



HOW TO REMAIN NEUTRAL: AN EXPERIMENTAL ANALYSIS OF NEUTRALIZATION

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Summary—Many patients with obsessive–compulsive problems engage in neutralizing activity to reduce or “cancel out” the effects of the obsession. In many cases, neutralization is covert and therefore difficult to assess or manipulate experimentally. We hypothesize that neutralization resembles overt compulsions. In particular, it was predicted that: (i) neutralization reduces the anxiety evoked by unacceptable thoughts, and (ii) if neutralization is delayed, anxiety and the urge to neutralize will decay naturally. To test the hypothesis, 63 Ss prone to a cognitive bias known to be associated with obsessional complaints (thought–action fusion) were asked to write a sentence that would evoke anxiety. Measures of anxiety (and other variables of interest such as guilt, responsibility and the likelihood of harm) were taken. Subjects were then instructed to either immediately neutralize ($n = 29$) or delay for 20 min ($n = 34$), after which time anxiety and urge to neutralize were re-assessed. The Ss who had neutralized were then instructed to delay, and the Ss who had delayed were now instructed to neutralize, after which time the final assessments were taken. The results confirmed the predictions and supported the hypothesis that neutralization resembles overt compulsions. Of note, there were no differences between anxiety reduction after a 20-min delay, and after immediate neutralization. The problems involved in designing and conducting experiments on covert phenomena are discussed, and the clinical implications of the study are considered. Copyright © 1996 Elsevier Science Ltd

INTRODUCTION

Many people who suffer from Obsessive–Compulsive Disorder (OCD) expend considerable effort in trying to “put things right”, to neutralize the effects of their unacceptable, intrusive obsessions. For example, a patient who was tormented by horrific images of death and mutilation in which her friends and relatives were seen to be suffering bloody injuries and painful deaths, tried to put matters right by forming neutralizing counter-images in which the victims were seen to be restored to active health (de Silva & Rachman, 1992).

Neutralization is an attempt to reduce or remove the discomforting effects of an intrusive thought (image/impulse); to cancel them out. It is mainly directed at undoing effects of a person's own thought or action. Very rarely, if ever, does one neutralize someone else's thoughts. Neutralization is usually covert. It differs from thought suppression, and from cognitions that may be used to challenge negative automatic thoughts arising from obsessions. Thought suppression is an attempt to stop, block or remove the intrusive thought itself (including obsessions), and can take the form of thought-stopping, or deliberate concentration on a different topic. Cognitive challenges to negative automatic thoughts are akin to internal debates, whereas neutralization is an attempt to compensate for or wipe out the effects of the obsessional thought. Neutralization appears to reduce anxiety and provides a period of (transient) relief.

Neutralization has attracted attention because it appears to resemble overt compulsions; both the neutralizations and compulsions are attempts to reduce anxiety, one mainly covert and the other mainly overt. However, neutralization differs from checking in that the purpose of checking is mainly to prevent the event, whereas neutralization is aimed at cancelling the effects of a person's thought or action. Neutralization therefore more closely resembles cleaning than checking, both cleaning and neutralization are focused on “undoing” the effects of a thought or

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action, rather than preventing the occurrence of the negative event. More simply, checking does not "cancel out" turning on an electrical switch.

In his cognitive analysis of OCD, Salkovskis (1985) attaches considerable significance to the role and effects of neutralization and connects it to the concept of inflated responsibility and the need for reassurance. Neutralization, compulsive acts, and reassurance-seeking share common features and all can be construed as attempts to reduce the probability of an adverse event or its effects and also to reduce one's responsibility for any such anticipated misfortune (Salkovskis, 1996). The clinical implications of neutralization are fully described by Salkovskis and Kirk (1988).

Most attempts at neutralization are covert and hence difficult to access. So, for the purposes of experimentation, we set out to develop a method of externalizing neutralization, and hence to make it accessible and open to manipulation. The aims of the experiment were firstly to establish a methodology for conducting experimental analyses of neutralizing activities, and secondly, to test the specific hypothesis that neutralizing resembles overt compulsions. The primary focus of the experiment was on the neutralization of anxiety but we also used the experiment to consider some related phenomena. In particular we were interested to learn about the effects of neutralization on guilt, responsibility for the threat, estimates of the likelihood of the threat, control over the threat, and the moral wrongness of the obsession-like thought.

In order to test the hypothesis we had to first provoke an unacceptable, obsessional-like thought (image/impulse) and, second, generate an urge to neutralize it. To maximize the effects of an experimental manipulation of neutralizing, we selected Ss who are prone to thought-action fusion, that is, who are inclined to feel that their unacceptable thoughts may increase the probability of an adverse event occurring (TAF Likelihood) and/or that such thoughts are morally equivalent to carrying out the corresponding unacceptable action (TAF Morality) (see Rachman, 1993). We chose Ss with TAF since an association has been shown between TAF and obsessional compulsive symptoms (Shafran, Thordarson & Rachman, 1996). Furthermore it seemed logical to suppose that if a person believes that their thoughts increase the likelihood of an event occurring, then they will be highly motivated to take action (i.e. neutralize) to reduce its effects and/or the probability of the event occurring, or their responsibility for the negative event. In other words, we predicted that Ss with TAF would both be more likely to respond to a manipulation designed to generate an obsessional-like thought (image/impulse) and have a stronger urge to neutralize this unacceptable thought, compared with Ss without TAF.

An experimental manipulation was used to generate an unacceptable thought in Ss with high thought-action fusion, and the characteristics of neutralization were then examined. If the hypothesis that neutralization resembles overt compulsions is correct, predictions can be made on the basis of known characteristics of compulsions (see Rachman & Hodgson, 1980):

- (1) Neutralization promptly reduces anxiety evoked by unacceptable thoughts, images or impulses.
- (2) If neutralization is delayed (or prevented), anxiety will decline naturally.
- (3) If neutralization is delayed (or prevented), the urge to neutralize will decline naturally.

It was also predicted that the other variables of interest (i.e. guilt, responsibility, etc.) would be affected by neutralization in the same way as anxiety.

METHOD

Subjects

Sixty-three university undergraduates, who had responded to a notice-board bulletin or class announcement asking for Ss with TAF (simply described), completed the study. The mean age of the sample was 19.5 yr ($SD = 1.01$) and 64% were female. Subjects were excluded if they met the following criteria:

- (1) History of, or symptoms of, current psychosis or depression on a telephone screening.
- (2) No evidence of either TAF Morality or TAF Likelihood on a telephone screening.
- (3) Depression score above 16 on the Beck Depression Inventory (Beck, Ward, Mendelson, Mock & Erbaugh, 1961).

- (4) Baseline anxiety above 20 on a visual analogue scale.
- (5) Anxiety below 50 or urge to neutralize below 20 after generating the obsessional-like unacceptable thought.

The reasons for these exclusion criteria were based in part on ethical considerations (we did not want to evoke anxiety in Ss with psychiatric problems), practical considerations (we wanted Ss prone to the phenomenon which we wished to study), and procedural considerations (in order to determine changes in anxiety and urge to neutralize, initial levels could not be at ceiling or at floor level). Approximately every second interested S was excluded according to our criteria, primarily because they did not have TAF on the telephone screening or else had high scores on the Beck Depression Inventory (Beck *et al.*, 1961).

Measures

Thought–Action Fusion Scale (Shafran *et al.*, 1996). This is a 19-item scale with two subscales of TAF Morality and TAF Likelihood. The TAF Likelihood subscale assesses: (1) beliefs concerning the influence of one's thoughts on real world events happening to oneself (TAF-Likelihood-self); and (2) the influence of thoughts on real-world events happening to other people (TAF-Likelihood-others) e.g. "If I think of a relative/friend being in a car accident, this increases the risk that he/she will have a car accident".

Beck Depression Inventory. This is a 21-item scale to assess depression (Beck *et al.*, 1961).

Maudsley Obsessional Compulsive Inventory. This is a 30-item TRUE/FALSE scale to assess symptoms of obsessive–compulsive disorder (Hodgson & Rachman, 1977).

Verbal Analogue Scales. Subjects were asked to use a scale of 0 to 100 where 0 is "not at all" and 100 is "extremely high" to answer the following questions: (1) How much anxiety do you feel right now? (2) How much guilt do you feel right now? (3) What is the likelihood of the (original) event occurring in the next 24 hr? (4) How much control do you have over the (original) event occurring? (5) How responsible would you feel if the (original) event did occur in the next 24 hr? (6) How morally wrong was it to write out the sentence? (7) How strong is your urge to reduce or cancel (further) the effects of writing the sentence?

Experimental manipulation

After completing the questionnaire package, Ss underwent a brief relaxation procedure. Baseline readings of anxiety and guilt were recorded using a verbal analogue scale. Subjects whose anxiety scores were above 30 received additional relaxation instruction until it was below this mark. Once a baseline rating was obtained, the experimenter began the provocation procedure to generate an obsessional-like unacceptable thought (image/impulse). The following instructions were given:

Keeping in mind a friend or relative who is close to you (pause), I would like you to write out the following sentence on this piece of paper inserting the name of the person in the blank.

Subjects were then given a blank piece of paper, a pen and the typed sentence:

I hope ——— is in a car accident.

After copying the sentence with the named friend or relative inserted in the blank, Ss were then instructed to:

Close your eyes and think about the situation for a few seconds.

The S then returned the blank sentence and the sentence with the name of the friend/relative to the experimenter. Assessments were made of anxiety, guilt etc., using the verbal analogue scales. If Ss refused to write the sentence owing to anxiety, the experimenter ascertained the type of car accident that the S had in mind. In these cases, the Ss were asked to think of a less severe accident (e.g. a fender–bender) or an accident involving a more distant relation. (In approximately two cases Ss still refused for moral reasons; they were thanked for their participation, de-briefed and the experiment ended.) If writing the sentence did not evoke anxiety of 50 or more on the Verbal Analogue Scale, Ss were asked to think of a more severe accident or an accident involving a closer relative.

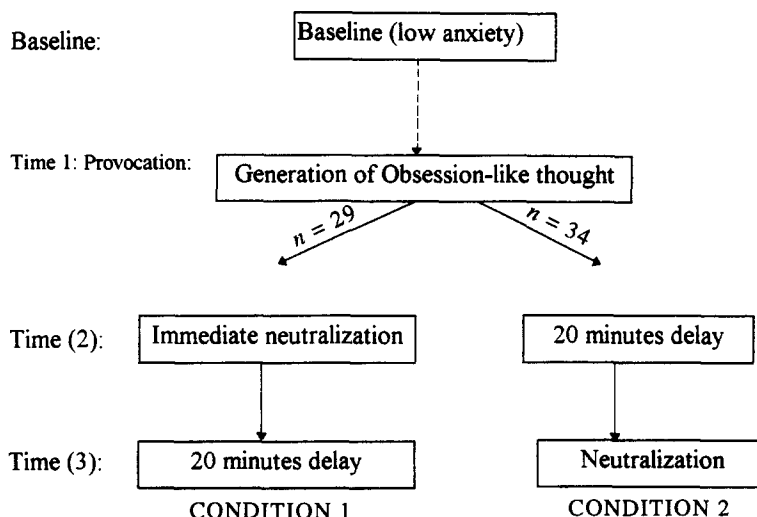


Fig. 1. The experimental method.

Subjects were then consecutively assigned to *one of two* conditions. *The first condition* was immediate neutralization. Ss were told that they “may do whatever [they] wish to try to reduce or cancel the effects of writing the sentence”. All Ss used a physical means of neutralization, which usually consisted of altering the sentence so that it said something positive, or destroying the paper containing the obsessive thought.

Following neutralization, the participants were again asked to provide a score for each of the seven variables (anxiety etc.) using the Verbal Analogue Scale. Subjects were then asked to delay for 20 min after which time anxiety etc. was reassessed. During the delay Ss were instructed to read a tedious magazine (usually the ‘New Yorker’ from 1994), and were not allowed to study.

In the second condition, the assessments were the same but the order was reversed. Therefore assessments were made immediately after provocation. After this time Ss delayed for 20 min, during which time they were instructed to read a tedious magazine. After the delay, Ss were reassessed. Following the reassessment, Ss were asked to neutralize. After neutralization, the final assessment was made.

A telephone follow-up was included to assess the attitude and feelings of the S towards the procedure in the 24 hr following the session, and to ensure that the S was not suffering from recurrent unwanted intrusive thoughts/images related to the experiment. A summary of the design is given in Fig. 1.

RESULTS

Overview

The effect of the manipulation was examined by comparing mean scores of anxiety from baseline to provocation. The effect of neutralization and delay were examined by comparing mean scores of the variables from provocation to time 2, and from time 2 to time 3 for each condition. The effects of neutralizing and delay were investigated separately for each condition, and the scores of the two groups (neutralization–delay vs delay–neutralization) were then compared using multiple analysis of variance. To correct for multiple comparisons, alpha was adjusted to 0.008 (0.05/7) using the Bonferroni correction procedure. Correlational analyses were conducted to examine the validity of the TAF scale, and the relationships among the variables, obsessional-ity and depression.

Table 1. Mean scores of anxiety for each condition

	Baseline Mean (SD)	After provocation Mean (SD)	Immediate neutralization Mean (SD)	20-min delay Mean (SD)
Condition 1 Neutralization-delay (n = 29)	16.2 (10.1)	64.7 (13.3)	23.5 (19.5)	12.8 (16.1)
	Baseline Mean (SD)	After provocation Mean (SD)	20-min delay Mean (SD)	Neutralization Mean (SD)
Condition 2 Delay-neutralization (n = 34)	12.2 (9.3)	69.7 (14.4)	15.29 (18.5)	9.7 (14.7)

The effect of the manipulation

The experimental manipulation was successful. For the entire sample, mean anxiety increased from a baseline of 14.6 to 67.4 after generating the obsessional-like thought [$t(62) = 24.6$, $P < 0.001$]. Mean guilt scores also increased from 7.3 to 53.5 [$t(62) = 13.3$, $P < 0.0001$].

Condition 1

The effect of immediate neutralization. Twenty-nine Ss were in the immediate neutralization condition (condition 1), and 34 Ss were in the delay condition (condition 2). In condition (1), after neutralization, the mean anxiety levels declined significantly from 64.6 to 23.5 [$t(28) = 11.94$, $P < 0.001$]. Neutralization was also followed by significant declines in: (i) guilt [$t(28) = 6.87$], (ii) estimates of the probability of the threat occurring within the next 24 hr [$t(28) = 3.09$], (iii) how responsible the S would feel if the threat were to occur within the next 24 hr [$t(28) = 3.71$], (iv) judgment of the immorality of writing the sentence [$t(28) = 3.52$], and (v) the urge to neutralize [$t(28) = 6.33$] (all P s < 0.008). Neutralizing was not followed by significant changes in feelings of control over the threat [$t(28) = 0.94$, $P > 0.05$].

The effect of delay following neutralization. Following neutralization, Ss were asked to delay for 20 min. This delay was followed by a significant reduction in anxiety [$t(28) = 3.57$; $P < 0.008$] and a non-significant trend for a reduction in guilt [$t(28) = 2.61$; $P < 0.05$] responsibility [$t(28) = 2.49$; $P < 0.05$] and urge to neutralize [$t(28) = 2.48$, $P < 0.05$]. There were no trends for a decline in estimates of the likelihood of threat, or control over threat, which were already at floor level ($P > 0.05$).

The results are shown in Table 1 and Figs 2-6.

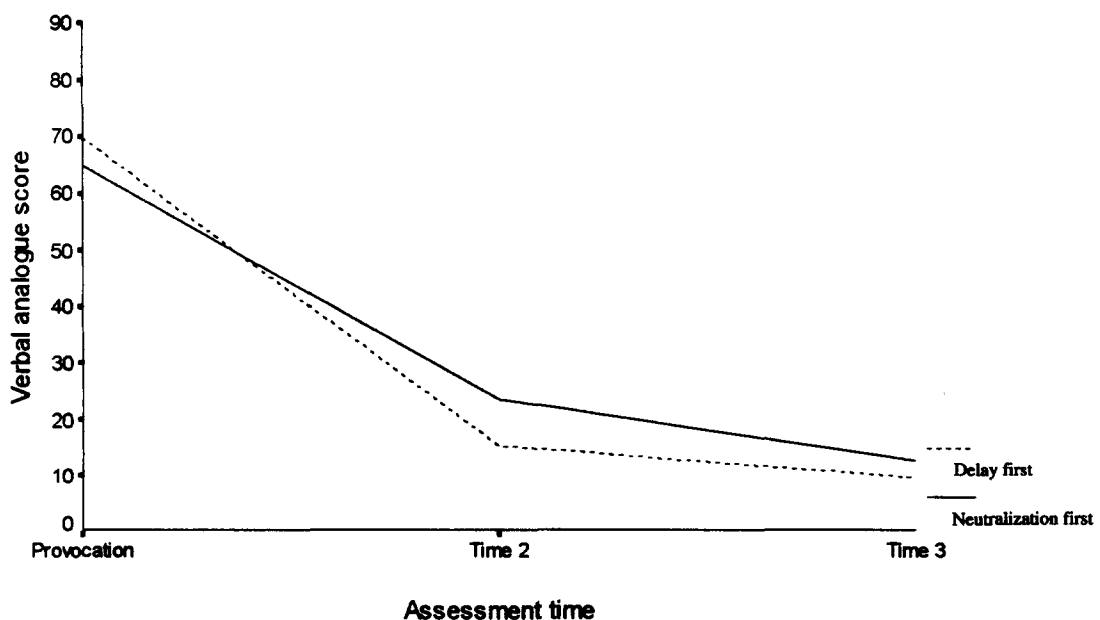


Fig. 2. Change in anxiety for each condition over time.

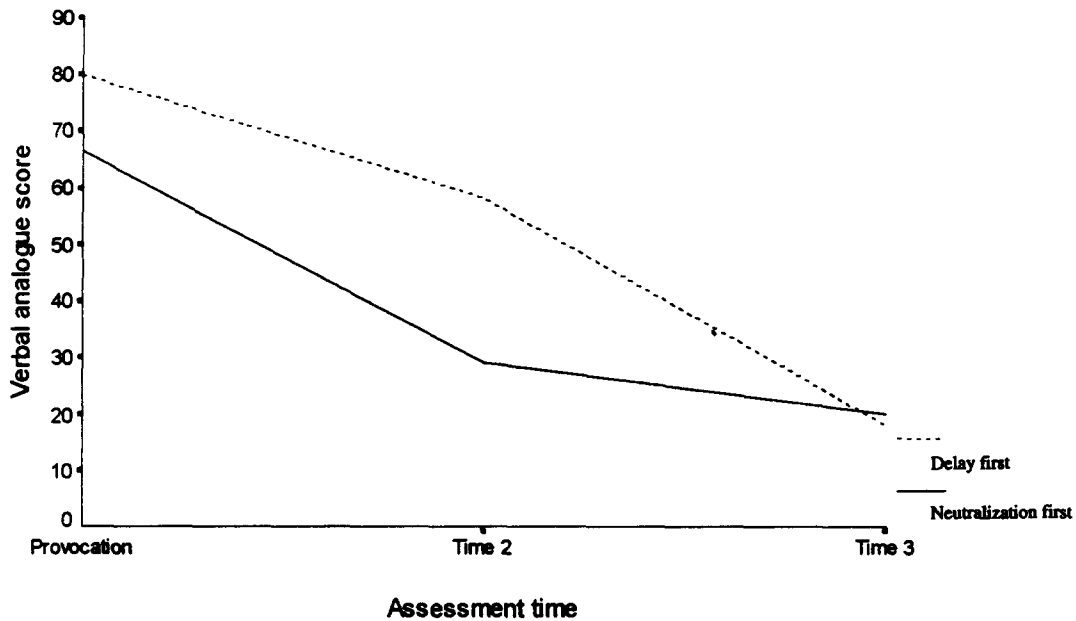


Fig. 3. Change in urge to neutralize for each condition over time.

Condition 2

The effect of delay. In condition (2), after delay (without neutralizing) the mean anxiety levels decreased significantly from 69.7 to 15.3 [$t(33) = 17.8$, $P < 0.008$]. The effect of delay on the other variables was the same as that of neutralization, i.e. significant declines in all the variables (including the urge to neutralize) except for feelings of control over the threat [$t(33) = 0.01$ respectively, $P > 0.05$].

The effect of neutralization following delay. Following the assessment after the 20-min delay, Ss were asked to neutralize. Neutralization significantly reduced the urge to neutralize which had remained relatively high [$t(31) = 6.11$, $P < 0.008$]. Neutralization had a non-significant trend to reduce anxiety [$t(33) = 2.01$, $P < 0.05$], guilt [$t(33) = 2.17$, $P < 0.05$], responsibility

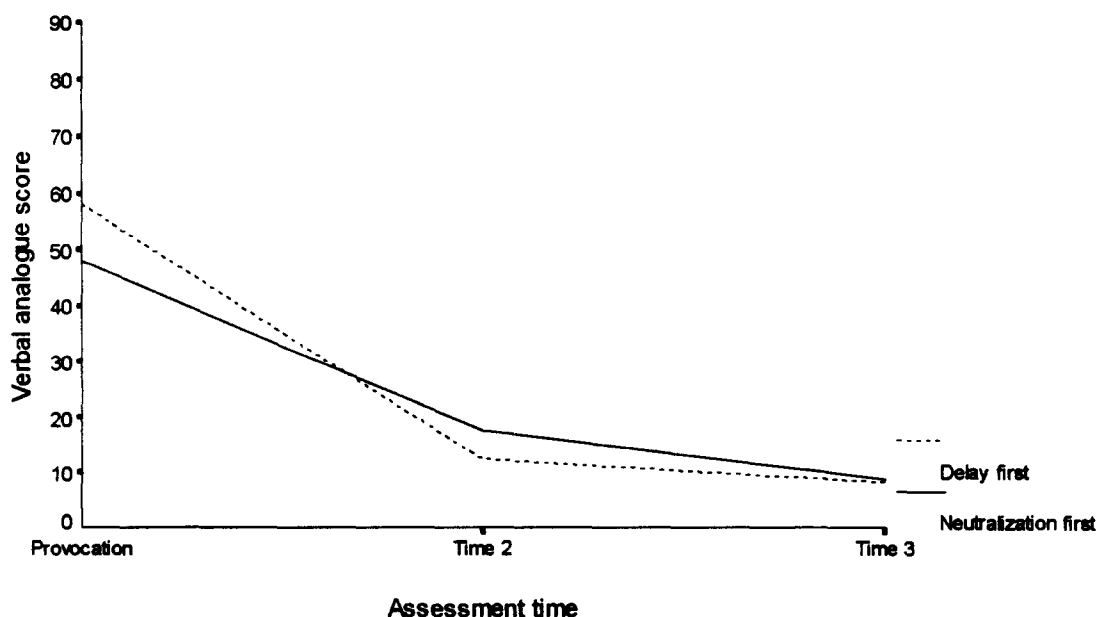


Fig. 4. Change in guilt for each condition over time.

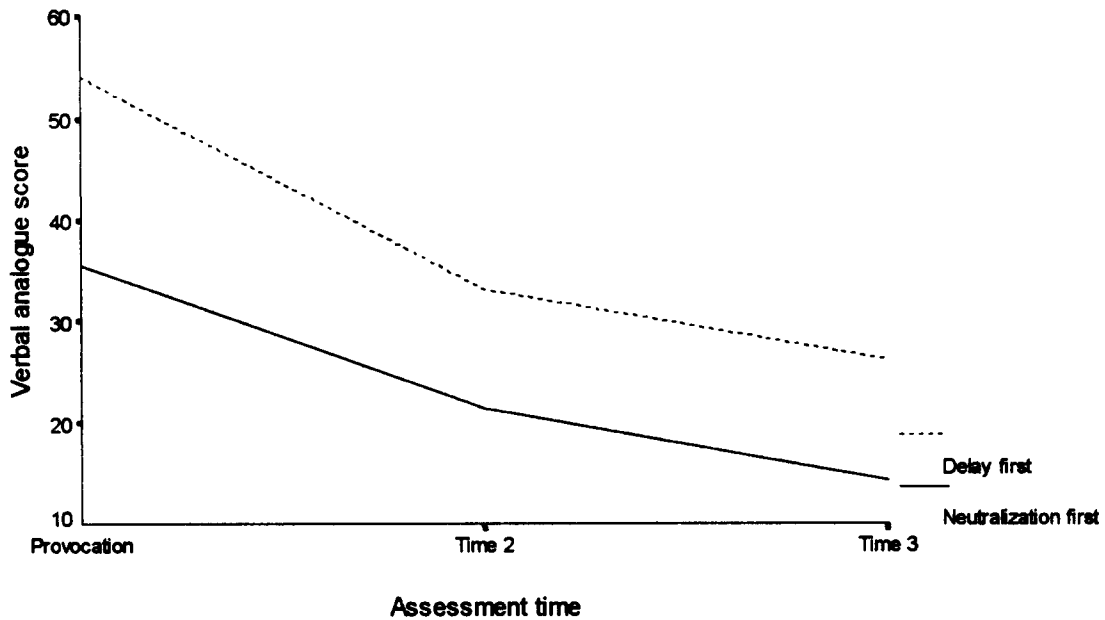


Fig. 5. Change in responsibility for each condition over time.

$t(33) = 2.23, P < 0.05$]; and estimates of the likelihood of threat $[t(33) = 2.01, P = 0.05]$. Neutralization did not significantly reduce estimates of feelings of control or moral wrongness ($P > 0.05$).

The results are shown in Table 1 and Figs 2–6.

Group comparisons

The effects of condition at time 2 (i.e. immediate neutralization vs 20-min delay) were compared using analysis of covariance, and entering provocation levels as the covariates. There was a significant difference between neutralization and delay only on the urge to neutralize $F(1,60) = 7.42, P = 0.008$. However, by the end of the experiment (time 3), there were no significant differences

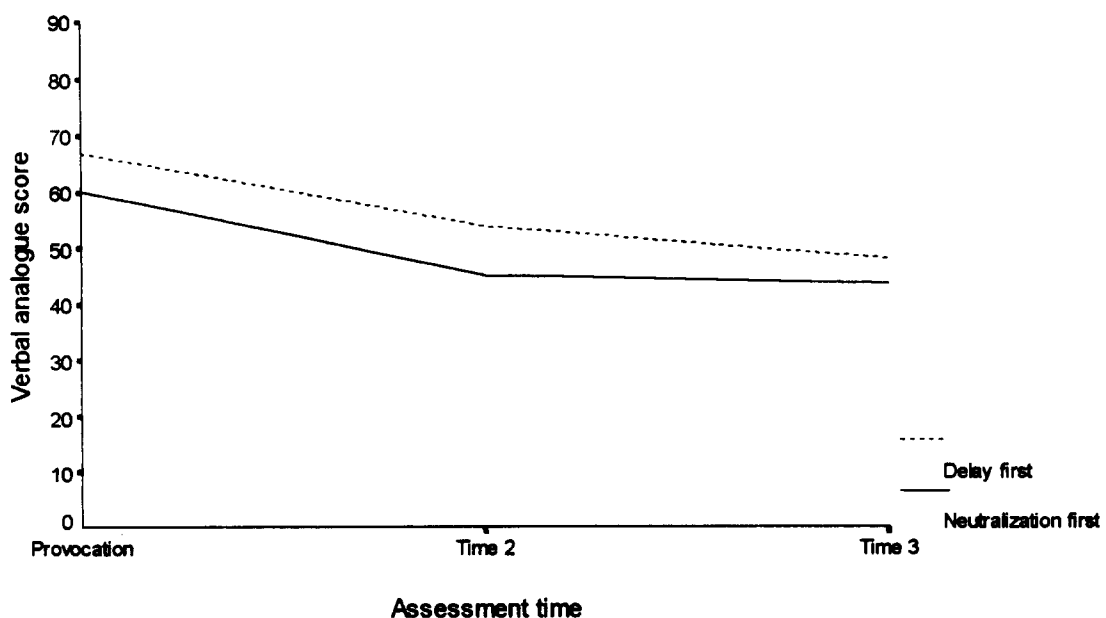


Fig. 6. Change in moral wrongness for each condition over time.

between the conditions on any of the variables (all P s > 0.05). Hence, the only difference between neutralization and delay was a short-term difference in the urge to neutralize.

Correlational analyses

To examine the relationship between pre-existing tendency to TAF and the effects of the manipulation, scores on the TAF scale were correlated with anxiety, guilt, etc., induced by the experimental manipulation for all Ss. There was a strong significant correlation between TAF scores on the pre-existing self-report measure for events related to other people, and estimates of the probability of the adverse event occurring within the next 24 hr ($r = 0.61$, $P < 0.001$). This correlation indicates that the TAF subscale has predictive validity. TAF for events related to other people was also significantly correlated with evoked anxiety ($r = 0.26$, $P < 0.05$), estimates of control ($r = 0.32$, $P < 0.05$), and feelings of responsibility if the threatened event had occurred ($r = 0.38$, $P < 0.05$). The TAF subscale was not significantly correlated with evoked guilt ($r = 0.08$, $P < 0.05$), moral wrongness ($r = 0.08$, $P < 0.05$) or urge to neutralize ($r = 0.22$, $P < 0.05$).

There were significant correlations between total scores on the MOCI and responsibility ($r = 0.41$, $P < 0.005$), moral-wrongness ($r = 0.40$, $P < 0.005$) and urge to neutralize evoked by the experimental manipulation ($r = 0.46$, $P < 0.005$). The correlations between MOCI scores and guilt or probability estimates were not significant ($r = 0.24$ and $r = 0.23$ respectively; $P > 0.05$). Depression scores were not significantly associated with any of the variables, although there was a moderate association between BDI scores and probability estimates evoked by the manipulation.

Of interest, the reduction in estimates of the likelihood of harm after a delay was significantly associated with TAF for events related to others ($r = 0.48$, $P < 0.005$) but this correlation was not significant in the neutralization condition ($r = 0.18$, $P > 0.05$). Surprisingly, the scores on the TAF Morality subscale were not significantly associated with any of the variables evoked by the manipulation, including a judgment of how morally wrong it had been to write the sentence ($r = 0.23$, $P > 0.05$).

At follow-up, 24 hr after the experiment, no S reported unwanted intrusive thoughts relating to the experiment.

DISCUSSION

The experimental predictions were supported. The results support the hypothesis that neutralization resembles overt compulsions in that: (i) neutralization reduces anxiety evoked by unacceptable thoughts/images; (ii) if neutralization is delayed, anxiety will decline naturally; and (iii) if neutralization is delayed (or prevented), the urge to neutralize will decline naturally. The prediction that the other variables of interest (i.e. guilt, responsibility, etc.) would be affected by neutralization in the same way as anxiety was largely supported, with the notable exception of estimates of feelings of control which were at floor level throughout the experiment.

In this experiment, delaying for 20 min was followed by the same reduction in anxiety and guilt as active immediate neutralization. Delay and neutralization appeared to have an additive function: a 20-min delay after neutralization was followed by a further significant decline in anxiety; neutralizing after a delay of 20 min was followed by a significant decline in the urge to neutralize, and a non-significant decline in anxiety. By the end of the experiment, there were no differences between the two conditions.

The main difference between the delay and neutralization conditions was that the Ss in the delay group still had a strong urge to neutralize after 20 min, despite the reduction in anxiety and guilt. Two possible explanations are offered for this apparent disconnection between their emotional discomfort and their urge to neutralize. First, it may be that there is desynchrony between the change in anxiety and the S's awareness of that change. However, our measures of anxiety were self-report verbal analogue measures, which argues against that interpretation. The second explanation is that Ss are neutralizing not because of their anxiety, but in order to reduce responsibility, as suggested by Salkovskis (1996). These Ss, and obsessional patients, do not test the possibility that anxiety and responsibility will decline naturally of its own accord, even without their active neutralizing activity. Patients certainly are initially skeptical about the prospect, and are surprised when their anxiety declines naturally. Hence the urge to neutralize

may have persisted in the delay group because of their (correct) belief that neutralizing brings relief. In the unusual circumstances of the experiment, *Ss* had no reason to change this belief and hence the urge to neutralize persisted. Perhaps *Ss* believed that anxiety and responsibility can only be reduced by performing a positive action (neutralizing) to compensate for the action (writing the sentence) that provoked the initial discomfort.

The experiment provides predictive validity for the TAF scale. The scale predicted behaviour in the experimental situation insofar as estimates of the likelihood of the event occurring after provocation were strongly correlated with scores on the TAF Likelihood scale for events relating to other people. Unfortunately, the TAF Morality scale did not have the same predictive validity since scores were not significantly correlated with judgments of how morally wrong it had been to write the sentence.

It is interesting to note that these *Ss*, drawn from a student population, had no difficulty with the idea of performing an action to "cancel out" the effects of writing the sentence. Most *Ss* spontaneously performed a neutralizing action, and others readily chose an action when prompted with a variety of examples of neutralizing activity. Therefore the concept of performing an action that is not realistically connected with the event in order to "undo" a different action is a normal phenomenon and is not restricted to obsessional patients. However, there were clear individual differences in the preferred neutralizing activity and in the different strategies employed to alleviate anxiety.

A number of neutralization strategies were observed in this experiment. Strategies included: cancelling out, e.g. inserting the word "not" in the sentence, crossing out the sentence, scrunching up the sentence and/or throwing the sentence away; counter-balancing, e.g. "I hope that ——— lives a long and prosperous life"; a shift in responsibility, e.g. "I do not hope that ——— is in a car accident. I only wrote the sentence for the purpose of the experiment"; cognitive-rationalization, e.g. "She's not going to be in one [an accident] even if I think that ——— so it doesn't matter". One *S* said that she would like to take the piece of paper home and burn it, another wanted to telephone her mother (the relative she had in mind) and check to make sure she was safe, and confess what she had done for the purposes of the experiment. Of interest, one *S* did not alter the sentence in any way, but chose to fold up the piece of paper in a symmetrical, orderly and complex manner (like an origami figure). The whole process took in excess of 3 min, with the *S* continually checking with the experimenter to ask if he was "in a hurry". This particular *S* had a MOCI total score of 16, and was especially high on the checking and doubting subscales.

Neutralization is usually covert, hence the importance of developing external empirical manipulations to determine its nature. Several exploratory experiments were needed in order to develop the effective manipulation that was eventually used in the present experiment. It requires carefully worded instructions, appropriate choice of *Ss*, sensitive selection of topics for manipulation and so forth. In order to help other researchers avoid the pit-falls we experienced, our "false-starts" are described below:

- False-start 1: We attempted to distinguish between mental and physical neutralizing. This experiment failed because very few *Ss* mentally neutralized voluntarily.
- False-start 2: We failed to specify that *Ss* could cancel out the effects of writing the sentence, so *Ss* were confused as to the nature of neutralization.
- False-start 3: We tried to re-evoke anxiety after neutralization or delay by asking *Ss* to re-write the sentence. This led to confusion.
- False-start 4: *Ss* who immediately neutralized were not asked to delay for a further 20 min so that our final assessment was at different points in time for the two groups.
- False-start 5: A number of ambiguities were present in the questions asked. For example, "likelihood of the event occurring" was confusing according to the stage of assessment (e.g. for *Ss* that had re-written the statement so that a positive event was happening). We therefore specified the likelihood of the original (negative) event.
- False-start 6: We initially used two experimenters to carry out separate parts of the experiment in order to try to minimize the effects of experimenter bias and experimenter expectation. However, using two experimenters caused confusion for *Ss*, and some

became concerned that the study was investigating consistency in responses and tried to recall previous responses to the stimuli as opposed to responding spontaneously.

A large number of questions remain to be addressed such as examination of physical vs instructed mental neutralizing, thought-suppression vs neutralizing, and a comparison between reassurance-seeking and neutralizing. The procedure failed to elicit an urge to neutralize in a substantial minority of Ss (approximately 13%). Are these people more likely to engage in thought suppression and obsessional rumination than Ss who are able to perform an overt activity to cancel out the effects of writing the sentence? These are all fertile areas for such investigations.

The predictions that: (1) neutralization promptly reduces anxiety evoked by unacceptable thoughts, images, or impulses; (2) if neutralization is delayed, anxiety will decline naturally; and (3) if neutralization is delayed, the urge to neutralize will decline naturally, were confirmed and were true for the other variables of interest (guilt, responsibility, etc.) However, it should be noted that the decline in the urge to neutralize after a delay was significantly less than the decline in the urge to neutralize following the performing of actual neutralization.

The finding with the most immediate and interesting clinical implication is the discovery that if the urge to neutralize a nasty, unwanted thought is delayed, the associated anxiety will decline. In that sense neutralization is redundant. Perhaps the neutralization serves to maintain the anxiety in the longer term. It is also of interest that although neutralization was successful in that it reduced anxiety and the sense of wrongness, the sense of wrong-doing remained relatively high. As one S explained: "You don't go around writing stuff like that, or even think it . . . It's not right to wish evil on people". Why, though, did guilt decline more than moral wrongness (45 points compared with 18)? It is possible to believe that one has behaved wrongly, but no longer feel the emotional sequelae of the transgression (anxiety, guilt, etc.) which dissipate over time. If this is the case, some obsessional patients may be left only with the cognitive component, i.e. the belief "I am bad (immoral, dangerous)". Re-experiencing anxiety (however it is evoked), is likely to be associated with a re-emergence of the negative cognitions associated with the original event. In this way, the cognitive distortions that characterize obsessional thinking can be seen to emerge. Alternatively, in this experiment, it may be that Ss were unable to make a clear distinction between anxiety and guilt, and misinterpreted the decline in feelings of anxiety as a decline in guilt.

To conclude, we hope that the results of this experiment will encourage other researchers to experiment with this method in order to subject the phenomenon of neutralization to experimental analysis, and perhaps to tackle some of the questions listed.

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