Formatted: Height: 11.69"

Suicidal ideation and psychiatric morbidity in a sample of Egyptianelderly population seeking medical advice Screening and risk determents

Submitted by

MaikelEskanderMechaelEskander

M.B.B.ch

In partial fulfillment of master degree neuropsychiatry

Supervised by:

Dr. Abd El-Nasser Mahmoud Omar

Professor of Psychiatry Department Faculty of Medicine, Ain- Shams University

Dr. MarwaAbdEl-MeguidHamed

Professor of Psychiatry Department Faculty of Medicine, Ain- Shams University

Dr. Ahmed Adel M. Abd-elgawad

Lecturer of Psychiatry Department Faculty of Medicine, Ain- Shams University

2020

Formatted: Border: Top: (No border), Bottom: (No border)

ACKNOWLEDGEMENT

First of all thanks to "Allah" the great, who enabled me to carry out this work.

I wish to express highest and respectful appreciation and everlasting gratitude to **Prof. Abd El-Nasser Mahmoud Omar**, Professor of Psychiatry Department Faculty of Medicine, Ain- Shams University, for His keen help and valuable guidance. This work was not to come into light without his remarkable thoughts and notable orientation.

I am also deeply grateful to **Prof.Doaa HammedMustafa**, Professor of Psychiatry Department Faculty of Medicine, Ain- Shams University, as she put the cornerstone of this study.

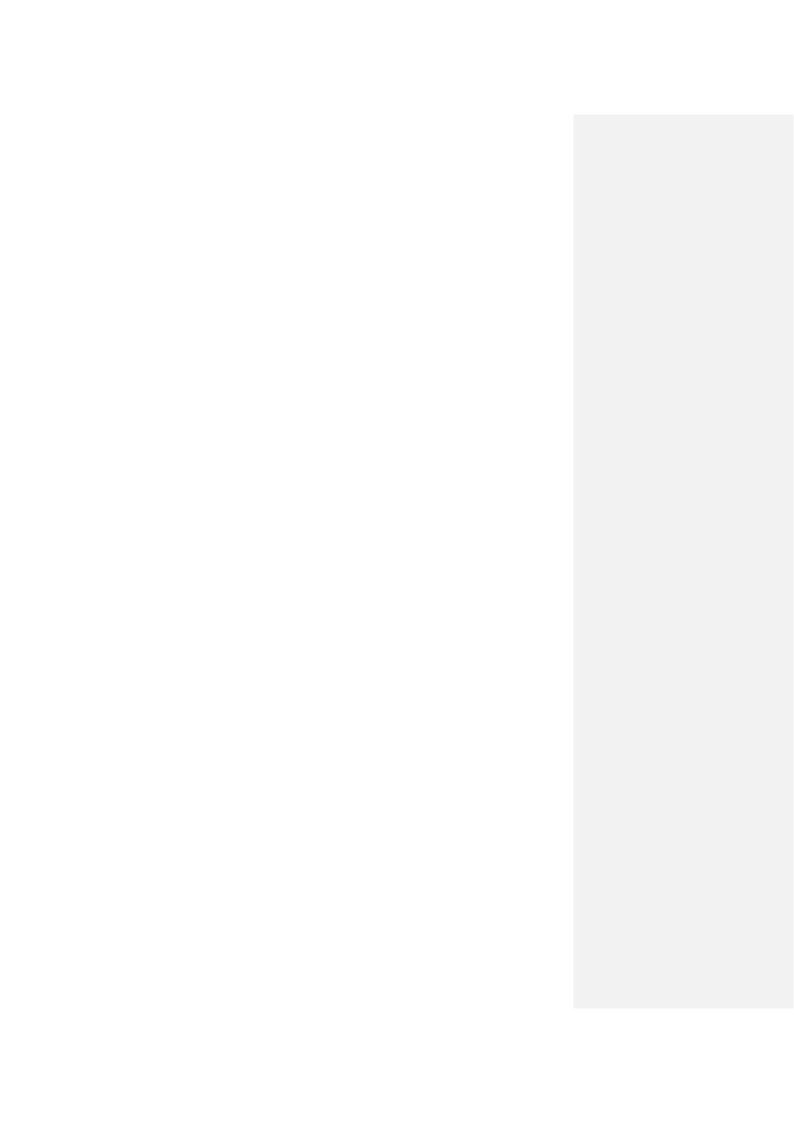
I wish to express the deepest gratitude and most sincere thanks to Prof.MarwaAbdEl-

$\underline{\textbf{Meguid}}\underline{\textbf{Hamed}}\underline{\textbf{Professor}}\underline{\textbf{Professor}}\underline{\textbf{Psychiatry}}\underline{\textbf{ofPsychiatry}}$

department faculty of medicine, Ain- Shams University, for her trust, since guidance, precious encouragement and unlimited support throw-out the stages of this work.

I would like to express my unlimited gratitude and appreciation to **Dr. AHMED ADEL M. ABD-ELGAWAD** Lecturer of Psychiatry Department Faculty of Medicine, Ain- Shams University. I'm deeply grateful to him for his supervision and invaluable support throughout the work.

I wish to thank all patients who participated in this study. Without whom this work would have never been completed.



LIST OF CONTENT

SUBJECTS		
Introduction		4
Aim of the work	2	•
Review of literature	4	•
ch1: Suicidal ideation in elderly	<u>4</u>	•
ch2: Suicidal behavior in elders	<u>1</u> 0	•
ch3: Theory Of Suicide And Suicidal Ideations	<u>1</u> 5	•
ch4: Neurobiology and Genetics of suicide	<u>3</u> 0	•
ch5: Protective and risk factors for suicide in elderly	37	•
ch6: Management of suicidal ideation and suicideprevention	44	•
Methodology and Results	55	•
Results		\
Discussion		•
Recommendation, limitation and Conclusion		•
Summary	<u>1</u> 0 <u>1</u>	•
References		•
Arabic summary		•

Formatted: Font: Bold, Complex Script Font: Formatted: Line spacing: single, Tab stops: Formatted Table Formatted: Font: Bold, Complex Script Font: Bold Formatted: Centered, Indent: First line: 0", Line spacing: single Formatted: Font: Bold, Complex Script Font: Bold Formatted: Centered, Indent: First line: 0", Line spacing: single Formatted: Font: Bold, Complex Script Font: Formatted: Centered, Indent: First line: 0", Line spacing: single Formatted Formatted **Formatted Formatted Formatted Formatted Formatted Formatted** ... **Formatted** Formatted **Formatted** Formatted **Formatted** Formatted **Formatted** Formatted **Formatted** ... **Formatted** ... Formatted Formatted Formatted ... **Formatted Formatted** <u>...</u> **Formatted** Formatted **Formatted Formatted** Formatted **Formatted**

Formatted

į

Formatted: Border: Top: (No border), Bottom: (No border)

Formatted: Font: (Default) +Headings CS (Times New Roman), Complex Script Font: +Headings CS (Times New Roman), Check spelling and grammar

Formatted: Font: (Default) +Body (Calibri), 11 pt, Complex Script Font: +Body CS (Arial), 11 pt

ii

LIST OF TABLES

Table No	Title	Page
1	Ideation-to-action framework theories	<u>2</u> 0.
2	Hypotheses of Interpersonal Theory of Suicide	<u>2</u> 5,
3	Protective factors for suicide	<u>4</u> 3,
4	levels of preventive intervention	46
5	Distribution of the studied cases, according to (GDS-SI) scale (n = 200)	63
6	Distribution of the studied cases, according to scales (GDS-SI) & (BSRS-5) $(n = 200)$	64
7	Characteristics of BSRS -5 in the study	65
8	Distribution of the studied cases, according to socio demographic variables (n = 200)	66
9	Distribution of the studied cases, according to diseases $(n = 200)$	70
10	Relation between presence of suicidal ideation by Geriatric depression scale suicide ideation and gender, marital state, social state, smoking habit ($n = 200$)	7 <u>2</u>
.11	Relation between presence of suicidal ideation by Geriatric depression scale suicide ideation and level of education, age	7 <u>3</u>
12	Relation between presence of suicidal ideation by Geriatric depression scale suicide ideation and illness (n = 200) in our study	7 <u>5,</u>
13	Distribution of the studied cases, according to MMSE scale (n = 74)	7 <u>6</u>
14	Relation between Geriatric depression scale suicide ideation and presence of cognitive impairment by MMSE (n =74)	77
15	Distribution of the studied cases, according to ADL scale $(n = 74)$	7 <u>9</u>
16	Relation between Geriatric depression scale suicide ideation and degree of dependence by ADL (n=74)	8 <u>0</u>
17	Distribution of the studied cases, according to ICD 10 scale $(n = 74)$	8 <u>2</u>
18	Relation between Geriatric depression scale suicide ideation and psychiatric disorders by ICD-10 (n = 74)	82
19	Relation between Geriatric depression scale suicide ideation and presence of psychiatric symptoms by Brief psychiatric rating scale (n = 74)	84

Formatted	
Formatted	(
Formatted	(
Formatted Table	···
Formatted	
Formatted	
Formatted	(
Formatted	
Formatted	<u></u>
Formatted	
Formatted	<u></u>
Formatted	<u></u>
Formatted	<u></u>
	<u></u>
Formatted	<u>(</u>
Formatted	(
Formatted	<u></u>
Formatted	
Formatted	
Formatted	
Formatted	
Formatted	<u></u>
Formatted	<u></u>
Formatted	
Formatted	
Formatted	
Formatted	(
Formatted	(
Formatted	(
Formatted	
Formatted	
Formatted	···
Formatted	
Formatted	
Formatted	
Formatted	
Formatted	<u></u>
Formatted	<u> </u>
Formatted	<u> </u>
Formatted	<u></u>
	<u></u>
Formatted	<u></u>
Formatted	<u></u>
Formatted	
Formatted	<u></u>
Formatted	<u></u>
Formatted	<u></u>
Formatted	
Formatted	
Formatted	
Formatted	
Parameter d	
Formatted	

Formatted Formatted

Formatted

Formatted: Border: Top: (No border), Bottom: (No border)

Formatted: Font: (Default) +Headings CS (Times New Roman), Complex Script Font: +Headings CS (Times New Roman), Check spelling and grammar

Formatted: Font: (Default) +Body (Calibri), 11 pt, Complex Script Font: +Body CS (Arial), 11 pt

LIST OF FIGURES

able No	<u>Title</u>	<u>Page</u>
1	The number of seniors and their proportion in the population	
2	<u>Dimensions—and indicators—of Thwarted Belongingness</u>	2 2./
3	<u>Dimensions—and indicators—of Perceived Burdensomeness</u>	23
<u>4</u>	Dimensions—and indicators—of Acquired Capability	2 4
<u>5</u>	Causal pathway to lethal suicidal behavior	2 5.
<u>6</u>	Assumptions of the Interpersonal Theory of Suicide	26
<u>7</u>	<u>IMV</u>	28
<u>8</u>	The three-step theory (3ST) of suicide. Key constructs of the 3ST are pain and hopelessness, connectedness, and suicide capacity	29
2	Distribution of the studied cases, according to (GDS-SI) scale (n = 200)	63
<u>10</u>	Distribution of the studied cases, according to scales (GDS-SI) & (BSRS-5) (n = 200)	64
<u>11</u>	<u>Characteristics of BSRS -5 in the study</u>	65
<u>12</u>	Distribution of the studied cases, according to Sex	67
<u>13</u>	Prevalence of suicidal ideation among females	67
<u>14</u>	Prevalence of suicidal ideation among males	67.
<u>15</u>	Distribution of the studied cases, according to Marital State	68
<u>16</u>	<u>Distribution of the studied cases, according to living status</u>	68
<u>17</u>	Distribution of the studied cases, according to Smoking	69
<u>18</u>	Distribution of the studied cases, according to Education level	69
<u>19</u>	Distribution of the studied cases, according to diseases (n = 200)	<u> 70</u>
<u>20</u>	Relation between Geriatric depression scale suicide ideation and socio- demographic (n = 200)	74
<u>21</u>	Relation between Geriatric depression scale suicide ideation and Age (years) (n = 200)	7 #
<u>22</u>	Relation between Geriatric depression scale suicide ideation and illness (n = 200) in our study	<u>75</u>
<u>23</u>	Distribution of the studied cases, according to MMSE scale $(n = 74)$	77
<u>24</u>	Relation between Geriatric depression scale suicide ideation and presence of cognitive impairment by MMSE (n = 74)	
<u>25</u>	Distribution of the studied cases, according to ADL scale (n = 74)	

Formatted		
Formatted '	Table	
Formatted		
		<u></u>
Formatted		<u> </u>
Formatted		()
Formatted		
Formatted		<u></u>
Formatted		
Formatted		$\overline{}$
Formatted		<u></u>
Formatted		<u> </u>
Formatted		<u> </u>
Formatted		[
Formatted		<u></u>
Formatted		
		<u> </u>
Formatted		
Formatted		
Formatted Formatted		
Formatted Formatted Formatted		
Formatted Formatted Formatted		
Formatted Formatted Formatted Formatted Formatted Formatted		
Formatted Formatted Formatted Formatted Formatted Formatted Formatted		
Formatted Formatted Formatted Formatted Formatted Formatted Formatted Formatted		
Formatted Formatted Formatted Formatted Formatted Formatted Formatted Formatted Formatted		
Formatted		
Formatted		
Formatted		
Formatted		
Formatted		
Formatted		
Formatted		
Formatted		
Formatted		
Formatted		
Formatted		
Formatted		
Formatted		
Formatted		
Formatted		
Formatted		
Formatted		
Formatted		
Formatted		
Formatted		

Formatted Formatted

Formatted

T	able No	Title	Page	Formatted Table
				Formatted: Line spacing:
	<u>26</u>	Relation between Geriatric depression scale suicide ideation and degree of dependence by ADL (n=74)	8 <u>0</u>	Formatted: Font: Bold, Con Bold
	<u>27</u>	Distribution of the studied cases, according to ICD 10 scale (n = 74)	81	Formatted: Font: Bold, Cor Bold
		Relation between Geriatric depression scale suicide ideation and psychiatric	83	Formatted: Line spacing:
	<u>28</u>	disorders by ICD-10 (n = 74)		Formatted: Font: Bold, Cor Bold
	<u>29</u>	Relation between Geriatric depression scale suicide ideation and presence of psychiatric symptoms by Brief psychiatric rating scale (n =74)	85	Formatted: Font: Bold, Cor Bold

Formatted: Line spacing: single
Formatted: Font: Bold, Complex Script Font: Bold
Formatted: Font: Bold, Complex Script Font: Bold
Formatted: Line spacing: single
Formatted: Font: Bold, Complex Script Font: Bold
Formatted: Line spacing: single
Formatted: Line spacing: single
Formatted: Line spacing: single
Formatted: Line spacing: Script Font: Bold
Formatted: Font: Bold, Complex Script Font: Bold
Formatted: Font: Bold, Complex Script Font: Bold

Formatted: Line spacing: single

Bold

Formatted: Font: (Default) +Headings CS (Times New Roman), Complex Script Font: +Headings CS (Times New Roman), Check spelling and grammar

Formatted: Border: Top: (No border), Bottom: (No border)

Formatted: Font: (Default) +Body (Calibri), 11 pt, Complex Script Font: +Body CS (Arial), 11 pt

List of Abbreviation

The Integrated Motivational-Volitional Model of	(IMV)
Suicidal Behavior	
The Three-Step Theory of Suicide	(3ST)
Hypothalamic pituitary adrenal axis	HPA axis
Cerebrospinal fluid 5-hydroxyindoleacetic acid , 5-	(5HIAA), (5-HT2A)
hydroxy-tryptamine	
norepinephrine	(NE)
3-Methoxy-4-hydroxyphenylglycol	(MHPG)
corticotrophin releasing hormone	(CRH)
Adrenocorticotropic hormone	(ACTH)
The medial prefrontal cortex	(mPFC)
Monozygotic ; dizygotic	MZ ; DZ
psychological autopsy	(PA)
Little Openness to Experience	(OTE)
Geriatric depression scale- SI	(GDS-SI)
Brief Symptom Rating Scale	(BSRS-5)
the 10th revision of the International Statistical	ICD-10
Classification of Diseases and Related Health Problems	
Brief psychiatric rating scale	BPRS
Mini mental state examination	MMSE
The activities of daily living scale	(ADLs or ADL)

Formatted: Border: Top: (No border), Bottom: (No border)

Formatted: Font: (Default) +Headings CS (Times New Roman), Complex Script Font: +Headings CS (Times New Roman), Check spelling and grammar

Formatted: Font: (Default) +Body (Calibri), 11 pt, Complex Script Font: +Body CS (Arial), 11 pt

Introduction

Suicide at any age <u>could be ais a tragedy</u> for the individual, his or her family and friends, <u>and therefore the and the communities of which they'rethey</u> are a part. At a population level suicide <u>is additionally is also a seriousa major</u> public health problem, accounting for over 34,500 deaths each year in the United States (WHO, 2010).

The <u>commonaverage</u> incidence of suicide <u>ideation_thoughts</u>among elderly population was 5.4% and at one year suicidal <u>thinkingideation</u> persisted for 36.7% of those with ideation at baseline (**Raue et al, 2007**).

Among <u>seniorelderly</u> population<u>it had beenit was</u> found that <u>almostnearly40forty</u> %-percent of patients <u>sixty five65</u> years or older who died by suicide had directly reported a <u>desirewish</u> to die to a medical provider <u>throughoutduring</u> the <u>previousprior</u> year. However, few at-risk older adults, <u>especiallyparticularly</u> men, spontaneously report symptoms of distress and/or thoughts of suicide, which can impede the <u>correctaccurate</u> detection of suicide risk (Marnin et al, 2010).

Consequently, suicide is taken into account considered a completely totally preventable reason for cause of death so by detecting suicidal ideation thoughts and associated risk factors, we can identify high risk population groups. To the best of our knowledge, there's no available data or studies concerning the rate of suicidal thoughts among the elders in Egyptly population. By the end of this our study, we can have an idea about the suicidal ideation thoughts rate in among the elders by population in Egypt and can outline the major risk factors related to associated with suicidal ideation thoughts.

Aim of the Work

- Suicidal ideation is defined as: <u>conceptionsthoughts</u> of serving as
 the <u>applianceagent</u> of one's own death. It <u>mightayaltervary</u> in
 seriousness <u>reckoning ondepending on</u> the specificity of suicide
 plans <u>and also and</u> the severity<u>degree</u> of suicidal intent (Pyles,
 2003).
- Our study gives a preliminary view about how common are suicidal ideations among elders in Egypt.
- The current study also aim to find associated risk factors with suicidal ideation in elders, in the available literature we can highlight the major risk factors affecting suicidal ideation thoughts in elderly as depressive symptoms present in 67.5 % of elderly population with suicidal ideation, various physical disorders and pain symptoms. (Chan etal, 2011)
- Few older adults at-risk for suicide are seen in mental health settings; most seek <u>therapytreatment</u> in primary care <u>venuessettings and will and may</u> even be more <u>probablylikely</u> to do so than <u>non-suicidal non-suicidal</u> older adults (Marnin; et al. 2010).
- Primary care providers are <u>consequentlythus</u> well positioned to <u>spotidentify</u> high-risk patients and <u>begininitiate</u> interventions to <u>diminishmitigate</u> suicide-related morbidity and mortality. <u>CurrentRecent</u> multicenter research trials <u>validatesupport</u> the effectiveness of collaborative care interventions for

Formatted: Font: Bold, Complex Script Font: Bold

<u>lesseningreducing</u>-and/or resolving suicide ideation among older primary care patients (Marnin;etal, 2010).

Formatted: Font: Bold, Complex Script Font: Bold

• So the first step in prevention of suicide in eldersly population is detection identification of high risk groups and thus identification of patients with suicidal ideation—thoughts is the cornerstone step on the prevention of suicide.

Review of literature

Chapter 1: Suicidal Ideation in Elderly

Introduction

Suicide is the act of deliberately killing oneself (WHO, 2010a). It points to any death that is a direct or indirect result of a positive or negative performance accomplished by the victim whom the victim knows or think will produce such a result (Wu & Chan, 2007).

Although suicide <u>seemsappears</u> to be an individual decisionto end one's own life, the effects and outcomes for family members are long-lasting. There are at least six bereaved survivors for each suicide (**Shneidman**, 1969); they have higher opportunities of eliciting complicated responses and <u>frequently usually</u> have a <u>greater higher</u> suicide rate than their rivals suffering non-suicide-related bereavement (**Jordan**, 2001).

Data from WorldHealth-Organization-proposesuggest that nearlyalmost one million people die from suicide every year, with aninternationalglobal mortality rate of 16 per 100,000. As suicide rates in the last half century boostedincreased by 60sixty percent% worldwide, it is expected estimated that by 2020, suicide would account for cause 1.53 million deaths (Bertolote& Fleischmann, 2009). These projected deaths could directlead to serious socioeconomic encumbrance burden on the society, especially increasing the loadburden on health care.

Old age is the <u>terminatingelosing stageperiod within the in the lifespan</u> and cannot be <u>outlineddefined precisely exactly because</u> asit <u>doesn't does not</u> have the same <u>significance meaning</u> in all societies. Older people have <u>inadequate limited</u> regenerative <u>capabilities abilities</u> and are more <u>susceptible prone</u> to disease <u>and</u>, syndromes <u>and sickness</u> than other adults; in the USA and UK, people become <u>ableeligible</u> to retire with full social security <u>advantages benefits</u> at age 65. However, this age definition <u>doesn't does not familiarize adapt</u> well to the non-Western situation; the United Nations <u>approved agreed</u> cut-off is 60+ years to <u>talk aboutrefer to</u> the older population (WHO, 2010b).

Older people pose have higher risk of suicide than nearlyalmost all other age groups. Reasons Causes for suicide are multi-factorial, and there are no decisive conclusive findings on the etiologies of older suicide. There are also dissimilar different findings concerning regarding the suicidal behavior between male and female elders in different countries. (Convell, et al, 2002).

Further, data suggested that suicide rate is extremely high among the elderly. The <u>uppermosthighest</u> suicide rates in most countries are <u>statedreported</u> to be among persons over 75 year old (**Diego**₇ et al, 2002).

Suicidal ideation which proceedprecede suicidal attempt, also comprehendedknown as suicidal thoughts, it is cogitationthinking about or an unusual preoccupation with suicide. The varietyrange of suicidal ideation differs are greatly from momentary fleeting thoughts, to incomplete attempts also most people who have suicidal thoughts ideations don't continuedo not go on to make suicide attempts, but suicidal thoughts are considered a risk factor (Gliatto&Rai, 1999).

It is <u>usually commonly</u> believed that "anyone who would think of ending their life must not be thinking clearly." Associations among