SUICIDE IN THE ELDERLY

ESSAY

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Neuropsychiatry

By

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5-HIAA	5-Hydroxyindoleacetic acid
5HT	5-Hydroxytryptamine (serotonin)
5-HT1A	5- Hydroxytryptamine receptor 1 A
AAS	American Association of Suicidology
BDI	Beck Depression Inventory
BHS	Beck Hopelessness Scale
BIC	Brief Intervention Contact
CCHS	Canadian Community Health Survey
CES-D	The Center for Epidemiologic Studies Depression Scale
CI	Confidence Interval
CIDI	Composite International Diagnosis Interview
CIRS	The Cumulative Illness Rating Scale
CRH	Corticotrophin Releasing Hormone
CSF	Cerebrospinal fluid
CSF MHPG	Cerebrospinal fluid 3-Methoxy-4 Hydrox Phenyl Glycol
DED	Depression-Executive Dysfunction syndrome
DHHS	Department of Health and Human Services
DRS	Dementia Rating Scale
DSH	Deliberate Self-Harm
DSS	Depression and Suicide Screen
DSS	Depression Suicide Screen
ECT	Electroconvulsive Therapy
EENT	Eyes, Ears, Nose and Throat
EMR	The Eastern Mediterranean Region
EPESE	Established Populations for Epidemiologic Studies of the Elderly
ESs	Effect sizes
GDS-5	Geriatric Depression Scale-5 items
GHS	Geriatric Hopelessness Scale

GMC	General Medical Condition
GP	General Practitioners
GSIS	Geriatric Suicide Ideation Scale
HBS	Harmful Behaviors Scale
HAM-D	Hamilton Depression Rating Scale
HIV	Human immunodeficiency virus
HPA	Hypothalamic adrenal axis
ICD	Impulse control disorder
MDD	Major Depressive Disorder
MEAF	Mental Health in Early Adulthood in Finland
MEPS	Means-Ends Problem-Solving procedure
MMSE	Mini-Mental Status Examination
MOS	Medical Outcome Study
MSSS	Major Symptoms of Schizophrenia Scale
PD	Parkinson's disease
PFS	Patients Follow-up Schedule
PHN	Public Health Nurse
PIF	Psychoses in Finland
rCMRGlu	Regional Cerebral metabolic Rate for Glucose utilization
PSW	Psychiatric Social Worker
RFL-OA	Reasons for Living Scale-Older Adult version
SANS	Scale for the Assessment of Negative Symptoms
SAP	Standardized Assessment of Personality
SAPS	Scale for the Assessment of Positive Symptoms
SD	Standard Deviation
SDS	Self rating Depression Scale
SID	Subcortical Ischaemic Depression
SMAST-G	The Short Michigan Alcoholism Screening Test – Geriatric version
SMR	Standardised Mortality Ratio
SPSI-R:S	Social Problem Solving Inventory-Revised Short
SSI	Scale for Suicide Ideation

SUD	Substance Use Disorder
SUPRE-MISS	Suicide Prevention Multisite Intervention Study on Suicidal Behavior community Survey
TAU	Treatment As Usual
TPH	Tryptophan hydroxylase
WHO	The World Health Organization

INTRODUCTION

Suicide rates are higher in later life than in any other age group, suicidal behavior in the elderly is undertaken with great intent and with great lethality than in younger age groups, and health care staff plays a vital role in recognition and prevention of suicide in this group ***(Cattell, 2000)*** .

Epidemiology

The rate of suicide for the elderly for 2005 was 14.7 per 100,000. White men over the age of 85 were at the greatest risk for all age –gender-race groups. The suicide rate for these men was 45.23 per 100, 000. Moreover , older adults have a higher completion rate. For all ages combined; there is an estimated 1 suicide for every 25 attempted suicides. Over the age of 65, there is one estimated suicide for every 4 attempted suicides. The rate of male suicide in late life was 5.2 times greater than for female suicides and the method of elderly male suicide was more violent than women, firearms were the most common means used among elderly men. ***(The National Center for Injury Prevention and Control, 2005).***

Neurobiology

The biology of suicidal behavior suggest dysregulation of the serotonergic system, shown by reduction in brain stem cerebrospinal fluid (CSF) 5-hydroxyindoleacetic acid (5-HIAA). Low CSF5-HIAA and homovanillic acid (HVA) have predictive value in further suicide attempts ***(Jones et al, 1990)*** .

Social factor

Social isolation and loneliness are important contributors, precipitating life events as relationship problems, financial, occupational and legal problems associated with younger and middle aged suicides. Physical illness and other losses are more associated with elderly ***(Carney et al, 1994)***. The bereavement has a significant role and the risk for widowed men being over three times that of married elderly men, widowed and married elderly women showed similar risk ***(Guohua, 1995)***.

Psychiatric illness

From 71- 95% of suicide victims aged 65 years and over had major psychiatric disorder at the time of death. Older suicide victims are more likely to have suffered from depressive illness ***(Conwell & Brent 1995)***.Primary psychotic illness (schizophrenia, schizoaffective illness, and delusional disorder), personality

disorder and anxiety disorders appear to play a relatively small role in suicide among the elderly ***(Carney 1994, Harwood et al, 2001).***Similarly, alcohol and other substance use disorder are present in a smaller proportion of completed suicides at older than younger ages ***(Conwell et al, 1996)***.

Physical illness

A number of specific central nervous system and systemic disorders have been linked with increased risk of suicides. These include epilepsy, multiple sclerosis, Huntington chorea, head injury, peptic ulcer and rheumatoid arthritis ***(Harris & Barraclough, 1994)***.

David et al., 2004 found that eleven illnesses (congestive heart failure, chronic obstructive lung disease, seizure disorder, Parkinson disease, urinary incontinence, anxiety disorders, depression, psychotic disorders, bipolar disorder, moderate pain, and severe pain) were associated with a significantly increased risk of suicide.

Availability of lethal methods

Reducing the availability of means of suicide as a preventive strategy is an important strategic initiative as reducing availability of firearms, limitation of paracetamol via over-the

counter sales and alteration in prescribing habits for older antidepressants ***(Cattell, 2000)*** .

Risk assessment

An act of suicide involving multiple psychological, physical and social factors operating in the life of a vulnerable individual. A typical high risk individual may be described as an elderly male, living alone following recent bereavement, who may have coexistent painful chronic health problems. He may have made serious previous suicide attempts and be currently depressed and the clinical interview that remains the cornerstone of such assessment. There is some evidence that suicidal elderly are less likely to express suicidal intent compared with the younger ones, so the detection of suicidal elderly is more difficult task than detection in younger (***Carney et al, 1994)***.

AIM OF THE WORK

The aim of the work is to review the literature on suicide in the elderly regards:

- Suicide rates in the elderly
- Neurobiology in the elderly suicides
- The predisposing social factor in the elderly suicides
- Role of the psychiatric illness in the elderly suicides
- Role of physical illness in the elderly suicides
- Preventive strategy in the elderly suicides

CHAPTER 1
EPIDEMOLOGY OF SUICIDE IN THE ELDERLY

Suicide is the cause of almost half of all violent deaths and results in almost a million fatalities every year ***(WHO, 2007)***. As well as being an indicator of extreme psychological distress **(*Kessler et al., 2005)***. A previous suicide attempt is one of the strongest predictors of future completed suicide ***(Beck & Steer, 1989)***, or subsequent attempt **(*Leon et al., 1990).***

Suicide attempts are a major public health problem, as it has been estimated that there are between 10 and 20 suicide attempts for every death by suicide worldwide ***(American Foundation for Suicide Prevention, 2006)***. This amounts to between 10 and 20 million suicide attempts each year.

The observations that a proportion of people who engage in suicidal acts have no psychiatric illness and that most individuals with a psychiatric disorder do not attempt suicide necessitate an increased understanding of physical health and psychosocial factors that may contribute to it ***(Robertson et al., 2008)***.

Robertson et al., 2008 examined the prevalence of 12-month suicidal acts aged 15 years and older in a Canadian national population survey and the demographic, clinical, and psychosocial correlates of suicidal acts in the year preceding

interview. They found that 0.6% of the sample endorsed having performed a suicidal act, comparable to figures previously reported by Kessler et al., 2005 about lifetime suicide attempts in the United States of America. It has been suggested that there may be 8–25 suicide attempts for every death from suicide. Most individuals who complete or attempt suicide have a diagnosable psychiatric illness, with depressive disorders most often diagnosed**.**

Suicide Definitions

Passive suicide (also called **indirect suicide**): includes behavior that occurs over time and can reasonably be expected to result in death. This can include refusing to eat, drink, take medication, or follow other treatment plans, or taking unnecessary risks. Passive suicide is likely to occur among older adults in settings such as nursing homes where they have limited control over their lives and limited access to lethal means ***(Reiss & Tishler, 2008)***. It is important to note that passive or indirect suicide is different from an end-of-life decision made by a terminally ill older adult, in which a health care team supports a rationally thought-out decision by the individual to have treatment and medication withheld or withdrawn.