The role of aversiveness in the relationship between intolerance of uncertainty and inflexible avoidance

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Introduction

The study of avoidance behavior is considered relevant to improve our understanding of anxiety disorders, which are commonly characterized by the presence of undue avoidance behaviors (Embrasci et al., 2011; Gillan et al., 2014). On the other hand, Dugas et al. (2001) defined intolerance of uncertainty as “the excessive tendency of an individual to consider if unacceptable that a negative event may occur, however small the probability of its occurrence.” One of its two facets, Proactive Intolerance of Uncertainty, has been defined as a factor leading to excessive responding in uncertain situations (Kroemer et al., 2014; Oglesby et al., 2015). Thus, uncertain avoidance situations may be taken as a relevant scenario to examine the role of intolerance of uncertainty as a factor that facilitates excessive and inflexible avoidance behavior.

Flores et al. (2018) found evidence that Proactive Intolerance of Uncertainty (P-IU) is associated with inflexible avoidance behavior. Specifically, healthy participants learned in a free-opponent Pavlovian task to avoid an aversive sound, and were tested in extinction to measure the sensitivity of avoidance responses to the devolution of the sound aversiveness. The results showed that an increase in P-IU was positively associated with insensitivity to outcome devolution. This association was still significant even when trait anxiety was controlled for. These results suggested that P-IU may be a vulnerability factor for inflexible avoidance.

Objective

To replicate Flores et al. (2018)’s results:

To study avoidance behaviour using a reinforcer devolution procedure to evaluate the extent to which P-IU is related to insensitivity to devolution.

Method

After a Pavlovian phase (Phase 1), we used a free-opponent Pavlovian avoidance procedure (Phase 2). Participants pressed two different keyboard keys to avoid a tone that the US was presented to either the right or left ear. After a Devolution phase (Phase 3) where we reduced the noise volume presented to one of the ears, participants went through a Test phase (Phase 4) where the noise was never administered (see Figures 1 and 2).

\[ \text{Outcome aversiveness} = \frac{\text{number of responses to \text{CSA}}}{\text{number of responses to \text{CSB}}} \]

- P-IU was measured with the Spanish adaptations of the Intolerance of Uncertainty Scale. LS (Freeston et al., 1994; adaptation: González Rodríguez et al., 2006).
- Inflexible avoidance was inferred from insensitivity to the reduction in the sound volume made in the Devolution phase. A sensitive performance would entail less avoidance responses to A than to B in the Test phase. An insensitive performance would entail similar avoidance responses to A and B. Insensitivity to devolution was calculated as:

\[ \text{Outcome aversiveness} = \frac{\text{number of responses to \text{CSA}}}{\text{number of responses to \text{CSB}}} \]