Original Article

The efficacy of telephonic follow up in prevention of suicidal reattempt in patients with suicide attempt history

Seyed Ghafur Mousavi, Rabiei Zohreh, Mohammad Reza Maracy[1], Amrollah Ebrahimi, Mohammad Reza Sharbafchi

Department of Psychiatry, Behavioral Sciences Research Center, School of Medicine, [1]Department of Epidemiology and Statistics, School of Health, Isfahan University of Medical Sciences, School of Medicine, Isfahan University of Medical Sciences, Isfahan, Iran

Abstract

Background: prevention of suicide is one of priority world health. Suicide is one of the preventable causes of death. The aim of this study is evaluation of telephone follow up on suicide reattempt.

Materials and Methods: This randomized controlled clinical trial is a prospective study which has been done in Noor Hospital of Isfahan-Iran, at 2010. 139 patients who have suicide attempt history divided in one of two groups, randomly, 70 patients in" treatment as usual (TAU)" and 69 patients in "brief interventional control (BIC). Seven telephone contact with BIC group patients have been done "during six months" and two questionnaires have been filled in each session. The data has been analyzed by descriptive and Chi-square test, under SPSS.

Results: No significant differences of suicide reattempt has been found between two groups ($P = 0.18$), but significant reduction in frequency of suicidal thoughts ($P = 0.007$) and increase in hope at life ($P = 0.001$) was shown in intervention group.

Conclusion: Telephones follow up in patients with suicide history decrease suicidal thought frequency" and increase hope in life, significantly.

Key Words: Prevention, suicide, suicides reattempt, telephone follow up

Address for correspondence:
Dr. Mousavi Seyed Ghafur, Department of Psychiatry, Behavioral Sciences Research Center, Noor Hospital, Isfahan University of Medical Sciences, Isfahan, Iran. E-mail: mousavi@med.mui.ac.ir

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INTRODUCTION

The Suicide and suicidal thought is a universal phenomenon, and it has existed during the history. Self-harm is a presentation of 1.4% of patients who attend to emergencies.[1,2] Suicide is one of the first main three cause of death of 15-34 years old, and one of the first main five causes of death of adolescence.[3,4] Almost one million patients die every year from suicidal attempt, and the rate of suicide attempt is 4-10 times of commit suicide. It is an important cause of emergency cares. So, suicide impose a considerable burden on health systems.[5,6] More than one third of committed suicide patients are first attempters and about two third have a history of previous suicide attempt.[5,7-9] Even many patients reattempt suicide during treatment phase of their recent attempt.[7]

Repeated suicidal attempt is an important predisposing factor for another attempt in future.[10] Suicidal

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attempts occur in 10-37% of patients during first month after an attempt, in 45% of patients during six months after it, and the maximum risk is during twelve week after it.[7,9] Suicide attempt is the strongest exclusive predisposing factor for death due to suicide, such that 3% of suicide attempters die during the first year after their attempt, 9% during 5 years after it, and 10% during a longer period.[7-9,11,12]

21% of suicidal attempts occur in mood disorder patients,[13] and they are ambivalent for treatment, So, they often do not follow up enough treatment.[7,11,14] Compliance rate reaches rarely 40% (7).So poor adherence is another risk factor for suicide reattempt. This may be caused by long waiting times for visit, administration process registrations and the rapport problems.[15] Considering suicide did preventable cause of death, it is one of the priorities of world health care.[12,16] Motoo *et al.,* studied the efficacy of 24 telephone or face to face follow up of a high risk suicidal group of poor compliant patients, during five years, and shows a prominent reduction in repeated suicide attempts during two years after discharge.[17]

Also De leo D *et al*., found considerable reduction in mortality rate of geriatric high risk suicidal patients after telephone supporting intervention.[18]

Another study by Alexandra Fleshman on attempted suicide patients by a 9 telephone contact intervention during 18 months and in five countries showed significant reduction of committed suicide in intervention group.[1]

Social and cultural factors affects the suicidal thought and attempts.[19] Compliance has also affects the suicidal behaviors.[7,20] So in this study the efficacy of telephone follow up on reduction of suicidal reattempt and their relation with demographic characteristics of patients evaluated.

The study focused on the intervention by "appraising psychiatric condition, present stresses, a brief supporting guides, and referring the patient to a psychologist, social workers, or psychiatrist if necessary" via phone call. Considering the suicide by toxication as a prevalent method of suicide attempt in our country, the study is done on suicide attempters who attempts via self poisoning.

MATERIALS AND METHODS

We chose 139 patients who were admitted to intoxication emergency service of Noor Hospital (Isfahan-Iran) because of suicidal attempt (2010-2011). The inclusion criteria were: 15 years old and older, conscious state, history of at least two suicidal attempts, possibility of telephone contact after discharge, and acceptance for participation. The exclusion criteria were afflicting with another threatening disease which needs an emergency intervention (like surgery, or ICU), after participation, and discontinuity of participation after primary consent, and death before discharge.

This is randomized controlled clinical trial, with 139 attempted suicide patients divided into two groups, randomly 70 patients in Treatment As Usual (TAU) group, and 69 patients in Brief Interventional Contact (BIC) group. Both group patients were interviewed at the hospital, but the (BIC) group were followed by seven follow up telephone contact after discharge at the second and fourth weeks, and at the second, third, fourth, fifth, and sixth months, by a psychiatric last year resident. The data were gathered by a questionnaire in each interview. During the primary interview consisted of some information about the psychiatric condition of patient, the need for follow up, guides about better copying with the stresses and harmful situations, and some comments about suicidal thoughts. A phone number was given to patient to contact in case of suicidal thoughts or need to help. The duration primary interview was about half hour, after that the patients were divided to each of (BIC) or (TAU) groups, randomly. Each of seven contacts of (BIC) group last about half hour, and during it the interviewer was tried to evaluate patient present condition and document it. Also, some guides about better copying with harmful conditions and reducing stresses, and refer to psychiatrist, psychologist, or social worker in case of needs were talked with patients. There were no phone contacts with control group patients (TAU) and patients only were prescribed routine treatments.

A primary questionnaire was filled for all the patients at first visit, which included: Name, age, marital, educational, occupational status, history of previous suicidal attempts, psychiatric history and diagnosis, medical history, social and economic problems, treatment plan, and need for being visited by psychiatrist, psychologist, or social worker. The follow up questionnaire included: patient mood, hope, motivation, previous stated problems, probable new problems, suicidal thought, map, or plan, treatment plan, and need to be visited by psychiatrist, psychologist or social worker.

The questionnaire validity were evaluated and approved by 10 professors in the psychiatric Department of Isfahan university of medical sciences. The reliability of the questionnaire was confirmed by completing it for 20 patients in 20 days.

Statistical analysis of the data was done by descriptive indexes and Chi-square test and by the use of $SPSS_{18}$.

RESULTS

Among 230 patients who attempted suicide, 139 patients chose and randomly divided to 69 patients in the intervention group and 70 patients in the control group. There was no significant difference between two groups regarding demographic and clinical characteristics, before the study table 1.

The only suicide attempt case in the intervention group was occurred in the 4th month after discharge, and in control group there were one case after the 1st month, 2 cases after the 2nd month and one case after the 4th month, after discharge during the 6 month follow up, one patient (1.4%) in the intervention group and 4 patients (5.76%) in the control group had attempted suicide, no significant difference of suicide reattempt has been found between two groups (P = 0.18). By the end of the study period, 28 patients in the control group and 14 patients in the intervention group had suicidal thought. Also, 19 patients in the control group and 50 patients in the intervention group had increase in hope at life. Thus, reducing frequency of suicidal thoughts (P = 0.007) and increase in hope at life (P = 0.001) were significant in the intervention group. There was no significant difference for the compliance to treatments after 6 months of follow up (P = 0.2) (10 patients in the control group and 15 patients in the intervention group). The frequency of suicidal thought, hope at life and compliance for treatment found in 7 contacts and follow up, are shown in Figure 1).

The characteristics of individuals reattempt suicide during 6 months of follow up, are shown in Table 2.

DISCUSSION

Out of 230 patients who reattempted suicide, 139 patients were chose in this study, (60.4%). Kapur *et al.*, had also shown that 60-70% of patients under care were hardly interested in participating intervention, after harming themselves.[12] This rate was reported by Guthrie *et al.*, to be 50%.[14] Hence, the rate of admitting care after attempt, in this study is similar to other studies.

Similar to the findings of studies by Souminen *et al.*, and Cederke *et al.*, the number of women participants were more than men in this study.[10,11] This is consistent with the higher prevalence of attempting to suicide in women and using methods with less killing activity (intoxication with drugs).[19] On the other hand, the intention of women to participate in the study could be due to their need receive more care than men attempting suicide.

Although in our study the number of patients with reattempt suicide in the intervention group is much less than the control group, but there was no significant differences in this regard, between them.

Table 1: Comparing demographic and clinical characteristics of intervention and control group

Variants	Group				*P* value
	Intervention		Control		
	No.	Percent	No.	Percent	
Sex					
Female	50	72.50	38	54.3	0.26
Male	19	27.50	32	45.7	
Marital status					
Single	29	42	28	40	0.72
Married	33	64.4	32	45.7	
Widow, divorcee, etc.,	8	11.6	10	14.4	
Education					
High school degree	24	34.6	29	41.6	0.58
High school diploma and associate's degree	40	58	34		48.6
Higher degree	5	7.2	7	10	
Age					
15-25	45	65.2	36	51.4	0.31
26-35	15	21.7	22	31.4	
Older than 35	9	13	12	17.1	
Job					
Unemployed	4	5.8	7	10	0.9
Employee, trained and assured worker	19	27.5	34	48.6	
Student and university student	17	24.6	9		12.9
Housewife	29	42	20	28.6	
No. of suicide					
2	45	65.2	44	62.9	0.12
3-5	21	30.4	16	22.8	
More than 5 times	3	4.3	10	14.3	
Disease					
Physical disease	21	30.4	12	17.1	0.66
Chronic psychiatric disorder	65	80	49	77	0.17
Problems					
Social problems	65	94.2	63	90	0.36
Economical problems	10	14.5	14	20	0.4
Mental disorder	49	71	67	65.7	0.17

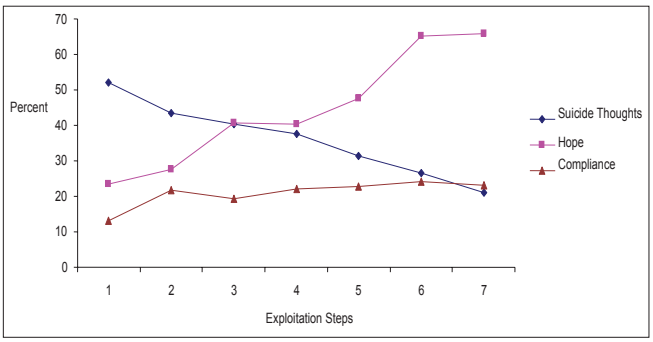

Figure 1: The frequency of suicidal thought, hope, and compliance for treatment

Table 2: The characteristics of individuals committed suicide during 6 months

Variants	Group (person)	
	Intervention (1)	Control (4)
Sex		
Female	-	1
Male	1	3
Marital status		
Single	1	3
Divorcee	-	1
Education		
High school degree	1	3
High school diploma and associate's degree	-	1
Age		
15-25	1	2
16-35	-	1
Older than 35	-	1
Job		
Unemployed	1	-
Permanent job (employee)	-	1
Impermanent job (worker)	-	2
Housewife	-	1
No. of previous suicide		
2	1	1
3-5	-	2
More than 5 times	-	1
Disease		
Chronic psychiatric disorder	1	3
Under psychiatric treatment		
Yes	1	2
No	-	2

Also in compliance for treatment after 6 months of follow up, there were not significant differences between the two groups.

Vander Sande *et al*., showed in a meta-analysis that intervention in suicide by psychiatric treatment with low treatment compliance does not provide considerable reduction in reattempting suicide.[21] On the other hand, Hassanzadeh *et al*. has not observed any effects in preventing attempt suicide, through a study by 6 months of follow up and primary psychoeducation.[22]

This result contradicts with the results of the studies by Alexandra *et al*., and Motto *et al*.,[1,17] who followed up their patients for 18 months and 5 years respectively. Hence the short time of follow up in our study and also the study by Hassanzadeh *et al*. (6 months) could be a factor for insignificance of intervention.

In our study, the reduction in suicidal thought and increasing hope at life were significant in intervention group. This could indicate that continuing intervention for long time could be effective in significant reduction in the number of reattempted suicides. On the other hand, the reduction in suicidal thought frequency and increasing hope at life were not significant in the studies by Cederke *et al*., during one year of contacts,[7] and studies of Brook *et al*., by crisis intervention and problem solving after the primary actions.[20] But, Guthries *et al*., reported in the studies with short term psychodynamic intervention,[14] and Nordentofe *et al*., was reported with CBT with improving signs in the study.[8]

Insignificance of reducing attempts to suicide in this study could be due to the used approaches for helping the patients, to solving their problems. Only telephone contacts and consultation were used for solving crisis and controlling stress and also recommendation for urgent and/or regular visits. It is while Guthrie *et al*. Used 4 sections of inter-personal psychodynamic treatment,[14] and Noodertoft *et al*., used CBT,[8] and Cederke *et al*., applied dialectical behavior therapy, while Kapur *et al*., used referring to self-vulnerable teams or psych health professional teams,[12] all of which were effective in reducing reattempts to suicide and reducing suicidal thought frequency and increasing hope at life.

Reattempting to suicide in 6 month follow up in this study was 1.4% in intervention group and 5.76% in control group, while this rate was 14.6% for a one year follow up by Kapur *et al*.[12] and by Cederke *et al*., 10-37%[7] and by Noodertoft *et al*., 10-42%.[8] This significant difference could be due to the difference in the conditions of the studied population (cultural conditions, religious reliance, and social supports), easier access of the patients to health services and/or due to the shorter time for the present studies.

Regarding the marital status, all the people reattempting to suicide were either single or divorced. It is in conformity with higher possibility for attempting suicide in people with less social supports.[19]

But no significance was observed between different groups in number of previous attempts to suicide in people reattempting the suicide.

Most of the patients reattempting suicide in this study had chronic psychological disease, and Kapur *et al*.,[12] and Cederke *et al*.,[10] found in their studies that previous psychiatric treatment were accompanied by reattempting to suicide.

The limitations in this study were: Relative short time of follow up, focusing on the patients attempting suicide only through self-poisoning, and follow up only through telephone contacts.

Longer follow up of the patients, selecting samples among patients attempting suicide with other methods, using other intervention techniques such as visiting in-person and assistance for solving the problems of the patients attempting suicide are recommended for future studies

CONCLUSION

The findings of this research briefly showed that telephone contacts could significantly reduce the frequency in suicidal thought ($P = 0.007$), and increase hope at life ($P = 0.001$), in patients reattempting suicide, but longer time is required for follow up and evaluations for justifying the possibility of effective prevention from reattempting suicide, by this method.

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