

## Individual differences in self-reported thought control: the role of the repressive coping style

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The purpose of the present research is to assess differences between repressors and non repressors in some aspects associated with conscious thought control. Thus, Sixty-three Spanish university students with different combinations of trait anxiety and defensiveness completed the Thought Control Ability Questionnaire (TCAQ) and the White Bear Suppression Inventory (WBSI). Data analysis showed that subjects with low anxiety (repressors and low anxious) reported higher perceived ability to control unpleasant thoughts and less tendency to suppress than did subjects with high anxiety (high anxious and defensive high anxious). Implications of these results are discussed in relation to recent researches that have explored the association between repression and thought suppression.

*Diferencias individuales en control del pensamiento: el papel del estilo represivo de afrontamiento.* El objetivo de la presente investigación es evaluar las diferencias existentes entre represores y no represores en diferentes aspectos relacionados con el control consciente del pensamiento. De este modo, 63 estudiantes universitarios españoles, con diferentes combinaciones de ansiedad rasgo y defensividad, completaron el Thought Control Ability Questionnaire (TCAQ) y el White Bear Suppression Inventory (WBSI). El análisis de los datos mostró que los sujetos con baja ansiedad rasgo (represores y bajamente ansiosos) informaron de una mayor capacidad percibida de control de pensamientos no deseados y una menor tendencia a suprimir tales pensamientos que los sujetos con alta ansiedad (altamente ansiosos y defensivos ansiosos). Las implicaciones de estos resultados son discutidas en relación con investigaciones recientes que han explorado la asociación entre represión y supresión de pensamiento.

Freud (1915/1957) posited the existence of a defense mechanism called repression that keeps unbearable thoughts and unwanted memories out of awareness (for a review see Erdelyi, 1990; Erdelyi and Goldberg, 1979). Some decades after Freud's works, Weinberger, Schwartz and Davidson (1979) identified a group of subjects that report low trait anxiety but are not truly low anxious (for a review see Myers, 2000). These subjects called repressors, who represent a 10-20 per cent of the population, are usually detected by their low scores on self-report measures of trait anxiety and high scores on defensiveness, traits usually measured through the Bendig short form of the Manifest Anxiety Scale (MAS, Bendig, 1956) and the Marlowe-Crowne Social Desirability Scale (MCSDS; Crowne and Marlowe, 1964) respectively.

Although, repressors report low levels of anxiety, they show elevated behavioral and physiological reactions to stressors (Asendorpf and Scherer, 1983; Gudjonsson, 1981; Weinberger et al, 1979). A research conducted by Derakshan and Eysenck (1999) obtained reason to believe that they are self-deceivers rather than other-deceivers, suggesting that they are not conscious of their real anxiety level.

Since the pioneer Weinberger et al (1979) research about the repressive coping style, a large body of work has investigated the personality and cognitive processes of repressors. For instance, we know that repressors report fewer negative memories associated mainly with emotions of fear and self-consciousness, which could imply a problem of accessibility for unpleasant and painful experiences (Davis, 1987; Davis and Schwartz, 1987). The application of the Stroop test showed that repressors had poor performance when the words reflected negative emotions (Dawkins and Furnham, 1989). A directed forgetting task revealed that repressors forgot more negatively valenced words than did non repressors, which indicated that repressors have a great ability for using retrieval inhibition (Myers, Brewin and Power, 1998). In addition, the use of semistructured interviews for assessing repressors' childhood suggested that their early experiences could be characterized by a non closed relation with their fathers and by a marked paternal antipathy and indifference (Myers and Brewin, 1994). Finally, we know that individuals who repress unpleasant memories and emotions are more likely to develop psychosomatic disorders and severe illnesses such as cancer (e.g. Goldstein and Antoni, 1989).

However, one of the aspects that remains polemic and unclear in this field is the relation between repression and suppression. According to the American Psychiatric Association (2000), suppression is conceptualized as an adaptive psychological mechanism which permits us to concentrate on our affairs without thinking about unpleasant or inappropriate things. On the other

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hand, repression is a defense mechanism in which a person deals with emotional conflicts or internal or external stressors by expelling disturbing wishes, thoughts, or experiences from conscious awareness. The feeling component may remain conscious, detached from its associated ideas. As we can see, repression is conceptualized at present as an unconscious process, whereas suppression is clearly defined as a conscious process.

As far as we know, few investigations have focused on the relation between repression and suppression. Wegner and Zanakos (1994) obtained a moderately large correlation between chronic thought suppression (measured with the White Bear Suppression Inventory) and sensitization, which is the opposite of repression. Giese-Davis and Spiegel (2001) hypothesized that these constructs (suppression and repression) are independent. This hypothesis was corroborated with a large sample of metastatic breast cancer patients, because they found in a factor analysis that repressive-defensiveness, suppression, restraint, and distress were separate factors. In a recent study, Myers, Vetere and Derakshan (2004) administered a questionnaire which measures suppression of affect to repressors, low anxious, high anxious and defensive high anxious subjects. There were no differences between repressors and the other groups, which indicated that suppression and repressive coping are not the same constructs.

One interesting question is whether people particularly good at repressing negative memories are also good suppressors of unpleasant intrusive thoughts. To our knowledge, only the study conducted by Barnier, Levin and Maher (2004) has addressed whether subjects with a repressive coping style can voluntarily control negative memories better than non repressors. Using the thought suppression paradigm (Wenzlaff and Wegner, 2000), these authors instructed repressors and non repressors to suppress or not suppress a positive (proud event) and a negative memory (embarrassed event) and they found that repressors are highly effective, natural suppressors of positive and negative past events. Thus, in the present article we pretend to extend the findings of this experimental study, examining certain thought control dimensions of repressors and non repressors.

## Method

### Subjects

Participants were chosen from an initial pool of 200 undergraduate psychology students (175 female) from the University of Valencia (Spain), with ages between 18 and 48 years and a mean age of 22.5 years. Following the Weinberger et al. (1979) classification, subjects were divided into four groups on the basis of their quartile scores on the Trait Anxiety Inventory (STAI-T; Spielberger, Gorsuch, Lushene, Vagg and Jacobs, 1983) and the Marlowe-Crowne Social Desirability Scale (MCSDS; Crowne and Marlowe, 1964). Thus, 63 subjects (49 female) with ages between 19 and 48 years and a mean age of 22 years ( $SD = 6.5$ ), participated in the present study in exchange for course credit. Subjects were distributed as follows: 21 repressors (low anxiety-high defensiveness;  $STAI-T < 14$ ,  $MCSDS > 17$ ), 10 low anxious (low anxiety-low defensiveness;  $STAI-T < 14$ ,  $MCSDS < 11$ ), 25 high anxious (high anxiety-low defensiveness;  $STAI-T > 29$ ,  $MCSDS < 11$ ) and 7 defensive-high anxious (high anxiety-high defensiveness;  $STAI-T > 29$ ,  $MCSDS > 17$ ). Mean scores and standard deviations on the STAI-T and the MCSDS for each group are displayed in table 1.

### Instruments

The *State-Trait Anxiety Inventory* (STAI; Spielberger et al, 1983) is a 40-item self-reported measure of general anxiety. The first 20 items (STAI-S) measure state anxiety, or how the subject feels right now. The second 20 items (STAI-T) assess trait anxiety, or how the subject generally feels. In the present study, we only used the trait version. Subjects rate each item using a Likert-type scale from 0 (not at all) to 3 (very much so). Total scores on the STAI-T vary from 0 to 60, with higher scores indicating more trait anxiety. Several studies have supported the sound psychometric properties of the STAI (see Spielberger, Gorsuch and Lushene, 1988).

The *Marlowe-Crowne Social Desirability Scale* (MCSDS; Crowne and Marlowe, 1964) comprises 33 true-false items that assess the person's tendency to distort self-presentation toward a socially desirable bias. Total MCSDS scores range between 0 (low defensiveness) and 33 (high defensiveness). The Spanish adaptation showed that this instrument is one-dimensional and has psychometric properties similar to those of the original version (Ferrando and Chico, 2000).

The *White Bear Suppression Inventory* (WBSI; Wegner and Zanakos, 1994) is a 15-item self-report inventory that was developed to assess chronic thought suppression. Responses to each item on the WBSI are based upon a 5-point Likert scale (A= strongly disagree, E= strongly agree). The Spanish version of the WBSI possesses satisfactory reliability and validity (Fernández-Berrocal, Extremera and Ramos, 2004). Recently, a confirmatory factor analysis of the WBSI (Luciano, Belloch, Algarabel, Tomas, Morillo and Lucero, in press) indicated the presence of three intercorrelated factors: the main factor was interpreted as «Unwanted Intrusive Thoughts» (e.g. «I have thoughts that I cannot stop»), the second as «Thought Suppression» (e.g. «There are things that I try not to think about») and the last as «Self-distraction» (e.g. «I often do things to distract myself from my thoughts»).

The *Thought Control Ability Questionnaire* (TCAQ; Luciano, Algarabel, Tomás and Martínez, 2005) is a 25 item self-report instrument that was constructed to assess individual differences in the perceived ability to control unwanted intrusive thoughts (e.g. «My thoughts are uncontrollable», «I often cannot avoid having upsetting thoughts», «I am not usually overwhelmed by unpleasant thoughts»). Subjects have to rate on a five-point Likert-type scale the extent to which they agree with each statement (A= strongly disagree, E= strongly agree). The TCAQ shows high internal consistency and retest reliability. Total TCAQ scores range between 25 and 125, with higher scores indicating higher thought control ability.

### Apparatus

Desktop computers running E-Prime v 1.0 software (Schneider, Eschman and Zuccolotto, 2002) were used to administer the questionnaires and to record subjects' responses via keypress.

### Procedure

Participants came in groups of 10 to a sound-attenuated laboratory and were seated in front of the computer individually. They completed the measures described above as part of a larger computer-administered survey. A male research assistant was present during the time in which subjects completed the TCAQ and the WBSI, in order to give instructions and answer questions.

## Results

Mean scores and standard deviations on the TCAQ and the WBSI for repressors (REP), low anxious (LA), high anxious (HA) and defensive high anxious (DHA) are displayed in table 1. We tested for group differences using one-way analysis of variance (ANOVAs). Scheffe tests were used for post hoc comparisons, with significance levels set at .05.

Table 1 shows that REP and LA scored significantly higher on thought control ability (TCAQ) than did HA and DHA. Analyzing the WBSI factors, we found that REP obtained the lowest mean scores in the three dimensions (presence of Unwanted Intrusive Thoughts, Thought Suppression and Distraction), being significantly different only from the two high trait anxiety groups, the HA and the DHA. Furthermore, LA subjects obtained a similar pattern of results because they differed significantly in the three factors from the HA group. By contrast, there were no differences between the LA and the DHA subjects for the thought suppression (TS) and self-distraction (D) factors, we only found differences between these groups in the unwanted intrusive thoughts (UIT) factor, reporting LA subjects less presence of unpleasant intrusive thoughts.

## Discussion

More than two hundred researches have focused on the study of the repressive coping style (Derackshan and Eysenck, 1997). But, only a few recent studies have investigated the relation between repression and suppression (Barnier et al, 2004; Giese-Davis and Spiegel, 2001; Myers et al, 2004). Therefore, the main goal of the present research was to explore the relationship between repressive coping style and thought suppression. That is, we pretended to know whether repressors are good suppressors of their unpleasant intrusive thoughts.

The key finding of our study is that low anxious subjects reported significantly higher thought control ability than did high anxious individuals. The results obtained using the TCAQ were very similar to those obtained with the WBSI. Data analysis showed no differences between repressors and low anxious and between high anxious and defensive high anxious on the TCAQ and the WBSI. It is important to highlight the absence of

significant differences between repressors and low anxious on the one hand, and between high anxious and defensive high anxious on the other in both self-report measures, because these findings suggest that the pattern of results obtained for repressors and non repressors is only a consequence of the level of trait anxiety, rather than the combination of trait anxiety and defensiveness. Furthermore, it is relevant to point out that the present study revealed that higher scores on defensiveness (MCSDS) were associated with higher TCAQ ( $r = .48, p < .01$ ) and lower WBSI ( $r = -.37, p < .01$ ) scores, which indicates that the employed instruments are not adequate or recommendable for eliciting reliable information from repressors.

Despite this shortcoming, our results are in line with those obtained by Barnier et al (2004). Although this study did not yield an interaction between anxiety and defensiveness, it demonstrated that repressors suppress negative intrusive memories that focus attention on the self without much effort, which supported the hypothesis that repressors are good suppressors, at least in a laboratory context. But, one threat to the validity of that experiment is that it relied exclusively on subjects' reports of target thought frequency and were therefore susceptible to self-report bias.

Many researchers have employed self-report measures to study cognitive processes in normal individuals (e.g. González-Pienda et al, 2004). In fact, our study is not the first that has used thought control instruments in order to get information from repressors. For instance, a study conducted by Myers (1998) examined which thought control strategies are employed preferably by repressors and non repressors. Thus, the Thought Control Questionnaire (TCQ; Wells and Davies, 1994), an instrument which measures five different strategies of thought control (distraction, social control, worry, punishment and reappraisal), was administered to repressors and non repressors. The results indicated that subjects with a repressive coping style usually employ more distraction (e.g. «I call to mind positive images instead») and less punishment (e.g. «I get angry at my self for having the thought») than non repressors, whereas high anxious subjects reported using more worry (e.g. «I think more about the more minor problems I have») than all other groups. These results are an indirect evidence of the repressors high ability to suppress unwanted thoughts, because several researches (e.g. Rassin and Diepstraten, 2003) have found

	Groups				F (3,59)
	REP (n= 21)	LA (n= 10)	HA (n= 25)	DHA (n= 7)	
STAI-T	9.05 (2.84)	11.50 (2.68)	36.04 (7.78)	35.29 (8.67)	
MCSDS	20.43 (2.62)	7.80 (2.86)	8.84 (1.80)	19 (2.89)	
TCAQ	98.95a (8.45)	88.90a (13.05)	64.24b (15.02)	65.29b (17.23)	31.10***
WBSItot	37.43a (10.22)	39.30a (10.35)	54.80b (8.12)	54b (13.35)	15.04***
UIT	19.67a (5.39)	19.80a (7.04)	28.80b (4.37)	28b (6.78)	14.02***
TS	11.29a (3.57)	12.10a,c (2.81)	15.72b (2.91)	15.71b,c (4.03)	8.75***
D	6.48a (2.8)	7.40a,c(3.37)	10.28b (2.42)	10.29b,c (3.59)	8.20***

Note: different subscripts indicate group differences ( $p < .05$ ). \*\*\*  $p < .001$   
White Bear Suppression Inventory factors: UIT= Unwanted Intrusive Thoughts; TS= Thought Suppression; D= Self-Distraction

that distraction is an effective and recommendable strategy of thought control.

In sum, the use of the thought suppression paradigm or the self-report measures of thought control do not seem the best way to get information about the conscious inhibitory processes of repressors. Therefore, we encourage the employment of other experimental paradigms like the think/no-think (Algarabel, Luciano and Martínez, in press; Anderson and Green, 2001) to rule out the self-reporting biases described above.

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