

# Satisfaction of trauma-affected refugees treated with antidepressants and Cognitive Behavioural Therapy

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## Key points of interest:

- A western model based on cognitive behavioral therapy was found satisfactory by bi-cultural patients, who have lived in Denmark for more than a decade.
- Satisfaction was not associated with treatment outcome, but with the patients' own interpretation of whether their condition had improved due to treatment.

## Abstract

**Purpose:** This study seeks to evaluate the satisfaction of trauma-affected refugees after treatment with antidepressants, psycho-education and flexible Cognitive Behavioral Therapy (CBT) including trauma exposure. **Material and methods:** A treatment satisfaction questionnaire was completed by patients at the end of a randomised controlled trial (RCT) comparing treatment with CBT and antidepressants. A patient

satisfaction score was developed based on the questionnaire, and predictors of satisfaction were analysed in regression models. Telephone interviews were conducted with patients dropping out of treatment before the end of the trial.

**Results:** In total, 193 trauma-affected refugees with PTSD were included in the study. Patients were overall satisfied with flexible CBT including exposure treatment in cases where this was part of the treatment. There was no statistically significant association between treatment outcome and satisfaction and satisfaction and treatment efficacy were independent of each other. The results showed that bi-cultural patients who had lived in Denmark for more than a decade were satisfied with the treatment based on a western psychotherapy model. **Discussion:** Treatment with selective serotonin reuptake inhibitor and flexible CBT, including trauma exposure, is acceptable for trauma-affected refugees. More studies are needed to evaluate patient satisfaction with western psychotherapy models in refugee patients who have recently arrived and to compare satisfaction with alternative treatment models.

**Keywords:** PTSD, trauma, refugee, cognitive behavioural therapy, treatment-satisfaction, anti-depressants

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### Background and aims

There are an estimated 60 million refugees and internally displaced persons worldwide and in 2015, UNCHR estimated that 3.5 million of these are in Europe. Refugees and asylum seekers suffer from diverse mental health problems such as PTSD and depression (Steel et al., 2009).

Recommended treatments of these trauma-related conditions are Selective Serotonin Reuptake-Inhibitors (SSRI) and Trauma-Focused Cognitive Behavioural Therapy (TFCBT) (Bisson, 2009; Stein, 2009). Nevertheless, only a few evaluations of the effect of these standard treatments for trauma-affected refugees have been carried out (Crumlish & O'Rourke, 2010; Nickerson, Bryant, Silove, & Steel, 2011; Palic & Elklit, 2011). TFCBT involves the use of prolonged exposure, which is when the patient assisted by the therapist and in homework, repeatedly recounts the traumatic events or listens to a recorded narrative of the traumatic event (Foa, Hembree, & Rothbaum, 2007). This treatment has received some attention in qualitative studies describing the patient experience of the treatment and its acceptability. The studies suggest that prolonged exposure is as acceptable as treatment with sertraline (Chen, Keller, Zoellner, & Feeny, 2013) and in some cases preferred over sertraline (Kehle-Forbes, Polusny, Erbes, & Gerould, 2014). However, it is a challenge to ensure patient compliance with treatment (Shearing, Lee, & Clohessy, 2011) even in non-refugee patient samples (Schottenbauer, Glass, Arnkoff, Tendick, & Gray, 2008). Only a few studies have examined acceptability of these treatments amongst trauma-affected refugees and asylum seekers despite the challenge of applying psychotherapy to patients with diverse cultural backgrounds

(Silove et al., 1997; Vincent, Jenkins, Larkin, & Clohessy, 2013). Two qualitative studies have examined the meaning of illness and expectations for treatment amongst trauma-affected refugees (Maier & Straub, 2011; Vincent et al., 2013), but no studies specifically investigate the patient satisfaction with TFCBT offered in a Western setting. Evaluating patient satisfaction is further complicated by the lack of consensus of a theoretical framework on patient satisfaction (Batbaatar, Dorjdagva, Luvsannyam, Savino, & Amenta, 2017). In the absence of actual patient satisfaction studies, drop-out rates can be examined, but drop-out rates are generally reported inconsistently in studies of trauma-focused treatment (Schottenbauer et al., 2008). This is also the case in studies on the treatment of trauma-affected refugees where drop-out rates vary from 0% in small studies to 30% in others (Palic & Elklit, 2011). The physiological response to pharmacological treatment may also be different among patients with different ethnic backgrounds as there is evidence of diversity on pharmacokinetics and pharmacodynamics (Noerregaard, 2012; Sonne, Carlsson, Bech, & Mortensen, 2016). The aim of the present study was to examine satisfaction with the treatment offered among trauma-affected refugees and to identify predictors of treatment satisfaction. The treatment offered consisted of CBT including trauma exposure, psychoeducation and sertraline. Our hypothesis was that satisfaction may be influenced by the patients' country of origin and religion as proxies for their cultural background. In addition, we hypothesised that the need of translation and the use of exposure during treatment might affect satisfaction.

The satisfaction study was conducted as part of a RCT evaluating the effectiveness of the administered treatments on PTSD in

a population of trauma-affected refugees in Denmark. The RCT showed no effect on PTSD symptoms, no effect of psychotherapy and no interaction between psychotherapy and medicine. A small but significant effect of treatment with antidepressants and psychoeducation was found on depression (Buhmann, Nordentoft, Ekstroem, Carlsson, & Mortensen, 2016).

## Method

### *Trial design*

The satisfaction survey was a part of a pragmatic randomised controlled 2x2 factorial trial. Randomisation meant that the treatment received did not reflect patient preferences. Patients were allocated to treatment with psychoeducation and antidepressants, or CBT with a trauma exposure component, or a combination of psychoeducation, CBT and antidepressants or to a waiting list. Patients randomised to the waiting list received a combination treatment after waiting for six months and completed the satisfaction survey afterwards. Thereby, the patients who participated in this study all received treatment with either medicine, CBT or a combination of the two, but some of the patients had been waiting six months before they started treatment (Buhmann et al., 2016).

### *Participants*

Participants had to be 18 years or older and had to be refugees or a family member reunified with a refugee. Furthermore, participants had to have PTSD according to the ICD-10 research diagnostic criteria, and to have a history of war-related psychological trauma such as imprisonment, torture, inhuman and degrading treatment or punishment, organised violence, prolonged political persecution and harassment or war. Of these, 42% were torture survivors

according to the UNCAT definition of torture. Additionally, the participants had to be motivated to receive treatment and to give written, voluntary informed consent. Potential participants were excluded if they had a severe psychotic disorder (ICD-10 diagnosis F2x and F30.1-F31.9), were addicted to psychoactive substances (ICD-10 F1x.24-F1x.26), had a need of somatic or psychiatric hospitalisation, or were pregnant or breastfeeding.

All data were collected at the Competence Centre for Transcultural Psychiatry (henceforth called CTP), which is part of the public mental health care services of the greater Copenhagen area in Denmark. CTP offers outpatient treatment specifically to immigrants and refugees with mental health problems and specialises in treating patients with trauma related to war, torture or persecution (Carlsson, Sonne, & Silove, 2014). The trial ran from June 2009 until December 2012. In total, 380 patients were screened, 280 patients were included in the trial and 217 completed the trial, and of these, 193 answered the satisfaction questionnaire and were included in the current analyses. Translation services were provided during assessment and treatment consultations on an as-needed basis (which was the case for 54% of the patients). All of the interpreters were associated with CTP and had experience in translating rating scales, psychotherapy and psychoeducational sessions.

### *Interventions*

Psychopharmacological treatment consisted of sertraline in doses of 25-200 mgs. For patients reporting problems sleeping, the pharmacological treatment was supplemented with mianserin in doses of 10-30 mgs at night. Psychoeducation was provided by the medical doctor and

covered the illness, treatment, sleep, life-style (including relaxation-exercises), physical activity and social relations, pain, cognitive function, and the influence of the illness on the family. The CBT was manualised and included core CBT methods, methods from acceptance and commitment therapy (ACT), mindfulness exercises and in-vivo and visualised exposure (TFCBT). The psychotherapy methods were flexibly applied from the manual and not all methods were used with all patients. We have therefore chosen to use the term “flexible CBT” to describe the treatment. Of the 193 participants in the study, only 37 participants received treatment with trauma-focused exposure (either interoceptive exposure or visualised exposure). The trauma-focused exposures were repeated on average twice and therefore did not amount to a sufficient number of repetitions for it to be termed “prolonged exposure”. The patient population at CTP is multicultural, and it was therefore not feasible to make specific cultural adaptations in the manual. However, the manual allowed for flexible use of methods and the cultural background of the individual patient was taken into consideration in the individualised version of psychotherapy. The psychotherapy has been described in detail elsewhere (Buhmann, et al., 2015).

#### *Outcome measures*

The outcome measures of the trial included:

- Self-rated PTSD severity (Harvard Trauma Questionnaire’s symptom part IV, HTQ) (Kleijn, Hovens, & Rodenburg, 2001; Mollica et al., 1992; Mollica, Wyshak, de, Khuon, & Lavelle, 1987).
- Self-rated symptoms of depression and anxiety (Hopkin’s Symptom Checklist-25, HSCL-25) (Kleijn et al.,

2001; Mollica et al., 1992; Mollica et al., 1987; Oruc et al., 2008).

- Blinded observer-rated symptoms of depression and anxiety (Hamilton depression and anxiety scales, Ham-D & Ham-A) (Hamilton, 1959, 1960).
- Self-rated somatic symptoms (Symptom Check List-90, SCL-90) (Derogatis, 1994).
- Pain (visual analogue scales, VAS, for headache, backache, pain in the arms and pain in the legs (Olsen, 2007), which were combined to a composite pain-score.
- Self-rated level of functioning (Sheehan Disability Scale, SDS) (Lam, Michalak, & Swinson, 2005; Sheehan & Sheehan, 2008).
- Self-rated quality of life (WHO-5) (Bech, 2012).

The ratings have been described in detail elsewhere (Buhman et al., 2014; 2015; 2016). Ratings were completed at pre-trial assessment and at the end of treatment. All self-report questionnaires were available in the six most common languages at CTP (Arabic, Farsi, Bosnian/Serbo-Croatian, Russian, Danish and English), which included the languages of 85% of patients. If no translation was available, an interpreter translated the official version into the language of the patient.

*The patient satisfaction questionnaire:* A questionnaire exploring the patients’ view of the treatment and the centre was developed specifically to be used at CTP. There is no accepted gold standard for the content of satisfaction surveys. When developing items for the present satisfaction questionnaire, we were inspired by literature on the topic, a template for a satisfaction survey used elsewhere in Danish mental health care as well as our clinical experience working with trauma-affected refugees. The questionnaire

was constructed to reflect the patient's treatment experience with a broad focus on the content of the service provided, the service providers as well as the cultural understanding in the clinic. Of all the items in the questionnaire, only 10 items were specifically related to satisfaction. The questions covered the patient's satisfaction with the contact to the medical doctor, social worker and psychologist at CTP, satisfaction with the different treatment modalities and satisfaction with the understanding of the patient's cultural background at CTP. The ten items were used to construct a satisfaction score. Each question was of a 1- 4 Likert type format (see Table 2). Score 1-2 were "not at all" and "only to some degree" and score 3-4 were "to a certain degree" and "to a high degree". Thereby the total of the satisfaction score ranged from 10-40. Missing items were assigned the participant's mean value of the other items of the scale. Cronbach's alpha for the scale was 0.88. The questionnaire was completed at the end of treatment without the presence of a therapist or medical doctor from CTP. Patients were encouraged to complete the questionnaire before leaving CTP at their last appointment. The questionnaire was translated to the same six languages as the outcome ratings and if needed, translation was provided in person. If patients did not show up for their last appointment, the questionnaire was mailed with a stamped return envelope.

#### *Drop-out interviews*

Of the 280 patients included in the trial, 63 patients did not finish the trial. Of these, 43 were withdrawn as they did not continue to meet the inclusion criteria and 20 patients dropped out. If patients dropped out of treatment, they were contacted by a secretary by phone and

asked about the reasons for dropping out. The choice of interviewer was deliberately to prevent patients feeling pressured to give positive responses to a therapist they knew. Formal answer categories included lack of effect of treatment, inconvenience, transport costs, cultural differences, other obligations, lack of energy, lack of respect, psychotherapy or medicine unacceptable, feeling better, leaving the country or other reasons. Patients who dropped out were also encouraged to fill out the satisfaction questionnaire, which was mailed to their home address with a stamped return envelope, but none were returned.

#### *Data analysis*

The association between satisfaction score and the change from pre- to post-treatment (difference scores) was analysed by univariate linear regression models (see Table 3). Following this, a linear regression model was generated with the satisfaction score as outcome and including difference scores for ratings that were significantly associated with satisfaction in the univariate models as predictors in addition to other potential predictors of satisfaction (age, gender, trauma exposure in treatment, religion, country of origin and the need of translation). All analyses were made in STATA 12 & 13 (StataCorp LP, College Station, TX, USA).

## **Results**

#### *Description of patient sample*

Of the 217 trial patients, 193 patients responded and completed the satisfaction questionnaire. Differences between respondents and non-respondents with regard to age, gender, religion, country of origin, trauma, use of trauma exposure in treatment and score on outcome ratings at baseline and follow-up were analysed with

paired t-tests and chi2-test. The responders were slightly older and had a slightly better level of functioning measured on SDS, but otherwise there were no differences between responders and non-responders. A summary of the socio-demographic information and information about the treatment of the participants is presented in Table 1.

#### *Patient satisfaction*

The responses to the 10 questions in the satisfaction score are summarised in Table 2. The sum of the scale was 34.0 (SD 5.7). The theoretical maximum was 40. The mean score on each item ranged from 2.9 to 3.7 on a scale from 1 to 4 with 4 corresponding to most satisfied. When condensing the

**Table 1:** *Baseline description of patients (N=193 unless otherwise specified)*

| Background                                           | N (%) or<br>Mean (sd) |                                                        | N (%) or<br>Mean (sd) |
|------------------------------------------------------|-----------------------|--------------------------------------------------------|-----------------------|
| <b>Sex (male)</b>                                    | 113 (59)              | <b>Previous psychiatric treatment</b>                  |                       |
| <b>Country of origin</b>                             |                       | <b>Any prior psychiatric treatment</b>                 | 155 (80)              |
| Iraq                                                 | 68 (35)               | <b>Needs translation for treatment</b>                 | 105 (54)              |
| Iran                                                 | 26 (13)               |                                                        | <b>Mean (sd)</b>      |
| Lebanon                                              | 22 (11)               | <b>Age</b>                                             | 45 (9)                |
| Ex-Yugoslavia                                        | 31 (16)               | <b>Years since arrival in Denmark</b>                  | 15 (6)                |
| Afghanistan                                          | 19 (10)               | <b>Treatment</b>                                       |                       |
| Other                                                | 27 (14)               | Duration of treatment (months)                         | 6.0 (1.3)             |
| <b>Religion (Muslim) (N=184)</b>                     | 141 (77)              | No. of sessions with psychologist                      | 9 (6)                 |
| <b>Trauma history</b>                                |                       | <b>Randomization group</b>                             | <b>N (%)</b>          |
| Torture (N=190)                                      | 80 (42)               | Antidepressants and CBT                                | 91 (47)               |
| Ex-combatant (N=191)                                 | 46 (24)               | Antidepressants                                        | 54 (28)               |
| <b>Socioeconomic</b>                                 |                       | CBT                                                    | 48 (25)               |
| Currently employed (N=121)                           | 17 (14)               | <b>Psychopharmacological treatment</b>                 |                       |
| Never employed (N=172)                               | 33 (19)               | Sertraline                                             | 136 (70)              |
| No education (N=185)                                 | 6 (3)                 | Mianserin                                              | 121 (63)              |
| Married (N=187)                                      | 100 (53)              | <b>Psychotherapy</b>                                   |                       |
| Has children (N=187)                                 | 163 (87)              | Have been treated with exposure                        | 37 (19)               |
| <b>Mental health condition</b>                       |                       | Discomfort due to therapy                              | 13 (7)                |
| Depression                                           | 181 (94)              | <b>Patient perceived outcome of treatment (N=111)</b>  |                       |
| Personality Change after Catastrophic Events (F62.0) | 55 (29)               | Condition improved due to treatment                    | 97 (87)               |
| Psychotic during treatment                           | 16 (8)                | Condition worsened due to treatment                    | 1 (1)                 |
| <b>In treatment for somatic symptoms</b>             | 75 (39)               | Condition improved due to other factors than treatment | 13 (12)               |

**Table 2:** *Treatment satisfaction score items*

| Scale item                                                                            | N   | Mean (sd)<br>(1-4) | Satisfied<br>N (%) |
|---------------------------------------------------------------------------------------|-----|--------------------|--------------------|
| Were you satisfied with the contact with the administrative staff?                    | 189 | 3.7 (0.6)          | 182 (96)           |
| Did you receive the information about your illness and the treatment that you needed? | 184 | 3.4 (0.8)          | 158 (86)           |
| Were you generally satisfied with the contact with the doctor at CTP?                 | 188 | 3.7 (0.6)          | 181 (96)           |
| Were you generally satisfied with the contact with the psychologist at CTP?           | 175 | 3.7 (0.6)          | 169 (97)           |
| Were you generally satisfied with the contact with the social worker at CTP?          | 174 | 3.5 (0.7)          | 158 (91)           |
| Were you satisfied with the influence you had on your treatment at CTP?               | 176 | 3.4 (0.8)          | 157 (89)           |
| Do you feel there was an understanding of your cultural background at CTP?            | 168 | 3.4 (0.8)          | 149 (89)           |
| Were you satisfied with the psychotherapy treatment?                                  | 167 | 3.3 (0.8)          | 142 (85)           |
| Were you satisfied with the drug treatment?                                           | 154 | 2.9 (1.0)          | 106 (69)           |
| Did you find the treatment at CTP worth your time and efforts?                        | 167 | 3.1 (1.0)          | 135 (81)           |
| <b>Sum score satisfaction score (10-40)</b>                                           |     | <b>34.0 (5.7)</b>  |                    |

response scale by combing categories 1 and 2 (“not at all” and “only to some degree”) and categories 3 and 4 (“to a certain degree” and “to a high degree”) to “not satisfied” vs. “satisfied”, the vast majority of patients were satisfied with the treatment. The range of satisfaction was from 69% satisfaction with pharmacological treatment to 96-97% satisfaction with the medical doctor, the psychologist and the administrative staff. There was a high rate of satisfaction (89%) with the understanding of the patient’s cultural background. In the univariate linear regression models, a small but significant association was found between satisfaction and difference score on HTQ, HSCL-25, SDS and VAS-score (see Table 3) and between the patient’s self-rated evaluation of treatment effect and satisfaction. In the linear regression model, including the significant difference scores and various

predictors, a significant association between being Muslim and lower satisfaction scores (reg. coeff.=−3.1, p=0.02) was found, whereas the difference scores did not remain significant in this model. If the patient’s self-evaluated perceived outcome of treatment was included in the model, the effect of being Muslim was no longer significant (reg. coeff.=−2.4, p=0.07), whereas a self-evaluated positive outcome was significantly associated with satisfaction (reg. coeff=−3.9, p<0.01). We did not find a significant association between satisfaction and the use of trauma exposure in treatment or between satisfaction and the need for translation or country of origin.

*Drop-out interviews*

Of the 20 patients who dropped out of treatment, 14 were interviewed about their reasons for dropping out. The reasons

**Table 3:** *Change in outcome ratings from baseline to post-treatment and results of univariate linear regression models of satisfaction score and change in rating*

| Rating         | N   | Mean change in score<br>pre- to post-treatment<br>(SD) | Linear regression coefficient<br>(95%-confidence interval) | p-value |
|----------------|-----|--------------------------------------------------------|------------------------------------------------------------|---------|
| HTQ            | 181 | 0.1 (0.6)                                              | -1.7 (-3.0 to -0.5)                                        | <0.01   |
| HSCL-25        | 181 | 0.1 (0.7)                                              | -1.4 (-2.6 to -0.2)                                        | 0.03    |
| Ham-D          | 164 | 0.7 (6.5)                                              | -0.1 (-0.2 to 0.0)                                         | 0.10    |
| Ham-A          | 157 | 0.4 (8.5)                                              | -0.0 (-0.1 to 0.1)                                         | 0.45    |
| SCL-90         | 177 | -0.1 (0.8)                                             | -0.8 (-1.8 to 0.3)                                         | 0.16    |
| SDS            | 176 | 0.1 (2.2)                                              | -0.5 (-0.9 to -0.2)                                        | <0.01   |
| WHO-5          | 177 | 3.8 (18.5)                                             | 0.0 (0.0 to 0.1)                                           | 0.78    |
| VAS pain score | 176 | 0.5 (7.8)                                              | -0.1 (-0.2 to 0.0)                                         | 0.01    |

mentioned for drop-out were inconvenience (4 patients), lack of energy (4 patients), other obligations (4 patients), lack of treatment effect (2 patients), transportation difficulties (2 patients) and having left the country (2 patients). When asked directly, no patient confirmed that psychotherapy, pharmacological treatment, lack of respect or lack of understanding of their culture had influenced their choice to leave treatment. The 43 patients who did not complete treatment because they were withdrawn from the trial were not interviewed. They were withdrawn because the patient did not meet the inclusion criteria.

### Discussion

In this quantitative study of patient satisfaction amongst trauma-affected refugees in treatment with flexible CBT and antidepressants, we found high general satisfaction with the treatment. Furthermore, 89% of patients reported that they were satisfied with the cultural understanding they had encountered at CTP and no patients dropped out of treatment because they felt their culture was not considered sufficiently

in the treatment. In the linear regression model, we found an association between satisfaction and being a Muslim (compared to non-Muslims), although this effect disappeared when self-evaluated treatment outcome was included in the model. No association between country of origin or the need of translation and satisfaction was found. Patients were generally very satisfied with the medical as well as the psychotherapeutic treatment, and no association between satisfaction and the use of trauma exposure in treatment was found. Although we found limited effect of treatment on PTSD in the original trial as measured by the outcome variables (C. B. Buhmann et al., 2016), the patients were generally satisfied with the treatment they received.

A striking result is that patients were satisfied despite relatively small treatment effects in the trial. Satisfaction was not associated with changes in self-report rating scales on symptoms, quality of life and level of functioning, including the HTQ primary outcome variable, or on observer ratings, including the Hamilton scales. Nevertheless, satisfaction was associated with the patient's

self-evaluated positive or negative effect of treatment (when asked directly whether they experienced that their condition had improved and whether this was associated with treatment or other factors). This could indicate that satisfaction is an independent outcome in itself. The results may be influenced by the trial excluding patients who were openly not interested in receiving treatment. However, most studies require informed consent and would therefore exclude patients, who did not wish to receive a given treatment. In our case, only five out of 380 patients screened for the trial were deemed not motivated.

One of our aims was to examine whether sociodemographic factors like country of origin, need for translation, and religion were associated with satisfaction with treatment. When working with patients from a different cultural context, it cannot be expected that treatment to be as acceptable as in studies with non-refugee patients from a Western country of origin. There is therefore an urgent need to explore the acceptability of standard PTSD treatments in transcultural patient populations. Few studies have looked specifically at satisfaction amongst trauma-affected refugee patients in a Western treatment setting. An Australian study comparing satisfaction among refugees with general mental health services and specialised services for trauma-affected refugees found that there was an overall higher satisfaction with specialised services, but also that patients who were more fluent in English were less satisfied with treatment in either treatment setting (Silove et al., 1997). Another study has found that language is the most important barrier to treatment (Maier & Straub, 2011). Our results point in a different direction. Culture was not mentioned as a reason for drop-out despite the fact that

the psychotherapy was only culturally adapted to the extent that the flexible manual allowed general adjustment of therapy to the individual patient's problems and understanding. However, although the direct answers in the satisfaction questionnaire suggest that patients did not experience culture as a barrier, they may have underreported dissatisfaction out of politeness. In addition to this, we found lower satisfaction amongst Muslims, which could also suggest that the treatment is more suited for people of Western background. On the other hand, patients had been in Denmark on average 14 years at the time of the study and therefore cultural differences may play a smaller role than in newly arrived refugees, because participants could have adapted to Danish culture to some extent. Despite this, half of the patients needed translation, which points to cultural isolation given the long period they have been staying in the country.

The results do not confirm that trauma exposure in treatment influences patient satisfaction. However, the study may not have been able to evaluate the satisfaction with trauma exposure therapy properly, as only 27% of patients in psychotherapy received trauma exposure therapy of any kind and only 20% of patients received trauma-focused exposure. Although the reasons for this have not been systematically studied, the psychologists' impression was that this was mostly due to resistance towards the treatment amongst the patients. In other populations, whilst it has been difficult to motivate patients to have trauma exposure treatment, those who have experienced trauma exposure seem to be satisfied with the treatment, and effect studies on other populations show that this is the most effective treatment for trauma-related disorders. For example, despite prolonged

trauma exposure being the recommended treatment in the department of Veteran Affairs in the U.S., only 1.5% of the patients undergo a full trauma exposure treatment (Shiner, 2012). Studies have found that the therapeutic relationship and proper preparation of the trauma exposure in therapy, including explaining the method to the patients and positive previous patient experience with trauma exposure, is important (Chen et al., 2013; Kehle-Forbes et al., 2014; Shearing et al., 2011). Satisfaction scores are often related more to patients' appreciation of the therapists and nonspecific aspects of treatment than they are to any demonstrated gains from treatment (Batbaatar et al., 2017). This may explain why patients were generally very satisfied with treatment although the gains were limited on outcome measures in the trial.

Fewer patients were satisfied with pharmacological treatment than with psychotherapy in the satisfaction questionnaire. The difference in satisfaction between psychotherapy and medicine is limited. The difference could be explained by side effects as there was a high prevalence of side effects in the study population, and a significant proportion of patients (23%) had to stop treatment with sertraline or mianserin before the end of the trial due to side effects (Buhmann et al., 2016). This could reflect ethnic differences in pharmacodynamics (Noerregaard, 2012; Sonne et al., 2016).

The study had several limitations, which may also have influenced the results. Patients may have been biased by their relationship with the staff at CTP and the fact that an interpreter was sometimes present. For this reason, they might have rated higher levels of satisfaction out of politeness. This could have been addressed by further stressing that the questionnaire was voluntary and

that answers did not have to be positive. Another limitation of the study is the lack of a qualitative element to elaborate on the findings, which makes it more difficult to interpret the results. It is furthermore unknown whether all patients understood the questions in the questionnaire, especially those who completed it without the help of an interpreter at home. Although our results indicate few differences in baseline characteristics and outcome between patients who completed the questionnaire and those who did not, we cannot rule out that non-respondents and drop-outs were less satisfied with treatment. The sample is small, which may have affected the predictor analyses as weak associations would have been difficult to detect. Finally, the scale is newly developed and has not been validated in other patient samples.

In conclusion, trauma-affected refugees were overall satisfied with the standard treatment for PTSD. The need of translation, country of origin or the use of trauma exposure in treatment were all unrelated to satisfaction, but an association was found between satisfaction and religion. However, satisfaction may be influenced by factors that were not assessed in this study and the answers given by the patients could have been influenced by politeness towards the clinic. This needs to be further explored.

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### **Declaration of interests**

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