# Awareness Program about Recommended Dietary Requirements for Psychiatric Patients

Thesis

*Submitted for Partial Fulfillment of the Requirement of doctorate Degree in Psychiatric Nursing*

In

*Psychiatric Nursing Department*

By

***Abeer Mohammed Elshahat Ali***

*M.Sc., Psychiatric Nursing, 2010*

*Nursing specialist in Technical health Institute Embaba*

Faculty of Nursing

Ain Shams University

2016

# Awareness Program about Recommended Dietary Requirements for Psychiatric Patients

Thesis

*Submitted for Partial Fulfillment of the Requirement of Doctorate Degree in Psychiatric Nursing*

In

*Psychiatric Nursing Department*

Under Supervision of


## Dr. Nevein Mustafa Elashery

*Professor of Psychiatric/ Mental Health Nursing*
*Faculty of Nursing - Ain Shams University*

## Dr. Mona Hassan AbdelAal

*Assistant Professor of Psychiatric/ Mental Health Nursing*
*Faculty of Nursing - Ain Shams University*

## Dr. Ereny Wilson Nagib

*Lecturer of Nutrition and Food Science*
*Home Economics Department - Ain Shams University*



Faculty of Nursing
Ain Shams University
2016

# Acknowledgment

*First, thanks to ALLAH for helping me to accomplish this work.*

*I would like to express my deepest gratitude sincerest appreciation to* ***Dr. Nevein Mustafa Elashery,*** *Professor of Psychiatric Nursing and Mental Health, Faculty of Nursing, Ain Shams University, for her kindness, guidance, support, caring, and supervision throughout the study.*

*I would like also to express my gratitude sincerest appreciation to* ***Dr. Mona Hassan AbdelAal,*** *Assistant Professor of Psychiatric Nursing, Faculty of Nursing, Ain Shams University, for her kindness, guidance, support, and supervision. She gave me the energy and self assurance to complete this work.*

*My thanks are also addressed to* ***Dr. Ereny Wilson Naqib,*** *Lecturer of Nutrition and Food Science, Home Economics Department, Ain Shams University, for her kindness, continuous encouragement, and supervision throughout the study.*

*I wish to convey my gratitude and thankfulness to all psychiatric patients who gave me much of their time and for their interest to participate in this study.*

*My deep appreciation and thankfulness for my father spirit, my mother, my husband, and my children. Last but not least, I would like also to express my gratitude and appreciation to all those who helped me directly or indirectly for the completion of this work.*

**Abeer Mohammed Elshahat Ali**

# List of Contents

# List of Tables

# List of Tables (Cont...)

# List of Figures

| Fig. No. | Title | Page No. |
|---|---|---|

# List of Figures (Cont...)

# List of Abbreviations

| Abb. | Full term |
|---|---|
| *5-HT* | *Serotonin* |
| *5-HTP* | *5-hydroxytryptomine* |
| *ADHD* | *Attention-deficit / hyperactivity disorder* |
| *AHA* | *American Heart Association* |
| *BDNF* | *Brain-derived neurotrophic factor* |
| *CNS* | *Central nervous system* |
| *DA* | *Dopamine* |
| *DHA* | *Docosahexaenoic acid* |
| *DNA* | *Deoxyribonucleic Acid* |
| *EFAs* | *Essential fatty acids* |
| *EPA* | *Eicosapentaenoic acid* |
| *EPUFAs* | *Essential polyunsaturated fatty acids* |
| *GABA* | *Gamma-Amino Butyric Acid* |
| *ICD-10* | *International Classification of Diseases (10th edition)* |
| *LCn-3* | *Long-chain omega-3* |
| *MAOIs* | *Monoamine oxidase inhibitors* |
| *OO* | *Olive Oil* |
| *N3* | *Aka Omega-3* |
| *NAT* | *Nutrition Assessment Tools* |
| *NRA* | *Nutrition Risk Assessment* |
| *OCD* | *Obsessive compulsive disorder* |
| *NE* | *Nor-epinephrine* |
| *PLA2* | *Phospholipids A2* |
| *ROS* | *Reactive oxygen species* |

# List of Abbreviations (Cont...)

| Abb. | Full term |
|---|---|
| *SAMe* | *S-Adenosyl-L-methionine* |
| *SEP* | *Socioeconomic position* |
| *SFA* | *Saturated fats* |
| *SOD* | *Superoxide dismutase* |
| *TBARS* | *Thiobarbituric acidic reactive substances* |
| *TFA* | *Trans-unsaturated fats* |
| *WHO* | *World Health Organization* |
| *WM* | *White matter* |
| *Y-BOCS* | *Yale-Brown Obsessive-Compulsive Scale* |

# Abstract

The study aimed at examining the effect of awareness program about recommended dietary requirements for psychiatric patients. **Methods:** The study was conducted at outpatient clinic in the Institute of Psychiatry affiliated to Ain Shams University hospitals, using a quasi- experimental research design on a convenient sample of 50 psychiatric patients. Data were collected through an interview questionnaire covering socio-demographic characteristics, and assessment of nutritional habits of the studied sample; nutrition assessment tools, nutrition risk assessment, and nutritional follow up. **Results:** The main study findings showed that, there were highly statically significant relations regarding improvements in modified nutritional supplements for depressed, schizophrenic, bipolar, and obsessive compulsive patients after conducting the program. Regarding psychiatric patients' knowledge about healthy food, healthy nutritional habits, and patients' awareness & readiness for change, there were highly statically significant improvements. Concerning signs and symptoms of psychiatric disorders there were highly statically significant relations in improvements for depressed, schizophrenic, bipolar and obsessive compulsive patients after conducting the program. **In conclusion,** the program was effective in improving psychiatric patients' awareness, about healthy dietary requirements post intervention. The study **recommended** that nurses should have more contribution in counseling psychiatric patients, and their family about healthy diet and healthy habits. Further research should recommend studying the effectiveness of herbs on enhancing mental health for psychiatric patients.

**Keywords:** Awareness Program- Recommended Dietary Requirements- Symptoms Associated with Psychiatric Disorders

# INTRODUCTION

Most people are not aware that mental disorders may require special diets. While dietary changes are necessary to address the metabolic consequences of atypical antipsychotic medications; diet also plays a significant therapeutic role in its ability to reduce the positive and negative symptoms of the disease ***(Jonathan, 2010).*** The ***International Society for Nutritional Psychiatry Research of Japan (2013)*** encourages the recognition of diet and nutrition as central determinants for both physical and mental health. A balanced diet is as important to psychiatry as it is to cardiology. Nutrition "has become a key factor for the high prevalence and incidence of very frequent mental diseases, such as depression. It has been proven that the quality of diet and the deficiencies in certain essential nutrients are determining factors for physical and mental health problems. The human brain "needs an adequate intake of key nutrients, such as polyunsaturated fatty acids Omega-3, essential amino acids, B-group vitamins (B12 and folate), vitamin D and minerals like zinc, magnesium and iron ***(Sarris et al., 2015).***

The brain is the platform for the mind and therefore the platform for the mental health. The understanding of how the brain works is less advanced than the understanding of the other body's organs work. One of the clearest examples is the role of nutrition in relation to mental health. In fact the brain is

made up in large part of essential fatty acids, water and other nutrients. Also food affects how can the person feel, think and behave. So, the dietary interventions may hold the key to a number of the mental health challenges in the society ***(McCulloch et al., 2014).***

The brain uses 20-30% of a person's daily caloric intake for the day. If the calories consume not enough, verbal fluency, problem solving ability and motivation are affected first, and then bodily functions are decreased in reverse order of necessity for life. The brain requires essential fatty acids to maintain proper function. This is one of the many reasons that extreme low-fat diets are not healthy. Fatty acids are required to maintain connections between neurons. A lack of N3 (aka Omega-3) fatty acids may cause learning and motor disabilities, and may damage the passage of dopamine and serotonin in the frontal cortex ***(Luther, 2013).***

Neurotransmitters are messengers passed back and forth within the brain. They allow neurons to communicate information amongst themselves. Neurotransmitters are made from amino acids, which often must be derived directly from the diet. For example, the neurotransmitter serotonin, which is associated with feelings of contentment, is made from the amino acid tryptophan. Adrenaline and dopamine, the 'motivating' neurotransmitters, are made from phenylalanine ***(McCulloch et al., 2014).***

The most common mental disorders that are currently prevalent in numerous countries are depression, bipolar disorder, schizophrenia, and obsessive-compulsive disorder (OCD). The dietary intake pattern of the general population in many Asian and American countries reflects that they are often deficient in many nutrients, especially essential vitamins, minerals, and omega-3 fatty acids. A notable feature of the diets of patients suffering from mental disorders is the severity of deficiency in these nutrients ***(Sathyanarayana et al., 2008).*** One in four people will suffer from a mental or a neurological disorder at some point during their lifetime; 450 million people are currently affected by these disorders, 121 million people suffer from depression, 24 million from schizophrenia ***(Okasha, 2011).***

Persons with serious mental illness, such as schizophrenia, bipolar disorder, and major depression, have mortality rates that are two to more than three times as high as the rate in the overall population and the primary cause of death in such persons. Concomitantly, this vulnerable population has an extremely high prevalence of obesity, nearly twice that of the overall population ***(Allison et al., 2009).*** Therefore, it is not surprising that persons with serious mental illness have an increased burden of weight-related conditions, including heightened risk of diabetes mellitus, hypertension, dyslipidemia, and certain cancers ***(Bresee et al., 2010 & McGinty et al., 2012).***

Depression is among the most burdensome disorders worldwide, giving rise to considerable adverse effects on activities of daily living for extended periods of time ***(Bruffaerts et al., 2012).*** World Health Organization (WHO) study of more than 240,000 people across 60 countries, depression was shown to produce the greatest decrease in quality of health compared to several other chronic diseases. Health scores worsened when depression was a co- morbid condition, and the most disabling combination was depression and diabetes ***(Trangle et al., 2016).***

Bipolar disorder is highly disabling with lifetime prevalence of 1% and 4%. It is associated with marked occupational, personal, and social impairment and is accompanied by poor physical health and early mortality. In fact, people with this disorder, on average, die 10–20 years earlier than the general population, with suicide accounting for 15% of deaths and cardiovascular disease accounting for roughly 35%–40% of death ***(Miller et al., 2014).***

## ***Significance of the Research***

On the basis of accumulating scientific evidence, an effective therapeutic intervention is emerging, namely nutritional intervention. These may be appropriate for controlling and to some extent, preventing depression, bipolar disorder, schizophrenia, eating disorders and anxiety disorders, attention deficit disorder/attention deficit hyperactivity disorder