The prevalence of suicidal ideation and attempts among individuals attending an adult psychiatry out-patient clinic in Gondar, Ethiopia

*Mekonnen D[1], Kebede Y[2]

1. College of Medicine and Health Sciences, University of Gondar, Ethiopia
2. Public Health, College of Medicine and Health Sciences, University of Gondar

Abstract

Background: Suicide is a common problem worldwide and the magnitude is high especially in countries where mental illnesses are prevalent and psychiatric services are poor.

Objective: To determine the prevalence of suicidal ideation and attempts among patients who attended the Psychiatry clinic of Gondar University Hospital.

Methods: A cross sectional study was conducted from March-December 2006 involving a total of 474 patients. Data was collected using a pre tested structured questionnaire containing basic socio-demographic variables, psychiatric diagnosis, suicidal ideation, suicidal attempt, the methods of suicide attempt and ways of survival from the attempted suicide. It was administered by psychiatry nurses working in the clinic. The data was analyzed anonymously using SPSS software.

Results: The commonest mental illness was Major Depressive Disorder (51.3%) followed by Psychosis (38%). Ninety one (19.2 %) patients attempted suicide at least once after the onset of the current mental illness and 307(64.8%) have suicidal ideation. The common method of suicidal attempt was hanging (45.1%) and 69.2% were at home. An association was found between suicidal ideation and attempt (OR=33.7; CI=8.2-138.8, p-value <0.01).

Conclusion: Suicidal ideation was common in psychiatric patients. It was also associated with suicidal attempt.

Key words: suicidal ideation, attempt, hanging, Ethiopia

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Introduction

Suicide is a huge but largely preventable health problem causing almost half of all violent deaths and resulting in one million fatalities each year, as well as economic costs in billions of dollars. Estimates suggest that suicide could rise to 1.5 million by 2020.[1] Globally, suicide represents 1.4% of the global burden of diseases.[1] Suicide is usually a cause of great distress to victim, family, friends, and community and largely to the nation. [2, 3]

The study at Butajira, in southern Ethiopia, showed that informants on average claimed to know more persons who had completed suicide than those who attempted it. Most of them believe that suicide attempters are cruel, feared and untrustworthy. Their attitude towards suicide completers were expressed in such phrases as "condemned sinners", "don't deserve funeral ceremonies" and "should be buried separately from others ".[4] Another study conducted on Ethiopian immigrants to Israel showed that the social message of the Ethiopian suicide expresses feelings of indignation.[5]

Suicide attempts are often a cry for help rather than a clear desire to die. So prevention of suicide lies in answering the individual's cry for help.[6-8] Most patients who commit suicide have seen a physician in the weeks to months prior to their deaths.[9] Individuals reporting suicidal ideation and previous attempts were more likely to make use of at least one type of service for mental health problems than non-suicidal individuals. Suicidal individuals are likely to make use of services, and a high proportion of suicide may be preventable through appropriate health care system responses.[9,10] The assessment of suicidal ideation at its worst point identifies a sub group of patients at relatively high risk for eventual suicide.[11] Suicide and medically serious suicidal attempts are two overlapping populations that share common psychiatric diagnosis and history features.[12] The assessment of suicide risk includes the ability to evaluate suicidal ideation, the ability to detect psychiatric disorders and the ability to assess factors associated with an increased risk of suicide.[2]

There is a complex relationship between suicides and mental disorders because of biological, psychological, and social factors. Suicide rates are higher in psychiatric patients than the general

***Correspondence author:**
Desalew Mekonnen
Gondar College of Medicine and Health Sciences
University of Gondar
P. O. Box 1350
Gondar, Ethiopia
Email: desalewm@yahoo.com

population.[13] In Ethiopia mental illnesses contribute 12.45% of the burden of disease. This indicates that mental disorders are as common as other diseases that are regarded as major health problems in the country. [14]

Suicide prevention efforts depend largely on early identification and adequate treatment of high-risk populations. These risk factors are not necessarily the same from one community to another.[4]

There is paucity of research on suicide among psychiatric populations in most parts of Africa so that this study was planned to provide base line data for further study.

Methods

Cross sectional study was conducted from March-December 2006 at Psychiatry clinic of Gondar University Hospital, North West Ethiopia.

Study setting

Gondar University Hospital is a tertiary care referral university hospital with 400 beds. The hospital serves 4.5 million people of which 95 % belongs to Amhara ethnic group. It is located 720 km North West to the capital Addis Ababa. The psychiatry clinic having two rooms was technically staffed with one General Practioner and two psychiatric nurses. Psychiatric disease diagnosis is based on DSM IV Criteria (American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders, 4th ed, Text Revision, American Psychiatric Association, Washington, DC 2000). The clinic serves on average 2000 patients yearly and provides mainly out patient service and only psychiatric emergency admissions.

Participants

Adults above the age of 18 years attending the psychiatry clinic were included after informed written consent.

Exclusion criteria

Patients under 18 years old, acute psychosis, acutely disturbed, catatonic, dementia, those without insight, those who refused and unable to sign the informed consent.

Questionnaire

Structured questionnaire was prepared by the investigators containing the following study variables; life time prevalence of suicidal attempt and ideation, possible risk factors like socio-demographic variables and psychiatric disorders, methods of suicidal attempt and ways of survival from the attempted suicide. It was translated in to a local language (Amharic) spoken in the area. The questionnaire translation was made by legal translators and the contents were revised by the ethical committee. Pre test was done and a common understanding was reached between the data collectors to avoid inter-rater variability. It was administered by psychiatry nurses working in the clinic.

Procedure

Ethical clearance and research grant was obtained from Research and Publications Office of the University of Gondar. Written permission was also obtained from the Medical Director of Gondar University Hospital. With the assumption of 95% confidence interval, 50% prevalence of suicidal ideation or attempt, and 4.5% margin of error, the total sample size required were 474. Consecutive patients who visit the clinic from March to December 2006 were included in the study until the sample size was met. Both new and patients on follow-up were included for the study. All patients involved in the study were already on medical care, support and follow up at the psychiatry clinic of the Hospital. The purpose of the study was clearly explained to each patient and written consent was obtained. Patients who didn't meet the inclusion criteria were excluded. Special registration book was prepared for the study to avoid repeated interview. Data was collected using structured pretested questionnaire administered by psychiatric Nursing staff as part of their practical interview. Data was analyzed anonymously by the investigators.

Data analysis

The data were analyzed using SPSS 13.0 for Windows (SPSS, Chicago IL, U.S.A). Odds ratios and significance levels were calculated along with 95% confidence intervals. A p-value of less than 0.05 was considered significant.

Results

A total of 474 patients were enrolled to the study. Two hundred fifty six (54%) were males and the remaining 218 (46%) were females. Their age ranges from 18 to 82 years old. The mean age was 32±12.3 years. Two hundred thirty (48.5%) were single, 412 (86.9%) Orthodox Christian religion followers and 232 (48.9%) patients were illiterates (Table 1).

Table 1: Socio-demographic characteristics of patients attending psychiatric consultations at Gondar University Hospital from March-December 2006

Characteristics	Number	Percent
Sex		
Male	256	54.0%
Female	218	46.0%
Age		
18-20	99	20.9%
21-30	169	35.7%
31-40	106	22.4%
41-50	63	13.3%
51-60	27	5.7%
61-70	7	1.5%
71-80	2	0.4%
81-90	1	0.2%
Marital status		
Single	230	48.5%
Married	172	36.2%
Divorced	58	12.2%
Widowed	14	3.0%
Religion		
Orthodox christian	412	86.9%
Muslim	54	11.4%
Protestant	6	1.3%
Catholic	1	0.2%
Jew	1	0.2%
Education		
Illiterate	232	48.9%
Elementary school	60	12.7%
Secondary school	141	29.7%
University student	12	2.5%
Certificate	13	2.7%
Diploma	13	2.7%
Bachelor Degree	3	0.6%

Patients with Major Depressive Disorder accounted for 51.3% (243/474) followed by psychotic disorders 38% (179/474). Family history of mental illness was found in 19.4% (92/474) patients (Table 2).

Table 2: Mental health related factors of patients attending psychiatric consultations at Gondar University Hospital from March-December 2006 (n=474)

Charecterstics	Number	Percent
Psychiatric diagnosis		
Depression	243	51.3%
Psychosis	179	38.0%
Bipolar	23	4.9%
Anxiety	14	3.0%
Organic[¥]	7	1.5%
Substance related	3	0.6%

Continuation of table 2

Charecterstics	Number	Percent
Family history of mental illness		
Yes	92	19.4%
No	382	80.6%

[¥]Organic means the psychiatric symptoms are due to underlying medical, surgical or gynecologic diseases.

The patients experiencing life time suicidal ideation were 64.8% (305/474). The magnitude of life time suicidal attempt was 19.2% (91/474). Three percent (14/474) of respondents reported a family history of suicide (Table 3).

Table 3: Prevalence of life time suicidal ideation and attempt and suicide related factors of patients attending psychiatric consultations at Gondar University Hospital from March-December 2006 (n=474)

Characteristics	Number	Percent
Suicidal ideation		
Yes	307	64.8%
No	167	35.2%
Suicidal attempt		
Yes	91	19.2%
No	383	80.8%
Family history of suicide		
Yes	14	3.0%
No	460	97.0%

Table 4 shows details of the 91 patients who attempted suicide among the 474 respondents. Suicidal attempt mainly due to their current mental illness was reported in 61.5% (56/91) patients and 69.2% (63/91) patients attempted at home. Methods of attempting suicide were reported as hanging in 45.1% (41/91) patients and poisoning in 19.8% (18/91) patients. The involvement of family members aborted the attempted suicide in 81.3% (74/91) patients.

Table 4: Details of patients who attempted life time suicide among the 474 patients attended psychiatric consultations at Gondar University hospital from March - December 2006 (n=91)

Characteristics	Number (n=91)	Percent
Reason		
Current illness related	56	61.5%
Social problem[£]	19	20.9%
Other reasons[µ]	16	17.6%

Continuation of table 4

Characteristics	Number (n=91)	Percent
Site of attempt		
Home	63	69.2%
Field	12	13.2%
River	9	9.9%
Forest	6	6.6%
School	1	1.1%
Method of attempt		
Hanging	41	45.1%
Poisoning	18	19.8%
Electricity	13	14.3%
Drowning	10	11.0%
Vehicle injury	5	5.5%
Gun shot	2	2.2%
Other methods[ð]	2	2.2%
Feeling after suicidal attempt		
Anger	25	27.8%
Guilt	29	32.2%
Indifferent	37	40.0%
Support for suicidal failure		
Family	74	81.3%
Friends	10	10.0%
Health care	6	6.6%
God	1	1.1%

[£] Social problem (n=19) stands for divorce (n=6), quarrel with family (n=6) quarrel with friends (n=5) and quarrel with spouse (n=2).

[µ]Other reasons (n=16) include school examination failure (n=8), demotion from work (n=6) and alcohol intoxication (n=2).

[Ð] Other methods (n=2) include house fire burn (n=1) and dog bite (n=1)

Sex distribution among suicidal ideation was nearly equal representing male to female ratio of one (Female/Male=155/153). Females were more represented on suicidal attempt with a ratio of 1.3/1 (Female /Male=52/39).

There was statistically significant association between suicidal ideation and attempt (OR=33.7 CI=8.17-138.77, P-value <0.01), but we didn't get statistically significant associations of suicidal ideation and attempt with sex, religion, marital status, educational level, type of mental illness and family history of suicide.

Discussion

In this study the magnitude of life time suicidal ideation and attempt and their possible associations with different variables were assessed. The majority of patients were age 21-30years (35.7%) with equal sex distribution. Depression was the most common mental illness and psychotic disorder follows (51.3% and 38% respectively**).** Family history of mental illness was (19.4%).

The prevalence of Suicidal ideation was 64.8% (307/474) and 19.2% (91/474) attempted suicide. Other community based studies in other parts of Ethiopia showed lower values as compared to our study. A study in Addis Ababa (the capital city of Ethiopia) adult population suicidal ideation was 2.7%, and suicidal attempt was 0.9% [15], Suicidal attempt at Butajira (Southern Ethiopia) adult population was 3.2%.[15] Another study on high school students at Addis Ababa demonstrated a life time risk of suicidal attempt 14.3%.[16] The higher magnitude of suicidal attempt and ideation in our study was most likely due to the fact that our study was conducted in a psychiatric population where high risk individuals were evaluated as compared to community based studies at Addis Ababa and Butajira stated above.
For those who attempted suicide 65.1% justified the underlying reason as being related to their mental illness. Sixty nine percent of them attempted suicide at home and 45.1% of attempts were by hanging. Hanging was also the most common method in other community based Ethiopian studies such as those conducted in Butajira and Addis Ababa.[6, 15, 16] Poisoning was the second most common method (19.8%); this was consistent with other Ethiopian studies.

The majority of those who attempted suicide (81.3%) survived because of the involvement of their families which clearly demonstrates the paramount importance of involving family members in the management of suicidal and risky patients (Table 4).

There is statistically significant association between Suicidal ideation and attempt (OR= 33.7 CI=.17-138.77, P-value <0.01). Suicidal ideation as a risk factor for suicidal attempt was also demonstrated in a community based study in Zambian school adolescence. [17] This evidence indicates the assessment of suicidal ideation at its worse point identifies patients with high risk for eventual risk. We didn't get statistically significant associations with suicidal ideation or attempts with level of education, type of mental illness, family history of mental illness and family history of suicide.

Limitations of the study

Despite providing valuable base line data, there are some limitations in our study. We assessed the life time prevalence of suicidal ideation and attempt than the point or current prevalence during the stated

period of time. The questionnaire was structured by the investigators and wasn't validated. Even though the questionnaire was pretested and discussed, it was administered by two psychiatry nurses and there was inter-rater variability between the data collectors. This inter-rater variability may lack reliability. There were also limitations in response biases on patients, diagnostic validity issues and heterogeneous nature of the sample studied.

Conclusion

Suicidal ideation and attempt are common problems and are closely interrelated. Those patients found to have risk factors are in great need of help in addressing this preventable death.

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