CONCERNING SYSTEMATIC DESENSITIZATION. AN OVERCOMED OR RENOWNED TECHNIQUE?

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Extended summary

Developed by Wolpe (1958), Systematic Desensitization (SD) is one of the first behavioral modification techniques used to treat phobias. SD is an exposure procedure that leads to the disappearance of anxiety responses. Although SD was formerly studied, its presence has vanished (McGlynn, Smitherman, & Gothard, 2004) due to the merge of new exposure procedures such as extinction technique. However, DS principles' have been assumed by other techniques and integrated into new therapeutic approaches. This paper reviews the present of DS and its applicability.

SD bases

Reciprocal inhibition and a response incompatible with anxiety

The term reciprocal inhibition was introduced by Sherrington (1961) and adopted by Wolpe to settle the foundations of DS. Relaxation competes with anxiety because they are physiological opposite responses that cannot happen at the same time. Although exposure therapy is effective without relaxation elements (Tyron, 2005), there seems to be several benefits from introducing a relaxation response for the decrease of anxiety:

1. Based on Rescorla and Wagner (1972), relaxation can be considered as a conditioned stimulus that favors a change in the context that ease anxiety extinction.

2. Based on Relational Frame Theory (RFT), individuals relate "relaxation" to "anxiety" because they are opposite elements that belong to the same relational frame.

3. Relaxation is a response incompatible and alternative to anxiety that has long-term effects. This new learning interferes with the mechanism of the phobia and favors its extinction (Vurbic & Bouton, 2014).

The more stimuli a therapy incorporates in the context, the easier is to consolidate a new learning. Evocating relaxation to control anxiety seems convenient since they are implicitly related and helps to build a new responding path. Moreover, some exposure treatments already incorporate relaxation elements due to its contributions to reduce anxiety.

Counter conditioning and stimulating context

The point of introducing the incompatible response (relaxation) is to establish an association between relaxation and anxiogenic stimuli. Consequently, the presentation of the feared stimulus would lead to relaxation responses. This refers to a counter conditioning principle that Wolpe adapted from Guthrie (1952). Although some authors argued that counter conditioning is not effective in reducing fear conditioned responses, there are some arguments that prove its benefit:

1.   SD procedure uses stimuli hierarchies that enables the exposure to a high number of stimuli from the phobic chain. Initially these stimuli would lead to anxiety responses, but progressively these responses would be replaced by more appropriated responses.

2.   Avoidance responses are accompanied by strong emotional responses. The habituation to these negative emotions by being exposed to the fear stimulus leads to the extinction of anxiety. This is a well stablished principle in mindfulness therapy.

Since the mechanism of phobias reflects Classical Conditioning principles, using these principles by promoting counter conditioning processes seems logical. Additionally, using hierarchies may prevent intense emotional responses and contribute to the extinction of the phobia.

Use of the SD

Specific phobias

All the phobias treated with SD revised in this paper have in common their strong physiological component of anxiety responses or reflect classical conditioning acquisition process. This proves the efficacy of the technique to modify maladaptive learnings and reduce physiological anxiety.

Generally speaking, for test anxiety (Egbockuku & Obodo, 2005; Zettle, 2003), social anxiety (Labrador, Rosillo, & Fernández Sastrón, 2010; McCullough & Osborn, 2004), noise phobia (Koegel et al.,2004), anxiety to health checks (Cavalari, DuBard, Luiselli, & Birtwell, 2013; Coldwell et al., 2007; Neacsu et al.,2014), fear flying (Capafóns, Sosa, & Avero, 1997; Triscari et al.,2011) and childhood phobias (Field & Cottrell, 2011; King, Heyne, Gullone, & Molloy, 2001), introducing relaxation favored the extinction of the phobia. Some of the studies included overlearning strategies and double hierarchies, raising the efficacy of SD treatment. This reflects the importance of incorporating a high number of

conditional stimuli to favor the consolidation of a new learning. Additionally, SD is flexible and easily combined with other therapies. This may have propitiated its absorption by other procedures.

Addictive disorders

Dowling, Jackson and Thomas (2008) show how imaginary SD enables individuals to practice the alternative response to anxiety in a wide range of contexts, increasing the effects of generalization. These training elements seem to be relevant for the recovery of the patient and have been incorporated in other exposition therapies.

Somatic disorders

Martin (2000) and Tesarz et al. (2014) treated headaches and chronic pain by provoking relaxation sensations using imagination exercises. This reflects that the objective is not to eliminate pain/anxiety, but to find a new way to cope with it. SD enables this learning by focusing on the development of alternative responses. In addition, as the RFT argues, "relaxation" seems to be the appropriate opposite partner for "anxiety" because of their physiological connection.

Sleep-wake disorders

Miller and DiPilato (1983) found that the frequency of nightmares decreased if individuals were exposed to the content of their dreams while doing relaxation exercises. This results show that reciprocal inhibition has long lasting effects.

In conclusion

There are several reasons that explain why SD is better accepted among patients than other exposure techniques:

Firstly, SD is based on well-established principles that connect the psychophysiological mechanisms of behavior with Classical Conditioning learning principles. This

helps the person to reorganize his fear schemes by developing a new way of controlling his physiological responses. The continued use of SD in clinical contexts without significant variations from the original technique described by Wolpe (1958) proves the steadiness of its bases. Moreover, there are reasons to believe that many of the procedures reviewed for this study implicitly reflect SD therapy hidden under the name of other exposition techniques.

Secondly, SD may favor treatment adherence by reducing the emotional cost of facing anxiety. This is done by incorporating hierarchies, relaxation exercises, imaginary trials and replacing automatic responses with adaptive reactions. These elements have not been obviated by exposure therapies, which have recently started to include part of them in their procedures.

SD is classified within the most appropriate treatments for anxiety disorders since it is a cognitive-behavioral technique (NICE, 2011). Thus, there is no reason to devaluate the utility of SD but to revalue its use.