Chula Med J Vol. 65 No. 3 July - September 2021;349-357 DOI : 10.14456/clmj.2021.46

Review article

Culture-bound syndrome

Thanya Lunchaprasith[a], Teeravut Wiwattarangkul[b], Sorawit Wainipitapong[b,*]

[a] *Silpakorn University International College, Bangkok, Thailand*
[b] *Department of Psychiatry, Faculty of Medicine, Chulalongkorn University and King Chulalongkorn Memorial Hospital, the Thai Red Cross Society, Bangkok, Thailand*

Many mental disorders are expressed in different characteristics, as a result of cultural factors. These conditions, known as culture-bound syndrome, have been studied in the field of psychiatry and social anthropology. Some mental abnormalities are treated as distinctive psychiatric disorders; many others were not yet clinically recognized. Therefore, patients with the conditions should be evaluated and treated in both psychiatric and cultural practices. It should be noted that, cultural specific mental disorders gradually fade in the age of globalization.

Keywords: Culture, mental health, psychiatric disorder.

The purpose of this article is to provide a general overview of cultural-bound syndrome or mental illnesses attributed by socio-cultural factors. In this view, cultural environment can stimulate mental disorder and provokes region-specific psychological illnesses. To understand cultural bound syndrome thoroughly, it is necessary to incorporate socio-anthropological knowledge alongside with clinical studies. The following issues will be addressed: socio-cultural factors associated with mental illness, anthropological explanations of mental illness, socio-cultural factors attributing to mental disorder and classification of culture-bound syndrome according to mental states.

Socio-cultural factors associated with mental illness

Culture has long been recognized as factor provoking mental health conditions.[1] In early 20th century, Emil Kraepelin coined the concept of ‘comparative psychiatry’, which postulates that ethnicity and culture have impact on mental health and psychiatric disorder. This is further developed into ‘transcultural psychiatry’ by Wittkower E. and Murphy H. By concretizing Kraepelin’s assumption, transcultural psychiatry concludes that race, ethnicity and culture are proven to affect mental health and psychosocial conditions.

In this regard, mental illness can be attributed by psychosocial factors. Regarding the diagnosis of mental health, the following concepts such as culture and value should be taken into account.

- **Culture** is defined as a pool of knowledge, thought, feeling and belief that are necessary for everyday life. It also encompasses social order, moral standards evolved over generations, all of which contributes to the formation of social habits. Culture also includes the society’s legacy, given the nature of thought that is developed differently from one society and another.[2]
- **Value** is the interest commonly shared by people in the community. It is what people in the society regard as valuable and contributory. What the society sees as positive in one society will not be regarded as such in another community. Value forms part of the community’s culture.

In this perspective, stress can be generated by cultural factors such as excessive adoption of western culture, deviance from social norms.[3] At the same time, elements of culture can be used as stress relievers. For example, religion, belief and ritual and tradition help reduce feelings of fear and promote happiness.

Deviance can emerge from the conflict between rationality and superstitious belief upheld by people in the society. More educated, people tend to denounce the society’s belief that they see illogical. [4]

***Correspondence to: Sorawit Wainipitapong,** Department of Psychiatry, Faculty of Medicine, Chulalongkorn University and King Chulalongkorn Memorial Hospital, the Thai Red Cross Society, Bangkok 10330, Thailand.
E-mail: sorawit.md@gmail.com
Received: March 15, 2020
Revised: April 28, 2020
Accepted: July 16, 2020

Value and culture can be transmitted from one society to another. However, conflicts may arise if it is not embraced in the new society. Discomfort brought by cultural conflict can lead to stress and affect people's mental health.

Value and culture have considerable impacts on people's mental condition. Particularly, they stimulate the feeling of happiness and sadness. With regards to superstition, it is commonly perceived in the society that believers will be blessed, whereas non-believers will be punished. As proven by a number of anthropological fieldworks in Tahiti, indigenous people live a happy life in general, believing that sadness has been taken away by spirits.

Nevertheless, reliance on superstition may lead to misperception. It is important to consult the shaman before proceeding with any actions. People will feel happy and confident if they follow the shaman's advice. On the contrary, non-compliance results in the feeling of discomfort. This is in fear of spiritual punishment.

Sigmund Freud introduced the concept of 'inherited psychical endowment', referring to the transmission of beliefs, behaviors, and taboos across generations that sometimes go beyond rationality. It is widely upheld in the society that non-compliance will result in negative conditions such as illness.

Values and culture may result in culture-bound psychological disorder. Psychological disorders can be attributed by cultural factors that are unique to the location. There, when diagnosing mental conditions, it is important to take into account local cultures.

Several anthropological field works conclude that illness is perceived differently in a given society. 'culture-bound syndromes', 'culture-specific syndrome' or 'folk illnesses' refers to those related with socio-cultural conditions, whose symptoms are expressed through behaviors, emotions and feelings. Affected by socio-cultural factors, some people consequently suffered from behavioral problems and mood disorders.[5]

Causes of culture-bound syndrome include, but are not limited to, the following elements:[6]

- Society's value and culture;
- Child rearing and certain personality traits, which are vulnerable to mental disorders;
- Denunciation and punishment, such as social sanction or, in the other hand, social privilege;
- Vengeful feelings and societal changes;
- Emotional extremes experienced by peers;
- Certain customs and traditions and harmful cultural practices; and,
- Education and sexuality.

Anthropological explanation of mental illness

In the field of social anthropology, mental illness is caused by three factors: supernatural power, preternatural powers, natural powers.

Presumption 1: Supernatural power

In this regard, it is believed that mental illness is rooted in supernatural power. Any mental conditions, ranging from mild stress to psychosis, are resulted from the will of the spirit.[7] People who do not comply with social norms are found to develop stress because they were possessed by spirits, as an act of punishment.

The presence of spirit in social belief includes 'good spirits', those that give people blessing in most cases. They will put curse on people only when they are seen to behave immorally, which include both physical and mental illness. Worshiping ceremonies are carried on to invoke spirits for assistance and protection.

The other type of spirits is 'evil spirits', which are souls that come from humans who die suddenly, agonizingly, from illness. They are those who normally curse people, especially those who violate the social norms. In this regard, social deviance is not caused by the individuals' will but rather by the will of bad spirits. Mental disorders were believed to be caused by bad spirits.

Therefore, rituals are carried on to repel evil spirits or ask for forgiveness. They are sometimes done by witchdoctors.

Presumption 2: Preternatural power

In this regard, it is believed that mental illness is caused by preternatural factors. Mental illnesses are caused by mysterious power or sorcery such as curse spell, black magic, and corpse oil use. It also includes mental disorders that are side effects of amulet use. It is believed that people are likely to suffer from mental illness if they are not capable of controlling the magic.[8]

Thailand is a country where tradition and modernity can coexist. Modernity is expressed in the form of urbanization in large cities and the adoption of global culture. Superstition is still regarded as a dominant narrative in many communities.

This includes illness that are religious driven. Treatments are performed by shamans and monks, who incorporate traditional medicine and religious ritual in dealing the medicine.

It should be noted that although our world is primarily caused by illness, the superstitious approach to medicine remains pertinent in the Thai society. There are many cases in which superstitious are used together with scientific knowhow in treating patients. Many Thai patients with contemporary treatment also seek spiritual help to recover from the disease.

Despite the globalisation that homogenises communities across the world, localities can maintain their distinctive characters. In medical perspective, there are physical disorders that developed by specific environment of the place. Similarly, mental conditions of people are considerably influenced by the socio-cultural factors. In the Thai folklore, preternatural causes of illness include, but are not limited to, the following elements.

1. **Breach of religious oath:** Mental illness occurs to people who do not comply with the oath they made to a god or a spirit.
2. **Taboo:** Offense to the spirits may result in mental disorder. Taboo are measures used by the society to control its members. Taboo are a set of beliefs that are transmitted across generations and apparently goes beyond rationality. Many people who commit taboos would feel guilty or anxious for fear of being punished. Sometimes, this may lead to mental disorders.
3. **Karma**: Based on Buddhist beliefs, mental disorder is believed to be a consequence by karma or actions committed in a previous life.
4. **Corpse oil use**: It is believed that mental disorders are provoked by charming oil. If the patients are not healed in a timely manner, they may suffer from psychosis.
5. **Dark poison**: Dark poison can be herbs brewed with dark curse, whose consumption can be fatal or result in severe agony (pain, extreme body composition change, psychosis).

Preternatural consequences are severe. Efforts are made to prevent these factors from happening or heal mental sufferers. Very often, Buddhist monks are believed as having healing power for preternaturally caused illness.

Presumption 3: Natural power

In this regard, it is believed that mental problems are related to biological factors, including imbalance of five elements according to traditional medicinal knowledge or genetic disorder.[9] For the latter, it is believed that psychosis is a condition that can run in families. The person whose parents have psychotic conditions has a high tendency to develop the same mental illness. Also, the grief after traumatic events (e.g. sudden loss or separation) may lead to psychological disorder.

In some faith, Strong lust are seen to impoverishes the mind. Men who frequently masturbate may develop psychosis in the future.[10] Marriage or ordination are seen as a solution to this mental problem.

Mild mental conditions can be self-healed or with help from family. External help is necessary if mental condition is aggravated. People would, in general, rely on 'folk healers.' There are different treatments for mental problems depending on presumed causes. Shamans are able to cure mental conditions caused by demonic possession. Sorcerer are able to treat mental conditions caused by dark magic.[11] However, in the contemporary times, patients with psychiatric disorders are treated in the hospitals or mental health services.

Socio-cultural factors attributing to mental disorders

Culture is one of numerous factors responsible for characteristics or personality of those in different societies. Consequently, the epidemiology of mental disorders varies from one place to another, given people's cultural viewpoints or attitudes. In the less tolerant society, minorities are excluded from the majority given the conflict in terms of values and beliefs. Social exclusion is an important cause of mental illness.

Cultural attitude:

- Obsessive-compulsive disorders are rarely found among African and Chinese people. These people seek psychological help for excretion.[12]
- People living in the Eastern societies have more tendency to develop mental disorder because introverts are seen as ideal.[13] On the contrary, people living in the western world are less likely to develop some psychiatric disorders given the prominence of extroversion.

Cultural conflict:

Cultural conflict arises from the encounter between two different cultures, as exemplified in rural-urban migration, socio-cultural changes, and resettlement. [14]

- It is found that rural people in Africa and Haiti, when moving to cities, develop a similar mental condition as white settlers.
- Sudden cultural changes can lead to severe stress, as evidenced by Tunisian Jewish migrants in Israel tend to have more antisocial behaviors than Jewish in Yemen. Also, the migrant group has higher prevalence of psychosomatic symptoms.

Classification of culture-bound syndrome according to mental states

According to Group on Culture and Diagnosis (DSM-IV-TR Appendix)[15], culture-bound syndrome can be defined as mental symptoms recurring in a region, which can lead to anxiety, agony, danger, difficulty and illness. These symptoms may fit within the diagnosis criteria by DSM IV-TR. They are mental syndromes that are specific to the area and may bear local names.

Culture-bound syndromes are part of transcultural psychiatry. They often occur in a specific region but are rarely found in other locations with absence of medical conditions, except in some reports from Western countries.

Culture-bound syndromes are classified by Kiev A. as follows:[16, 17]

Anxiety states

a. Koro symptoms (retraction of genitalia)

- 'Koro' is derived from Makassarese language, from Sulawesi, Indonesia (meaning: to retract) or the Malay word '*koro*' (meaning: turtle), signifying the ability of turtle to retract head.[18]
- The symptoms are commonly found in Southeast Asian countries such as Indonesia, Malaysia, Singapore and Thailand, in particular among overseas Chinese. Sometimes they spread among peers. The emergence of 'Koro' symptoms corresponds with traditional beliefs that have been transmitted across generations.

Signs

- In early stage, patients experience stress, cold sensation in the hands and feet, tachycardia, pale, sweating, anxiety, numbness in hand and feet, and unconsciousness.
- At a later stage, the patients develop contraction or severe pain. They hold their genitalia or ask others to take a hold for them for fear of genital retraction into abdomen and resultant death. In some cases, the patients would ask others, usually of the same gender, to massage on the abdomen or tie the penis for fear of genital disappearance. The sign usually lasts for less than one hour.
- 'Koro' symptoms are not usually severe. Factors contributing to severe 'Koro' symptoms are hypersexuality, cheating, internal conflict. They develop anxiety because they are influenced by the traditional belief that compulsive sexual behaviors can damage health.
- In Singapore and Thailand, Koro syndrome is caused by the consumption of certain food such as bananas and certain shellfishes. It is believed that shellfishes' retracting behavior contributes to the symptoms.[19]

Treatment

- Treatment may start from anxiety and fear relief. Patients may seek psychological advice for help. Medication is sometimes necessary. Essentially, patients should be reassured that their genitalia will no longer be contracted and not resultant death.

b. Brain Fag: Commonly found in African American, these symptoms refer to physical abnormalities such as headache and neck pain, loss of vision, and skin burn. This also includes somatoform disorders, depression and anxiety as a result of concentration deficit and academic challenges faced by high-schoolers.[20]

c. Susto (espanto): Susto, commonly found in Latin American, describes mental behaviours due to the fear of superstitious power that may harm health, including anxiety, irritability, loss of appetite, insomnia, fear and sadness.[21]

d. Neurasthenia[1] (Chinese:神经衰弱[2]): Commonly found among the Mainland Chinese, overseas Chinese and Japanese[3]. Neurasthenia describes a mental disease that is presumably caused by nervous system fatigue. It is manifested through over 50 signs including poor concentration, headache, anhedonia, irritability, dizziness and insomnia.[22]

---

[1] This diseases is named by George Beard in 1868 as 'neurasthenia'

[2] 神经衰弱 (Pinyin: Shenjing Shuairuo) means weakness of the Nervous System

[3] 神经衰弱 (Japanese pronunciation: Shinkei suijaku)

This culture-bound syndrome is mostly ignored in Western medical studies because they are believed to be a part of mood or anxiety disorder. However, it is treated as a distinctive mental condition in the Chinese medical world, as it is listed in the Chinese Classification of Mental Disorders (CCMD-2-R).[(23)] To diagnose the condition, patients should exhibit at least three out of the following five categories for at least three months: fatigue, mood, alertness, neurological symptoms and sleep problems. This should impose significant impacts on distress or occupational, academic, social function. These patients require treatment.

This is commonly found in people experiencing problems in the workplace, e.g. unwanted assignments at work, distance from family members, strong criticism at work, over workload, lost interest at work. Besides, this disorder is commonly found in those who experience study difficulties and relationship problems (e.g. separation, marriage conflicts, departure of immediate family members).

Based on Chinese medical tradition, depression is caused by relationship factors, and the socio-cultual environment, and may result in physical symptoms. This is manifested in (qi - 氣) deficiency that forms part of life energy (jing - 精) and causes lack of liveliness (shen - 神). This is different from the Western psychological condition that ignores the socio-cultural aspects related to the mental condition.[(24)]

Treatment of this disorder is a combination between Chinese and Western Medicine. This includes antidepressants together with Chinese herbs, vitamins and supplements.

2. Obsessional-compulsive neuroses

***a. Frigophobia (paling)*:** This is a kind of repetition compulsion disorder. Patients diagnosed with this mental condition develop extreme fear of cold weather and wind. Believing that heat is gone, patients wear thick clothes or constantly keep themselves warm.[(25)]

***b. Lahtah*:** Commonly found in Southeast Asia ('บ้าจี้' in Thai language), the patients are easily swayed by surrounding environments. With extreme surprise, they exhibit uncontrollable behaviors and verbal expression such as echopraxia, echolalia, coprolalia, and automatic obedience.[(26, 27)]

3. Phobic states: It is a syndrome in which the patients develop distress from fear.

a. Evil eye or Mal Ojo: Commonly found among Mexican American kids, this symptom describe phobia caused by being visually controlled. When stimulated, patients develop extreme fear or anxiety.[(28)]

b. Fear of eye to eye confrontation: Commonly found among the Japanese children or teenagers, this symptom described phobia of eye contact. Patients develop extreme anxiety when being looked by others or accidentally glance at others.[(29)]

c. *Hikikomori (引きこもり[4])*: This is a social withdrawal condition commonly found among Japanese people, especially the male in late adolescence in the middle class, who is usually in a good health condition.[(30)] It is estimated that to date there are 1 million people with this condition.[(31)]

Patients with this mental condition will separate themselves from the rest of the society. They usually lock themselves in a room for several years (up to twenty years). Patients are in general nonchalant and develop depression, with very few reports on criminal behaviors. Other symptoms are also found such as agoraphobia (fear of being in open spaces), insomnia, obsessive-compulsive disorder, paranoid idea and regressive behaviors.

This condition is possibly caused by the economic downturn in Japan. As they live in a highly-competitive society, Japanese face a lot of pressure both at school and work. According to Miyadai S., a Japanese sociologist, hikikomori is caused by modernization that makes the family put high expectations over children, many of whom experience role conflict when they are growing up.

4. Depressive reaction

a. Hiwa (Itck): This is described by hurt feelings experienced by elderly Moab male when their wives (usually young) escape from them. This usually results in killing attempts and can further be developed into psychosis. In this stage, patients will paint their face in black, as if they were preparing themselves for a battle.[(32)]

b. Windigo psychosis: This is described by the cannibal desire among the Algonquians in Canada, who believed to be possessed by a wendigo. They also have depression and believed themselves as monsters.[(33)]

c. Malignant anxiety: This is a depressive disorder found in coastal African countries. Fear of black magic power, patients exhibit perpetual mental illness whose signs are similar to acute depression, e.g. anxiety, worrying about dark magic power and confusion. They are found to conduct homicidal or suicidal attempts.[(34)]

[4] Literal Meaning: detention or separation

5. Dissociative states: A mental disorder that are similar to schizophrenia (with the presence of mania episode). This often occurs together with hysteria and drug addiction.

a. ***Amok (Spain: Mal de Pelea[5]):*** This is a dissociative symptom which includes aggression, paranoid, fatigue, memory loss, and may lead to suicidal and homicidal attempt. This is particularly found in Malaysia, Laos, Philippines, Polynesia, Papua New Guinea and Puerto Rico, particularly males who are Malay, Muslim, lowly-educated, lives in rural areas and aged between 20 - 45 years old.(35, 36)

The depressive disorder is associated with the feeling of loss, embarrassment, anger, low self-esteem and is categorized as non-severe pressure. Possibly, it is developed by conflicts in the workplace, family problems, social exclusion, jealousy, gambling debt and unemployment. Rarely, it may stem from more serious issues such as the departure of many family members at the same time.

According to Malaysian Law, law abusers with this mental syndrome will not be convicted for severe punishment by reason of insanity- actions being conducted unconsciously.(37, 38) They are evaluated by psychiatrists in the hospital, where they are normally diagnosed as schizophrenia and treated with antipsychotic. However, there are cases that patients are regarded as criminals and receive life imprisonment.

b. Attaque de Nervios [6]: This is a mental disorder found among the Hispanic ethnic group who experience family-related problems such as departure of immediate family members, divorce, marriage problems, accidents occurred to family members. When stimulated, patients exhibit aggressive behaviors physically and verbally such as crying, shaking, compulsive shouting. In some cases, patients also have seizure signs, fainting, dissociative disorder, or attempt to suicide.(39) Also patients may temporarily experience loss of memories during illness.

This mental disorder is commonly found among females, lowly educated and suffer from marriage problems (such as divorce, separation or widowhood) who recurrently experience suffering.(40) They develop a false belief that their health is bad and also experience depression.

As for treatment, patients will be placed in a safe environment to prevent them from killing and suicidal attempts. Also, psychotherapy is used to convince the patients that they have people who can support them and allow patients to talk about their problem. The latter one is considered as the best treatment strategy to deal with patients' uncontrollable behaviors.

Symptom observation is sufficient for patients who do not develop psychological illness. Treatment is needed for patients who recurrently exhibit symptoms and may vary according to patients' condition such as family problems, and family conflict. Short-acting benzodiazepine can be used to treatthose who have a tendency to develop signs. When treating 'Attaque de Nervios'-diagnosed patients, it is essential to understand socio-cultural environment of Hispanic[6] ethnic people who are mostly low-income and regularly suffer from racism.

***c. Bouffée délirante[8]*:** Found among Haitian, this mental disorder is similar to brief psychotic disorder. Patients diagnosed of '*Bouffée délirante*' develop acute aggression, agitation, confusion, paranoid, visual and auditory hallucination, as in those with brief psychotic disorder.(41)

d. Hsieh-Ping: Found in Taiwan, patients will develop trance state such as epilepsy or shaking, dyschronometria (loss track of time), change of perception, repetitive speech, hallucination, and misperception.(32) Mostly found in female, patients believe to possessed by spirits because of the lack of worship.

e. Piblokto: Commonly found among Eskimo ladies, patients show signs such as depression, shaking, anxiety and crying before running into snow, jump into the water, conduct self-injury, abuse others, confusion, loss of memory. Possibly it is resulted from the effort to readjust ego to prevent extreme anxiety, caused by the departure of cousins or severe injury.(42)

f. Spirit possession: Mental illness in which the patients believed to be possessed by spirits, which vary according to their religious beliefs.(43)

g. Falling out: Found among African American, patients exhibit symptom similar to epilepsy, as a result of traumatic events such as robbery.(44)

h. Ghost sickness: Found among native Americans, patients exhibit physical abnormality such as fatigue, headache, and fainting, together with psychological abnormality such as anxiety, hallucination, confusion, loss of appetite as a result of dark magic.(45)

---

[5] Meaning: fighting sickness

[6] Spanish language, meaning: Attack of Nerves

[7] Countries that speak Spanish or have Spanish ancestry such as Caribbean (Puerto Rico, Cuba, Dominican) and Latin America (Mexico and some countries in south America)

[8] French language, meaning: Delirious Breath

Conclusion

Despite the fact that mental disorder being found across the world, there exists phenomenological diversity of mental diseases. As this paper illustrates, many mental disorders are region-specific. The clinical knowledge alone is not sufficient to effectively diagnose mental conditions. The socio-cultural analysis is proven to be useful in understanding mental conditions in the region and designing proper treatment for psychiatric patients.

Nevertheless, the occurrence of culture-specific mental abnormalities[6] may fade in the future due to a number of social trends that predominates people's perception. Modernization revolutionizes people's perception towards things around them, including illness. As Max Weber's 'disenchantment' concept illustrates, the world becomes more rationalized given the predominance of logical positivism-every phenomenon being accompanied by a scientific explanation. Also, globalization is responsible for the disappearance of culture-bound syndrome. Globalization homogenizes communities across the world by orienting towards western ideas. The local interpretations of mental abnormality become less salient, in favour of contemporary western medicine that are deeply ingrained in positivism.

References

1. Subudhi C. Culture and mental illness. In: Francis A, Rosa PL, Sankaran L, Rajeev SP, editors. Social work practice in mental health: Cross-cultural perspectives. New Delhi: Allied Publishers; 2014. p. 131-39.
2. Alarcon RD. Culture, cultural factors and psychiatric diagnosis: review and projections. World Psychiatry 2009;8:131-9.
3. Demes KA, Geeraert N. The highs and lows of a cultural transition: a longitudinal analysis of sojourner stress and adaptation across 50 countries. J Pers Soc Psychol 2015;109:316-37.
4. Matsueda RL. The dynamics of moral beliefs and minor deviance. Social Forces 1989;68:428-57.
5. Guarnaccia PJ, Rogler LH. Research on culture-bound syndromes: new directions. Am J Psychiatry 1999;156: 1322-7.
6. Ventriglio A, Ayonrinde O, Bhugra D. Relevance of culture-bound syndromes in the 21st century. Psychiatry Clin Neurosci 2016;70:3-6.
7. Grover S, Davuluri T, Chakrabarti S. Religion, spirituality, and schizophrenia: a review. Indian J Psychol Med 2014;36:119-24.
8. Velayudham J, Picha R. Magico-religious beliefs in psychosis. J Evid Based Med 2019;6:2349-562.
9. Peltzer K, Pengpid S, Puckpinyo A, Yi S, Anh le V. The utilization of traditional, complementary and alternative medicine for non-communicable diseases and mental disorders in health care patients in Cambodia, Thailand and Vietnam. BMC Complement Altern Med 2016;16:92.
10. Aneja J, Grover S, Avasthi A, Mahajan S, Pokhrel P, Triveni D. Can masturbatory guilt lead to severe psychopathology: a case series. Indian J Psychol Med 2015;37:81-6.
11. Monika G. The differentiation of psychosis and spiritual emergency [dissertation]. Adelaide: University of Adelaide; 2007 [cited 2020 Jan 13]. Available from: https://digital.library.adelaide.edu.au/dspace/bitstream/2440/47986/8/02whole.pdf.
12. Williams MT, Chapman, LK, Simms JV, Tellawi G. Cross cultural phenomenology of obsessive compulsive disorder. In: Abramowitz JS, McKay D, Storch EA, editors. The Wiley handbook of obsessive compulsive disorders [Internet]. New Jersey: Wiley-Blackwell; 2017. p. 56-74. [cited 2020 Feb 22]. Available from: http://drkevinchapman.com/wp-content/uploads/2018/05/Williams_CrossCulturalOCD_2017.pdf.
13. World Health Organization. Depression and other common mental disorders: global health estimates [Internet]. Geneva: WHO; 2017 [cited 2020 Mar 13]. Available from: https://apps.who.int/iris/bitstream/handle/10665/254610/WHO-MSD-MER-2017.2-eng.pdf.
14. Antrop M. Rural–urban conflicts and opportunities. In: Jongman R, editor. The new dimensions of the European landscape. Proceedings of the Frontis workshop on the future of the European cultural landscape [Internet]. 2002 Jun 9-12; Wageningen, The Netherlands; 2002 [cited 2020 Jan 29]. p. 83–91. Available from: https://library.wur.nl/ojs/index.php/frontis/article/view/1005/576.
15. Bell CC. DSM-IV: Diagnostic and statistical manual of mental disorders. JAMA1994;272:828-9.
16. Maretzki TW. Review of Ari Kiev 's transcultural psychiatric. Transcultural Psychiatric Research Review 1972;9:91-6.
17. Kiev A. Culture-bound syndromes, ethnopsychiatry, and alternate therapies: Vol. IV of mental health research in Asia and the Pacific. Am J Psychiatry 1977; 134:946.
18. Yap PM. Koro—A culture-bound depersonalization

syndrome. Br J Psychiatry 1965;111:43-50.
19. Durst R, Rosca-Rebaudengo P. The disorder named koro. Behav Neurol 1991;4:1-13.
20. Ola BA, Morakinyo O, Adewuya AO. Brain Fag Syndrome - a myth or a reality. Afr J Psychiatry (Johannesbg) 2009;12:135-43.
21. Weller SC, Baer RD, Garcia de Alba Garcia J, Salcedo Rocha AL. Susto and nervios: expressions for stress and depression. Cult Med Psychiatry 2008;32:406-20.
22. Schwartz PY. Why is neurasthenia important in Asian cultures? West J Med 2002;176:257-8.
23. Lee S. Cultures in psychiatric nosology: the CCMD-2-R and international classification of mental disorders. Cult Med Psychiatry 1996;20:421-72.
24. Aung SK, Fay H, Hobbs RF 3rd. Traditional Chinese medicine as a basis for treating psychiatric disorders: A review of theory with illustrative cases. Med Acupunct 2013;25:398-406.
25. Perera DN, Panduwawela S, Perera MH. Frigophobia: a case series from Sri Lanka. Transcult Psychiatry 2014;51:176-89.
26. Tuma AH, Maser JD. Anxiety and the anxiety disorders [Internet]. London: Routledge; 1985 [cited 2020 Mar 27]. Available from: https://books.google.co.th/books/about/Anxiety_and_the_Anxiety_Disorders.html?id=r3t_DwAAQBAJ&redir_esc=y.
27. Michael GK. Latah: The symbolism of a putative mental disorder. Cult Med Psychiatry 1978;2:209-31.
28. Fortuna L. Working with Latino/a and Hispanic patients [Internet]. 2020 [cited 2020 Mar 10]. Available from: https://www.psychiatry.org/psychiatrists/cultural-competency/education/best-practice-highlights/working-with-latino-patients.
29. Kasahara Y. Fear of eye-to-eye confrontation among neurotic patients in Japan. In: Lebra TS, Lebra WP, editors. Japanese culture and behavior: selected readings [Internet]. United State: University of Hawaii Press; 1986 [cited 2020 Feb 27]. p. 379-87. Available from: https://books.google.co.th/books/about/Japanese_Culture_and_Behavior.html?id=g8-BGRKwWXoC&redir_esc=y.
30. Teo AR, Gaw AC. Hikikomori, a Japanese culture-bound syndrome of social withdrawal?: A proposal for DSM-5. J Nerv Ment Dis 2010;198:444-9.
31. Japan's "Hikikomori" population could top 10 million [Internet]. 2019 [updated 2019 Sep 17; cited 2020 Jan 22]. Available from: https://www.nippon.com/en/japan-topics/c05008/japan's-hikikomori-population-could-top-10-million.html.
32. Hughes CC. Glossary of "Culture-Bound" or Folk psychiatric syndromes. In: Simon RC, Hughes CC, editors. The culture-bound syndromes. Netherlands: D. Reidel Publishing; 1985 [cited 2020 Mar 18]. p. 468-505. Available from: https://link.springer.com/content/pdf/bbm%3A978-94-009-5251-5%2F1.pdf.
33. Marano L. Windigo psychosis: The anatomy of an emic-etic confusion. In: Simon RC, Hughes CC, editors. The culture-bound syndromes. Chicago, IL: The University of Chicago Press; 1982 [cited 2020 Mar 18]. p.411-48. Available from: https://link.springer.com/chapter/10.1007/978-94-009-5251-5_37.
34. Tseng WS. Anxiety disorder. In: Tseng WS, editor. Handbook of cultural psychiatry. United States: Academic press; 2001 [cited 2020 Jan 13]., p.291-302. Available from: https://books.google.co.th/books/about/Handbook_of_Cultural_Psychiatry.html?id=Lx7Q_lyhxLQC&redir_esc=y.
35. Saint Martin ML. Running amok: A modern perspective on a culture-bound syndrome. Prim Care Companion J Clin Psychiatry 1999;1:66-70.
36. Hempel AG, Levine RE, Meloy JR, Westermeyer J. A cross-cultural review of sudden mass assault by a single individual in the oriental and occidental cultures. J Forensic Sci 2000;45:582-8.
37. Tseng WS, Matthews D, Elwyn TS. Cultural dimensions of various crimes and behavioral problems. In: Elwyn TS, Matthews D, Tseng WS, editors. Cultural competence in forensic mental health: a guide for psychiatrists, psychologists, and attorneys. London: Routledge; 2004. p.102-22. [cited 2020 Jan 10]. Available from: https://books.google.co.th/books/about/Cultural_Competence_in_Forensic_Mental_H.html?id=S34pP8hA2_gC&redir_esc=y.
38. Hunter JA. The genesis of air range. In: Hunter JA, editor. Anger in the air : Combating the air rage phenomenon. , London: Routledge; 2006 [cited 2020 Mar 28]. p.102-22. Available from: https://books.google.co.th/books/about/Anger_in_the_Air.html?id=uOOOnQAACAAJ&redir_esc=y.
39. Keough ME, Timpano KR, Schmidt NB. Ataques de nervios: culturally bound and distinct from panic attacks? Depress Anxiety 2009;26:16-21.
40. Nogueira B, Mari J, Razzouk D. Culture-bound syndromes in Spanish speaking Latin America: the case of Nervios, Susto and Ataques de Nervios. Arch Clin Psychiatr (São Paulo) 2015;42:171-8.
41. Johnson-Sabine EC, Mann AH, Jacoby RJ, Wood KH, Peron-Magnan P, Olié J, et al. Bouffée délirante: an examination of its current status. Psychol Med 1983; 13;771-8.

42. Higgs RD. Pibloktoq: A study of a culture bound syndrome in the circumpolar region. Macalester Rev 2011;1:1-9.
43. Cohen E. What is spirit possession? Defining, comparing, and explaining two possession forms. Ethnos 2008;73:101-26.
44. Jackson Y. Culture-bound syndromes: Falling out, blacking out. In: Encyclopedia of multicultural psychology. New York: SAGE Publications; 2006 [cited 2020 Mar 18]. p.136-7. Available from: https://books.google.co.th/books/about/Encyclopedia_of_Multicultural_ Psychology.html?id=_hcurFqnQioC&redir_esc=y.
45. Putsch RW. Ghost illness: A cross-cultural experience with the expression of a non-western tradition in clinical practice. Am Indian Alaska Native Ment Health Res 1988;2:6-26.