



The Role of Common Physical Properties and Augmental Functions in Metaphor Effect: A Replication Study

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INTRODUCTION

Metaphor is a frequently used tool in psychotherapy such as Acceptance and Commitment Therapy (ACT). It is a contextual behavioral model of psychological intervention rooted in an approach to human language and cognition known as Relational Frame Theory (RFT). Recent studies (Luciano C.; Sierra M. A.; Ruiz F. J.; Flórez C. L.; Hernández D. R., 2016) have shown that common physical properties and augmental functions of a metaphor would favor behavioral change in clinical practice.

OBJECTIVE

The purpose of the present study was to analyze the effect of two variables in the metaphor effect on promoting psychological flexibility according to RFT: (a) the presence of common physical properties between the individual's experience and the metaphor, and (b) the specification of appetitive augmental functions in the metaphor content.

METHOD

Participants

82 adults (42 men and 40 women). Age range: 18 to 61.

Task

Initially, the participants were invited to introduce their right hand in a glass container with water at approximately 5 celsius degrees (Cold Pressor) and to leave it there for as long as possible.

After this period, they were invited to hear a metaphor commonly used in the therapeutic process that aimed engaging in initially aversive activities. To group 1 (Condition A), the metaphor included common physical properties with the task (cold water) and the description of an appetitive reward; to group 2 (Condition B), the metaphor included only common physical properties with the task, to group 3 (Condition C), the metaphor specified only an appetitive reward and, to group 4 (Condition D), the metaphor did not specify a common physical property nor a reward.

Immediately after the metaphor was heard, the participants were asked to place their left hand in the cold pressor and then the percentage difference in the dwell time before and after exposure to the metaphor was measured.

Experimental Groups

Participants were randomly assigned to four experimental protocols consisting of a metaphor that included:

- (A) common physical properties and augmental functions
- (B) only common physical properties
- (C) only augmental functions, and
- (D) none of these variables

RESULTS

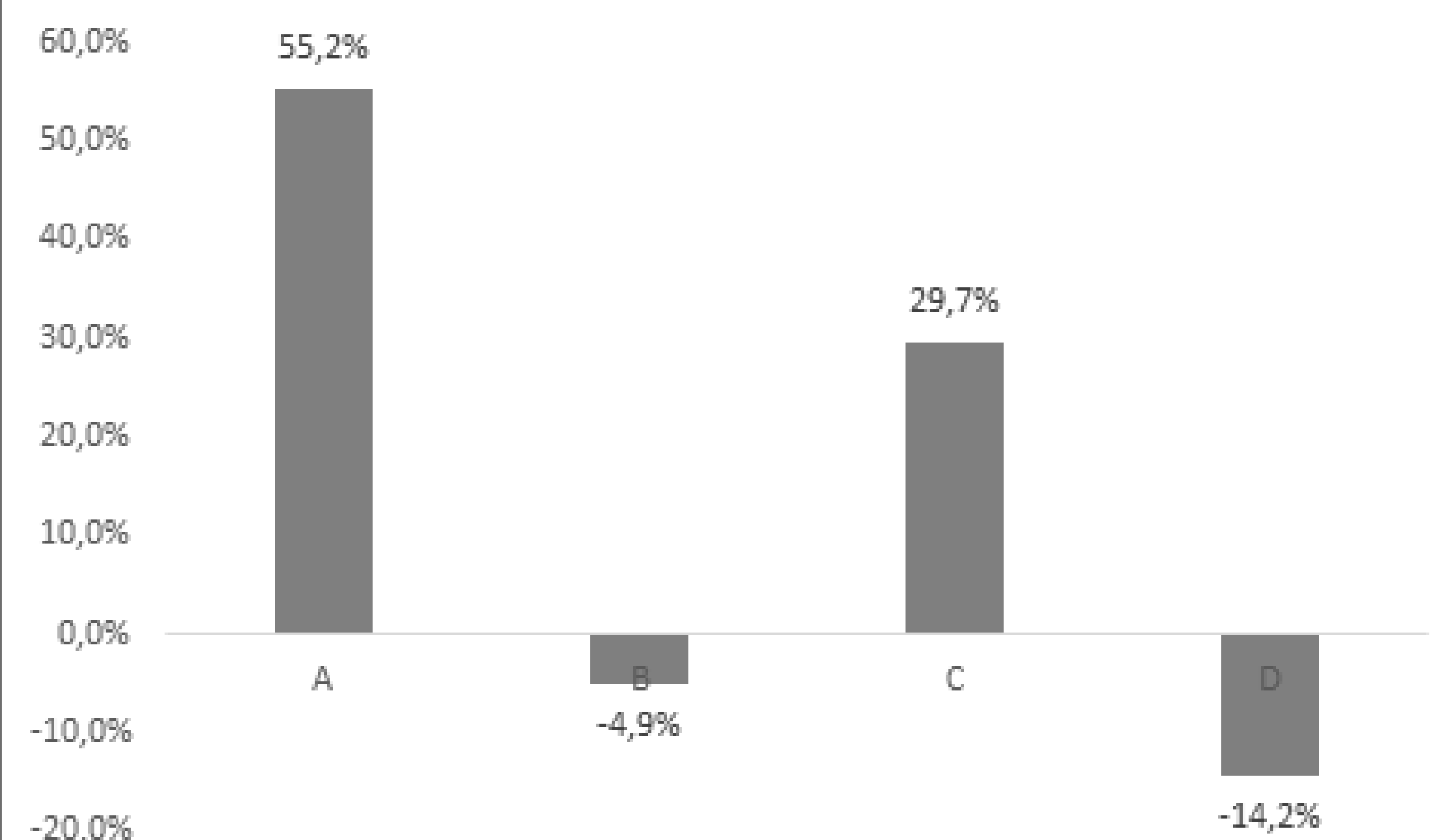


Figure 1. Mean percentage of temporal improvement in posttest in relation to pretest for each experimental condition.

Conditions	Between-Condition Cohen's d			
	A	B	C	D
A	-	0,83	0,33	0,97
B	-	-	0,61	-0,18
C	-	-	-	0,79
M	55,2%	-4,9%	29,7%	-14,2%
(SD)	93,0%	51,7%	61,2%	50,1%

Table 1. Descriptive data for each condition (mean and standard deviation).

Figure 1 and Table 1 show the descriptive data in the percentage of time tolerating the pain at posttest in relation to pretest for each experimental condition. Participants in Condition A showed the highest mean percentage, followed by Conditions C and B, and Condition D, which showed the lowest mean percentage. Between-Condition Cohen's d are also presented in Table 1. Effect sizes between condition A and condition B and D were large, whereas the effect size with relation to condition C was medium.

DISCUSSION

According to the results of this study, psychologists who seek behavioral changes from the use of metaphors should choose those that include physical properties common to actual experience and specify augmentative appetitive properties for the emission of the response in the natural environment. One interesting finding is that unlike the original study, appetitive augmental functions had an effect on increasing pain tolerance even when the metaphor did not specify common physical properties.

REFERENCES

LUCIANO C.; SIERRA M. A.; RUIZ F. J.; FLÓREZ C. L.; HERNANDEZ D. R. *The Role of Common Physical Properties and Augmental Functions in Metaphor Effect*. International Journal Of Psychology and Psychological Therapy, 2016, 16, 3, 265-2179.