Psychiatry Research 230 (2015) 913–918

Contents lists available at ScienceDirect

Psychiatry Research

journal homepage: www.elsevier.com/locate/psychres

OSTA program: A French follow up intervention program for suicide prevention

Fayçal Mouaffak [a,b,c,*], Arnaud Marchand [a], Emmanuelle Castaigne [a], Armelle Arnoux [d], Patrick Hardy [a,b,c]

[a] Service de Psychiatrie, CHU de Bicêtre, HUPS, APHP 78, rue du General Leclerc, 94270 Le Kremlin Bicêtre, France
[b] INSERM U1178, Equipe "Dépression et Antidépresseurs", CESP, University Paris-Sud, 94275 Le Kremlin Bicêtre, France
[c] Faculté de Médecine Paris-Sud, 94275 Le Kremlin Bicêtre, France
[d] Unité de Recherche Clinique (URC), HUPS, APHP 78, Rue du General Leclerc, 94270 Le Kremlin Bicêtre, France

ARTICLE INFO

Article history:
Received 6 January 2015
Received in revised form
15 October 2015
Accepted 15 November 2015
Available online 19 November 2015

Keywords:
Suicide
Suicide attempt
Tertiary prevention
Telephone
Practitioner outreach

ABSTRACT

Attempted suicide is a strong risk factor for subsequent suicidal behavior. In recent years, a particular interest has been given to follow-up interventions as a potential effective strategy in preventing recurrent suicidal behavior. We developed a follow-up intervention program called OSTA (organization of a suitable monitoring for suicide attempters) aimed at addressing this issue and tested its effectiveness in a 1-year randomized controlled trial. Individuals who attempted suicide and were admitted to the emergency department (ED) of Bicêtre Hospital ($n=320$) were randomly allocated to receive either the OSTA program or a control treatment. On an intention to treat basis, the proportion of patients who reattempted suicide did not differ significantly between the interventional group (IG) 14.5% (22/152) and the control group (CG) 14% (21/150). There were also no significant differences, between the two arms, in the number of suicide attempts. Although no significant difference has been found between the OSTA program and the control treatment concerning the rate of suicide reattempts, we believe that further studies should be conducted to test the effectiveness of more standardized follow-up studies in suicide prevention.

1. Introduction

According to the World Health Organization (WHO), approximately 1.5 million people will die from suicide every year by 2020. Attempted suicide is under recorded (Bertolote and Fleischmann, 2005a; Nordentoft and Sogaard, 2005), nevertheless, the number of non-fatal episodes is estimated to be 10–40 times higher than that of fatal episodes (Wasserman and Wasserman, 2009). The risk of subsequent suicidal behavior is substantial, between 12% and 25% of those who attempted suicide had another attempt within one year (Hawton and Sinclair, 2003), with the first month carrying an especially high risk of repetition (Cedereke and Ojehagen, 2005; Qin et al., 2009). Furthermore, up to 3% will die by suicide within one year, 9% within 5 years and in studies of longer duration, mortality rates are close to 11% (Daigle et al., 2011). As attempted suicide is the most important predictor of a completed suicide (Tidemalm et al., 2008), prevention of recurrent suicidal behavior is a high priority.

After attempting suicide, 70% of patients are discharged from EDs and referred to an outpatient follow-up. Approximately half of them will refuse to engage in recommended treatment (Lizardi and Stanley, 2010). Monitoring or follow-up care is proposed as a strategy to address this issue. It is defined as a service intervention that aims at both increasing access to and engaging in care. As well as to prevent suicide and related behaviors as opposed to more acute care interventions, such as psychotherapy (Brown and Green, 2014). This approach relies on a "stay in contact" or "connectedness" program through intensive interventions (medical visits or nursing at home, brief psychotherapy and case management) or follow-up services (phone calls, cards or letters, emails or mobile phone messages). From one study to the other, these tools were used separately, associated or according to a pre-established monitoring algorithm (Vaiva et al., 2011). To our knowledge, since 1993, 16 controlled and randomized controlled studies assessed the effectiveness of diverse follow-up strategies (Morgan et al., 1993; Van Heeringen et al., 1995; Evans et al., 1999, 2005; Motto and Bostrom, 2001; Cedereke et al., 2002; Carter et al., 2005; Vaiva et al., 2006; Fleischmann et al., 2008; Beautrais et al., 2010; Vijayakumar et al., 2011; Bertolote et al., 2010; Hassanian-Moghaddam et al., 2011; Hvid et al., 2011; Marasinghe et al., 2012; Morthorst et al., 2012; Cebria et al., 2013). Three studies assessing

* Corresponding author.

http://dx.doi.org/10.1016/j.psychres.2015.11.024
0165-1781/

telephone follow-ups reported a significant decrease in suicide reattempts (Vaiva et al., 2006; Fleischmann et al., 2008; Cebria et al., 2013) while one study evaluating the efficacy of sending letters reported positive results (Hassanian-Moghaddam et al., 2011). Among five studies (Cedereke et al., 2002; Vaiva et al., 2006; Fleischmann et al., 2008; Hassanian-Moghaddam et al., 2011; Morthorst et al., 2012) assessing engagement in healthcare, only two (one using phone follow-ups (Vaiva et al., 2006) and the other sending letters (Hassanian-Moghaddam et al., 2011) reported significantly positive results. The refusal rate of monitoring strategies does not exceed 11% attesting of the high applicability of these methods.

The OSTA program, developed in the psychiatry department of the University Hospital of Bicêtre, is a follow-up protocol aimed at optimizing treatment continuity after discharge from the ED. The objective of our study is to evaluate whether or not the OSTA program could reduce the frequency of subsequent suicidal acts and improve the engagement in healthcare compared with a control treatment.

2. Materials and methods

2.1. Design

A 12-month prospective randomized controlled trial was conducted in the psychiatric ED and the Psychiatric Department of the University Hospital of Bicêtre, France.

2.2. Participants

The prospective recruitment lasted from January 2009 until December 2011. Recruiting and follow-up procedures were in accordance with the WHO's worldwide initiative for the prevention of suicide (SUPRE MISS) (Bertolote and Fleischmann, 2005b) recommendations and were validated by the local research ethics board. Participation in the study was proposed to all suicidal adults admitted to our psychiatric ED during the daytime working hours (excluding the nighttime and the weekends). In our university hospital, adults who attempt suicide are admitted to the general ED and are evaluated by our ED psychiatrist who decides the patients' discharge or hospitalization. Patients included in this study were men and women aged 18 or older, surviving a suicide attempt, discharged from the ED and referred to an outpatient follow-up program after a stay of less than 72 h, giving consent, able to be contacted by phone (not incarcerated or homeless) and able to communicate in French without an interpreter.

The definition of attempted suicide used for inclusion was the WHO's definition adopted in 1996 (De Leo et al., 2006).

2.3. Randomization

The randomization process was made by an independent research assistant at the Clinic Research Unit (URC) of the Bicêtre Hospital. Patients were assigned either to the interventional group (IG) or to the control group (CG). Stratification according to attempted suicide history was subsequently conducted (first attempt vs previous attempts).

2.4. Procedures

2.4.1. Enrollement

All patients admitted to the ED for a suicide attempt received treatment as usual, which included medical care, evaluation of suicide risk and formulation of an initial treatment plan by a psychiatrist.

Once informed consent was obtained, patients were interviewed by a senior psychiatrist. Socio-demographic data, medical and psychiatric history, in particular suicidal behavior history, were collected, as well as an ICD 10 diagnosis and characteristics of the current suicide attempt.

2.4.2. Measures

A psychopathological assessment was conducted with the Montgomery Asberg Depression Rating Scale (Montgomery and Asberg, 1979). Suicide intentionnality was evaluated with the Beck's Suicide Intent Scale (Beck et al., 1974). Finally, the interviewees were asked for their fixed and/or mobile phone numbers, the contact information of a support person as well as for the contact information of their primary physician and/or their treating psychiatrist.

2.4.3. Intervention

The program for the IG consisted in the following interventions

– A few days after their randomization the patients received a letter informing them of their scheduled interventions as well as a resource card providing the telephone number of a senior psychiatrist available 24 h a day at the emergency department of our hospital. The resource card did not include any “caring message”. In the 1st, 6th and 11th month, they also received reminder letters, with a return pre stamped envelope, through which they were asked to inform the study center of any changes to their private phone number and/or home address.

– The telephone intervention was conducted by a nurse, a psychologist or a senior psychiatrist who were all specifically trained in the administration of the program and the management of patients with a high risk of suicide.

The telephone calls, given at 2 weeks post discharge, as well as at months 1 and 3, consisted of a brief assessment of the psychopathological state as well as of the risk of suicide (item 10 of the MADRS) followed by an evaluation of the adherence to mental health services. Information was also collected on the current situation of the patient and whether significant changes had occured. The end of the conversation was devoted to the scheduling of the next interview. When increased risk for suicide was detected, an urgent visit in the ED was arranged.

– Enhancement of interprofessionnal collaboration: the practitioner to whom the patient was referred (primary physician or psychiatrist) received within the first week after dischage a hospitalization report as well as a summary of the OSTA program. A phone call at 3 months inquired about the patients' engagement in health care. The treating practionner was also contacted whenever one of his patients was lost to follow-up or when an increased risk of suicide was detected. A psychiatrist trained in problem solving and crisis management was available for coordinating with treating physicians and hospital services in case of need.

2.4.4. Standard treatment

Patrticipants in the control group received a letter informing them of the result of the randomization process. In the 1st, 6th and 11th month, they received reminder letters, with a return pre stamped envelope, through which they were asked to inform the study center of a change of home address and/or private phone number.

2.5. Outcome

The primary endpoint was the number of patients who reattempted suicide at 12 months. The secondary outcome was the engagement in healthcare defined by the initiation of a medical treatment with a psychiatrist or a general practitioner in accordance with the initial treatment plan.

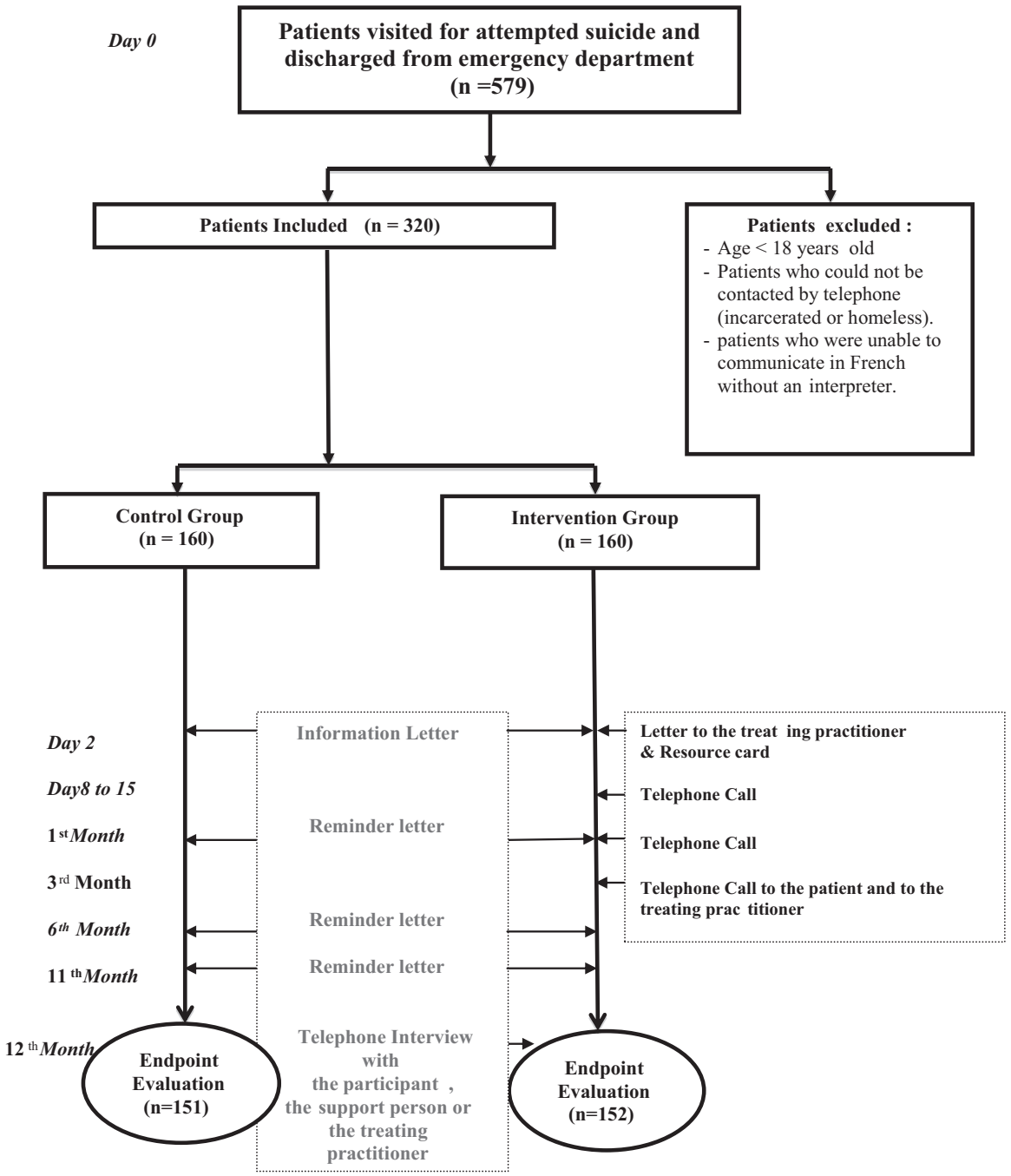

Fig. 1. Progress of patients through the OSTA program.

Outcome data were obtained through a phone interview with the participant, the support person designated by the patient, the treating physician or by consulting the hospital database or the death registry (Fig. 1).

2.6. Data analysis

A statistical engineer at the University Research Center (URC) conducted data entry, cleaning, verification, confidentiality and analysis. Frequencies, means and standard deviations of socio-demographic and patient characteristics were assessed. Differences in categorical variables between groups were tested with a chi-squared test. A Cochran–Mantel–Haenszel test was used to analyze stratified categorical data. Heterogeneity of the odds ratios was tested by Breslow–Day test. Continuous variables were tested by student *t*-tests when data distribution was normal, otherwise the wilcoxon test was used.

Survival curves for time to reattempted suicide at 12 months were obained based on the Kaplan–Meier estimate. Cox's proportional hazards model, adjusted on the past history of repeated suicide attempts, with stepwise selection, was used to look for factors measured at baseline which were independently predictive of time to reattempted suicide at 12 months. Variables were proposed for this multivariate analysis if $p < 0.20$ in the bivariate adjusted analyses. If odds ratio of adjacent categories were not statistically different, these categories were grouped. Final Cox's model enabled to test the treatment arm's effect adjusted for these selected independent predictive factors. Results were expressed as hazard ratios (HR) with a 95% confidence interval (CI).

All patients were included in the analysis regardless of subsequent adherence to treatment, according to the intention to treat principle.

3. Results

From a total of 579 patients admitted to our emergency department for attempted suicide, 320 were included in this study. One hundred and sixty participants were randomized to the intervention group (IG) and 160 participants to the control group (CG).

The mean age was 39 (standard deviation (SD) 13) in the IG and 38.6 (SD 13) in the CG. There was approximately three times more females than males in the two groups. Differences with respect to the number of previous suicide attempts, suicide method or type (violent/non violent), alcohol influence and psychiatric assessment were non significant. Regarding psychiatric diagnosis, the patients, in both arms, were suffering from moderate to severe depressive disorders (27.1% in the CG and 30.3% in the IG), trauma and stressor related disorders (29.6% in the CG and 27.8% in the IG) and personnality disorders (15.9% in the CG and 17.1% in the IG). One third of patients had a psychiatric follow-up, and half of them received antidepressants and anxiolytics (Table 1).

In the IG, 71.3% of patients were referred to a psychiatric follow-up versus 59.4% in CG. The remaining patients were referred, in both groups, to their general practitionner.

The reachability of patients was relatively high throughout the study duration: 86% of the participants from both arms responded to the first contact scheduled between the first and the second week after study inclusion. At the third call, three months after inclusion in the study, 64% of participants responded. Eventually, at 12 months, 63% of the patients responded to the telephone calls of the study team.

At the end of the 12-month follow-up period, we assessed all the included participants: eight participants (2.5%) withdrew their consent prematurely, 28 (9%) were lost to follow-up and three (1%) died,two, in the CG, of pancreatic cancer and acute alcohol intoxication and one, in the IG, of suicide.

Table 1
Clinical and socio-demographic characteristics.

	Control Group (CG) $N=151$	Interventional Group (IG) $n=152$
Age (mean ± SD)	38.6 ± 13.3	39 ± 13
Sex ratio (F/M)	2.8 (111/40)	2.9 (113/39)
Professional status (%)	30	
Unemployed (%)		32
Axis I psychiatric morbidity		
Depressive disorder (%)	27.1	30.3
Trauma and stressor related disorders (%)	29.6	27.8
Alcohol related disorder (%)	4.7	7.2
Axis II psychiatric morbidity (%)	15.9	17.1
Previous psychiatric follow up (%)	25.8	34.2
Previous psychotropic treatment (%)	54.3	59.9
Alcohol influence (%)	43.1	46.7
Number of suicide attempts (mean ± SD)	2.9 ± 4. 9 (1–40)	3.5 ± 5.4 (1–30)
First suicide attempters (%)	49	50.7
Suicide repeaters (%)	47.9	51.9
More than one (%)	21.9	16.9
Suicide method		
Violent (%)	4	5.9
Non-violent (%)	96	94.1

Table 2
Primary outcomes and secondary outcomes.

	Intervention Group (%)	Control Group (%)	OR (95% CI)	P
Proportion of suicide reattempt	14.5	14	1.01 (0.52–1.97)	0.98
Proportion of suicide reattempt in first timers	5.3	5.2	1.02 (0.24–4.27)	1
Proportion of suicide reattempt in repeaters	23.4	23.3	1.02 (0.48–2.18)	0.98
Proportion of patients having initiated a medical follow up	24.2	31	0.71 (0.41–1.22)	0.21

•In intention to treat analysis.
•OR: odd ratio; CI: Confidence Interval.

3.1. Effect of the Intervention

On an intention to treat basis, the proportion of patients who reattempted suicide did not differ significantly, at 12 months, between the interventionnal arm 14.5% (22/152) and the control arm 14% (21/150) odds ratio=1.01(0.52–1.97), $p=0.98$. There was also no significant differences, between the two groups, in the number of suicide attempts (0.2 ± 0.58 in the IG verus 0.23 ± 0.84 in the CG; $p=0.98$) (Table 2).

Subgroup analysis showed that the response to intervvention did not differ according to the past history of repeated suicide attempts. First timers had approximately the same proportion of reattempts in both arms: 5.3% of first timers reattempted suicide in the IG versus 5.2% in the CG.

For the repeaters, 23.4% reattempted suicide in the IG versus 23.3% in the CG.

Neither survival curves nor further multivariate analyses enabled us to find any significant differences between the two groups (Fig. 2).

The independent factors which are mostly associated with suicide risk are history of previous suicide attempt (HR=3.9; CI (1.6–9.04)) and comorbid depression with MADRS score >15 (HR=2.4; CI (1.17–4.9)).

3.2. Secondary outcome

At the 12-month follow-up, 24.2% of the interventional arm patients and 31% of the CG patients declared having initiated a medical follow-up ($p=0.21$, OR=0.71, CI (0.41–1.22).

After the index suicide attempt, one month later and 12 months later, data collected by phone calls showed that 70.6% of the patients initiated a medical follow-up. The large difference between the results reported at 12 months and those issued from the data collected throughout the study underline the major effect of memory bias.

4. Discussion

This randomized controlled trial investigated the effect of the OSTA program which combines delivering an emergency resource

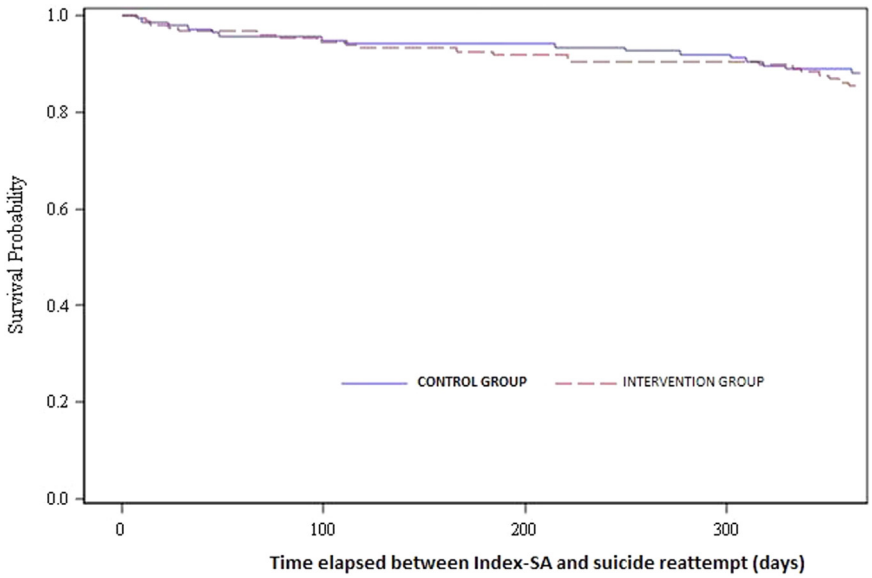

Fig. 2. Survival curve of suicide reattempt by time in the IG versus the CG.

card, sending letters, telephone calls and the outreach of treating practitioner to patients with a recent suicide attempt. Although, our intervention program did not reduce significantly neither the proportion of suicide reattempters nor the number of suicide attempts in comparison with the control treatment, some points deserve to be emphasized.

The randomized controlled design is a strength of our trial which was increased by the type of OSTA program interventions (contacting the treating practitioner and the support person) which helped to reduce the number of patients lost to follow-up. In our program, we also emphasized the networking activity with care providers and in particular treating physicians. Actually, our research center functioned all along the study as a hub linking patients, treating physicians and EDs thus setting up a sustainable infrastructure. The functioning of this system has been maintained beyond the study duration and deserves to be evaluated, separately, on a longer time as it constitutes a background work which cannot reasonably be assessed in a period as short as 12 months.

The proportion of patients who reattempted suicide in both arms (14%) is lower than expected. Actually, in the control arm the rate of suicide reattempts is expected to approach 22%. This result is probably related, first, to the quality of the intervention at the ED which involved both a senior psychiatrist and a nurse trained to the management of suicidal attempts. Secondly, to the effect of the control treatment, which can not be denied to patients at high risk owing to ethical implications. These interventions probably represented a bias that led to the underestimation of OSTA program effectiveness. A greater sample size might have been helpful to overcome this bias.

Another major issue is the discrepancy between the results of engagement in health care collected prospectively throughout the study (70.6%) and those reported retrospectively at the end of the follow-up (24.2%). This inconsistency emphasizes on the important limitations resulting from memory bias. As the prospectively collected data are more reliable, we retained that 70% of patients, at least, in the IG have engaged in healthcare. This rate is comparable to those reported in the literature (Cedereke et al., 2002; Vaiva et al., 2006).

So far, eight (Cedereke et al., 2002; Fleischmann et al., 2008; Bertolote et al., 2010; Hvid et al., 2011; Marasinghe et al., 2012; Morthorst et al., 2012; Cebria et al., 2013) of sixteen randomized controlled studies assessed telephone intervention strategies while the remaining evaluated effectiveness of caring letter interventions, easy access to on-call psychiatrists or home visits of a caregiver. Telephone interventions were effective in significantly reducing the rate of suicide or recurrent suicidal behavior in four studies (Vaiva et al., 2006; Fleischmann et al., 2008; Hvid et al., 2011; Cebria et al., 2013).

Effectiveness seems to be related with an early implementation of telephone contacts as well as on a high frequency of calls during the most critical period, the first weeks (Luxton et al., 2013). In our study, telephone calls started as soon as the first week and were scheduled at one month, three months and 12 months. Our results suggest that contacting patients rapidly after the index episode might not be sufficient and that a high frequency of contacts during the critical first weeks is of paramount importance. This finding is consistent with the conclusions of Motto (Motto and Bostrom, 2001) who theorized that the cumulative effect of repeated caring contacts has the greatest impact and that objective of follow-up studies is to make the patient realize that there is a person concerned about his welfare, and who maintains positive feelings towards him, hence the neologism of “connectedness” which is the concept that constitutes the common thread running through most of follow-up studies (Luxton et al., 2013).

5. Conclusion

Our study did not show any significant results favoring the OSTA program neither in reducing the proportion of suicide reattempt nor in improving healthcare engagement. One of the major criticisms made to the follow-up studies is the failure to replicate trials that found significant effects (Brown and Green, 2014). Actually authors are prone to develop new interventions instead of improving those that have been found to be effective. The spread of new technologies (smartphone applications, chat rooms, telephone messaging) and their growing use in follow-up studies (Chen et al., 2010; Luxton et al., 2012; Berrouiguet et al., 2014) will hopefully help in standardizing interventions and reducing methodological gaps thus improving replicability of studies.

Conflicts of interest

The authors declare that they have no conflicts of interest.

Source of funding

The authors declare that they have no source of funding.

References

Beautrais, A.L., Gibb, S.J., Faulkner, A., Fergusson, D.M., Mulder, R.T., 2010. Postcard intervention for repeat self-harm: randomised controlled trial. Br. J. Psychiatry 197 (1), 55–60.
Beck, A.T., Schuyler, D., Herman, I., 1974. Development of Suicidal Intent Scales. Charles Press Publishers.
Berrouiguet, S., Gravey, M., Le Galudec, M., Alavi, Z., Walter, M., 2014. Post-acute crisis text messaging outreach for suicide prevention: a pilot study. Psychiatry Res. 217 (3), 154–157.
Bertolote, J.M., Fleischmann, A., 2005a. Suicidal behavior prevention: WHO perspectives on research. Am. J. Med. Genet. Part C Semin. Med. Genet. 133C (1), 8–12.
Bertolote, J.M., Fleischmann, A., 2005b. Suicidal behavior prevention: WHO perspectives on research, American Journal of Medical Genetics Part C: Seminars in Medical Genetics. Wiley Online Library, pp. 8–12.
Bertolote, J.M., Fleischmann, A., De Leo, D., Phillips, M.R., Botega, N.J., Vijayakumar, L., De Silva, D., Schlebusch, L., Nguyen, V.T., Sisask, M., Bolhari, J., Wasserman, D., 2010. Repetition of suicide attempts: data from emergency care settings in five culturally different low- and middle-income countries participating in the WHO SUPRE-MISS study. Crisis 31 (4), 194–201.
Brown, G.K., Green, K.L., 2014. A review of evidence-based follow-up care for suicide prevention: where do we go from here. Am. J. Prev. Med. 47 (3 Suppl. 2), S209-215.
Carter, G.L., Clover, K., Whyte, I.M., Dawson, A.H., D'Este, C., 2005. Postcards from the EDge project: randomised controlled trial of an intervention using postcards to reduce repetition of hospital treated deliberate self poisoning. Br. Med. J. 331 (7520), 805.
Cebria, A.I., Parra, I., Pamias, M., Escayola, A., Garcia-Pares, G., Punti, J., Laredo, A., Valles, V., Cavero, M., Oliva, J.C., Hegerl, U., Perez-Sola, V., Palao, D.J., 2013. Effectiveness of a telephone management programme for patients discharged from an emergency department after a suicide attempt: controlled study in a Spanish population. J. Affect. Disord. 147 (1–3), 269–276.
Cedereke, M., Monti, K., Ojehagen, A., 2002. Telephone contact with patients in the year after a suicide attempt: does it affect treatment attendance and outcome? A randomised controlled study. Eur. Psychiatry 17 (2), 82–91.
Cedereke, M., Ojehagen, A., 2005. Prediction of repeated parasuicide after 1–12 months. Eur. Psychiatry 20 (2), 101–109.
Chen, H., Mishara, B.L., Liu, X.X., 2010. A pilot study of mobile telephone message interventions with suicide attempters in China. Crisis 31 (2), 109–112.
Daigle, M.S., Pouliot, L., Chagnon, F., Greenfield, B., Mishara, B., 2011. Suicide attempts: prevention of repetition. Can. J. Psychiatry 56 (10), 621–629.
De Leo, D., Burgis, S., Bertolote, J.M., Kerkhof, A.J., Bille-Brahe, U., 2006. Definitions of suicidal behavior: lessons learned from the WHo/EURO multicentre study. Crisis 27 (1), 4–15.
Evans, J., Evans, M., Morgan, H.G., Hayward, A., Gunnell, D., 2005. Crisis card following self-harm: 12-month follow-up of a randomised controlled trial. Br. J. Psychiatry 187, 186–187.
Evans, M.O., Morgan, H.G., Hayward, A., Gunnell, D.J., 1999. Crisis telephone consultation for deliberate self-harm patients: effects on repetition. Br. J. Psychiatry 175, 23–27.
Fleischmann, A., Bertolote, J.M., Wasserman, D., De Leo, D., Bolhari, J., Botega, N.J., De Silva, D., Phillips, M., Vijayakumar, L., Varnik, A., Schlebusch, L., Thanh, H.T., 2008. Effectiveness of brief intervention and contact for suicide attempters: a randomized controlled trial in five countries. Bull. World Health Organ. 86 (9), 703–709.
Hassanian-Moghaddam, H., Sarjami, S., Kolahi, A.A., Carter, G.L., 2011. Postcards in Persia: randomised controlled trial to reduce suicidal behaviours 12 months after hospital-treated self-poisoning. Br. J. Psychiatry 198 (4), 309–316.
Hawton, K., Sinclair, J., 2003. The challenge of evaluating the effectiveness of treatments for deliberate self-harm. Psychol. Med. 33 (6), 955–958.
Hvid, M., Vangborg, K., Sorensen, H.J., Nielsen, I.K., Stenborg, J.M., Wang, A.G., 2011. Preventing repetition of attempted suicide-II. The Amager project, a randomized controlled trial. Nord. J. Psychiatry 65 (5), 292–298.
Lizardi, D., Stanley, B., 2010. Treatment engagement: a neglected aspect in the psychiatric care of suicidal patients. Psychiatr. Serv. 61 (12), 1183–1191.
Luxton, D.D., June, J.D., Comtois, K.A., 2013. Can postdischarge follow-up contacts prevent suicide and suicidal behavior? A review of the evidence. Crisis 34 (1), 32–41.
Luxton, D.D., Kinn, J.T., June, J.D., Pierre, L.W., Reger, M.A., Gahm, G.A., 2012. Caring Letters Project: a military suicide-prevention pilot program. Crisis 33 (1), 5–12.
Marasinghe, R.B., Edirippulige, S., Kavanagh, D., Smith, A., Jiffry, M.T., 2012. Effect of mobile phone-based psychotherapy in suicide prevention: a randomized controlled trial in Sri Lanka. J. Telemed. Telecare 18 (3), 151–155.
Montgomery, S.A., Asberg, M., 1979. A new depression scale designed to be sensitive to change. Br. J. Psychiatry 134, 382–389.
Morgan, H.G., Jones, E.M., Owen, J.H., 1993. Secondary prevention of non-fatal deliberate self-harm. The green card study. Br. J. Psychiatry 163, 111–112.
Morthorst, B., Krogh, J., Erlangsen, A., Alberdi, F., Nordentoft, M., 2012. Effect of assertive outreach after suicide attempt in the AID (assertive intervention for deliberate self harm) trial: randomised controlled trial. Br. Med. J. 345, e4972.
Motto, J.A., Bostrom, A.G., 2001. A randomized controlled trial of postcrisis suicide prevention. Psychiatr. Serv. 52 (6), 828–833.
Nordentoft, M., Sogaard, M., 2005. Registration, psychiatric evaluation and adherence to psychiatric treatment after suicide attempt. Nord. J. Psychiatry 59 (3), 213–216.
Qin, P., Jepsen, P., Norgard, B., Agerbo, E., Mortensen, P.B., Vilstrup, H., Sorensen, H. T., 2009. Hospital admission for non-fatal poisoning with weak analgesics and risk for subsequent suicide: a population study. Psychol. Med. 39 (11), 1867–1873.
Tidemalm, D., Langstrom, N., Lichtenstein, P., Runeson, B., 2008. Risk of suicide after suicide attempt according to coexisting psychiatric disorder: Swedish cohort study with long term follow-up. Br. Med. J. 337, a2205.
Vaiva, G., Vaiva, G., Ducrocq, F., Meyer, P., Mathieu, D., Philippe, A., Libersa, C., Goudemand, M., 2006. Effect of telephone contact on further suicide attempts in patients discharged from an emergency department: randomised controlled study. Br. Med. J. 332 (7552), 1241–1245.
Vaiva, G., Walter, M., Al Arab, A.S., Courtet, P., Bellivier, F., Demarty, A.L., Duhem, S., Ducrocq, F., Goldstein, P., Libersa, C., 2011. ALGOS: the development of a randomized controlled trial testing a case management algorithm designed to reduce suicide risk among suicide attempters. BMC Psychiatry 11, 1.
Van Heeringen, C., Jannes, S., Buylaert, W., Henderick, H., De Bacquer, D., Van Remoortel, J., 1995. The management of non-compliance with referral to outpatient after-care among attempted suicide patients: a controlled intervention study. Psychol. Med. 25 (5), 963–970.
Vijayakumar, L., Umamaheswari, C., Shujaath Ali, Z.S., Devaraj, P., Kesavan, K., 2011. Intervention for suicide attempters: a randomized controlled study. Indian J. Psychiatry 53 (3), 244–248.
Wasserman, D., Wasserman, C., 2009. Oxford Textbook of Suicidology and Suicide Prevention. OUP, Oxford.