Depressive Disorders among a Sample of Egyptian Old Patients in a Medical Ward

THESIS

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By

Alia Adel Abdel Fattah Saleh

(M. B., B. Ch.)

Supervised by

Prof. Dr. Sanaa Ahmed Kamal

Professor of Psychiatry

Faculty of Medicine, Cairo University

Prof. Dr. Abdel Hamid Hashem Hashem

Professor of Psychiatry

Faculty of Medicine, Cairo University

Assist. Prof. Dr. Noha Ahmed Sabry

Assistant Professor of Psychiatry

Faculty of Medicine, Cairo University

Faculty of Medicine
Cairo University

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Depressive Disorders among a Sample of Egyptian Old Patients in a Medical Ward

Abstract

AIM OF WORK: 1) To determine the influence of general medical conditions (as regards severity and multiplicity of medical illness) and the related disability on depressive disorders in the population of study. 2) To determine the influence of social support and perceived locus of control (LOC) on depressive disorders in the population of study. 3) To compare between Major and Non-Major Depression and their correlates in older medical inpatients.

DESIGN: A cross-sectional, case/control, comparative study with consecutive sampling.

SETTING: The General Medical wards of Kasr Al Aini Hospital.

SUBJECTS: 100 elderly Egyptian patients of both sexes aged 55 years or above with no cognitive impairment, suffering from a chronic medical illness and were admitted in internal medicine ward at the time of the study. The subjects were classified into 2 groups (control and depressed groups) 50 subjects each. The depressed group subjects were further classified into Major (N=18) and Non-Major Depression subgroups (N=32).

METHADOLOGY: Diagnostic criteria of the DSM-IV TR were used for the diagnosis of depressive disorders. SMMSE was used for assessment of the cognitive functioning (subjects scoring < 24 were excluded). Socio-demographic variables were collected, Subjective social Support and Actual Social Support (number of children and siblings seen in the past month, number of current friends, presence of family conflicts), elder mistreatment, religious activities, recent bereavement, past history of depression, sexual functioning, Subjective Rating of

General Health, and activities of daily living were all assessed. Severity and multiplicity of the general medical condition was assessed by the Modified Cumulative Illness Rating Scale (CIRS).Perceived Locus of Control was assessed by Rotter internal/external LOC scale.

RESULTS: Comparison between the control and depressed groups revealed that depression in older medical inpatients is associated with divorce and widowhood, living alone, inadequate Subjective Social Support and lower number of children and siblings seen in the last month, lower number of close friends, and presence of family conflicts and/or elder mistreatment, irregular practice of religious activities, poor Subjective Rating of General Health, positive past history of depression, and external Locus of Control.

Comparison between Major and Non-Major Depression subgroups revealed that patient characteristics and correlates of depression are similar in both groups. However, higher educational levels, positive past history of depression, and sexual dysfunction problems were particularly associated with Major Depression.

CONCLUSION:

Depression in older medical inpatients is particularly associated with inadequate social support whether subjective or actual. Depression in older medical inpatients is associated with medical illness perception of greater severity rather than the actual disease status and the related disability**.** Depression in older medical inpatients is associated with external locus of control and positive past history of depression. Both Major and Minor depression are similar in patient characteristics and depression correlates which suggest that both lie on one continuum in the elderly patients with chronic medical illness.

Key words: elderly, depression, medical inpatients.

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List of Abbreviations

ACTH	Adrenocorticotrophic hormone.
AD	Alzheimer's Disease
ADLs	Activities of Daily Living.
AL	Assisted Living.
BASDEC	Brief Assessment Scale For Depression Card-Sort.
BDI	Beck Depression Inventory.
BDNF	Brain-derived neurotrophic factors.
BP	Blood Pressure.
CBT	Cognitive Behavioural Therapy.
CES-D	Centre of Epidemiological Studies Depression Scale.
CHF	Congestive Heart Failure.
CIRS	Cumulative Illness Rating Scale.
COPD	Chronic obstructive pulmonary disease.
CRH	Corticotrophin releasing hormone.
CSF	Cerebro-spinal fluid.
DED	Depression Executive Dysfunction.
DM	Diabetes Mellitus
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders-IV.
DSM-IV TR	Diagnostic and Statistical Manual of Mental Disorders-IV Text Revised.
DST	Dexamethasone Suppression Test.
e GFR	Estimated Glomerular Filtration Rate.
EBAS-DEP	The Even Briefer Assessment Scale for Depression.
ECA	Epidemiological Catchement Area.
ECT	Electro-Convulsive Therapy.
FGF	Fibroblast Growth Factor.
FSH	Follicle stimulating hormone.
GDS	Geriatric Depression Scale
GPs	General Practioners.
HPG	Hypothalamo-puituitary-gonadal axis.
HPT	Hypothalamo-puituitary-thyroid axis.
HR	Heart Rate.
5-HIAA	5-Hydroxy-Indole acetic acid.
ICD-10	International Classification of Mental Disease-10.
IHD	Ischemic Heart Disease.
IL1 IL6	Interleukin I, VI
IPT	Inter Personal Therapy
LH	Luteinising hormone.
LOC	Locus Of Control.
MAO-B	Mono-Amine Oxidase B.
MCI	Mild Cognitive Impairment.

MDD	Major Depressive Disorder
MI	Myocardial Infarction.
m-RNA	Messenger RNA.
MRS	Magnetic Resonance Spectroscopy
MTHF-R	Methyline Tetra-hydro Folate Reductase.
NIH	National Institute of Mental Health.
NK	Natural Killer
NRs	Nuclear Receptors
OTE	Openness To new Experience.
P	Probability.
PD	Parkinson's Disease.
p-MRS	Proton Magnetic Resonance Spectroscopy.
PSD	Post-Stroke depression.
QTc	Corrected Q-T interval.
R	Correlation coefficient.
RIMA	Reversible Inhibitor of Mono-amines.
SD	Standard deviation.
SIADH	Syndrome of Inappropriate anti-diuretic hormone
SMMSE	Standardized Mini-Mental State Examination.
SRGH	Subjective Rating of General Health.
SSRIs	Selective Serotonin Reuptake Inhibitors.
5HTTLPR	Serotonin transporter linear polymerase replication gene.
TCAs	Tricyclic Anti-depressants.
TNF	Tumor Necrosis Factor.
TRH	Thyrotrophin releasing hormone.

Introduction

Depression in old age is a pathological process, not a normal reaction to growing older. The majority of people cope with aging, and many feel happy and fulfilled (Alexopoulos, 1992). Depression tends to be denied by the current generation of elderly people, many of whom were raised in an atmosphere where showing feelings are discouraged, and this adds to the diagnostic difficulties. Comorbid medical conditions, the tendency of patients to somatise, cognitive deterioration, and multiple life events, often of loss (e.g. bereavement, retirement), all further complicate the diagnostic process (Evans & Mottram, 2000).

It is generally accepted that the burden of depression in the elderly is high. Despite this, the prevalence of major depressive disorder has been shown to be no higher in the elderly than in the young (1-3%), however these findings do not take into consideration the co-morbidity of physical illness (Blazer, 1999).

Older medical inpatients are five to ten times more likely to have major or minor depression than older persons in the community (Cole *et al.*, 2006). The reported prevalence of major depression in elderly medical inpatients varies between 5% and 32%. Subsyndromal or minor depression (clinically significant symptoms of depression that do not meet the diagnostic criteria for major depression) is also common in this population. The prevalence of minor depression ranges from 20% to 50% (McCusker *et al.*, 2005).

The prognosis of major depression in this population appears to be poor. A follow-up study of older medical inpatients showed that, when physical illness was controlled for, those who where depressed before discharge saw physicians more frequently, were more often hospitalized and

more often needed nursing home care than controls without depression (Koenig & Kuchibhatla, 1999).

Depression is very important in older medical inpatients because it is associated with:

- Increased mortality: depressed patients have a higher mortality rate than their age- and sex-matched controls. The death rate is three times greater in depressed men and twice as high in women compared with controls. Most of these deaths are due to medical illness, particularly stroke and myocardial infarction (Mulley, 2001).
- Greater morbidity: depression worsens the prognosis of the co-existing physical illness (Mulley, 2001).
- Reduced compliance: older patients who are depressed are less likely to continue to take their medication. This includes antidepressant medication. Medical relapses and re-admissions are therefore more likely (Mulley, 2001).

Factors associated with depressive disorders may include patient's clinical, socio-demographic, cognitive, and functional status. These factors may represent risk factors for depression. They can also help the clinicians in the identification of subgroups of patients about whom they should have a high index of suspicion of the existence of depression (McCusker *et al.*, 2005).

There are also hints in the previous studies of a protective effect against depression through social contacts. Previous studies demonstrated an association between severe life events, major social difficulties, poor physical health and the onset of depression (Murphy, 1982).

There was a stronger relationship between the number of social support deficits and depression. Social support deficits also related to age, handicap, and loneliness. Loneliness was itself associated with depression (Prince *et al.*, 1997a).

Beliefs about the controllability of health, referred to as health locus of control (LOC). Individuals may believe their illness is controlled by themselves (internal LOC), powerful others (external LOC), or fate. Individual differences in perception of control over health have been linked to depression. In a meta-analysis, depression was associated with high external LOC and low internal LOC, moreover lower internal LOC has been associated with more depressive symptoms (Voils *et al.*, 2005).

The association of depression in geriatric patients with morbidity and mortality leads to conclusion that the detection and treatment of depression in late life is very worthwhile and simple, brief self- rating scales can assist both in detection and in measuring the outcomes of intervention (Wattis, 2001).

We hypothesize that elderly hospitalized patients with chronic medical illness suffer from depression that is related to burden of medical illness, lack of social support and perceived locus of control.

Aim of the work

- To determine the influence of general medical conditions (as regards severity and multiplicity of medical illness) on severity of depressive disorders in the population of study.

- To determine the influence of social support and perceived locus of control (LOC) on depressive disorders in the population of study.

- To compare between Major and Non-Major Depression in older medical inpatients with chronic medical illness.

Chapter 1

Epidemiology of late life depression

Introduction:

Worldwide life expectancy is increasing. Currently about 10% of the world's population is made of older adults (aged 65 and above). This figure is said to rise steadily, to as much as 30% in some societies. For mental health this will mean an increase not only in the neurodegenerative conditions, such as Alzheimer's dementia, but also of depressive disorders (Baldwin *et al.*, 2002b).

In 2050, it is predicted there will be a total of 2 billion people over the age of 60; 80% of these will be living in developing countries. Life expectancy at birth is increasing in all regions and women are living longer than men (Kalache, 2006).

Population aging refers to a decline in the proportion of children and young people and an increase in the proportion of people aging 60 and over. As populations age , the triangular population pyramid of 2002 will be replaced with a more cylinder like structure in 2025 (Kalache, 2006).

In Egypt, over the past 5 decades, life expectancy at birth has increased globally by almost 20 years, from 42.4 in 1950-1955, to 68.3 years in 2000-2005. It is also projected that by 2025, it will reach 77.8 years (WHO, 2006).

In 2000, the percent of people aged 60 years and older in Egypt was 6.3 % of the total population. It is projected that this percent will rise to 11.5 % by 2025 (WHO, 2006).