

Relative Risk of Mental Disorders and Suicidal Attempts: a Study of suicide Attempters Presented at Ain Shams University Hospital, Psychiatry Department, Cairo

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

سببنا انك لا تعلم لنا
إلا ما علمتنا إنك أنت
العليم العظيم

صدق الله العظيم

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List of Contents

<i>Subject</i>	<i>Page No.</i>
List of Abbreviations.....	i
List of Tables.....	iv
List of Figures	viii
Introduction	1
Aim of the Work.....	6
Review of Literatur	
Background ON Suicide	7
Risk Factors for Suicide Behavior	20
Mental Illness and Suicide	35
Management.....	72
Methodology	94
Results.....	105
Discussion	154
Conclusion.....	221
Strengths and Limitation.....	222
Recommendations	224
Summary	227
References	234
Arabic Summary	—

List of Abbreviations

<i>Abbr.</i>	<i>Title</i>
AN	: Anorexia nervosa
APA	: American Psychiatric Association
ASPD	: Antisocial personality disorder
AUD	: Alcohol use disorder
BAD	: Bipolar affective disorder
BIS	: Barratt impulsivity scale
BPD	: Borderline personality disorder
BSIS	: Beck's Suicidal intent scale
CBT	: Cognitive behavioral therapy
CDC	: Centers for Disease Control and Prevention
CSF	: Cerebrospinal fluid
DBT	: Dialectical behavioral therapy
DSM-IV	: Diagnostic and Statistical Manual of Mental Disorders, 4 th Edition
DZ	: Dizygotic
ECA	: Epidemiologic catchment area
ECT	: Electroconvulsive therapy
ED	: Eating disorder
EMR	: Eastern Mediterranean region
FDA	: Food and Drug Administration
FH	: Family history
GAD	: Generalized anxiety disorder
MAO	: Monoamine oxidase A

MDD	: Major depressive disorder
MDE	: Major depressive episode
MZ	: Monozygotic
N	: Number
NCS	: National comorbidity survey
NESARC	: National Epidemiologic Survey on Alcohol and Related Conditions
NMDA	: N-methyl-D-aspartate
OCD	: Obsessive-compulsive disorder
OPC	: Outpatient clinic
PDs	: Personality disorders
PFC	: prefrontal cortex
PH	: Past history
PTSD	: Post traumatic stress disorder
RCTs	: Randomized controlled trials
SA	: Suicide attempt
SCID I	: Structured Clinical Interview for DSM-IV Axis I Disorders
SCID II	: Structured Clinical Interview for DSM-IV Axis II Disorders
SD	: Standard Deviation
SI	: Suicidal ideation
SLEs	: Stressful life events
SMR	: Standard Mortality Ratios
SPS	: Suicide probability scale
SPSS	: Statistical package for Social Science
SRB	: Suicide related behavior
SRRS	: Social Readjustment Rating scale
SSRI	: Selective serotonin reuptake inhibitors

SUD	: Substance use disorder
TPH	: Tryptophan hydroxylase
USA	: United States of America
WHO	: World Health Organization
WMHS	: World Mental Health Surveys
5-HIAA	: 5-hydroxyindoleacetic acid
5-HT	: Serotonin
5-HTT	: Serotonin transporter

List of Tables

<i>Table No.</i>	<i>Title</i>	<i>Page No.</i>
Table (1):	Terms Comprising Suicidal Ideation and Behavior	8
Table (2):	Shneidman's ten commonalities of suicide.	18
Table (3):	Shneidman's ten commonalities for suicide prevention.	73
Table (4):	Evaluation of suicidal risk.....	79
Table (5):	Guidelines for selecting a treatment setting for patients at risk for suicide	81
Table (6):	Principles of postvention.	90
Table (7):	Beck's Suicidal intent scale (BSIS); suicide intent severity among the study group.	105
Table (8):	Socio demographic characteristics of the study group and gender differences.....	106
Table (9):	Social characteristics of the study group and gender differences.....	107
Table (10):	Family and past History of the study group and gender differences.....	108
Table (11):	Suicidal history of the study group and gender differences.	109
Table (12):	Suicide probability scale (SPS) scores of the study group and gender differences.....	110
Table (13):	The Social Readjustment Rating scale (SRRS) scores of the study group and gender differences.	111
Table (14):	Barrette impulsivity scale (BIS) scores of the study group and gender differences.....	112

Table (15):	Assessment of Psychiatric morbidity among subjects of the sample using Structured Clinical Interview for DSM-IV Axis I Disorders (SCID I)	114
Table (16):	Axis I comorbidity distribution of the study group.	116
Table (17):	Personality disorders among the sample using Structured Clinical Interview for DSM-IV Axis II Disorders (SCID II).....	117
Table (18):	Axis I and II comorbidity in the study group.	118
Table (19):	The Socio-demographic characteristics across axis I disorders.....	119
Table (20):	The Social factors across axis I disorders	121
Table (21):	The family and past History across axis I disorders	122
Table (22):	The suicidal history across axis I disorders.....	123
Table (23):	The suicidal probability scale (SPS) scores across axis I disorders	125
Table (24):	The Social Readjustment Rating scale (SRRS) scores across axis I disorders	126
Table (25):	Barrette impulsivity scale (BIS) scores across axis I disorders.....	127
Table (26):	Logistic regression analysis of variables differentiating depression suicide attempters from non-depression.....	128
Table (27):	Logistic regression analysis of variables differentiating schizophrenia suicide attempters from non-schizophrenics.	130
Table (28):	Logistic regression analysis of variables differentiating SUD suicide attempters from non-SUD patients.	131

Table (29):	The Socio-demographic characteristics across axis II disorders	132
Table (30):	The Social factors across axis II disorders	133
Table (31):	The family and past History data across axis II disorders.....	134
Table (32):	The suicidal History data across axis II disorders	135
Table (33):	The Suicidal probability scale (SPS) scores across axis II disorders	136
Table (34):	The Social Readjustment Rating scale (SRRS) scores across axis II disorders.....	137
Table (35):	Barrette impulsivity scale (BIS) scores across axis II disorders	138
Table (36):	Logistic regression analysis of variables differentiating borderline PD suicide attempters from non-borderline patients.....	139
Table (37):	Logistic regression analysis of variables differentiating histrionic PD suicide attempters from non-histrionic patients.....	140
Table (38):	Relation between axis I & II comorbidity according to socio-demographic data.....	141
Table (39):	Relation between axis I& II comorbidity according to social factors.....	142
Table (40):	Relation between axis I & II comorbidity according to family and past history.	143
Table (41):	Relation between axis I & II comorbidity according to suicidal history.	144
Table (42):	Relation between axis I & II comorbidity according to suicide probability scale.	145

Table (43):	Relation between axis I& II comorbidity according to the Social Readjustment Rating scale (SRRS).	146
Table (44):	Relation between axis I & II comorbidity according to Barrette impulsivity scale.	146
Table (45):	Comparing the Socio-demographic data in multiple and single attempters.	147
Table (46):	Social factors in multiple and single attempters.	148
Table (47):	Family and past History in multiple and single attempters.	149
Table (48):	Suicidal history in multiple and single attempters.	150
Table (49):	Suicidal probability scale (SPS) data in multiple and single attempters.	151
Table (50):	The Social Readjustment Rating scale (SRRS) scores in multiple and single attempters.	151
Table (51):	Barrette impulsivity scale (BIS) scores in multiple and single attempters.	152
Table (52):	Axis I disorders frequency in multiple and single attempters.	152
Table (53):	Axis II disorders frequency in multiple and single attempters.	153

List of Figures

<i>Figure No.</i>	<i>Title</i>	<i>Page No.</i>
Fig. (1):	Factors acting from before birth to immediately proximal to the suicide attempt, influencing an individual's decision to attempt suicide.	20
Fig. (2):	Targets of Suicide Prevention Interventions.	72
Fig. (3):	Positive correlation and significant between BIS score and SPS score.	113
Fig. (4):	SCID I distribution of the study group.	115
Fig. (5):	Axis I comorbidity distribution of the study group.	116
Fig. (6):	SCID II distribution of the study group.	117
Fig. (7):	Axis I and II comorbidity in the study group.	118
Fig. (8):	Odds ratios of variables differentiating depression suicide attempters from non-depression.	129
Fig. (9):	Odds ratio of variables differentiating schizophrenia suicide attempters from non-schizophrenics.	130
Fig. (10):	Odds ratio of variables differentiating SUD suicide attempters from non-SUD patients.	131
Fig. (11):	Odds ratio of variables differentiating B PD suicide attempters from non-borderline patients. ...	139
Fig. (12):	Odds ratio of variables differentiating histrionic PD suicide attempters from non-histrionic patients.	140

Introduction

Suicide is among the leading causes of death and disease burden around the world (*WHO, 2008*). According to the World Health Organization (WHO)'s global report on violence and Health (2002), someone commits suicide every 40 seconds, and 1 attempt is made every 1 to 3 seconds (*Kruget al., 2002*). By 2020, these figures may have risen to 1 death every 20 seconds and 1 attempt every 1 - 2 seconds (*Du Toit et al., 2008*). Estimates suggest that there are more than 20 to 50 million suicide attempts worldwide, leading to 1 million deaths by suicide annually (greater than the mortality rate due to war and homicide combined) (*Saberi-Zafaghandiet al., 2012*). Based on a WHO report, suicide is the 13th cause of death in the world and the 3rd cause of death in the age group 15–34 years. These data clearly indicate that suicide is a serious public health problem (*SUPRE, 2012*).

According to *WHO (2003)* report only a few number of suicide are from countries outside western world, especially from Muslim countries. A variety of social, legal, and religious factors, make reporting and data collection on suicide and nonfatal suicidal behaviors, difficult.

The crude rate of suicide attempts in Cairo was found to be 38.5 per 100.000. There was a high percentage in the age group 15–44 years, with no major difference between the genders. Depressive illnesses, hysterical reactions and

adjustment disorders (in that order of frequency) were the main causes of the attempt (*Okasha & Lotaief, 1979*). A study in 1981–1982 showed that 31% had made previous non-serious attempts. Dysthymic disorders, adjustment, affective and personality disorders were the most common diagnoses encountered (*Okasha et al., 1986*).

The term Suicide is defined as self-inflicted death with evidence that the person intended to die according to the American Psychiatric Association (APA) practice guidelines (*Skegg, 2005*). If one does not succeed in ending one's life, the attempt constitutes non-fatal suicide. Non-fatal suicides can be categorized into two groups: Attempted suicide – not failing deliberately; in other words, those who intended to take their own lives and wished to die. Parasuicide – failing deliberately; i.e. those who made impulsive suicidal gestures, either as a punitive gesture or to draw attention to themselves or to their plight (*Du Toit et al., 2008*).

Extensive research has examined risk factors for suicide, and several studies have identified a history of prior suicide attempts as a very strong predictor of suicide risk (*APA, 2003*). Improved accuracy in the evaluation of risk after a suicide attempt, that is why, is important. The risk of suicide after an unsuccessful attempt is around 10% over follow-up of 5-35 years. Characteristics of attempted suicide, such as being well planned, or violent, might imply a higher risk of a later successful attempt (*Runeson et al., 2010*).

Certain socio-demographic characteristics have also been associated with high suicide risk. These include male gender, European-American ethnicity, marital disruption, unemployment, living alone, a recent migration, early parental deprivation, family history of suicidal behavior, poor physical health and stressful life events (*Hussain et al., 2009*).

Additional risk factors include the presence of a psychiatric disorder. Studies have found that up to 90% of individuals who present with self-harm meet diagnostic criteria for psychiatric disorders. The most common is depression, followed by substance use disorders and anxiety disorders (*Skegg, 2005*). Individuals with antisocial and borderline personality disorders exhibit high rates of self-harming behaviors. Eating disorders, schizophrenia and posttraumatic stress disorder have also had been found in study samples of self-harmers (*Skegg, 2005*).

The results from WHO Surveys on data on the lifetime presence and age-of-onset of mental disorders and nonfatal suicidal behaviors show that, overall, mental disorders were equally predictive in developed and developing countries. However, with a key difference being that the strongest predictors of suicide attempts in developed countries were mood disorders, whereas in developing countries impulse-control, substance use, and posttraumatic stress disorder were most predictive (*Nock et al., 2009*).