

# Mood and Depression

## **Associate Professor Wong Kim Eng**

The World Health Organization ranks Depression as the world's fourth most serious public health problem. It is thus a common illness in the community and unfortunately, many people suffer the symptoms of depression needlessly without seeking medical help.

In an epidemiological study done in Singapore, Fones, Kua, Ng and Ko (1998) found that 8.6% of the people studied reported symptoms indicative of Depression. In a study of the elderly (aged 65 years and beyond) in Singapore, Kua (1990) found the rate to be 5.7% of those studied.

Depression is more common in females (ratio of 2 females to 1 male), and middle age is the age of highest occurrence. In males, however, most cases tend to occur after middle age. People who are widowed/divorced/separated, living alone, of lower socio-economic status and with serious physical illness, are more vulnerable to Depression.

The term mood refers to the emotional feeling of the person. Everyone knows what it feels like to be low in the mood, that is, to be "sad" or "down in the dumps", as when one is stressed by some event in one's life, such as failing an examination or suffering a broken relationship. Such sadness or "feeling depressed" does not last more than one week, and does not affect the person's everyday functioning significantly. Similarly, when one is exhilarated over some joyful event, one feels "on top of the world", "great", "it feels good to be alive", "on cloud nine"; again, it is a normal experience and does not last more than a few hours or days. Thus it is expected that in normal everyday life, most if not all people would have experienced the ups and downs in mood, usually in association with the events that occur in their life.

The diagnosis of Depression, on the other hand, is clearly different from just being “sad” or “feeling depressed”. Depression refers to a more enduring low mood that lasts for at least 2 weeks, in association with disturbances of thought and behaviour, which impair the social and occupational functioning of the one affected.

### **Case study**

**Peter, a 55-year-old company executive with a loving and supportive wife, was experiencing an unprecedented heavy workload around the time of his andropause (male menopause). For 3 months, he began to feel lethargic, depressed, anxious and apprehensive about work. He found himself unable to laugh or cry, could not eat or sleep properly, and suffered a loss of 5 kg in body weight. His work concentration and memory deteriorated, and he began to doubt his capability and felt guilty about his company’s misplaced trust in him. A keen sportsman, he had to drop out of his regular tennis game as he had lost the capacity to enjoy or concentrate on his favourite sport. His sexual libido waned and his sexual life came to a standstill. His wife wept often, to see him reduced to such a shadow of his previous self. He found his mood to be lowest at around 3 to 4 am each morning, when he would awake from sleep spontaneously and wonder if he should end his suffering.**

**The psychiatrist diagnosed him as suffering from Depression, and started him on antidepressant drug therapy. He made a steady and complete recovery, and was taken off treatment after 8 months.**

### Symptoms of Depression

Most of the following symptoms of Depression are clearly demonstrated in Peter:

- Depressed mood most of the day, nearly everyday
- Markedly reduced interest in or pleasure in most if not all activities
- Reduced energy or fatigue
- Feelings of hopelessness/uselessness/guilt
- Poor appetite associated with loss of weight (some patients eat more and put on weight)
- Poor sleep with early morning awakening (some patients sleep excessively)
- Difficulty in thinking and concentrating, with difficulty in completing tasks

- Impaired memory
- Physical symptoms like heavy chest, difficulty breathing, or constipation
- Increased activity like restlessness, or, reduced activity like remaining still most of the time

In some cases of severe Major Depression, the mood is so low that psychotic (meaning that the person has lost touch with reality) symptoms may also be present:

- Hearing “voices” (hallucinations) that pass derogatory remarks about them, blaming them for all the bad that is happening, and telling them to go and die
- Abnormal ideas (or delusions, which are false, firm, unshakeable beliefs that are not keeping with the person’s educational, social and cultural background) of being guilty, bad, and deserving to die, or that the body is rotting away

#### Depression, Menstrual Cycle, and Pregnancy

It is not uncommon for some women to complain of physical and mood symptoms related to the *premenstrual syndrome* about 3 to 4 days before the onset of the menstrual period, and ending shortly *after the start* of the menstrual bleeding. The mood symptoms are low mood, associated with irritability and anxiety, whilst the physical symptoms are usually breast tenderness/swelling and abdominal discomfort/pain. The cause of this *premenstrual syndrome* is thought to be due to a combination of hormonal changes and psychological factors. Various reports have estimated that around 30-80% of women of reproductive age in western societies may have experienced the premenstrual syndrome.

Around the *menopause*, some women may complain of symptoms indicative of Depression. It should be treated as Depression that may occur at other times of life.

*Maternity blues* occur for only 3 or 4 days after delivery. A common occurrence (up to half women who delivered normal babies), the new mother would be tearful and irritable, feel helpless, and have a fluctuating mood. Drug treatment is not necessary, as the condition resolves with the help of encouragement and support from family members.

*Postnatal Depression* is Depression that occurs during the period after childbirth, and is to be regarded as Depression that may occur at other times of life.

### **The Influence of Culture on Depression**

It is widely known that, compared to Westerners, the Chinese in China and Taiwan are much less often diagnosed with Depression. One plausible reason is that the Chinese are not psychologically minded, and therefore tend to express their depression with physical symptoms (aches and pains, chest discomfort, irritability, giddiness, etc.). Another reason may be that their inherent stoic make-up, together with their cultural rejection of the social stigma of depression, makes them deny depression. Not surprisingly, a one-week study of a psychiatric outpatient clinic in Hunan showed that the diagnosis of Neurasthenia (a condition of fatigue, and weakness, with symptoms not much different from the physical symptoms of Depression) was made in 30% of the patients, compared to the diagnosis of Depression made in only 1% of the patients.

The Chinese in Singapore, however, are psychologically dissimilar to those in China and Taiwan, as a result of urbanization as well as exposure to Western education and culture. Hence, Depression is not an uncommon diagnosis in Singapore.

### **Causes of Depression**

Depression is caused by an interaction between environmental factors (stressful events, usually relating to losses e.g. relationship breakup) and personal factors (such as heredity, childhood experiences, physical illness, substance abuse, use of certain medications). The causation of Depression is thus multifactorial, and these factors act through biochemical and psychological processes to bring about the clinical illness we call Depression.

- Environmental factors

These may act as *predisposing* to Depression (that is, making the person vulnerable to Depression), or *precipitating* Depression (that is, triggering Depression). A *predisposing* environment to Depression would be that of a married woman from a poor socio-economic class with several young children to look after, without the support of a confiding relationship. A precipitating environmental factor would be the loss of a job, or a partner.

- Heredity or genetic causes

Research has shown that children, parents and siblings of depressed patients (also known as first degree relatives) have a higher risk of getting Depression, compared to the general population. The exact mode of inheritance, however, is still unclear.

- Childhood experiences

Studies have shown that the loss of a parent in childhood, and other adverse childhood experiences, predispose the person to Depression in adulthood.

- Physical factors

People who abuse or who are addicted to *stimulating substances* (examples: cocaine, amphetamines) feel “high”, “full of energy” and “happy” while high on the substances. When the substance is not replenished, and the substance-induced high mood state wears off, the person may become acutely depressed (also known as “crash”) and manifest other attendant symptoms of Depression. At times the Depression can be so severe as to drive the person to suicide. Thus it is important to exclude substance abuse as the cause of Depression in certain young persons who are vulnerable to substance abuse.

*Physical illnesses* like Parkinson’s Disease, Viral Influenza, Thyroid Disorders, Cancers, etc, can sometimes spark off Depression in vulnerable patients.

Likewise, patients receiving medication like propranolol and methyldopa (for high blood pressure) may sometimes manifest Depression too.

As mentioned earlier, normal conditions like childbirth can also trigger Depression in the vulnerable.

### **The Psychological Process of Depression**

People with Depression tend to think in a gloom and doom manner, running themselves down with *negative thoughts* (I'm a failure as a mother'), and *unrealistic beliefs* ("I cannot be happy unless I am successful in everything I do"). They also draw a general conclusion from a single event ("I am useless because I can't even look after my own child"). This depressive manner of thinking sets up a vicious circle, which perpetuates the low mood even after the original precipitating event is resolved. The low mood in its turn perpetuates the depressive thinking.

### **The Biochemical Process of Depression**

Biochemical theories of Depression are based on the concept of a neurotransmitter imbalance in Depression. Neurotransmitters are chemical messengers released at the ends of nerve terminals in the brain; these neurotransmitters act on specific regions of the brain that control the person's thoughts, behaviour, and emotions. The neurotransmitters identified to be of importance in Depression are: Serotonin (also known as 5-Hydroxytryptamine or 5-HT), Noradrenaline (also known as Norepinephrine), and Dopamine. Currently, the evidence is strongest for a reduced functioning of serotonin in the brains of people with Depression.

### **Endocrine Abnormalities in Depression**

Depression has been found to be associated with some cases of endocrine abnormalities involving the adrenal glands and the parathyroid glands. This has led to the postulation that endocrine abnormalities may play a role in Depression. Of all the endocrine abnormalities, most interest has centred on cortisol, a hormone secreted by the adrenal glands. It is known that stress per se would give rise to increased cortisol in the blood. The postulation is that after a prolonged life stress, the raised blood cortisol would bring about an abnormal brain serotonin function, and in turn, Depression.

### **Treatment of Depression**

The following modes of therapy may be used in the treatment of Depression:

### **a) Drug Therapy with Antidepressants**

Drug treatment may be used for all cases of Depression. Three commonly used classes of antidepressants are the tricyclic antidepressants (TCAs), serotonin reuptake inhibitors (SSRIs), and Monoamine Oxidase Inhibitors (MAOIs).

#### **(i) TCAs (examples are Amitriptyline, Imipramine, Dothiepin)**

TCAs were the first antidepressants to be discovered. They are effective, and Imipramine is in fact used as the gold standard against which newer classes of antidepressants are compared. There is a lag period of 2-3 weeks before they take effect, and the side effects experienced by some are : dry mouth, constipation, difficulty in passing urine, giddiness on abrupt changes of position, and irregularities in the heart beat. They should be used with caution in patients with suicidal ideas or heart disease as an overdose can be fatal.

#### **(ii) SSRIs – Fluoxetine, Fluvoxamine, Sertraline, Paroxetine, Citalopram**

SSRIs are newer and more expensive antidepressants with a milder side effect profile compared to the TCAs. Their side effects may be abdominal discomfort, nausea, vomiting, diarrhea, or loss of appetite. The main advantage of the SSRIs is their safety when used in patients with suicidal ideas or heart disease. They are useful in mild and moderate Depression, as TCAs are generally more efficacious in severe Depression.

#### **(iii) MAOIs (an example is Moclobemide)**

In Singapore, only Moclobemide is available. Moclobemide is a new generation MAOI that does not have the food and medicine restrictions of the older generation MAOIs. It is mainly used in Mild Depression, where its efficacy is about similar to that of the TCAs or SSRIs; its main advantage is for use in those who cannot tolerate the side effects of the other antidepressants.

#### **(iv) Other antidepressants**

When the patient does not respond to or tolerate the above antidepressants, other newer and expensive antidepressants may be used: Bupropion, Nefazadone, Venlafaxine, and Mirtazapine.

(v) Mood stabilizers

Mood stabilizers like Lithium and Valproate are sometimes used in combination with the antidepressants in cases where the patient does not respond to antidepressants alone. The addition of a mood stabilizer also helps to prevent recurrences of Depression in those prone to recurrences.

**b) Psychological Therapy**

Psychological Therapy may take the form of *support, counselling, problem-solving skills training, or Cognitive Behavioural Therapy*. It may be offered as the sole therapy, or in combination with drug treatment.

**c) Electroconvulsive Therapy (ECT)**

Myths and misconceptions of ECT abound amongst the general population, the most popular of which is that psychiatrists forcibly “zap” patients with ECT against their will and without their family’s knowledge!

The truth is that before the advent of drug therapy, ECT was the very first effective physical treatment of severe Depression, and it remains an important mode of therapy to this day. It is indicated in severe Depression where the patient’s life is in danger, either from a refusal to eat, or where the

side effects of the antidepressants are intolerable/risky, or where the patient is acutely suicidal. Unlike drug treatment, the onset of action of ECT is rapid and it is undeniably life saving in many cases.

ECT is a safe procedure that entails the delivery of a short-lasting anaesthetic by a qualified anaesthetist before the psychiatrist delivers a small electrical current to the brain. It does not cause structural brain damages as is the popular misconception. Some patients may complain of an impaired memory for recent events, but it does not last beyond 3 months.

## **Conclusion**

Depression is a treatable illness; at least three quarters of patients treated would respond to therapy. Thus early diagnosis and treatment would prevent unnecessary suffering and suicide. Some cases of untreated Depression may resolve spontaneously after weeks or months, whilst others may continue unchanged for years, taking a toll on the patients personal, family, social, and occupational life.

The risk of developing a recurrence of Depression is higher in those who develop the illness at an earlier age, For those with 3 or more episodes of Depression, the attacks increase as the patients get older; such patients would require long term treatment.

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