

Suicidal Attempt and Associated Factors among Patients with Depressive Disorder Visiting Psychiatric Unit

Abeba Beyene¹, Meseret Taddese¹, Yemiamrew Getachew², Prema Kumara³, Mengesha Birkie⁴

¹ Department of Psychiatry, College of Medicine and Health Sciences (CMHS), Wollo University, Ethiopia

¹ MSc, Integrated Clinical and Community Mental Health

² Department of Comprehensive Nursing, CMHS, Wollo University, Ethiopia

³ Department of Comprehensive Nursing, CMHS, Wollo University, Ethiopia

⁴ Department of Psychiatry, CMHS, Wollo University, Ethiopia

Corresponding Author: Prem Kumar

Abstract: Background: Suicide is the act of intentionally causing one's own death. It is a psychiatric emergency. Depressive disorder continues to be associated with an under-recognized risk for suicidal attempt as well as completion of suicide. People who die due to suicide are frequently undiagnosed and untreated peoples with depressive disorder. **Objective:** The aim of this study is to assess prevalence of suicidal attempt and associated factors among patients with depressive disorder visiting psychiatric unit of Dessie Referral Hospital South Wollo, Ethiopia 2015. **Methods:** An Institution based cross-sectional study was conducted. A systemic random sampling technique was used to get 423 patients from April to May 2015. Composite international diagnostic interview was used to collect data. Data entered in to EPI-INFO version 7 and transferred to SPSS version 20 for further analysis. Logistic regression was carried out and odds ratio with 95% confidence intervals was computed. **Results:** The prevalence of suicidal attempt was 27.0%. Being female [AOR=2.54, 95% CI: 1.48-4.34] and having family history of depressive disorder [AOR=2.79, 95% CI: 1.74-4.4.7] had statistically significant association with suicidal attempt. **Conclusion and Recommendations:** Significant proportion of patients with depressive disorder had at least one episode of suicidal attempt. Being female and having family history of depressive disorder were found to be independent predictors of suicidal attempt.

Key Words: Suicidal Attempt, Associated factors, Patients, Depressive disorder, Psychiatry unit

Date of Submission: 24 -02-2018

Date of acceptance: 12-03-2018

I. Introduction

Globally suicide mortality rate was 16/ 100,000 deaths. Based on current trends World Health Organization estimates that in 2020 approximately 1.53 million people will die from suicide and 10 to 20 times more people will attempt suicide worldwide [1]. Depressive disorder is one of the strongest co-relates of suicidal attempt. Suicide has also longitudinal relationships with psychological, social-environmental, low level of social and family support and substance abuse that are significantly related with suicidal ideation and attempt. Attempted suicide is one of the major risk factors for completed suicide which is associated with depressive disorder and is also a potentially fatal event [2]. According to study done in USA the life time risk of suicide among patients with untreated depressive disorders is nearly 20% and 141/100,000 respectively [3]. The risk of suicide in person with major depressive disorder is roughly 20 times than that of general population and suicide is estimated to be under-reported for multiple reasons including stigma, religious concerns and social attitudes [4]. Study done on the current suicidal ideation and past suicide attempts among patients with depressive disorders showed that those who had attempted suicide revealed greatly correlated with depressive disorder. A regression analysis revealed that past suicide attempts and hopelessness are significantly accounted for the presence of current suicidal ideation [5]. Depressive disorder can affect individuals at any stage of the lifetime. It appears to be chronic illness with a high risk of recurrence over one's lifetime especially when adequate treatment is not available and suicide remains one of the most common outcomes of depression. So significant numbers of depressive patients end their lives by committing suicide [6]. A Longitudinal study conducted in European outpatient psychiatric Hospital indicates that suicidal ideation and suicidal attempt farther increases when depressive disorder is co-morbid with disruptive behavior, substance abuse and anxiety [7].

Suicide is rated as one of the first eight leading causes of death annually in South Africa. About 5000 suicides were recorded yearly in South Africa [8]. Study done by Jacobson made a retrospective analysis of

medical records from Nakamte General Hospital in western Ethiopia between 1966 and 1972 incidence rate of attempted suicide to be 4.5/100.000 [9]. There is limited study on the prevalence and risk factors of suicidal ideation and attempt among people with depressive disorder in Ethiopia. Therefore findings of this study will contribute to develop appropriate plan and intervention to reduce problem and also can serve as base line for those who wish to conduct study on this area.

II. Objectives

- 2.1 To assess prevalence of suicidal attempt and associated factors among patients with depressive disorder visiting psychiatric unit of Dessie Referral Hospital South Wollo, Ethiopia 2015.
- 2.2 To determine associated factors among patients with depressive disorder visiting psychiatric unit of Dessie Referral Hospital South Wollo, Ethiopia 2015.

III. Methodology

3.1 Study Area and Period

This Study was conducted at Dessie Referral Hospital psychiatry unit April to May 2015.

3.2 Source Population

All patients already diagnosed as having depressive disorder and attending at Dessie Referral Hospital psychiatry unit.

3.3 Study Population

All patients already diagnosed as having depressive disorder and attending at Dessie Referral Hospital psychiatry unit during the study period.

3.4 Sample Size and Sampling Procedure

The sample size was determined using single population proportion formula. $n = (Z\alpha/2)^2 p (1-p) / d^2$ Where P = Estimated proportion assumed as 50% (0.5). d = Absolute precision or tolerable margin of error (d) = 5% = 0.05. $Z/2 = Z$ value at $(\alpha = 0.05) = 1.96$ corresponding to 95% confidence level. 384, then adding 10% non-response rate, the final sample size was: $384 + 38.4 = 423$. Systematic random sampling technique was used to select each study participants.

3.5 Operational Definitions

Suicidal ideation: is defined as if the respondent answers yes to the question have you seriously thought about committing suicide in the past one month? If yes the patient has suicidal ideation.

Suicidal attempt: is defined as if the respondent answers yes for the question have you ever attempted suicide?

Ever substance use: Means ever use of at least one specified substance in life time.

Current substance use: Means use of at least one of specified substance in the last three months.

Depression: According PHQ-9 those scoring ≥ 5 have depression yes/no.

Social support: individual who scored greater than or equal to 9, Oslo 3 items consider as social support.

3.6 Data Collection and quality control

Data was collected by interviewing of patients. Questionnaire A tool was also used that includes tools that were used to evaluate the prevalence of suicidal ideation and attempt among people with depressive disorder. The questionnaire was adapted from World Mental Health (WMH), Survey Initiative Version of the World Health organization (WHO), and Composite International Diagnostic Interview (CIDI). Data was collected by psychiatric nurses for one month period. Structured questionnaire was developed and modified appropriately and translated to local language (Amharic) to be understood by all participants.

3.7 Data processing and Analysis

Data was checked for completeness and consistency. Then it was coded and entered in the computer using Epi info version 7 software. Data was transfer to and analyzed using SPSS version 20. Logistic regression analysis was conducted to identify factors associated with suicidal attempt among people with depressive disorder. P-value less than 0.05 was considered to determine statistically significant association. The strength of the association was presented by odds ratio with 95% confidence interval.

IV. Results

4.1 Socio-demographic characteristics

A total of 423 patients were interviewed in this study. Of which 410 respondents gave a complete response making response rate of 96.6%. Out of the total 410 study subjects 248 (60.5%) of respondents were Female. 293 (71.3%) of the participants were Muslim. 71(17.3%) of the respondents were government employed. Three hundred forty three (86.1%) was Amhara by Ethnicity 319 (77.8%) of respondents living alone (Table1).

Table 1. Socio-demographic characteristics of patients with depressive disorder visiting psychiatric unit of Dessie Referral Hospital, North East Ethiopia 2015

Variables	Category	Frequency	Percentage
Sex	Female	162	39.5
	Male	248	60.5
Age	18-29	201	49.0
	30-44	158	39.0
	45	51	12.0
Religion	Orthodox	103	25.5
	Muslim	293	71.3
	Protestant	8	2.0
	Catholic	6	1.5
Educational status	Unable to read & write	163	39.7
	1-8grade	66	16.1
	9-12grade	120	29.3
	Above 12	61	14.9
Marital status	Single	80	19.5
	Married & living together	205	50.0
	Married but not living together	40	9.8
	Divorced	45	10.9
	Widowed	40	9.8
Ethnicity	Amhara	353	86.1
	Oromo	33	8.0
	Tigre	11	2.7
	Gurage	13	3.2
Living status	with Family	319	77.8
	Alone	91	22.2
Perceived family help	Yes	208	50.7
	No	202	49.3

4.2 Clinical characteristics of participants

The duration of their illness for 206 (50.2%) of participants was less than 1 year and more than a year for 184(44%) of participants. One hundred ninety three (47.1%) reported that they had family history of depressive disorder. Majority, 326 (79.5%) respondents had no family history of suicidal attempt. Twenty eight (6.8%) of study participants has family member who commit suicide.

Table 2. Clinical characteristics of study participants visiting psychiatric unit of Dessie Referral Hospital, North East Ethiopia 2015

Variables	Category	Frequency	percent
Duration of illness	<1year	206	50.2
	2 1-5years	142	34.6
	>5years	62	15.2
Frequency of episode	1 week-1month	170	41.3
	1month-1 year	219	53.4
	>1year	21	5.3
Status of controlling the illness	Fully Controlled	189	46.1
	partially controlled	158	38.5
	Not controlled	63	15.4
Known diagnosed medical illness	yes	89	21.6
	No	321	78.3
Family history of depressive disorder	Yes	193	47.1
	No	217	52.9
Family history of committing suicide	yes	28	6.8
	No	382	93.2

4.3 Common Psychoactive substance use

One hundred eighty nine (46.1%) of participants reported they had history of psychoactive substance use. Among those who had history of substance use, majority 157(83.1%) used Khat. One hundred seventy two (42.0%) use substance in the last 3 months of these 116(67.4%) are Khat users.

4.4 Prevalence of suicidal attempt

One hundred eleven (27%) of respondents had reported suicidal attempt. Among those who had suicidal attempt 90(81%) were female and Majority, 92 (83%) ever had suicidal attempt once.

4.5 Factors affecting suicidal attempt

On Binary analysis sex and family history of depressive disorder were found to be significantly associated with suicidal attempt. Female participants were about 2.54 times more likely to have suicidal attempt compared to

male patients [AOR=2.54, 95% CI 1.48-4.34]. Those who had family history of depressive disorder were about 2.79 times more likely to have suicidal attempt than those had no family history of depressive disorder [AOR=2.79, 95% CI 1.74-4.47].

Table3. Factors associated with suicidal Attempt among people with depressive disorder visiting Dessie Referral Hospital Dessie, Ethiopia 2015.

Variable	Category	Suicidal ideation		COR (95% CI)	AOR(95%CI)
		Yes	No		
Age	18-29	36	100	0.85(0.50-1.44)	0.92(0.70-1.19)
	30-44	45	132	1.00	1.00
	>45	30	67		
Sex	Male	21	112	1.00	1.00
	Female	90	187	2.57 (1.51 – 4.36)	2.54 (1.48-4.34)***
Family history of depressive disorder	Yes	76	129	2.86 (1.80 – 4.54)	2.79(1.74-4.47)***
	No	35	170	1.00	1.00
Ever use of psychoactive substance	Yes	59	150	1.13(0.73-1.74)	1.17(0.74-1.86)
	No	52	149	1.00	1.00

V. Discussion

This study showed that the prevalence of suicidal ideation among depressive Disorder of outpatient was 26.6%. This study finding is in line with other similar studies; however the prevalence of suicidal ideation in Helsinki, Finland among psychiatric outpatients with depressive disorder was 58 % [10]. A study done among adult depressive disorders in United States Montefiore Medical center showed that suicidal ideation that range from 47% to 69% in patients with Major depressive disorder [11].

The study done among psychiatric individuals attending an adult psychiatry outpatient clinic in Gondar, Ethiopia showed that a prevalence of patients attempted suicide was (19.2 %) [12]. This study showed that female participants were about 1.62 times more likely to have suicidal ideation compared to male patients [AOR=1.62, 95%CI: 1.04-2.88] which is consistent to other similar studies. The possible reason may be due to burden among females mainly on handling of household responsibilities and may be due to the difference in proportion of male to female participants involved in this study.

The Mathari Psychiatric Hospital Nairobi Kenya, research showed prevalence of suicidal attempt of 8.7%.The result is lower when compared to this study finding. The possible reason might be due to difference in study population, design and population size [13]. Those who live alone were about 3.64 times more likely to have suicidal ideation than those who live with family [AOR=3.64, 95%CI: 2.11-6.96]. Patients who had family history of suicidal attempt were about 4 times more likely to have suicidal ideation compared to those who had no family history of suicidal attempt [AOR=4.05,95%CI:2.49-6.58].Subjects who had ever substance use 1.77 times more likely to have suicidal ideation than those who not use [AOR=1.77, 95%CI: 1.07-2.91]. The fact that those all are contributed to depressed might have hopelessness and they could be forced them to ideate suicide.

In this study female participants were about 2.54 times more likely to have suicidal attempt compared to male patients [AOR=2.54, 95%CI: 1.48-4.34]. Those who family history of depressive disorder was about 2.79 times more likely to have suicidal attempt than those who without depressive disorder [AOR=2.79, 95%CI: 1.74-4.47]. This is consistent to other similar study conducted at Columbia inpatient and outpatient among peoples with depressive disorder showed that significance result in suicidal attempt. The possible reason that the fact depressed individual family have neurotransmitter disturbance in the brain might contributed to hopelessness this expose to suicidal attempt [14].

However, age was not also significant factor for suicidal attempt in a study done among depressive disorder inpatients in National University of Malaysia [15]. Those who face two or more episode of depressive disorder suicide attempt among patients with major depressive disorder is less precisely known but is estimated to about 40% after the first life time episode of depressive disorder and the rate of repetition of attempt within a year is approximately 25% compared to being newly diagnosed with depressive disorder[16]. In this study 63.3% of participants reported that they have ever used substance had suicidal ideate.

VI. Conclusion

Prevalence of suicidal attempt among people with depressive disorders in this study is high and sex, family history of depressive disorder was significantly associated with suicidal attempt.

Ethical Consideration

Ethical clearance was obtained from University of Gondar and Amanuel Mental Specialized Hospital. A formal letter of permission was submitted to Dessie Referral Hospital administration. Confidentiality of respondents

was maintained. An informed consent was obtained from each respondent after communicating the purpose of the study.

Authors' contribution

AB conceived and designed study, collected, analyzed and interpreted data; YG and PK drafted the manuscript and finalized for significant and logical content. All authors read the draft manuscript and approved the final copy for submission.

Acknowledgements

This study received financial support from University of Gondar and AMSH. We would like to thanks for Dessie Referral Hospital and administrative and technical staffs for their indispensable co-operations before & during data collection. We are also grateful to the study participants without whom the current study would not have been realized.

References

- [1]. Sokero, TP, Eerola MH. Decline in suicidal ideation among patients with MDD. *Journal of Affective Disorders* 2006; 95:95-102.
- [2]. Crosby, A. E. et al. Suicides—United States, Mortality and Morbidity Weekly Review 1999-2007; 60: 56-59.
- [3]. Kebede D, Alem A. Suicide attempt and ideation adults among adults in Addis Ababa, Ethiopia. *Acta Psychiatrica Scand* 1999; 100: 35-39.
- [4]. Isacson G. suicide prevention. a medical breakthrough *acta psychiatrica Scandinavica*. 2000;102:113-117.
- [5]. American Foundation for suicide prevention. Facts and Figures and Office of Applied studies. 2011.
- [6]. Rockville M. Suicidal thoughts, Suicidal Attempts, Substance Abuse and Mental Health Service Administration. The OAS report. 2006.
- [7]. American Association Suicidology. Fact Sheets: Reliable information about suicide. 2011.
- [8]. Rhodes, A. E, Bethell, J., Suicidality, depression, and mental health service use in Canada. *Canadian Journal of Psychiatry* 2006. 51:35-41.
- [9]. Montross LP. Suicidal ideation and suicide attempts among middle-aged and older patients with schizophrenia spectrum disorders and concurrent subsyndromal depression. 2008; 12:884-90.
- [10]. Olfson M, et al. Continuity of antidepressant treatment for adults with depression in the United States. *Am J Psychiatry* 2006;163:101-108.
- [11]. Asnis GM. suicidal behaviors in adult psychiatric outprevalence, 1993;150:108-12.
- [12]. Mekonnen D, Kebede. The prevalence of suicidal ideation and attempts among individuals attending an adult psychiatry out-patient clinic in Gondar, Ethiopia *African Health Sciences* 2011; 11: 103 - 107.
- [13]. L NDpMF. co-occurring suicidal and psychotic symptoms in inpatients at mathari psychiatric Hospital Br *Jpsychiatry suppl*. 2004;46:17-2324.
- [14]. Leo Sher MAO. The relationship of aggression to suicidal behavior in depressed patients with a history of alcoholism, *Addictive Behaviors*, M, 2004.
- [15]. AS CLTS. suicide attempts among depressed inpatients with depressive disorder in a Malaysian sample psychosocial and clinical risk factors crisis. 2011;32: 283-7.
- [16]. Cynthia A. et al.. Clinic differences among depressed patients with and without a history of suicidal attempts finding from the STARD trial *Journal of Affective disorders*. 2007;97:77-84.

Itishree Biswal "Effectiveness of Structure Teaching Programme for Diabetic Client on Diabetes Mellitus at Diabetic Clinics" *IOSR Journal of Nursing and Health Science (IOSR-JNHS)* , vol. 7, no.1 , 2018, pp. 62-66.