Changes in the Intensity and Frequency of Psychiatric Problems Related to Traumatic Experience after Three Months of Treatment

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Abstract

The aim of this study was to determine changes in posttraumatic stress disorder (PTSD) and comorbid symptomatology in 123 clients from CRTV IAN Belgrade after three months of psychotherapy. The quality and intensity of symptomatology was measured in two time points, before treatment and after 12 psychotherapeutic sessions (3 months) using self-reporting by clients as well as the structured clinical interview given by independent evaluators who did not take part in the psychotherapeutic process. We have established a statistically significant reduction both in the intensity of PTSD symptomatology and the comorbid symptomatology. These results were compared with the results of follow up of the changes in an identical symptomatology of internally displaced persons over a two-year period. The results from this quasi-control group reduce the possibility of attributing the reduction in psychopathological indicators of the treated group to spontaneous recovery or the effect of other beneficial influences outside therapy.

INTRODUCTION

A vast majority of studies aimed at evaluating treatment of torture victims have a common serious shortfall: lack of the control group. The authors of this work do not know of any reported results of evaluation of torture victims based on the design of a randomised study involving a control group. One of the key reasons for the gathering of researchers from various centres for rehabilitation of torture victims in 2000[1] was to explore possibilities of establishing an adequate control group for a multi-centric study on the effects of treatment of torture victims undertaken by centres throughout the world. Given that the study initiated at this meeting has not yet been realised, our opinion was that the publication of treatment evaluation results of individual centres, even without the control group, has its significance. Namely, a synthesis of a larger number of such empirical results (although obtained in methodologically imperfect circumstances) could contribute to the understanding of current situation in the evaluation of treatment of torture victims, especially baring in mind the overall positive knowledge about how these methodological shortcomings affect the results of the research on size and direction of particular treatment effects. Lipsey and Wilson (1993) have shown that unlike other methodological shortfalls in the experimental design of treatment effects study (non-randomised distribution of subjects into groups, overall methodological quality of the study) the lack of a control group could largely inflate the level of treatment effects (in the said meta-analysis of meta-studies, the level of effect obtained in the meta-studies without a control group is up to 61% higher than in meta-studies involving a control or comparative group). From a strictly logical point of view, without including a control group, any change of value in the examined variable before and after treatment could be attributed to a factor other than the treatment itself (e.g. spontaneous recovery, maturing or something else). However, having in mind the results of meta-studies on the effectiveness of psychological, behavioural and pedagogical treatments that indicate the existence of a general positive clinical and practical effect of these treatments, i.e. the effect that cannot be attributed to the artefacts of the meta-analytical technique or the generalised placebo-effect (Lipsey and Wilson, 1993), as well as baring in mind the results of studies showing positive effects of treatment in clients with symptoms of or diagnosed posttraumatic stress disorder (Brom, Kleber & Defares, 1989; Boudewyns & Hyer, 1990; Boudewyns, Hyer, Woods, Harrison & McCranie, 1990; Cooper & Clum, 1989; Foa, Rothbaum, Riggs & Murdock, 1991; Keane, Fairbank, Caddell & Zimering, 1989; Marmar, Horowitz, Weiss, Wilner & Kaltreider, 1988; Resick, Jordan, Girelli, Hutter & Marhoefer-Dvorak, 1988; Richards, Lovell & Markis, 1994; Silver, Brooks & Obenchain, 1995; Thompson, Charlton, Kerry, Lee & Turner, 1995; Wilson, Becker & Tinker, 1995; Tarrier, Pilgrim, Sommerfield, Faragher, Reynolds, Graham & Barrowclough, 1999; Layne, Saltzman, Savjak, Popovic, Music, Djapo, Pynoos, Arslanagic, Black, Durakovic, Campara & Houston, 2001; Ouimette, Moos & Finney, 2003) and the results of torture victim treatment evaluation obtained to date (Birck, 2001;

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Arcel, Popovic, Kucukalic, Bravo-Mehmedbašic, Ljubotinja, Pušina, Šaraba, 2003) the results that will be rendered in this paper have additional weight. This work will also present findings about the differences in some indicators of psychopathology collected on a sample of refugee population in two time points (Tenjovic, Vidakovic, Vujadinovic, Kneževic, Opacic, Živanovic in press), which can serve as a landmark in proper positioning and understanding the results obtained in research of the treatment effects in our centre.

The aim of this work was to establish whether in the three months of treatment in CRTV IAN we have indeed managed to reduce the symptomatology related to traumatic experience.

Research problems

1. Establish whether there are differences between the beginning of treatment and three months later in the frequency and intensity of avoidance and intrusion symptoms, numbness and symptoms of hyper-arousal, as well as in subjective discomforts, problems in social and professional functioning related to the traumatic event.
2. Establish whether there are differences between the beginning of treatment and three months later in the prominence of hostility, anxiety, obsessive-compulsive reactions, somatisation, interpersonal sensitivity, paranoid ideation, depression, psychoticism and phobic anxiety.

METHOD

Sample

The study was made on a sample of 123 examinees (80% men and 20% women) CRTV clients who have been undergoing treatment for the period of minimum three months, The average age of examines was 46.32 years, spanning from 18 to 76 years of age (SD=11.72)[2].

2 Given that it was not always possible to apply all instruments, the number of examinees varies from one instrument to the other and shall be specifically stated in each table.

Instruments

1. Instruments for assessing the clinical status of clients

a) Clinical interviews

Clinician-Administered PTSD Scale (CAPS; Blake, Weathers, Nagy, Kaloupek, Klauminzer, Charney & Keane, 1990) designed to measure the presence of PTSD symptoms, divided into three groups: re-experiencing (sudden and disturbing memories and/or stressful dreams about the event, re-experiencing the event in terms of flashbacks, emotional pain and/or bodily reactions when confronted with something that reminds the person of the event); avoidance and numbness (effort to avoid thoughts, feelings, conversations and/or places, activities, people reminding the person of the event, inability to take pleasure in formerly pleasurable activities, feeling f disconnectedness from family and friends, sense of emotional numbness, conviction that certain life goals are impossible to achieve); increased hyper-arousal (sleeping problems, rage outbursts and irritability, problems in concentration, exaggerated caution, over-reacting to stimuli reminding of the event - "startle response")

b) Self-assessment measures

Symptom Checklist 90-Revised, (SCL 90-R; Derogatis, 1983) is a short multi-dimensional instrument designed to scan a wide range of psychological problems and psychopathological symptoms. It is also useful for follow-up the flow and effects of treatment. It contains the following symptom scales: somatisation, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism).

Impact of Event Scale (IES; Horowitz, 1979). This is a self-assessment scale designed to measure the current subjective distress related to any specific stressful life event and assess the symptoms of intrusion and avoidance accordingly.

2. IDS-Intervention description scale

In the attempt to describe the type of psychotherapeutic experience of our clients, we have abandoned the usual way of stating types of psychotherapy for which the therapist was trained and which he uses in working with clients. The reason for this is that mere stating the type of psychotherapy used is not determining enough in terms of describing what really went on during the sessions. Namely, many elements within each of large psychotherapeutic orientations (cognitive-behavioural, gestalt, psycho dynamically oriented psychotherapy, etc.) are rather similar although baring various names and it is possible that differences in appearance of psychotherapeutic methods do not always entail the concrete operational difference. On the other hand, psychotherapists working within the same orientation can favour different types of interventions while working with their clients, thereby causing different psychotherapeutic outcomes. In order to avoid this imprecision we have tried to determine the most operational description of what goes on during the sessions. In this respect, the clinicians and researchers in IAN have organised several

brainstorming sessions in order to compile a comprehensive list of different psychotherapeutic interventions used in CRTV IAN (e.g. clarification, interpretation) and originating from various psychotherapeutic orientations or different techniques used in the everyday work but not distinctive of any specific psychotherapeutic technique (e.g. data collection, information provision). We have established that the preliminary list containing several hundred interventions described in a variety of vocabularies of different psychotherapeutic approaches could be reduced to a far smaller number of clearly distinctive procedures by summarising redundant descriptions (a total of 25 procedures, Table 1). The task of every psychotherapist was to write down the percentage of time spent on each of the given interventions, after each of the 12 sessions held.

Procedure

The instruments were applied after the admittance interview, with the aim of objectively assessing the initial psychiatric status of clients, i.e. the need for psychiatric treatment. This assessment was conducted by a clinician who did not take part in the psychotherapeutic process. After three months after the beginning of treatment, and independent evaluator applied the same instruments in order to register potential changes in psychopathology. During these three months clients came for psychotherapy once a week, which means they had 12 sessions before they were re-tested.

After each of the 12 sessions the therapist noted the representation of particular type of intervention in every session. Table 1 shows the structure of the average distribution of the listed interventions in all 12 sessions.

Table 1. Basic parameters of distribution for representation of a particular type of psychotherapeutic intervention in an average session with 123 CRTV clients (minimum, maximum, arithmetic mean and standard deviation)

Psychotherapeutic intervention	Min	Max	M	SD
Data collection	.00	90.00	19.300	17.862
Empathic listening	.00	51.67	18.060	13.115
Support	.00	37.00	15.986	9.355
Information provision	.00	30.00	7.176	7.356
Reflecting emotion and content	.00	24.00	6.312	5.423
Other cognitive/behavioural techniques	.00	80.00	4.451	13.498
Agreement and work on finalising therapy	.00	25.00	3.371	4.772
Clear definition of problem and aim of counselling	.00	20.00	2.832	4.018
Interpretation	.00	14.34	2.709	3.767
Coaching	.00	16.67	2.547	3.845
Exploring the alternatives	.00	15.00	2.493	3.752
Clarification	.00	12.79	2.446	3.497

Psychotherapeutic intervention	Min	Max	M	SD
Establishing the working alliance	.00	25.00	2.281	3.716
Confrontation	.00	9.35	1.409	2.358
Silence, waiting, refraining from interpretation	.00	11.82	.923	1.839
Analysis of the therapist-client relationship	.00	8.33	.889	1.998
Working on resistance	.00	12.68	.866	2.192
Other techniques from dynamic psychotherapy options	.00	10.00	.647	1.888
Using the body in therapeutic process	.00	5.00	.152	.699
Other psychological workshop techniques	.00	1.33	.015	.142
Other psychodrama techniques	.00	.71	.008	.076
Other family therapy techniques	.00	.36	.004	.038
Other techniques in working with the body	.00	.36	.004	.038
Other techniques in gestalt therapy	.00	.00	.000	.000
Other techniques in transactional analysis	.00	.00	.000	.000

RESULTS

The symptomatology of the posttraumatic stress disorder (PTSD) was analysed on the basis of results in the subscales of both CAPS and IES. Table 2 shows changes on CAPS subscales. Given that the application of CAPS is very demanding in terms of time and staff needed for the completion, the results were collected for the sample of 66 examinees. For testing differences we have used the Studen's t-test for dependent samples. The table contains values for current PTSD.

As shown in Table 2, there was a statistically significant improvement in the clinical picture of PTSD (reduced frequency and intensity of symptoms). The differences in comparison with the initial state are statistically significant, with the exception of the intensity of numbness and avoidance symptoms. Given that this is a very respectable instrument (a form of golden standard in diagnosing PTSD) these results can be taken with utmost confidence. As concerns the very diagnosis of PTSD, in the first time point 72.7% of examinees had diagnosed PTSD, whereas after three months this percentage has been reduced to 59.1 %. Therefore, in 13.6% cases there was a reduction in number and intensity of symptoms below the criteria line for diagnosing PTSD [3].

3 In fact, there was a reduction of symptoms below level needed for PTSD diagnosis in 21 clients, but simultaneously in 5 borderline cases there was a slight increase of symptoms, thereby creating conditions for establishing a PTSD diagnosis.

Table 2. Changes in frequency and intensity of individual groups of PTSD symptoms in CRTV clients (N=66) after three months of psychotherapy, assessed using the Clinician Administered PTSD Scale for DSM-IV (CAPS)

Symptoms and Problems	M1	SD1	M2	SD2	M1-M2	t(65)	p
Re-experiencing							
Frequency	6.091	3.948	4.803	3.726	1.288	2.184	.033
Intensity	7.530	4.199	5.818	3.906	1.712	2.851	.006
Avoidance and numbness							
Frequency	8.879	5.249	7.394	5.188	1.485	2.129	.037
Intensity	9.227	4.994	8.227	4.895	1.000	1.258	.213
Hyper-arousal							
Frequency	7.258	4.207	5.849	4.100	1.409	2.292	.025
Intensity	7.833	3.841	6.364	3.948	1.470	2.418	.018
Problems in functioning							
Subjective discomforts	2.121	.886	1.682	.844	.439	3.837	.000
Social functioning	1.682	.897	1.303	.894	.379	3.525	.001
Professional functioning	1.439	.962	1.061	.821	.379	2.782	.007

M - arithmetic mean: SD - standard deviation; t(n) – Studen's t-test with corresponding n - number of degree of liberty; p – statistical significance

The same procedure was applied on a larger sample (N=123) using the IES. Results are shown in Table 3.

Table 3: Changes in frequency and intensity of individual groups of PTSD symptoms in CRTV clients (N=123) after three months of psychotherapy, assessed using the Impact of Event Scale (IES)

	M1	SD1	M2	SD2	M1-M2	t(121)	p
Intrusion Score	23.325	8.233	19.268	9.770	4.057	4.712	.000
Avoidance score	24.732	8.494	21.480	9.547	3.252	3.443	.001
Total score	48.057	15.345	40.748	18.135	7.309	4.418	.000

M - arithmetic mean: **SD** - standard deviation; **t(n)** – Studen's t-test with corresponding n - number of degree of liberty; **p** – statistical significance

The results show that during three months of treatment a significant reduction occurred in the IES measured intrusion and avoidance symptoms. This finding was obtained by subjective assessment by client additionally supports the objective finding on the change of PTSD symptomatology obtained through the instrument in the form of structured clinical interview.

In the posttraumatic stress disorder there is a wide comorbidity, which has been elaborately explored with respect to our clients elsewhere in this publication. Here it is important to answer whether there have been changes in the rest of symptomatology during treatment. In order to respond to this we have compared scores from nine scales in the SCL-90-R (as well as the global symptom severity index) at the beginning and at the end of three months treatment. Results are shown in Table 4.

Table 4: Changes of scores in specific dimensions of the Symptom Checklist - revised version (SCL-90-R) in CRTV clients (N=123) after three months of psychotherapy

Scales	M1	SD1	M2	SD2	M1-M2	t(100)	p
Hostility	1.63	.98	1.33	.99	.297	3.444	.001
Anxiety	2.16	1.02	1.89	1.10	.276	3.152	.002
Obsessive-compulsive	2.08	.89	1.81	.94	.261	3.147	.002
Somatisation	2.23	1.04	2.00	1.12	.228	2.848	.005
Interpersonal sensitivity	1.69	1.00	1.49	.92	.201	2.769	.007
Paranoid ideation	1.88	1.04	1.68	1.04	.195	2.344	.021
Depression	1.99	.91	1.80	.97	.189	2.383	.019
Psychoticism	1.24	.86	1.09	.84	.150	2.051	.043
Phobic anxiety	1.36	1.05	1.25	1.03	.112	1.372	.173
Global severity index	1.84	.84	1.63	.88	.208	3.115	.002

M - arithmetic mean: **SD** - standard deviation; **t(n)** – Studen's t-test with corresponding n - number of degree of liberty; **p** – statistical significance

As presented in Table 4, with exception of phobic symptoms, there was a statistically significant reduction in the overall comorbid symptomatology.

DISCUSSION

In order to produce a proper evaluation study of any given treatment, the evaluation study should comply with a list of "golden standards" of an ideal study on effects of treatment, proposed by Foa & Meadows (1997): 1) clearly defined target symptoms, 2) reliable and valid measures of symptomatology (it is recommended to include instruments enabling the establishment of diagnoses as well as instruments for assessing the intensity of symptoms), 3) existence of "blind" evaluators (the evaluator should not be the one conducting psychotherapy), 4) proper training of evaluators, 5) existence of clear, reproducible,

specific treatment programmes, 6) unbiased division into groups (clients should be divided into groups randomly; moreover, in order to separate treatment effects from the person of therapist, each treatment should be conducted by ate least two therapists) and 7) existing assessment of adherence to treatment plan (if the treatment is going as planned, if any components of the given treatment are beginning to resemble some other treatments).

Our study practically satisfies the first five of the seven golden standards for an ideal treatment effects study. Given that this work aims at determining the overall changes in the symptomatology of our clients regardless of the type of treatment used (and does not intend to establish the effectiveness of a specific type of treatment) the completion of the seventh criterion ceases to be important.

All these rules and procedures are implemented in order to prove two things: 1) that during treatment there was a change in the desired direction and 2) that this change did not occur due to any other factors such as spontaneous recovery or placebo effect.

In this work the first aspect was undoubtedly met - during treatment there was an average reduction of frequency and intensity of symptomatology related to stressful experience. The open question remains whether these changes occurred spontaneously due to time and other factors unrelated to treatment. In order to give a credible response to this question it was necessary to identify at least some findings indicating that during the course of time on the same or similar group living in same or similar conditions there has been no spontaneous recovery. Information derived from a control group could be at least partly indicated by comparative studies conducted in 2000 and 2002 on the sample of internally displaced persons from Kosovo (Tenjovic et all. in press). Excluding the score of avoidance in the sample of women, there had been no statistically significant reduction of PTSD symptomatology measured by IES. The results therefore show that when we compare the representative sample of 903 internally displaced persons from Kosovo with the representative sample of 358 examinees from the same population after two years there is no evidence of spontaneous recovery from symptomatology related to traumatic experience. Here it should be noted that these are initial values 3 to 4 standard deviations higher than the average normative sample in America.

The situation is even more drastic with regard to the comorbid symptomatology measured by SCL-90-R. The highest discrepancies in the two samples of internally displaced persons are found on the scales of phobic anxiety, psychoticism, interpersonal sensitivity and hostility. We should bear in mind that there are statistically significant differences on all scales, but that the differences are most prominent in the mentioned scales. What is important here for us is the fact that in the sample of internally displaced persons from Prizren region all indicators of psychopathology are increasingly present in 2002 compared to 2000. Consequently, not only the spontaneous recovery did not occur, but also there was an additional aggravation in intensity and frequency of symptoms.

Although this is not an identical type of trauma (torture concerning CRTV clients and traumatic experience of exile concerning internally displaced persons) or the time span between testing points (three months for CRTV clients and two years for internally displaced from Kosovo) and it concerns different groups of people, there are grounds to

believe that data on mental status of these people in two points of time could to a certain extent indicate what would have been obtained by following up on a properly established control group. Namely, we should bear in mind that both in the treated sample and the quasi-control one the examinees obtain relatively similar scores on the instruments used. Both groups share the experience of exile, while the CRTV clients have the additional experience of torture. Finally, although the quasi-control sample does not involve the same group of people assessed in two time points, these samples were large enough and constructed in such a way that they give no reason to believe that a biased choice was made in terms of systematic selection of subjects with poorer or better mental health.

CONCLUSION

Results of this research undoubtedly show that between the beginning of treatment and three months into the treatment a significant reduction occurred in the frequency and intensity of intrusion symptoms, symptoms of avoidance and numbness as well as symptoms of hyper-arousal and prominence of subjective discomforts and problems in social and professional functioning related to traumatic experience.

The results also show that after three months from the beginning of treatment there was a statistically significant reduction in prominence of hostility, anxiety, paranoid ideation, depression and psychoticism, while the differences in phobic anxiety were not statistically significant.

On the whole we could say that already after three month of psychotherapy CRTV clients have experienced beneficial effects of treatment with regard to the intensity and frequency of PTSD symptomatology, as well as the comorbid psychopathology. Results obtained from the quasi-control group significantly reduce the possibility of attributing the recorded reduction in symptomatology of the tested group to either spontaneous recovery or effects of other non-therapeutic influences (since it is not clear why there should be an uneven distribution of such beneficial factors outside therapy in favour of the tested group rather than in favour of the quasi-control group).

It is planned that further work would explore relations between the type of intervention during psychotherapy and changed symptomatology, as well as the follow-up of psychic state of CRTV clients one year after the beginning of psychotherapeutic intervention.

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