Abstract

There are known risks of re-traumatization through bereavement crisis interventions, we tailored a new intervention lowering the degree of direct emotional activation. However, we need evidence of this intervention effects on depression and on psychotraumatic symptoms between one and six months after a loss.

It is a randomised controlled trial with two groups, control group (n=18) and experimental group (n=11) in two assessments (one and six months after loss), both included a semi-structured interview (Socio-Demographic Questionnaire, Beck Depression Inventory and the Impact of Events Scale-Revised). The experimental group had a cognitive-narrative program with four sessions: recalling, cognitive and emotional subjectivization, metaphorization and projecting sessions.

Participants in the experimental and control groups have lower levels of depression and traumatic stress six months after a loss. Statistically significant results in emotional numbing IES-R sub-scale are observed.

A brief narrative based in cost-effective interventions in crisis prove that the positive outcomes have increased in controlling the traumatic stress and time after a loss.

Keywords: prevention; primary health care; randomized trial; cognitive narrative; crisis

**Randomized controlled trial of a cognitive narrative crisis intervention for bereavement in primary healthcare**

 Everyone, at some point in their lives, face the inevitable suffering associated with the loss of someone significant. This is experienced uniquely by each individual, some individuals with deep grief can take years dealing with grief, changing a person’s psychosocial functioning, others experienced grief with a big intensity but only in some determined periods, and there are still those in which the pain of loss is so easily outweighed that seems to be an attempt to mask it (Bonanno & Kaltman, 2001).

It has been demonstrated that experiences of loss can take multiple forms of expressions, and generally have consequences on physical and psychological health (Stroebe, Schut & Stroebe, 2007; Currier, Berman & Neimeyer, 2008). Additionally, some individuals tend to develop psychological reactions to loss, characterized by negative emotions such as depressions, anxiety, disbelief, anger, social isolation, self-blame, despair (Stroebe, Schut & Stroebe, 2007) and complicated grief (Boelen, Bout & Hout, 2009). Complicated grief is a phenomenon that can be treated, but can’t be prevented, which doesn’t mean that interventions with the goal to prevent this type of grief do not have value (Wittouck, Autreve, Jaegere, Portzky & Heeringen, 2010). Therefore, considering known risks related to traumatic stress on crisis narrative interventions (Barbosa, Sá & Rocha, 2013) and the time after loss variable, there is need for evidences to support effective crisis interventions aiming to prevent emotional problems related to bereavement. A meta-analysis on complicated grief has shown that there is a difference among the short-term and long-term effects of preventive and treatment strategies, in favor of the latter (Wittouck et al., 2011). In parallel, we also know that there is a positive correlation between depressive symptoms and absenteeism, which is reflected at the levels of national productivity (Gusmão, Xavier, Hector, Pope & Almeida, 2005). The possibility of other medical conditions, such as substance abuse and dependence with sexual risk behaviors may also be associated (Le et al., 2003). Psychological intervention in grief has been a controversial issue. However, it has been generally accepted by researchers that psychological interventions help to reduce the intensity of the mourning, promote greater resilience in the process of adjustment after the loss (Kato & Mann, 1999; Wittouck et al., 2011) and intervene in complicated bereavement is more effective than not doing so (Currier, Neimeyer & Berman, 2008). It is extremely important to understand that each person grieves in a unique way, so, the treatments protocols applied in a certain case need to be adaptable to the individual needs (Wittouck et al., 2011). Grief work is a concept essential at some point of our lives; it is crucial to pay attention to the significance of changing of thoughts and emotions, to clearly see all the benefits of seeking help, as well as to recognise that mourning doesn’t pass with the “cure of time” (Barbosa et al., 2013). Studies have shown that there is empirical evidence that a longitudinal intervention helps to stabilize the reaction to bereavement (Bonanno, Wortman & Nesse, 2004), during an intervention, people usually show resilience, i.e., reduce their levels of depression in early after the loss (Bonanno et al., 2002; Bonanno, Wortman & Nesse, 2004). Based on the negative results of the debriefing (Mayou, Ehlers & Hobbs, 2000),the positive results that cognitive-narrative therapy has shown in intervention with bereaved individuals (Currier, Neimeyer & Berman, 2008) and after a review of empirical studies that have followed its protocol in health setting, which results proved to be effective at the level of psychotraumatic (Gonçalves, Machado & Rosas, 1997), depressive and anxious (Rocha, 2004) symptoms,the question formulated was if psychologists at primary health care center can help to prevent bereavement problems through a brief narrative intervention? In order to answer this question we develop a randomized controlled trial of an intervention manual with following main goals: a) to prevent psychotraumatic and depression symptoms on bereavears, b) to promote the participation in the program in order to help the persons in need, and c) implement a brief intervention that can be adjusted to the primary healthcare with the consideration of costs- benefits for the patients and the healthcare facilities.

**Method**

*Trial Design*

This study is a longitudinal randomised controlled clinical trial and respects CONSORT guidelines. Repeated measures, including BDI and IES-R, were used. The outcomes variables considered are (a) depressive (primary outcome) and traumatic symptoms. The study has the objective to decrease depression symptoms and, secondarily, psychotraumatic symptoms and consisted on the following sequential phases: (1) participants were recruited by medical staff of a Primary Health Care Unit; (2 ) data was selected and treated; (3) Clients were contacted by phone to book the first session; (4) participants sign informed consent; (5) eligible participants were randomly sequentially allocated in the control and experimental groups; (6) both groups were subjected to a semi-structured interview (SDQ) and to two instruments – BDI and IES-R – one month after the loss, baseline assessment at the first time it was given (referred as T1) ; (7) Finally, six months after the loss, the evaluation was repeated in the same conditions as the first one, follow-up assessment at the second time the study was given (T2). The experimental group had additionally a cognitive narrative manualized intervention.

**Participants**

Participants were recruited by the medical staff of a Primary Health Care Unit located in the cities of Paredes and Rebordosa (Porto, Portugal). Those who fulfilled the following three inclusion criteria were eligible: individuals with a significant loss within last month, older than 18 years old and with the at least fourth grade of primary school completed. A total of 52 eligible participants have been contacted, however only 29 participated to this study (Figure 1.). The study objectives and the description were disclosed in detail and informed consent was requested.

**Intervention**

*Manualised cognitive narrative programme for complicated grief*

To achieve the main goals, it is crucial to consider the robustness of the treatment based on an intervention manual, which should be descriptive (Jané-Llopis, Hosman, Jenkins and Anderson, 2003; Nezu & Nezu, 2008). Thus, this manual is based on the Gonçalves, Machado, and Rosas (1997) and Barbosa et al. (2013).

The manual was structurally separated in characteristics of the client, of the psychologist, of the process, objectives and methods for each session. The process was designed in four weekly sessions of 60 minutes and the objectives and therapeutic techniques used during the sessions were the recall, the cognitive and emotional subjectification, the metaphorizing and the projection. Each session began with a summary of the previous and ended up with a review of it. The first session involved recalling narratives; the main objective of the first session is to understand the meaning of the deceased in the life of the client and to promote the memory of a specific episode (something to do with the loss). Initially, the participant describes the importance of the deceased in his/hers life and the type of their relationship. Subsequently the client describes an episode so that he/she structure his/her experience with a sense of authorship and consistency. The second session addresses emotional and cognitive subjectivization; the main objectives of this session is to provide a greater awareness of emotional and cognitive dimensions of the experience; to promote the exploration of other aspects of emotional and cognitive experience, not previously appreciated; and to explore the multiplicity and diversity of cognitive and emotional experiences of the episode. The therapist summarizes the activated and evoked emotions from the narrative construction and later suggests the client to explore the cognitive component of the episode and to make successive associations to the thoughts and emotions evoked. The third session involves methaphorization; in which the objective is to explore the different possible meanings for the episode and to choose a metaphor that has more tension and condensation of meaning. Initially, it is important to summarize and retrace the route already described focusing particularly the emotional subjectification and the cognitive experience. The use of paraphrases, silence, reflection of meaning and summarization are important interview skills. Subsequently, the client is prompted to generate metaphors establishing analogies between different frameworks, fostering tension between different levels of meaning and suggesting answers (Gonçalves, 2000). The therapist should encourage metaphors from the others perspective including more references and asks the client to create a unifying metaphor that condense the meaning of the episode. Finally, on the fourth session, projecting took place; in this session we want to promote the construction and the experience of other possible organizations of the episode. Reflecting on the metaphor, a client is requested to present an episode that ran in an alternative way to the root metaphor, followed by metaphorization of this episode. The therapist encourages the client to imagine the episode with the alternative metaphor and clarifies the different emotions and thoughts in the two narratives. In the end, it is discussed how the new metaphor might be an alternative way more suitable to operate. The experimental group completed a checklist in order to evaluate the acceptability of the program.

*Therapists and treatment reliability*

The therapist was subjected to training on the manualized intervention, in order to have a direct experience of the characteristics and requirements of the task. The therapist was monitored to maintain the structure of the program and to solve the difficulties arising from the process and had to make her own assessment at the end of each session. The therapist had to be able to present the techniques and objectives in a clear and simple language. Despite the demanding levels of structure and directivity of the process, the therapist had to be able to establish very high levels of empathy, positive acceptance, neutrality and authenticity.

**Outcome measures**

*Depressive symptoms (Primary outcome)*

The instrument used to assess depression was the BDI adapted for the Portuguese population by Serra and Abreu (1973), with the main goal of distinguishing the non-depressed and the depressed persons, with the cut-point value of 12.

*Psychotraumatic symptoms*

The IES-R is the most frequently used instrument for assessing bereavement traumatic reactions (Stroebe & Schut, 2006). We used the cut-off point > 35, a value that has been used in other studies, with a diagnostic sensitivity of 0.91 and diagnostic specificity of 0.82 (Creamer, Bell & Failla, 2003; Matthiesen and Einarsen, 2004). The IES-R included 22 items, which were distributed among the three scales, namely the subscale avoidance (8 items), the subscale intrusion (8 items) and subscale hypervigilance (with 6 items). In addition, a fourth factor became known as subscale of emotional numbing (Sundin & Horowitz, 2002).

**Sample Size**

52 recently bereaved (less than one month) persons were initially contacted and sequentially randomized 15 for the intervention group and 37 for the control group. In the experimental group, four participants failed intervention enrolment reporting that they did not consider relevant to participate. On the control group, 19 were lost declining the second assessment referring as transportation difficulties, low-level symptoms considering not relevant to follow-up assessment

**Randomization**

The selected sample is composed by29 participants. These participants were randomly sequentially allocated into two groups: a control group and an experimental group. Table 1 describes participant characteristics for each group. Both control group (n=18) and experimental group (n=11) experienced bereavement and have social-demographic and clinical similarities.

*Analysis of attrition rates in sample*

The values of attrition rates for IG considered were the following: (a) number of contacted individuals (n = 15); (b) number of participants in the intervention (n = 11); (c) number of participants who completed the interventions (n = 11); and (d) number of participants who completed the last evaluation (n = 11). During the 4 sessions of the program, a participation of the clients was 100%, i.e., 0% of attrition. This result might be additionally explained by the flexibility given to the clients by a therapist in terms of booked dates and timetables.

However, the high attrition verified on enrolment is mainly due to the high inclusiveness of eligibility, considering both participants with low and high symptoms, on a preventative perspective of the design. Also, baseline results at T1 do not evidence significant differences on the outcome measures, suggesting low-bias risk.

**Statistical methods**

To assess the differences between the groups, during both periods of analysis, Tl and, T2, at the level of the depression and the psychotraumatic symptoms we performed a t-test, chi-square and size effects calculations (Field, 2009), considering T2 between groups analysis of raw values, prevalence based on cut-off values and prevalence of negative evolutions. At the end of the second evaluation, the experimental group also completed a rating scale in order to evaluate the program acceptability. Considering the small sample, there is the main focus on describing and analysing effect size values. A published meta-analysis (Jané-Llopis et al, 2003) for the different types of programs for the prevention of depression found a weighted mean effect size of 0.22 (95% CI 0.14–0.30). In this study, it is used the value of Hedges (g), since this is more conservative and the most suitable for the size of the sample.

**Results**

***Analysis for depressive symptoms***

*Comparisons between the control group and experimental group*

The BDI values obtained for both groups, in baseline and Follow-up (FU), do not have a statistically significant difference (p>0.05). However, considering effect-sizes analysis on the second evaluation, there is a medium to a high value on lowering depressive symptoms (g = 0.65), comparing control and intervention groups.

There is high prevalence of above cut-off value of depressive symptoms in the experimental group (90.9%) and in the control group (83.3%) at baseline. In FU assessments those values decrease, respectively, to 54.5% and 55.6%. In spite of a higher decrease on intervention group at FU, there are no significant differences between groups, as shown in table 3.

***Traumatic stress symptoms***

*Comparisons between the control group and experimental group*

Through a descriptive analysis of the indicators of psychotraumatic symptoms (Table 2) that the mean decreased proportionally in both groups with the exception of IES-R Intrusion, which maintain values. A significant positive difference in Emotional Numbing for the experimental group is also observed, comparing both groups and showing a clear effect in the experimental group. Effect-size values range between 0.01 and 0.8, with 0.80 for Emotional Numbing (confidence interval 95% between 0.02 and 1.58), as shown in table 2.

*Comparative analysis of the prevalence of traumatic stress*

We calculate the values prevalence of psychotraumatic symptoms, considering the cut-off point above 35 on IES-R, we find in the control group a rise and fall effect, i.e., 6 participants decreased traumatic symptoms, but other 6 increased (50%). Analyzing the experimental group we observe that 4 participants with psychotraumatic symptoms evolve positively for values below cut-off and no other participant had increased values, which is a consistent low risk of re-traumatization of this crisis intervention. However, after examining chi-square those differences are not statistically different between groups.

*Analysis of the positive and negative evolutions*

In order to understand the positive and negative evolutions between the experimental and control groups we subtracted FU and baseline results and flagged participants with a decrease of symptoms as “Positive Evolutions”. There are strictly positive evolutions in the experimental group (100%) between the first and second evaluation (Table 3).

In the control group, 4 participants did not show improvement over time in their depression and traumatic symptoms and only 77.8% of the 18 clients showed positive evolution. This observation is consolidated by the chi-square results which show significant differences between groups over time.

Intervention group acceptability of the cognitive narrative protocol

Intervention group participants responded to questions regarding the acceptability of the intervention program. The response options ranged from 0 to 10. Table 4 shows that we obtained very satisfactory answers, with an average variation (approximated) of 8 to 10, indicating that the program was important for the participants. We emphasise that the participants consider this intervention as an opportunity to support and to clarify their thoughts and emotions. The IG felt that they received more support and that it is important to receive such help when solving problems, leading to a better and more adaptive life.

**Discussion**

This randomized controlled trial evaluated the effectiveness of four-session cognitive narrative intervention reducing depressive and traumatic symptoms in recently bereaved participants and examines differences between the two groups at baseline and six months after the loss. The manual included recalling, cognitive and emotional subjectivization, metaphorization and projecting sessions focused on providing a space for narrative production, to coherently externalize emotions with the adequate level of activation and to generate new meaningful narratives. .

Indicators of depression and traumatic stress were compared in the experimental group at six months. Most relevant results for psychotraumatic symptoms, due to known negative results on short crisis interventions, we found no negative evolutions and very positive improvements on emotional numbing. Evidences of efficacy of preventive bereavement interventions are scarce or even negative (Wittouck et al., 2011).

The effect sizes results allow us to compare this intervention with other already published, for instance, considering specifically for complicated grief preventive interventions, the Wittouck et al. (2011) meta-analysis showed a negative evolution mean effect size of 0.13 (for treatment interventions, there are positive evolutions with mean effect size of 1.38). This important synthesized evidence generated a negative appraisal for preventive crisis interventions, which sustains our effort to develop new interventions targeting and controlling psychotraumatic symptoms. Also, Jané-Llopis (2003) extensive meta-analysis of depression prevention programs found a mean side-effect of 0.22. Our effect-sizes reveal positive evolutions for depression value of 0.65 and for the traumatic stress of 0.19.

 It is also noted a very positive effect IES-R sub-scale for emotional numbing, a Hegde’s g effect size of 0.80 (IC 95%, between 0.02 and 1.58). Nevertheless, there are no conclusive results regarding the structure of the IES-R and its subscales, in particular at level of emotional numbing (Asmundson, Frombach, McQuaid, Pedrell, Lenox & Stein, 2000; Duhamel et al., 2004).

Tracking the evolution of all participants, we found in the experimental group that 100% had positive evolutions, five months after the intervention, that is, all participants show a decrease on the symptoms (depressive and psychotraumatic). On the other hand, 22.2% of the control group participants had an increase on symptoms.

These positive results on such a small scale study may be explained by the careful manualization considering emotional activation, specifically the not inclusion of sensorial (objectivation) work of episodic memories, which have positive implications on future bereavement or crisis interventions concerning the management of the optimal level of activation. These results confirms the importance metaphor construction by patients as part of a coherent episodic narrative providing a functional structure to work with emotions and thoughts, and can be used to understand the changes in relation to the perception of bereavement (Maercker et al., 2008; Neimeyer, 200) and to provide new perspectives for life and new meaningful memories. This intervention seems to accelerate this process; however, the process itself may occur also on the contextual work between sessions. It opens a way for contextual narrative production with very high level of creativity and coherence.

However, the limitation of the sample used is a very relevant aspect concerning generalization and possible bias from attrition or from randomization. Analyzing possible bias on differences at baseline and of risk factors between groups, show that (1) there are not relevant differences at baseline; (2) the attrition rates on control group was considerable, however, comparing the included participants characteristics at baseline in both groups, the differences are minimal and the theoretical trends indicate a negative bias for experimental group (i.e, less education and less social support perception). Most difficult and methodologically complex is the inclusion of participants controlling time after loss, in this case, only one month after. Nevertheless the pilot nature of this randomized trial, in future research this sample should be expanded to provide more robust evidence of efficacy.

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Table 1

*Sociodemographic characteristics of IG (n=11) and controls (n=18)*

|  |  |  |
| --- | --- | --- |
| Social demographic measures | Control Group | Experimental Group |
| *n* | *%* | *M* | *SD* | *n* | *%* | *M* | *SD* |
| Age |  |  | 44.28 | 13.57 |  |  | 42.18 | 11.47 |
|  ≤ 30 anos  | 5 | 28 |  |  | 2 | 18.2 |  |  |
|  > 35 anos | 9 | 72.7 |  |  | 9 | 81.9 |  |  |
|  |  |  |  |  |  |  |  |  |
| Education level (in years) |  |  |  |  |  |  |  |  |
|  Between 4 and 6 years | 10 | 55.6 |  |  | 8 | 72,7 |  |  |
|  Between 7 and 12 years | 6 | 33.3 |  |  | 3 | 27.3 |  |  |
|  More than 12 years | 2 | 11.1 |  |  | 0 | 0 |  |  |
| Marital Status |  |  |  |  |  |  |  |  |
|  Single | 2 | 11.1 |  |  | 3 | 27.3 |  |  |
|  Married | 12 | 66.7 |  |  | 5 | 45.5 |  |  |
|  Widow(er) | 4 | 22.2 |  |  | 3 | 27.3 |  |  |
| Previous histories of grief |  |  |  |  |  |  |  |  |
|  No | 5 | 27.8 |  |  | 2 | 18.2 |  |  |
|  Yes | 13 | 72.2 |  |  | 9 | 81.8 |  |  |
| Perception of + social support |  |  |  |  |  |  |  |  |
|  No | 4 | 22.2 |  |  | 5 | 32.7 |  |  |
|  Yes | 14 | 77.8 |  |  | 6 | 67.3 |  |  |
| Sick leave |  |  |  |  |  |  |  |  |
|  No | 12 | 66.7 |  |  | 6 | 54.5 |  |  |
|  Yes | 6 | 27.8 |  |  | 5 | 45.5 |  |  |

Table 2

*Depressive symptoms (BDI) and traumatic symptoms (IES-R): comparison between the IG and controls at T1 and T2*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  Outcome variable |  Intervention *M* *SD* |  Control *M* *SD* |  *Df* |  *t* |  *p* |  *Hedges’s**g* |
| BDI T1  | 20.09 10.75  | 21.61 10.34  | 20.62 | -0.37 | *.71*  |  |
| BDI T2 | 9.73 6.45 15.89 10.49  | 26.98  |  -1.99  | .06 | 0.65 |
| IES-R T1 | 44,55 13.25 48.17 14.66 | 23.11  |  -0.69 | .50 |  |
| IES-R T2 | 32.18 15.82 35.22 16.03  | 21.50  |  -0.50 | .62 | 0.19 |
|  IES-R Intrusion T1 | 2.27 0.68 2.45 0.70 | 21.79  |    -0.68 | .50 |  |
| IES-R Intrusion T2 | 1.73 0.78 1.73 0.79 | 21.68 |   -0.04 | .99 |  0.01 |
| IES-R Hypervigilance T1 | 2.47 0.80 2.18 0.84 | 22.03 |  0.91 |  .37 |  |
| IES-R Hypervigilance T2 | 1.67 0.76 1.65 0.85 |  23.27 |  0.06 | .95 |  0.02 |
| IES-R Emotional numbing T1 | 1.36 0.92 1.80 1.27 | 26.04 |  -1.08 | .29 |  |
| IES-R Emotional numbing T2 | 0.64 0.64 1.39 1.04  | 26.99 |  -2.42 | .02\* |  0.80 |
| IES-R Avoidance T1 | 1.31 0.83 1.90 0.81 | 20.95 |  -1.90 | 0.71 |  |
| IES-R Avoidance T2 | 1.07 0.89 1.40 0.70 | 17.42 |  -1.04 | 0.31 | 0.04 |

 \* *p* < 0.05

Table 3

*Frequence, prevalence and positive evolutions between both groups in IES-R and BDI at T1 and T2*

|  |  |  |  |
| --- | --- | --- | --- |
|  | Intervention *n*  %  | Control *n* % | *p for χ²(1)* |
| Traumatic stressAbove IES-R cut-off T1 Above IES-R cut-off T2 DepressionAbove BDI cut-off T1Above BDI cut-off T2 Positive evolution T2-T1 on Depression and Traumatic Stress | 9510611 | 81.845.534.520.7100.0 | 159151014 |   83.3  50 51.7 34.75  77.8 | *n.s.*.19.04 |

*Note.* T1 = 1st evaluation; T2 = 2nd evaluation

Table 4

*Program acceptability by participants (n=11)*

|  |  |  |
| --- | --- | --- |
|  |  *M* |  *SD* |
| Helped me to clarify my feelings | 9.36 | 0.50 |
| Supported me in what I felt | 9.27 | 0.45 |
| Helped me to organize my feelings | 9.00 | 0.89 |
| Helped me to organize better my thoughts and doubts | 9.00 | 0.63 |
| Helped me to communicate better with significant persons | 8.91 | 0.70 |
| Helped me to live better my own life  | 8.91 | 0.94 |
| Helped me to be less afraid of eventually new relationship | 8.00 | 1.09 |
| Helped me to be aware of my personal meanings | 9.00 | 0.63 |
| Helped me giving information about this process | 9.00 | 0.63 |

*Figure 1.* Flow of participants through each stage of an experiment

Analysed (*n*=11)

Analysis

Analysed (*n*=18)

Assessed for eligibility (*n* = 52)

Randomized

Assigned to control group (*n*=37)

Assigned to intervention group (*n*=15)

Received intervention (*n*=11); Lost to enroll (*n*=4), reason: did not considered necessary.

Participants (*n*=18)

 Lost to follow-up (*n*=19)

Reason: declined second evaluation

Participants (*n*=11)

Follow-up