



AILUROPHOBIA: THE CURATIVE, ABNORMAL AND IRRATIONAL FEAR OF  
FELINES (CATS)

BY

RABIU GARBA IDRIS (G1410075)

[rabsgarba@gmail.com](mailto:rabsgarba@gmail.com)

+60166049468

KULLIYAH OF EDUCATION

DEPARTMENT OF EDUCATIONAL PSYCHOLOGY AND COUNSELLING SERVICES

ABSTRACT

*Ailurophobia is an excessive fear of cats, the phobia is considered to be the type of anxiety disorder where an exposure to feared stimulus can cause a full blown panic attack. Among the recent developments in descriptive pathology and aetiology, Ailurophobia can be treated like any other disorder. This piece of work tries to showcase a cohesive evidence that the disorder is curable as against the belief of many people. A qualitative research design with an in-depth semi-structured (one on one) interview was employed along with four participants that were purposely selected. Findings revealed that behavioural and psychotherapy could best be the medication for the problem. Finally the paper suggests family therapy and parent training as the complementary and alternative treatment for the disorder.*

## **1. Introduction**

Historically, Egyptians are believed to be the first people to have kept, domesticated felines or cats more than 4000 years ago. Cats became invaluable to the Egyptians due to the feline's incomparable ability to chase out, exterminate mice and other small creatures of rodent species, thereby protecting food stores Dale (2008). When it comes to felines, people either love them or hate them. But there is actually a third many people have for cats, they fear them and the clinical name for the fear of cats is “Ailurophobia.” Although, it is difficult for most cat lovers to understand why anyone would be afraid of cats, but the truth of the matter Ailurophobia is very real, and can be a genuine problem for people who suffer from it (Williams, 2009).

Ailurophobia is an excessive, extreme, irrational, and persistent fear of cats, despite the understanding of the phobic individual and assurance from others that there is no danger. The phobia is considered to be the type of anxiety disorder, wherein exposure to the feared stimulus can cause sweating, shaking, heart palpitations, loss of breath, dry mouth, the inability to think or speak clearly, and even a full blown panic attack Antrim (2009). Ailurophobia then, is not simply a strong dislike of cats or felines; it is an intense feeling of fear at the sight of the animal even if it is just on television. Ailurophobics may fear physical contact physical contact with a cat, such as bites and scratches, or they might fear the perceived supernatural nature of cats.

Therefore, Ailurophobia as a kind of specific anxiety disorder, has its origin in the individual experiencing repeated random episodes of apparently spontaneous panic attack (SPA). Among the recent developments in the descriptive pathology and aetiology, Ailurophobia can be treated like any other disorder APA (2005). This piece of work tries to highlight that, the irrational and excessive fear of felines is a mental illness and can be cured

unlike what many people think and associate cats with black magic, witchcraft, sadism and evil-especially black cats.

## **2. Literature Review**

### **2.1 The Concept of Ailurophobia**

In clinical psychology, a phobia is defined as a type of anxiety disorder usually manifested a persistent fear of an object or situation in which the sufferer commits to great lengths in avoiding, typically disproportional to the actual danger posed, often being recognised as irrational. In the event the phobia cannot be avoided entirely, the sufferer will endure the situation or object with marked distress and significance in social or occupational activities APA (2010). Hence, people with phobias tend to avoid this situation or objects and become anxious when they anticipate having to meet them, such as the case of the irrational fear of cats or felines.

The fear of cats is termed “Ailurophobia” a word derived from the Greek ‘Ailouros’ (cats) and ‘Phobias’ (fear). Nearly a quarter of the U.S population reports on extreme fear of specific animal Ching (2015). Felines in particular, are often identified as animals that are intensely feared. The disorder, is among the most common mental, emotional and behavioural problems Kessler et al (2005), Olatunji et al (2007), Kessler & Wang (2008). Some people may wonder how anyone could possibly be afraid of cats. However, many people report an extreme and even irrational fear of a cat. Although, the Diagnostic and Statistical Manual of Mental Disorder (DSM-V) fifth edition does not identify a specific name for a phobia of cats, but it does recognise that individuals can experience a “specific phobia” – which can include a fear of cats. Hence, the problem affects one-tenth of the total population worldwide, and has become

a very important area of research interest in Psychopharmacology (Eisenberg et al, 1998; Dopheide & Park, 2002; WHO, 2004).

## 2.2 The Psychological Symptoms of Ailurophobia

People with Ailurophobia manifest their situations in different ways and dimensions. For most people, it is less about fear than almost loathing. Similar to the reactions many people have to snakes or rats. Some people experience it virtually all the time, others just in response to direct stimuli. Some possible solutions that can trigger the loathing of cats are: hearing purring, seeing a cat in real life, imagining the possibility of a cat touching or rubbing against one, the thought of meeting a cat in the dark, seeing the starring eyes of a cat (as cats have the tendency to stare at passers-by), seeing cats in pictures and on television, and cat-like toys and cat-like fur (Antrim, 2009).

Like all the fears and phobias, Ailurophobia is a protective mechanism created by the unconscious mind. Quite often, the phobic individual according to Shri (2006) cannot even tell you what they fear about felines, or where their fear might have originated. This means that, what Ailurophobics know is that they only find themselves being afraid of cats as long as they could remember. They might have had a frightening experience with a cat as a baby or young child, but have forgotten it. Toddlers often are not taught how to properly pick up cats and may also prod, poke or pet them roughly. This could result in getting children scratched, bitten and emotionally traumatized.

Individuals with a phobia of cats display panic attacks upon confrontation with the animal. In general Ailurophobics might exhibit the following psychological behaviour as symptoms characterising the disorder:

- Feeling of apprehension or dread

- Feeling of tense and jumpy
- Anticipating the worst
- Trouble concentrating
- Shortness of breath
- Self-consciousness
- Muscle tension
- Pounding heart
- Nervousness
- Restlessness
- Irritability
- Sweating
- Worry
- Fear

### **2.3 Causes of Ailurophobia**

But, various behavioural, cognitive, genetic, and biological theories have been proposed to explain the aetiology of Gatophobia White (2006). There are said to be biological, psychological and social (Biopsychosocial) factors that contribute to Gatophobia disorder (Pies 1994, Kirk & Melton 2002 & Wong 2006).

#### ***Biological factors***

Genetic factors predispose certain people to the excessive and irrational fear disorder. Findings from the researches testified that, there is a higher chance of Ailurophobia disorder in the parents, children and siblings of a person with the phobia of cats than in relatives of someone without the fear of felines Torgersen (1983), Weismann (1993) and Goldman (2001). Brain

imaging and functional studies have shown that several neurotransmitters are linked to the neurobiology of the phobia (Cates et al., 1996; Standford et al., 2000; Millan, 2003; and Augustin, 2005).

### ***Psychological factors***

Gatophobia can result when a combination of increased internal and external stresses overwhelms one's normal coping abilities or when one's ability to cope normally is lessened for some reason. The psychological factors include:

**Psychodynamic:** When internal competing mental processes, instincts and impulses conflict, causing distress.

**Behavioural:** The phobia is a maladaptive learned response to specific past experiences and situations that become generalised to future similar situations.

**Spiritual:** When people experience a profound, unquenchable emptiness and nothingness of their lives, often leading to distress concerning their mortality and eventual death (Sarason & Sarason, 2000; Brannon & Feist 2004).

### ***Social factors***

Life experiences like a death in the family, divorce, job loss, financial loss, accident or major illness affect a person's attitude and response to life situations. Long term exposure to abuse, violence, terrorism and poverty may affect an individual's susceptibility to Ailurophobia disorder Eysenck (2004). Besides, the irrational and excessive phobia of cats could also be caused by seeing someone else have negative experience with a cat. Furthermore, parents can sometimes transfer their own fear of cats on their children.

## 2.4 Treatment for Ailurophobia

With professional help, the fear of cats or felines can usually be overcome. Indeed, for any phobia treatment plan to succeed, the person must have a desire to overcome the fear. Ailurophobics often avoid seeking treatment because they are embarrassed about fearing of animal that is generally regarded as cute, cuddly and harmless. Ailurophobia as it is so prevalent of psychiatric disorder, yet less than 30% of individuals who suffer from Ailurophobia seek treatment Lepine (2002). People with Ailurophobia disorder can benefit from a variety of treatments and services, but psychotherapy is always the treatment of choice except in cases where the phobia is so severe that immediate relief is necessary to restore functioning and to prevent immediate and adverse consequences. Hence, the treatment includes the following:

**Behavioural therapies:** In this regard, the Ailurophobic individual is taught to use relaxation and visualisation techniques when experiencing anxiety about cats. The phobic is gradually exposed to cats, but in a systematic, structured way while the person concentrates on remaining calm. This might include looking at photos of cats, watching videos about cats, seeing a cat through a window, and eventually if possible, the person actually confronts or be in the same room with a cat or kitten. But, often the therapist will accompany him or her to provide support and guidance.

**Cognitive-behaviour therapy (CBT):** Ailurophobia responds well to cognitive-behaviour therapy. CBT is a form of psychotherapy which stipulates that the way we think about things affects how we feel emotionally. Research has shown that CBT is effective not only for the phobia of cats, but also for several anxiety disorders Herbert et al (2009). It has two components. The cognitive component helps people change their thinking patterns that keep them from overcoming their fears. The behavioural component seeks to change people's reaction the phobia provoking condition.

**Psychotherapy:** Psychotherapy is another form of treatment for Ailurophobia, it centres on the resolution of conflicts and stresses, as well as the developmental aspect that may be linked to the phobia through talk therapy. Psychotherapy involves talking with a trained mental health professional, such as a psychiatrist, social worker, or counsellor to learn how to deal with problems such as the irrational fear of disorder (Knekt et al, 2008).

**Family therapy and parent training:** Here the focus is on the family and its dynamics. This is based on the assumption that the individuals of a family cannot improve without understanding the conflicts that are to be found in the interactions of the family members. Thus, each member is expected to contribute to the resolution of the problem being addressed (American Psychological Association, 2004; Feldman, 2004).

### 3. Objectives of the Study

The current work focused to investigate the concept, causes, symptoms, and treatment of one of the specific anxiety disorders known as Ailurophobia. Therefore, it aims to establish a cohesive evidence that the disorder is curable, and those that are suffering from the illness may be rest assured as the problem could be remedied. The goal is set to answer the following:

1. To determine the main causes of Ailurophobia among individuals.
2. To ascertain the psychological symptoms manifested by persons with Gatophobia.
3. To assess the possible treatments offered to the people that have the fear of felines.

### 4. Methodology



This project is designed as a qualitative piece of research. In a sense, it is a case study research in the quest of understanding the experiences of the targeted informant. Creswell (2009) posits that, qualitative research is based on assumptions that are very different from quantitative designs. Therefore, in a qualitative research broad expression can be disclosed by the informants without any limitation like quantitative method Shirin, Hassan & Islam (2014). This research employs a single research method that is a formal interview to collect data. The tool used in the data collection investigated the causes, symptoms and the treatments of the illness. Furthermore, through the process of this project semi-structured and in-depth interview was utilised.

#### **4.1 Sampling**

A sample is a small proportion of a population selected through a specific procedure for deducing information given. Sequel to the incapacity of the researcher, to carry along all the individuals with Ailurophobia, purposeful sampling was applied in this study. Purposeful sampling is a kind of sampling would allow the researcher to select the appropriate informant (an individual having the kind of phobia under investigation) who can best help to understand the phenomena in focus (Creswell, 2005).

#### **4.2 Informants**

The informant in this research consisted of four participants who had a chronic Ailurophobia for more than two decades but never sought treatment. The sample was purposely selected, as very rich data could be obtained and the interviewee admitted having the so-called excessive, abnormal and endogenous fear of cats. The study was carried out in the International Islamic University, Malaysia (IIUM). The informants precisely consist of two Nigerians, one Pakistani

and a Malay. They are all postgraduate students across different Kulliyah pursuing their masters and Ph. D. degrees respectively.

### **4.3 Data Collection**

The study investigated the aetiology, symptoms and the possible treatment for the phobia that the individuals are suffering from over 20 years through an in-depth one on one interview. The phobic interview session lasted for almost 116 minutes all together. All the questions were open-ended with many contingent proving ones. In this regard, interview questions were directly posed to the informant. The interview schedule gave the researcher an ample opportunity to gain a general understanding about the phobia condition of the subject this has to do with the feelings, symptoms and the psychological condition the person finds himself on the presence of a cat.

### **4.4 Data Analysis Procedures**

To begin with, the data were analysed by listening to the audio-recorded interviews over and over, and taking notes of important concepts and replicated views, making some of the irrelevant information on the interview data reducible and align to the research questions. Furthering the step of data collection, the audio-recorded interview was transcribed strictly and verbatim, while the researcher reads them repeatedly to make himself thoroughly conversant with the contents. Hence, making the initial codes to emerge. The codes for analysis were gradually generated, and then expanded, decided and carefully refined to arrive at the eventual themes. Lastly the data was re-aggregated according to the various questions that were utilised in the study.

### **4.5 Credibility and Trustworthiness**

To ensure the credibility and trustworthiness of the collected data, some themes were extracted and gathered in a single script coupled with the relevant transcribed conversation. The script was later taken to two experts in Psychology (Clinical Psychologists) to verify the appropriateness of the generated themes in light of the contextual oral discourse. The average agreement of the duo inter-raters were 93 per cent and this clearly indicates that the identified themes represent the ideas as intended by the informant (Miles and Huberman, 1994).

## 5. Findings and Discussions

The discussion upon the findings is based on the generated major themes. The themes from the informants are divided into three categories (the causes, symptoms and treatment of Ailurophobia) on which the research questions were posed during the interview session. The preliminary discussion of the major themes was strictly based on the informant's inputs and far from being a complete critical discussion in light of neither the existing literature review nor the related theoretical or conceptual framework.

### 5.1 Research Question 1

What are the main causes of Ailurophobia among individuals?

From the informants' assertion and understanding, two major themes that is **genetic, and behavioural factors** are what predisposed the respondents to the fear of cats.. Three of the informant's narrations in relation to the above question were due to the fact that they just realised that they are afraid of cats by inheritance because there is a number of people in their household who have this fear. This is best illustrated by the informants as:

*"I think, there is not any known factor that causes me the fear of cats, I just realised this problem since I was a little kid. The phobia runs in our family, lots of people in our house are equally afraid of cats, including my father, my siblings, my uncle, my grandfather except my grandmother who even kept a cat. As I told you I have inherited this problem right from my parents and grandparents."*

Another informant adds:

*“.....The problem runs in our family.....”*

The third informant states that:

*“It is genetically inherited from one generation to another, because my child has it, I have the fear of a simple cat and my mother too”*

Whereas one informant stated that it was the past experienced that push him to the irrational anxiety, the informant posits:

*“I was a living witness when a cat chop up a finger of one little boy, from then I developed the fear of cat, believing that it can bite me the way it did to the poor innocent child”*

The above data demonstrate a major finding as to the main cause of Ailurophobia, the researcher observes that heredity and behaviour which resulted from the past experience are the main contributing factors in the fear of cats. As many believed that the fear of felines is mostly due to the ‘Psychosocial’ factors Pies (1994). But the findings of the White (2005) and Wong (2006) testify that Ailurophobia is caused by either of the trio combination factors which are Biological, Psychological and Social (Biopsychosocial). This signifies that there is a higher chance of Ailurophobia disorder in parents, children and siblings of a person with the fear of cats than in the relatives of someone without this disorder (Goldman 2001).

## 5.2 Research Question 2

What are the psychological symptoms manifested by a person with Gatophobia?

In this research question, two major themes were discerned which were **an emotional sensation** which affect the cognitive processes of the individual and **physical sensation** such

as nervousness, worry, fear and irritability. According to the informants the presence of a cat totally destabilises their elements to the extent that, they thought of seeing or touching a cat filled them with deep fear and loathing. Their body and mind remain uneasy until it leaves the place or someone help them out by chasing it. One informant adds:

*“I am completely loath, whenever I see a cat or hear its sound, but when it approaches me that is the worst. I become so petrified, it frightens me a lot, and especially that I am unable to move or speak. Indeed, I do not have a peace of mind, all my intentions collapse, I have the feeling of worry and shortage of breath until it disappears in totality. Sometimes when I am praying and a cat comes to pass, it takes my attention and when I am walking to my house and come across a cat I become very worried and feel jittery.....”*

The above data have shed more light on the two major symptoms attached to Ailurophobia which are the emotional and physical as observed that, the subjective experience of Gatophobia has two components which consist of physical component and emotional component Charles and Shelton (2004) and Augustin (2005). These symptoms could be linked to what the informants’ manifest, whenever they see a cat or hear its sound, they feel like it comes to scratch, or even bite them. In summary the informants manifest some sorts of typical psychological symptoms of those that have the excessive and irrational fear of cats.

### 5.3 Research Question 3

How is the fear of felines treated?

Based on the above research question two main themes were generated that were, **behavioural therapies** and **psychotherapy**. Although, one of the informants did not consider the fear of cats as a disorder, but three of them admitted that the disorder can be cured. Even though, one of them believed that no drugs can cure this kind of illness, but he confessed that counselling in form of therapy could help. The respondent states that:

*“Yes, I do not think the phobia could be directly treated especially by taking drugs, because I do not agree that by orally taking drugs then the fear vanishes. If there are other means such as someone who is knowledgeable that can sit with the phobic and give him a kind of special*

*treatment like advising him and telling him not to worry about the fear, then this could work to some people with this phobia, but to me.....”*

The respondents' views with regard to the treatment of Ailurophobia was a blend of opinions, some believed that it could not be directly cured, but later suggested some process to be followed in order to get the core of the problem. The informant gives out behavioural and psychotherapy as the means to treat the illness. This refers to the former as the process of reducing or eliminating the phobia by exposing the person gradually to the object or situation that is feared. Whereas the latter involves talking with a trained mental health professional, such as a psychiatrist or psychologist to learn how to deal with the problem (Knekt et al., 2008).

## **6. Conclusion and Recommendation**

This research portrays several significant issues regarding the excessive and irrational fear disorder of felines or cats. Firstly, it delineates the key important causes of the problem, secondly, it illustrates the major symptoms of the disorder as manifested by the individuals suffering from the disease and thirdly the study shows the main process of treating the problem.

Ailurophobia is one of the most prevalent anxiety disorders, although many individuals who suffer from this problem never believe it as an illness let alone seek for treatment. People with this phobia can benefit immensely from a variety of treatments and services. This study suggests family therapy and parent training as the complementary and alternative treatment for Ailurophobia. This would ensure that each member of a family is expected to contribute to the resolution of the phobia.

## **REFERENCES**

American Psychiatric Association. (2000). *Diagnostic and Statistical Manual for Mental Disorders (DSM-IV-TR) Text Revision (4th ed.)*. Arlington, VA: American Psychiatric Publishing.

- American Psychological Association (2004). *Anxiety Disorders: The Role of Psychotherapy in Effective Treatment*. Retrieved from <http://www.apahelpcenter.org/articles/article.php>
- American Psychological Association (2010). *Understanding Anxiety Disorders and Effective Treatment*. NE, Washington DC.
- Antrim, C. N. (2009). Cats Holy and Propane. *Psychology Review*. 21 169-179.
- Augustin, S. G. (2005). Anxiety disorders. In M. A. Koda-Kimble, L. Y. Young, W. A. Kradian (eds.), *Applied Therapeutics: The Clinical Use of Drugs* (8th ed., pp. 76-1 – 76-47). Philadelphia, PA: Lippincott Williams and Wilkins.
- Brannon, L., Feist, J. (2004). *Health psychology: An introduction to behaviour and health* (5th ed.). Belmont, CA: Wadsworth.
- Cates, M., Wells, B. G., & Thatcher, G. W. (1996). Anxiety Disorders. In E. T. Herfindal and D. R. Gourley (Eds.). *Textbook of Therapeutics: Drug and Disease Management* (6th ed., pp. 1073-1093). Hagerstown, MD: Lippincott Williams and Wilkins
- Charles, I., & Shelton, D. O. (2004). Diagnosis and management of anxiety disorders. *Journal of American Osteopathic Association*, 104 (3), S2-S5.
- Ching, T. H. (2015). *Ailurophobia: The Fear of Cats*
- Chung, L. Y., Goh, S. H., & Imiyabir, Z., 2005. Central nervous system receptor activities of some Malaysian plant species. *Pharmaceutical Biology*, 43 (3), 280-288.
- Creswell, J. W. (2005). *Qualitative Inquiry and Research Design: Choosing Among Five Traditions*. Thousand Oak: SAGE.
- Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approach*. (4th Ed.). Thousand Oak: SAGE.
- Dale, S. (2008). *Everything You Have Always Wanted to Know About Cats*. Tree house Humane Society.
- Dopheide, J., BCPP., & Park, S. (2002, March). The Psychopharmacology of Anxiety. *Psychiatric Times*, 19 (3). Retrieved from <http://www.psychiatrictimes.com/display/article/10168/47826>
- Eisenberg, D. M., Davis, R. B., Ettner, S. L., Appel, S., Wilkey, S., & Van Rompay, M. (1998). Trends in alternative medicine use in the United States. *The Journal of The American Medical Association*, 280 (18), 1569-1575.
- Eysenck, M. W. (2004). Approaches to Abnormality. In M. W. Eysenck, *Psychology: An International Perspective* (pp. 794-853), New York, NY: Psychology Press.

Feldman, R. S. (2004). *Understanding Psychology* (6th ed.). New Delhi: Tata- McGraw-Hill.

Goldman, W. T. (2001). *Childhood and Adolescent Anxiety Disorders*. Retrieved from [http://www.Keep Kids Healthy.com](http://www.KeepKidsHealthy.com)

Kessler, R. C., Soukup, J., Davis, R. B., Foster, D. F., Wilkey, S. A., Van Rompay, M. I., & Eisenberg, D. M. (2001). The use of complementary and alternative therapies to treat anxiety and depression in the United States. *American Journal of Psychiatry*, 158 (2), 289-294.

Kessler, R. C., & Wang, P. S. (2008). The descriptive epidemiology of commonly occurring mental disorders in the United States. *Annual Review of Public Health*, 29, 115-129.

Kirkwood, C. K., & Melton, S. T. (2002). Anxiety disorders. In J. T. Dipiro, R. L.

Talbert, G. C. Yee, G. R. Matzke, B. G. Wells, L. M. Posey, *Pharmacotherapy: A pathophysiologic approach* (5th ed.). New York, NY: McGraw-Hill.

Knekt, P., Lindfors, O., Laaksonen, M. A., Raitasalo, R., Haaramo, P., Järvikoski, A. & The Helsinki Psychotherapy Study Group. (2008). Effectiveness of short-term and long-term psychotherapy on work ability and functional capacity —A randomized clinical trial on depressive and anxiety disorders. *Journal of Affective Disorders*, 107(1-3), 95-106.

Lépine, J. P. (2002). The epidemiology of anxiety disorders: prevalence and societal costs. *Journal of Clinical Psychiatry*, 63 Supp. 14, 14-18.

Millan, M. J. (2003). The neurobiology and control of anxious states. *Progress in Neurobiology*, 70(2), 83-244.

Miles, M. B., and Huberman, A. M., (1994). *Qualitative Research: A Guide to Design*. Thousand Oaks, CA: Jossey-Boss.

Olatunji, B. O., Cisler, J. M., & Tolin, D. F. (2007). Quality of life in anxiety disorders: a meta- analytic review. *Clinical Psychology Review*, 27, 572-581.

Pies, R. W. (1994). *Clinical manual of psychiatric diagnoses and treatment: a biopsychosocial approach*. Washington, DC: American Psychiatric Press.

Sandford, J. J., Argyropoulos, S. V., & Nutt, D. J. (2000). The psychobiology of anxiolytic drugs Part 1: basic neurobiology. *Pharmacology & Therapeutics*, 88, 197-212.

Sarason, I. G., & Sarason, B. R. (2000). The problem of maladaptive behaviour.

*Abnormal Psychology* (8th ed., pp. 180-207). New Delhi, Delhi: Prentice Hall of India.



- Shri, R. (2006). Management of anxiety. In B. Mahesh, K. Brijlata, & B. Vivek (Eds.), *Modern Psychology and Human Life* (pp. 364-375). Agra, India: Rakhi Prakashan.
- Shirin, H. B., Hassan, S.S.S. and Islam, S., (2014). Interaction in e-learning Environment: Does it Fulfil with Islamic Teaching? *Malaysian Online Journal of Education Management*. (MOJEM), 2 (4), 36-52.
- Weissman, M. M. (1993). Family genetic studies of panic disorder. *Journal of Psychiatry Research*, 27 (Suppl. 1), 69-78.
- White, P. (2005). *Biopsychosocial medicine: an integrated approach to understanding illness*. New York, NY: Oxford University Press. doi: 10.1176/appi.ps.57.10.1534-a
- World Health Organization. (2004). *The World Health Report 2004: Changing History*, Annex Table 3: Burden of disease in DALYs by cause, sex, and mortality stratum in WHO regions, estimates for 2002. Retrieved from [http://www.who.int/whr/2004/en/report04\\_en.pdf](http://www.who.int/whr/2004/en/report04_en.pdf)
- Wong, D. F. K. (2006). *Clinical case management for people with mental illness-abiopsychosocial vulnerability stress model*. New York, NY: The Haworth.