Does social desirability moderate the relationship between implicit and explicit anxiety measures?

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Abstract

Explicit measures assess introspectively accessible self-descriptions and evaluations. In contrast, implicit measures assess introspectively inaccessible processes that operate outside of awareness. Consequently, implicit measures should be free of response factors such as faking tendencies and social desirability (SD). Usually, correlations between implicit and explicit measures of the same construct tend to be low. Study 1 ($N = 145$) tested the hypothesis that SD should moderate the relationship between an implicit (the Implicit Association Test) and an explicit (a standard questionnaire) anxiety measure. Study 2 ($N = 62$) extended this test by distinguishing between the SD components of self-deceptive enhancement and impression management. However, results of both studies suggest that SD does *not* act as a moderator between implicit and explicit anxiety measures. The discussion focuses on implications and limitations of this finding.
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Keywords: Anxiety; Social desirability; Implicit assessment; Explicit measures

1. Introduction

In the last years, there has been a boom in research on the implicit measurement of attitudes and personality variables that was driven by two trends/developments: first, there was an increased appreciation of the fact that human behavior is not only guided by explicit (controlled, conscious) processes but also by implicit (automatic, unconscious) processes (Greenwald et al., 2002). Second, a promising new measurement tool for assessing these implicit processes was introduced: the Implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998).

The IAT measures strengths of associations between concepts by comparing response times in two combined discrimination tasks. Participants are required to sort stimuli representing four

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concepts using just two responses, each assigned to two of the four concepts. Basic assumption of the IAT is that, if two concepts are highly associated, the sorting task will be easier (i.e. faster) when the two associated concepts share the same response key than when they share different response keys. For instance, implicit attitudes towards Blacks and Whites can be assessed by combining the task of classifying Black versus White faces and discriminating pleasant versus unpleasant word meanings. Individuals with implicit prejudices against Blacks should react slower when Black faces and pleasant attributes (Black + pleasant) share the same response key as compared to the reversed configuration (Black + unpleasant).

An impressive number of studies demonstrating reliability and validity of the IAT has accumulated (overview in Greenwald & Nosek, 2001). A recent important adaptation of the IAT was the development of a variant to measure personality traits like self-esteem and self-concept (Greenwald & Farnham, 2000). This was done by combining the task of categorizing *pleasant* versus *unpleasant* word meanings and classifying items (e.g. me or they) into *self* and *other* categories. An IAT measure of implicit self-esteem is computed as the difference in mean categorization latency when self and pleasant share the same response key (self + pleasant) as compared to self + unpleasant. The IAT effect thus measures how much easier it is for participants to categorize self items with pleasant items than self items with unpleasant items.

Using the same rationale, we adapted the IAT to provide an implicit measure of anxiety. For this aim, the categorization into self and other categories was combined with the classification of items into anxiety and calmness categories (for details see Method). An IAT effect indicating implicit anxiety was computed as the difference between self + anxiety and self + calmness. Ongoing research demonstrated that the IAT-anxiety shows good internal consistency, stability, and incremental validity—as compared to questionnaire measures of anxiety—in the prediction of anxiety-related behaviors (Egloff & Schmukle, 2002).

2. Goals of this research

Greenwald and Nosek (2001) outlined three topics where additional research with the IAT is especially needed: (a) identification of cognitive mechanisms underlying the IAT effect, (b) identification of behaviors that are predicted by IAT measures, and (c) identification of variables that moderate the relationship between IAT and parallel self-report measures. The research reported in this article is concerned with the latter topic.

Previous research has shown that IAT measures and self-report measures of the same construct display a mixture of associations and dissociations, depending on the domain assessed: In their overview on web-based IATs, Nosek, Banaji, and Greenwald (2002) reported an average correlation of $r = 0.24$ between implicit and explicit measures, with a range between 0.08 (age attitude) and 0.52 (political candidates). Banse, Seise, and Zerbes (2001) found for attitudes towards homosexuality an even higher association, $r = 0.62$. In contrast, divergence between implicit and explicit measures was observed in attitudes toward gender (Greenwald & Farnham, 2000) and race (Greenwald et al., 1998). Concerning the association between implicit and explicit self-esteem, correlation coefficients of $r = 0.21$ (Bosson, Swann, & Pennebaker, 2000) and of $r = 0.17$ (Greenwald & Farnham, 2000; Nosek et al., 2002) were reported. Similarly, implicit and explicit anxiety measures showed a weak positive correlation, mean $r = 0.14$ (Egloff & Schmukle, 2002).