

Perceived Distress & Endorsement For Cognitive or Exposure Based Treatments Following
Trauma.

Grant J. Devilly

&

Allie Huther

Brain Sciences Institute, Swinburne University, Australia.

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Address for Correspondence: Prof. Grant J. Devilly. Brain Sciences Institute, Swinburne
University, PO Box 218, Hawthorn, Victoria 3122. Australia. Email: gdevilly@swin.edu.au

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Abstract

This study investigated the perceived endorsement and distress, as judged by novice raters, of two therapies (Cognitive and Exposure Therapy) in the treatment of post traumatic stress disorder (PTSD) in a patient who had experienced a history of sexual abuse. It was found that novice raters perceived exposure as more distressing than cognitive therapy, and that endorsement of the two techniques was related to the outcome of the therapy rather than the therapy description. This provides support to the hypothesis that either a lack of knowledge or a priori beliefs of exposure therapy as a 'harsh' intervention may cloud therapeutic interpretation and be one reason for the lack of widespread adoption of this effective intervention. These results suggest that behavior therapists may need to educate the public / non-behavior therapists regarding the sensitive application of behavior modification strategies and educate new and practicing clinicians regarding patient toleration of these therapies.

The aftermath of trauma may result in a range of problems which can manifest in a disruption to normal functioning. The commonality of symptoms following trauma is reflected in the diagnostic criteria for PTSD (DSM-IV; American Psychological Society, 1994) which also stipulates that the diagnosis requires persistence of these symptoms for four weeks or longer after the traumatic event. Rather than the perceived impact of the trauma diminishing with time for all victims, studies indicate that the trauma may have a pervasive influence on some individuals' lives over a long period (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). Taken together with a lifetime prevalence rate of between 5% and 10% (Kessler et al., 1995) and a much increased risk of suicide (Kessler, 2000), there is an imperative to derive and disseminate successful treatments. The selection of treatment type has historically been entirely subjective and the treatment rationale may be based on several factors that may or may not be suitable for the election of a therapeutic modality. Expert Consensus guidelines have been published (e.g., Foa, Davidson, & Frances, 1999) which describe current best practice for the treatment of PTSD, yet these are not always adopted in general practice (e.g., see Jess, 2001). In relation to this, Becker, Zayfert, and Anderson. (2004) polled 852 North American psychologists' (217 surveys returned) regarding their uptake and use of exposure techniques in the treatment of PTSD. Firstly, they found that, in defiance of the evidence based literature, less than 30% of the sample identified as having a primary theoretical orientation of behavioural, cognitive or cognitive-behavioural (CBT). Secondly, and of even more concern, they found that more than 70% of respondents had no formal training in exposure techniques for PTSD, less than 21% rated themselves as 'somewhat' or 'very' comfortable with its use, and only 9% reported using imaginal exposure to treat 50% or more of their PTSD cases. Of particular interest to the current study the authors state that "the three most commonly endorsed factors in the main sample were limited training (60%, $n=124$), a preference for individualized treatment over manualized therapy (25%, $n=52$), and concern that the patient would decompensate (22%, $n=45$)" (p. 292). Such results raise serious questions regarding the reasons for these perceptions.

Yet, recent studies suggest that the two major techniques used in CBT have the most support for the treatment of PTSD: Cognitive Therapy (e.g., Resick and Schnicke, 1992; Tarrier, Pilgrim, Sommerfield, Faragher, Reynolds, Graham & Barrowclough, 1999; Resick, Nishith, Weaver, Astin, & Feuer, 2002) and Exposure Therapy (e.g., Foa, Rothbaum, Riggs, and Murdoch, 1991; Foa, Dancu, Hembree, Jaycox, Meadows, & Street, 1999; Marks, Lovell, Noshirvani, Livanou, & Thrasher, 1998). Despite continued research into the efficacy of different treatment options for trauma, literature comparing these two modes of treatment is scarce and equivocal results have been predominantly obtained (Marks et al., 1998; Tarrier et al., 1999). Devilly and Spence (1999) and Devilly (2004a) have argued that when efficacy is equal then the distress induced by the technique may be another important factor to consider when selecting the intervention. Using a rating scale assessing treatment distress Devilly and Spence (1999) found that levels did not differ significantly between Eye Movement Desensitization and Reprocessing (EMDR) and a cognitive behaviour therapy (CBT) variant in the treatment of PTSD. However, it was found that ‘drop-out’ rates were higher in the EMDR condition than CBT, with the researchers implicating a need for further study to determine the role of distress in discontinuation with the treatment.

Hembree, Foa, Dorfman, Street, Kowalski, and Tu (2003) have recently evaluated drop-out rates of those engaged in exposure therapy, cognitive therapy, stress inoculation training and EMDR. They found no significant differences between these interventions on rates of attrition, concluding that all the evaluated CBT treatments were equally tolerable, as measured by attrition rates. Naturally, this presupposes that attrition is a reasonable index of treatment toleration.

Endorsement of a treatment based on outcome is problematic as it may be influenced by a number of factors that circumvent an analysis of the treatment itself. For example, a treatment may be judged solely on its likelihood to produce a positive outcome rather than taking into consideration the ‘means’ to producing a successful outcome. Studies indicate that other factors such as patients’ stress reactivity and coping style (Gunthert, Cohen, Butler, & Beck, 2003) may predict their response to therapy. Indeed, Devilly (2004a) has noted that distress following an

intervention and endorsement of that intervention are separate factors, with distress being more related to symptom severity at intake (patients rate an intervention as more distressing the more psychologically fragile they are) and endorsement of a treatment being more related to improvement as a result of the intervention.

In a seminal study by Borkovec and Nau (1972) students were asked to rate their perception of the credibility of two treatment rationales and a placebo, and indicate their expectancy for patient improvement based on the rationales. The study found that credibility varied for treatment rationales and procedural descriptions. The implication of this study was that rationales are not seen as equal in their credibility and are also not equivalent in predicting the demand characteristics for improvement and expectancy (Devilley & Borkovec, 2000). It has been found that patient expectancy can be related to the outcome of a treatment (e.g., Borkovec & Matthews, 1988), and so the effects of a treatment needs to be assessed relative to expectancy and demand characteristics of the therapy.

In addition to these results (emphasising the need to control for such factors in participants when conducting studies comparing treatments) one must also consider a possible bias that may be inherent in the wider general public. In fact such biases may even relate to a lack of knowledge regarding exposure principles or a priori beliefs held by therapists themselves. There have been claims that exposure therapy is associated with increased risk for patient deterioration as a result of the technique compared to other treatments (e.g., Pitman, Altman, Greenwald, Longpre, Macklin, Poire, & Steketee 1991; Tarrier et al., 1999) and that the intervention is more anxiety provoking for both clients and their treating agents than other treatments, such as EMDR (Pitman, Orr, Altman, Longpre, Poire, & Macklin, 1996). However, the evidence for these claims appears to be impressionistic or lacking (e.g., see Devilly & Foa, 2001; Foa, Zoellner, Feeny, Hembree, & Alvarez-Conrad, 2002).

The aim of this research was to study the perceived distress and endorsement of a predominantly Exposure based Treatment (ET) and a predominantly Cognitive based Treatment

(CT), and examine which factors influence endorsement and distress of a particular type of therapy. The use of an analogue sample as a means of comparison for treatments (as opposed to actual patients) allowed us to evaluate the effects of a description of a therapy without the interference of therapist effects. It was hoped that this would elicit any a priori bias associated with exposure therapy or cognitive therapy in the wider population.

The first hypothesis was that there will be a difference in distress but not endorsement scores between CT and ET. We also expected that, based on previous research (Dewilly, 2004a) participants' ratings of endorsement would be related to outcome. It was expected that if the outcome was positive then respondents would more favourably endorse the treatment. The study also aimed to clarify whether ratings of distress are based on the outcome of a treatment or a description of the procedure itself.

Method

Participants

The sample consisted of 78 participants from Swinburne University, 38 males and 40 females. Descriptive statistics for the participants can be found in Table 1. Participants were randomly selected from a busy walk-way at Swinburne University and asked if they would participate in a study by completing a questionnaire. Additionally, participants also volunteered during either a psychology laboratory class or psychophysiology lecture. Of the respondents 92.3% were university students, studying a variety of degrees from arts, science, engineering and business disciplines. Unfortunately, ethical requirements did not allow us to collect data on which course the students were enrolled and for how long they had been studying this course. Upon completion of the questionnaire, respondents were offered a small chocolate as a reward for participation.

Insert Table 1 About Here

Measures

Respondents completed a questionnaire that consisted of a case vignette of a supposed patient (Bronwyn), a 9 session description of Cognitive Therapy (CT) and a 9 session description of predominantly Exposure Therapy (ET) which were both followed by either a positive or negative therapy outcome. An adapted version of the Distress/Endorsement Validation Scale for an analogue sample (Dewilly, 2004a) was administered after each therapy description and outcome.

Case Study: The case study of ‘Bronwyn’ (presented below) was adapted from true therapy notes of a patient that had undergone treatment based on an adapted version of the Trauma Treatment Protocol (TTP; Dewilly & Spence, 1999) which incorporated a combination of Exposure Therapy and Stress Inoculation Training – described as ET here. ‘Bronwyn’ had completed the Distress / Endorsement Validation Scale in relation to this therapy at post-treatment. The demographic information was adjusted so that the patient could not be identified.

“Bronwyn is a 22 year old management trainee who was referred for therapy by a local medical practitioner. At intake she reported a history of sexual abuse by her father. The abuse began when Bronwyn was 14 years old and continued, intermittently, over 2 years. She reported that her father had initially begun to act inappropriately with her and her sister when she was 13 years old by disallowing them to use tampons, and touching them in a way which “made them feel awkward”. Bronwyn and her sister told their mother, who thought they were over reacting. However, her mother and father were already arguing on a regular basis, and the two separated for a short period due to these arguments. During this separation, Bronwyn’s father started to return to the family home when Bronwyn was at home by herself and his advances became sexual in nature. Bronwyn’s father forced her to perform fellatio on him and on three occasions forced her to have sexual intercourse (vaginal) with him. Bronwyn reported to become quite dissociated during the abuse, feeling that “it was not really happening”. On a number of occasions Bronwyn attempted to inform her mother of the abuse, but Bronwyn’s mother refused to

believe her. Her father returned to the family home and the sexual abuse continued over a two year period. Bronwyn eventually moved to an apartment that was owned by her parents, where she still resided when she first attended for therapy. Bronwyn and her sister have never spoken about the abuse, but she reports that there is an unspoken understanding between them that it had occurred to both of them. Bronwyn's sister does not comment upon it, and her mother still disbelieves that it ever happened.

Bronwyn felt that these incidents had affected her life since the abuse began, but that it had become a more prominent and distressing issue for her over the last 4 years. During the first assessment, Bronwyn described her main problems as being the degree to which she experienced anger outbursts, had low self-esteem, mistrusted people's intentions, felt isolated and was generally anxious. She also reported to feel extreme levels of guilt, shame and self-blame. She believed that if she hadn't "created such a fuss over the tampons issue, things would never have progressed that far".

During therapy, Bronwyn highlighted the beliefs that she "should have done more to stop him" and that she "was dirty" as the most pervasive negative tenets in her life related to the abuse. At intake she was taking no medication and drank only rarely."

Therapy Descriptions: Descriptions of ET and CT were presented after the case study, and counterbalanced to avoid ordering effect. The descriptions were adapted from the TTP manual and are summarised below. A full description of the therapies given to the participants is available from the first author upon request.

ET: This consisted of exposure therapy plus stress inoculation techniques (SIT). SIT comprised a short description of breathing retraining, relaxation strategies, thought stopping, self-talk and, very briefly, addressed challenging irrational beliefs. The exposure therapy comprised

both imaginal and in vivo exposure. The in vivo exposure comprised a description of the derivation of a hierarchy and instructions to systematically complete the tasks (Foa et al., 1991). The imaginal exposure was described in the questionnaire with the following quote: “I’m going to ask you to recall the memories of the trauma. I’ll ask you to close your eyes so you won’t be distracted. I will ask you to recall these painful events as fully and as vividly as possible. I don’t want you to tell a story in the third person, but to describe in the present tense, as if it were happening now, right here. You are perfectly safe here. You will close your eyes and tell me what you feel. We’ll work together on this. If you start to feel uncomfortable and want to run away or avoid it by leaving the image, I will help you stay with it. We will tape it so you can take the tape home and listen to it. Every few minutes I’ll ask you to rate your anxiety level on a scale from 0 – 100. Please answer quickly and don’t leave the image. We will repeat this imaginal exposure to the memory of the trauma over and over again for 50 minutes”. ET techniques were described for each of the nine sessions that were conducted with Bronwyn.

CT: The cognitive therapy protocol was an adapted version of Cognitive Processing Therapy (Resick & Schnicke, 1992; Resick et al., 2002) which excluded all exposure-based elements. This consisted of identifying automatic negative beliefs, challenging irrational beliefs, and a method of replacing faulty, defeatist and negative self-talk with more rational, facilitative and task-enhancing dialogue. Modules discussing five themes (safety, trust, power, esteem, and intimacy) likely to have been affected by the rape were also provided and more adaptive beliefs derived. The CT was of the same duration and session length as the ET and the description was of similar length and detail as the ET description.

Outcomes: A positive or negative outcome followed both of the treatment descriptions. If the participant read a positive outcome for ET they were presented with a negative outcome for CT, whereas if the participant was presented with a negative outcome for ET they read a positive outcome for CT. This enabled the exploration of the basis of endorsement and distress (treatment process or outcome), without suppressing differences in the two treatments.

Positive Outcome: “After treatment Bronwyn moved out of the flat owned by her parents, and accepted an offer to move in with friends, an hour from her family home. Since treatment Bronwyn has remained in contact with her mother, however she has severed contact with her father. Bronwyn and her sister have openly discussed their abuse and they have become closer and continue to support each other. Bronwyn reports to now be considerably less irritable, has much higher self-esteem, and is more selectively trusting of people and far less anxious generally.”

Negative Outcome: “After treatment Bronwyn continued to live in the flat owned by her parents. She has remained in contact with both her mother and father, and still reports feeling anxious in the presence of her father. Bronwyn did not discuss the treatment with either her mother or sister, as she felt that they would not approve of her discussing family matters with a stranger. To date, Bronwyn and her sister have not discussed their abuse with one another. Bronwyn now reports to have occasional “temper outbursts”, sometimes reflects upon the events with a sense of guilt, avoids strangers and is generally quite anxious.”

Distress Endorsement Validation Scale (DEVS): The Distress Endorsement Validation Scale (Devilly, 2004a) is a 10-item measure of the distress and intrusiveness of the technique utilized during the therapeutic experience and endorsement rates for the therapy. The adapted version employed in the current study had been modified for use by an analogue sample. There are 10 items that are rated on a 9-point Likert-type scale ranging from 1 (not at all) through 5 (somewhat) to 9 (very). The wording of the questions was changed from being directed at the patient (e.g., ‘how much distress *did you feel* after the first treatment session?’) to being directed at an informed participant (‘how much distress *do you think the patient felt* after the first treatment session?’). The DEVS has been found to have two factors; distress which has 7 items and endorsement with 3 items. The scale has demonstrated high internal consistency within the full 7 item distress factor (Cronbach’s $\alpha = .92$ for whole factor) and inter-item correlations within this factor of between .60 and .84. The endorsement factor has high internal consistency (Cronbach’s $\alpha = .84$) and inter-item correlations of between .67 and .74. The specific items in this version of the

questionnaire related to the raters' view of how the patient would be feeling - specifically: 1... distress experienced during first assessment session; 2... distress experienced during first treatment session; 3... after first therapy session, distress experienced for the next few hours; 4... how anxious about returning to therapy for second treatment session; 5... overall, how intrusive was the therapy; 6... overall, how distressing was the whole treatment; 7... overall, how exhausting was the whole treatment; 8... if knew as much about treatment technique as now, how inclined patient would be in still participating; 9... how likely in recommending this treatment to someone else; 10... believe client received value for time and money.

Procedure

Respondents were told that the study was investigating the distress and endorsement of two different therapies administered to a victim of sexual abuse. There were four types of questionnaires presented to the sample. Participants answering questionnaire A were presented with the CT first, followed by a positive outcome and ET second with a negative outcome. Participants answering questionnaire B were presented with ET with a negative outcome first, and CT with a positive outcome second. Questionnaire C presented ET first, with a positive outcome, and CT second with a negative outcome, and conversely questionnaire D presented the respondent with CT with a negative outcome, followed by ET with a positive outcome.

Results

Preliminary Analysis

Analyses were conducted using STATISTICA, version 6.1 (Statsoft, 2004) and effect sizes were computed using ClinTools version 3.5 (Deville, 2005). As mentioned above, to control for ordering effects, half of the subjects answered CT first ($n = 39$), and half of the subjects answered ET first ($n = 39$). To investigate if there was an ordering effect on distress or endorsement for cognitive or exposure therapy, data were split according to which treatment was presented first. A MANOVA with one between subjects factor (presentation order) was applied to the four variables (distress with cognitive, distress with exposure, endorsement of cognitive, endorsement of exposure). There were

no significant differences at the multivariate level (Wilks' η^2 (4,73) = .92, ns), nor at any of the univariate levels ($\alpha = .05$). Data was therefore collapsed into the 4 groups associated with therapy and outcome; CT with a positive outcome, CT with a negative outcome, ET with a positive outcome and ET with a negative outcome.

Box-plots were generated to ensure data was normally distributed for the four groups and no outliers were evident. This was conducted separately for CT (positive and negative outcome) and ET (positive and negative outcome). Data was found to be generally well distributed and no outliers were found.

Main Analyses

Conceptually, and empirically (Devilly, 2004a), Distress and Endorsement measure different factors. Therefore, all analyses were performed for each of these factors separately. Cohen's d effect sizes were computed for statistically significant results and Cohen's conventions were used in interpretation of these effect sizes (0.2 = small, 0.5 = moderate, 0.8 = large).

The patient in the case vignette was a female rape victim and so the results were analysed by gender of participant to check for any effects. A 1- way MANOVA displayed a significant effect for gender on overall ratings (Wilks' η^2 (4,73) = .84, $p < .02$; Power = 0.83). Univariate analyses showed that this was predominantly contributed to by female participants rating ET as more distressing than male participants, with a moderate effect size (F (1,76) = 8.65, $p < .01$; d = 0.66; Power = 0.83). Univariate analyses on the effect of gender on CT endorsement and distress and ET endorsement were not significant.

Insert Table 2 About Here

A 2 - way MANOVA was conducted with the 2 independent variables of Condition (ET positive / CT Negative, ET Negative / CT Positive) and Gender (Male, Female) on the 4 dependent variables of CT distress and endorsement and ET distress and endorsement. There was a significant

effect for Condition (Wilks' η^2 (4,71) = .47, $p < .01$; Power = 0.97), whereby endorsement ratings for both CT ($F(1,74) = 53.06$, $p < .01$) and ET ($F(1,74) = 32.15$, $p < .01$) were affected by outcome – the better the outcome, the more people endorsed the treatment – with a very large effect size (see Table 2). However, outcome did not affect people's ratings of the distress caused by either CT ($F(1,74) = 1.14$, ns) or ET ($F(1,74) = 0.59$, ns). As noted for overall ratings, there was a significant effect for Gender (Wilks' η^2 (4,71) = .83, $p < .01$), but there was not an interaction effect between Condition and Gender (Wilks' η^2 (4,71) = .99, ns). This is demonstrated in Figure 1.

 Insert Figure 1 About Here

To assess whether one therapy was rated as more distressing overall (irrespective of outcome) a dependent t -test was applied between ET and CT aggregated distress ratings. A significant result ($t = 2.91$, $df = 77$, $p < .01$) was obtained with people perceiving ET as more distressing. This displayed a small to moderate effect (Cohen's $d = 0.34$). There was no difference between overall ET and CT endorsement ratings ($t = 0.54$, $df = 77$, ns).

Bronwyn's Results

Bronwyn was a real patient who had been provided ET and had reported the positive outcome. This case was randomly selected from an ongoing research study and neither the research assistants who collected the data in the current study nor the director of research knew the outcome of the case or Bronwyn's ratings on the DEVS. Bronwyn scored 33 on the Distress subscale. This is 1.44 standard deviations below the mean score as rated by participants in this study where Bronwyn had received ET and had a positive outcome. Bronwyn scored 27 (the maximum possible) on the Endorsement subscale. In the same order of magnitude as with the Distress rating, this is 1.39 standard deviations above the perceived Endorsement as rated by the participants. In sum, participants who read the ET outline where the client supposedly had a positive outcome, rated it as

more distressing and endorsed it less than the patient who actually received that treatment and had such an outcome.

Discussion

The first hypothesis predicted a significant difference in overall distress but not endorsement scores between treatment groups of CT and ET. Results supported this hypothesis for both perceived distress ratings and endorsement ratings. It was found that participants perceived a description of ET as being more distressing to undergo than CT. In this study the ET had even been diluted with stress inoculation techniques. This gives support to the hypothesis that those not experienced in the strategies of ET, and its delivery in a sensitive manner, may have an a priori bias to see the intervention as rather harsh. The difference in the current study was significant and yielded a small to medium effect size. This is consistent with recent claims (e.g., Pitman, Orr, Altman, Longpre, Poire, & Macklin, 1996; Tarrier et al., 1999), where authors claim that ET is a more distressing intervention than other therapies, although relying only on clinical acumen for these claims. The results of this study suggest that such opinions may well be based on pre-existing bias / interpretation of exposure therapy and may not actually relate to the client's opinion of the therapy. Hembree et al. (2003) have demonstrated that attrition rates for ET are not significantly different to those for CT, suggesting equivalent toleration of the interventions as assessed by this process measure. Furthermore, in a previous study (Deville, 2004a), it was found that treatment distress ratings on the DEVS, as completed by the patients themselves, related predominantly to intake symptom severity – not intervention type.

With regards to cognitive therapy, there is an abundance of information regarding its use in society. Television programs present advice that is centrally based on elements of cognitive therapy and there are many psychology self-help books available which also have many similar components to that which are used in cognitive therapy. In this way the public may be more familiar with the strategies of cognitive therapy and, therefore, see them as more acceptable interventions. However, while the present study presented equal length definitions of the treatments, participants' actual

knowledge of ET or CT was not controlled for. Future studies may wish to gauge raters' familiarity with the various treatments.

Endorsement ratings, however, did not significantly differ between the two treatments, overall, yet were related to patient outcome. The relationship between endorsement and outcome supports earlier research (Deville, 2004a) where this relationship was found for an actual patient population. In effect, people will rate a treatment as worthwhile when that treatment improves their quality of life.

The vignette presented to participants in this study was from a real case where Bronwyn had been treated with ET and had reported the positive outcome as outlined. It is interesting to note that her real ratings of the treatment were quite different to the mean ratings people would have expected her to report. The participants in this study rated the ET as more distressing and endorsed it less than Bronwyn did in actuality. It is also interesting to note that females rated the distress of exposure higher than males. It suggests that females may be more sensitized to the distress of rape and have an increased estimation of the distress that reliving it could cause. However, this does not necessarily mean that they are correct in ascribing this level of distress to exposure when conducted by an experienced therapist.

There are certain limitations in this study. Firstly, as mentioned above, we do not know how much a priori knowledge the participants had of the therapies described, how many of them were trainee psychologists or how long they had trained. We cannot, therefore, assume that experts in the field are or are not subject to the same biases. For this reason, future studies could assess experienced therapists with this same paradigm, particularly considering their level of experience and training history (e.g., whether they have ever been supervised by a behaviourist). However, of importance to the aims of this study, we wanted to assess pre-existing biases (existing through whichever reason) that are inherent to students who are considered generally informed members of the public and who may proliferate any biases by transmitting them to others and may even later go onto become therapists themselves.. Secondly, the description of ET in this study was adapted from

TTP (Deville & Spence, 1999) which included a certain amount of CT as part of the stress inoculation ingredient. This was performed so that we could compare the real results of the patient (who had been treated with TTP) with those of the participants in this study. We suggest that it may be useful to include a third treatment which does not contain any cognitive elements in any future study. Finally, we would suggest asking participants whether they have a history of rape themselves. While we know that the ratings of therapeutic distress from those patients with PTSD are influenced by intake presentation generally and therapeutic endorsement appears to be related to improvement, we do not know for certain that non-patient raters (such as those used in this experiment) would have differing perceptions dependent upon a personal history of rape.

The results of this study suggest that student raters see exposure therapy as more distressing than cognitive therapy, yet endorsement of the therapy appears to be based on outcome rather than the method of intervention. Furthermore, this study raises concerns regarding the use of independent raters as reliable litmus tests of treatment toleration, with the participants rating ET as more distressing and endorsing the treatment less than the actual patient who received the intervention. This study also suggests that a priori assumptions, or lack of knowledge, may discriminate against exposure treatment on estimation of distress.

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Table 1. Descriptive Statistics Of Participants

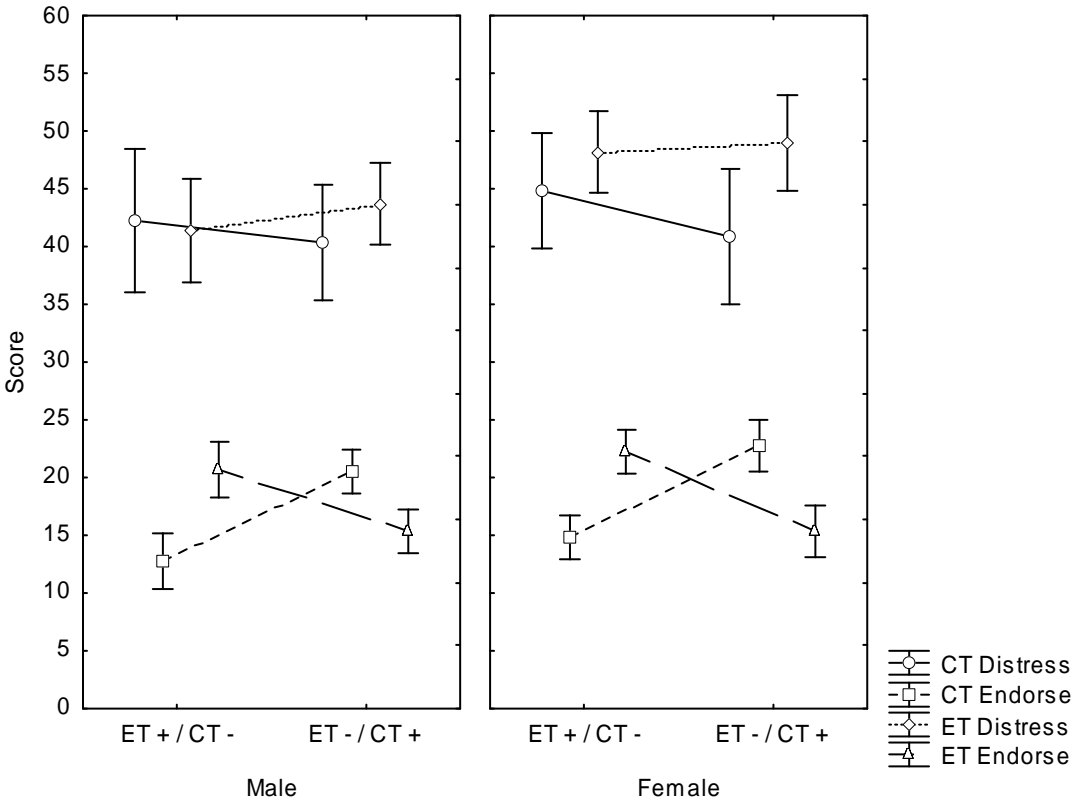
	Males		Females		Total	
	N	%	N	%	N	%
18 and Under	3	60	2	40	5	6.4
18 - 24	24	48	26	52	50	64.1
25 - 30	8	53.3	7	46.7	15	19.2
31 and Over	3	37.5	5	62.5	8	10.3
Total	38	48.7	40	51.3	78	100
Student	36	94.7	36	90	72	92.3
Non Student	2	5.3	4	10	6	7.7

Table 2. Means And Standard Deviations Of Distress And Endorsement Factors For Both Positive And Negative Outcomes Of CT And ET.

	Cognitive Therapy					Exposure Therapy				
	Positive Outcome (n=40)		Negative Outcome (n=38)		Effect Size	Positive Outcome (n=38)		Negative Outcome (n=40)		Effect Size
	M	SD	M	SD	<u>d</u>	M	SD	M	SD	<u>d</u>
Distress	40.58	12.90	43.84	10.79	0.27	45.50	8.70	45.93	9.36	0.05
Endorsement	21.45	4.24	14.00	5.19	1.57	21.61	3.89	15.35	5.23	1.36

Note: Effect Size = Cohen's d.

Figure 1. Male And Female Participant Ratings Of Cognitive Therapy And Exposure Based Therapy Dependent Upon Positive And Negative Outcomes.



Note: Vertical bars denote 95% confidence intervals; ET = Exposure Therapy; CT = Cognitive therapy; + = positive outcome; - = negative outcome.