Abstract

Anxiety disorders are some of the most common mental disorders found in patients around the world. The typical treatment for these disorders is exposure to the anxiety inducer. Since many patients are reluctant to confront feared objects or situations, they avoid such treatment. Previous studies have shown that fears can be acquired without conscious awareness and evidence suggests that they can also be modified by way of threat extinction, which is a form of threat reduction through non-reinforced presentations. However, there is no conclusive evidence that threats can be extinguished unconsciously.

The first aim of the present study was to test for unconscious threat extinction while assessing conscious experiences of the suppressed stimuli, using two different suppression techniques: Continuous Flash Suppression (CFS) and Visual Masking (VM). The second aim was to examine whether unconscious threat extinction can be performed on undergraduate participants with strong symptoms of spider phobia.

In the first and second part of the research, we performed threat acquisition and extinction processes under laboratory conditions using the CFS and VM techniques, while controlling awareness. We found evidence of effective threat extinction and successful extinction retention (assessed by a skin conductance response index) under both conscious and unconscious exposure conditions when using VM. However, the results when using CFS were inconclusive and call for further investigation.

In light of these findings, in the third part of the work we examined the phenomenon by using a VM technique to perform unconscious threat exposure on subjects with symptoms of spider phobia. The findings suggest that unconscious exposure may affect subjects’ avoidance of spiders similarly to overt exposure.

These results demonstrate the effectiveness of unconscious extinction, even when strict measures of awareness are taken. Our findings have theoretical implications for the understanding of exposure therapy and may pave a path for the potential clinical utility of unconscious threat extinction.