstacle to treating patients with schizophrenia. Thus, the Korean term for schizophrenia has been changed to *Johyeonbyung*, which metaphorically connotes the key pathology of dysfunctional neural circuitry and neural networks. We expect that this new term will help promote early detection and treatment of schizophrenia and will diminish social stigma and prejudice. We hope that it will eventually contribute to the social rehabilitation of persons with schizophrenia. In conclusion, caution is necessary in coining a term for a psychiatric disorder, as the term can affect public attitudes toward people who are labeled with this term.

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