INTRODUCTION

Emotions are the basic feelings of human beings. No aspect of our mental life is more important to the quality and meaning of our existence than emotions. They are what make life worth living, or sometimes ending. Emotion is a complex psycho-physiological experience involving an individual's state of mind and its interaction with biochemical and environmental influences. All of us have felt unhappy, “down,” or discouraged at times in our lives. Often the result is caused by a change either in the form of a setback, a loss, or simply as Freud said, “Everyday misery.” The painful feelings that accompany these events are usually appropriate, necessary, and transitory. They can present an opportunity for personal growth as in proper amount; it is physiological and protects us from both physiological and psychological danger. In excessive amount however they paralyze us, or distort our perception of reality. It is up to us to capture the positive value of the negative emotion without succumbing to their excesses as certain emotions like anxiety, anger, pride, love, pain, or joy interact to motivate a person to a goal directed action. However when these emotions predominate & persist beyond their usefulness in motivating for goal directed behavior, they become morbid or pathological.

Stress, upto a certain level is a physiological phenomenon, but in today’s era stress itself has become a biggest stressor for the whole society by causing multiple psychological as well as psychosomatic diseases. One can live a healthy life if he has learnt the art of adaptation or coping strategies; otherwise stress caused either by life events or by environmental factors takes the whole command of the psychological system of the person and cause many a diseases like mood disorders.

Moods are shorter-term emotional states, typically lasting for hours, days or even longer. Mood is a sustained and pervasive emotional response which colors the whole psychic life. Both DSM-IV & ICD-10 have accommodated many psychological disorders under the broad heading of Mood disorder. Among which Depression has got eye catching prevalence. Depression is a disease, which not only affects the individual creativity, but also disturbs basic natural balance of inter personal relationships at social level.
Depression is nourished by a life time of ungrieved and unforgiven hurts. It seems worst than terminal cancer, because most cancer patients feel loved and they have hope & self esteem but a depressed individual can impact their social settings by exhibiting a lack of self-esteem, becoming more sensitive to the opinions of others, and more importantly, become less physically active. This means that they will not want to go out, that they do not want to exert themselves.

Mental disorders are common in the United States and Internationally. An estimated 22.1% of Americans ages 18 and older (about 1 in 5 adults) suffer from a diagnosable mental disorder in a given year. When applied to the 2003 U.S. Census residential population estimate, this figure translates to 46.4 million people. In addition, 4 of the 10 leading causes of disability in the U.S. and other developed countries are mental disorders - major depression, bipolar disorder, schizophrenia, and obsessive-compulsive disorder. Many people suffer from more than one mental disorder at a given time. Mood disorders cost U.S. employers 16 billion dollars in lost work time annually. Over 90 percent of suicide victims have a diagnosable mental disorder.

The incidence of depression is high on rise as World Health Organization reports that Depression is the leading cause of disability as measured by YLDs and the 4th leading contributor to the global burden of disease (DALYs) in 2000. By the year 2020, it is projected to reach 2nd place of the ranking of DALYs calculated for all ages, both sexes. Today, depression is already the 2nd cause of DALYs in the age category 15-44 years for both sexes combined. Women between the ages of 25-44 are most often affected by depression with a major cause of depression in women being the inability to express or handle Anger. At its worst, depression can lead to suicide, a tragic fatality associated with the loss of about 850 000 thousand lives every year. More than 90 percent of people who take their own lives have a diagnosable mental disorder, commonly a depressive disorder or a substance abuse disorder. In 2000, suicide was the 3rd leading cause of death among 15 to 24 year olds. In 2001, 30,622 people died by suicide in the U.S. Four times as many men as women die by suicide; however, women attempt suicide 2-3 times as often as men. Depression affects all people regardless of age, geographic location, demographic
or social position. It is commonest psychiatric disorder affecting about 121 million people worldwide. Fewer than 25% of those affected have access to effective treatments. In India, 65.4 per 1000 population are affected by mental illnesses, out of which 51% i.e. 31.2 per 1000 Indian population is suffering from depression.\(^1\)

Full credit of this great prevalence goes to throat cutting competition of modernization, improper life style and dietary habits. This disorder has threatened the modern world and forced the scientists to search the solution to ‘increase happiness’. Research data indicate that people suffering from depression have imbalances of neurotransmitters, natural substances that allow brain cells to communicate with one another. Two transmitters implicated in depression are Serotonin and Norepinephrine. Scientists think a deficiency in serotonin may cause the sleep problems, irritability, and anxiety associated with depression. Likewise, a decreased amount of norepinephrine, which regulates alertness and arousal, may contribute to the fatigue and depressed mood of the illness.\(^2\) Other researchers suggest that impairment of the Hypothalamo-Pitutary-Adrenal Axis functioning resulting into hyper secretion of a stress hormone-Cortisol is found in clinically depressed patients.\(^3\)

The earlier age of onset and increased frequency of depression over the last 100 years are likely related to neurobiology, physiology, genetics, stress and environmental factors, but a role for nutrition in depressive symptoms has been underestimated. Ayurveda, being a science of life gives due importance to Diet along with environmental and psychological factors in manifestation of any disease including mental disorder. So in the etiopathogenesis of mental disorder the role of diet must be taken into consideration as quoted in Chhandogya Upanishad “Annamayam hi manah”. According to Chhandogya Upanishad, the food inside the body divides food into 3 parts: Sthoola, Madhyama & Anu which nourish Purisha, Mamsa & Mana respectively means the subtle and abstract part of the Anna is Mana. Acharya Charaka states that “The codes of taking food if obeyed properly, gives strength to mind and if one goes against them, develops tendency to develop disease.”\(^4\)
Nerve tissue possesses one of the highest concentrations of fatty acids in the body, with approximately 20% of the dry weight of the brain comprised of long-chain fatty acids. These long-chain fatty acids provided in food are essential for both the structure and function of nerve cells. Omega-3s promote transmission of the chemical messengers that facilitate communication between nerve cells and are associated with emotional stability (e.g., serotonin) and positive emotions (e.g., dopamine). Omega-3s have been linked to depressive conditions such as bipolar disorder, unipolar depression, borderline personality disorder, premenstrual syndrome and perinatal depression. Omega-3 fatty acids affect brain derived neurotrophic factor, which encourages synaptic plasticity, provides neuroprotection, enhances neurotransmission and has antidepressant effects.

Analyses of blood fatty acids show that depressed people have lower levels of omega-3s and higher levels of omega-6s compared with people who are not depressed. For example, several studies reported lower EPA and DHA levels in depressed compared with non-depressed people, whereas total omega-3s (including ALA) were reduced in all depressed patients except in one study. Overall, the reports showed that the severity of depression was greater as the concentrations of EPA, DHA, ALA and total omega-3s fell. Although some of these findings were not of statistical significance, there was a consistent shift away from omega-3s toward omega-6s in depressed people.

Atasi (Flax seed, linseed) is the richest plant source of omega 3 fatty acids which is rich in EFA – Essential fatty acids. They are particularly valuable because the body needs them to function properly, but can't manufacture them on its own. Essential fatty acids work throughout the body to protect cell membranes. Atasi is a richest plant source of Alpha-linolenic acid (ALA) which can be endogenously converted to longer chain Omega 3 fatty acids; EPA & DHA. Flax seed is the best plant source of omega 3 fatty acids which is rich in ALA which can be endogenously converted into EPA & DHA. Ashwagandharishta, an Ayurvedic classical formulation is the treatment remedy for Apasmara (epilepsy), Shosha (tuberculosis), Murchha (syncope), Unmada (Psychosis), Mandagni (poor digestive power) etc. Ashwagandha (Withania somnifera D.) a main ingredient of Ashwagandharishta has antistress and anxiolytic activities. It works as
antidepressant by enhancing 5 HT neurotransmission. Moreover, Mushali being a vrishya drug may work as mood elevator and many ingredients of Ashwagandharishta are proven antidepressant agent. So the present study has been taken to evaluate the role of Ashwagandharishta (Bhaishajya Ratnavali – Murchchharogadhikar) in the management and Atasi – Flax seed (a rich source of Omega 3 fatty acid) as an adjuvant to it to explore the possibility of a safer indigenous, cost effective and toxicity free herbal remedy to take care of mental health of depressed subjects.

Pharmacologically, Flax seed oil was proved possessing an excellent anti-depressant and anti-convulsant activity, mild to moderate anxiolytic and antipsychotic activity, and sedative whereas Ashwagandharishta showed potent antipsychotic activity and marked anxiolytic activity. It has CNS depressant and possesses moderate anti-depressant and anti-convulsant activity and combination of Ashwagandharishta and Flax oil demonstrated potent antipsychotic activity, significant hypnotic potentiating and anti depressant effect, mild anxiolytic and anti-convulsant activity. Thus, psycho-neuro-pharmacological profile of Ashwagandharishta and Atasi Taila provided liberal evidence and validation for the use of both the drugs in clinical trial.

Total 130 patients of depressive illness fulfilling the diagnostic criteria of DSM IV for Major depression, attending the OPD & IPD of Kayachikitsa department of IPGT & RA hospital, Jamnagar were selected and registered for the present study irrespective of their sex, caste etc. Survey study was carried out to evaluate the omega 3 fatty acid deficiency in depressed subjects. For that depressed subjects (n=130) and non depressed healthy subjects (n=100) were evaluated for their consumption of dietary articles containing omega 3 fatty acids. Then these 130 patients were randomly divided in three groups: In group A, 40 patients of depression were administered Ashwagandharishta - 25 ml after mixing with equal amount of water twice a day after Lunch & Dinner; in group B, 50 depressed subjects were managed by Ashwagandharishta as above & Atasi Taila – 10 ml twice a day along with Lunch & Dinner and in group C, 40 patients of depression were administered Atasi Taila – 10 ml twice a day along with Lunch & Dinner. In all the
interventional groups Trance was carried out once in a week individually to the patient and duration of treatment was kept 60 days.

The results of survey study proved that the depressed subjects ingest significantly low amount of ω-3 FA and high amount of dietary articles which interferes with the conversion of ALA to EPA & DHA which make them omega 3 deficient and when Omega 3 fatty acid deficiencies is combined with adverse life events, childhood adversities, disharmony in marital life, psychological stress, sleep disturbances, lack of exercise, addiction like tobacco and alcohol are the contributing factors or risk factors for depression.

Clinically, Ashwagandharishta showed better anxiolytic effect as compared to flax seed oil whereas combination of Ashwagandharishta and Flax seed oil demonstrated more potent antidepressant effect against Ashwagandharishta and Flax seed oil alone; evidencing the significant role of Atasi Taila as an adjuvant to Ashwagandharishta in the management of depression. Thus, the present piece of work provides enough scope to establish Atasi taila & Ashwagandharishta as an effective remedy to treat clinical depression.

References:

2 http://www.healthyplace.com/causesofdepression.htm accessed on 15/10/2007