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Brief report

Predictive validity of explicit and implicit self-esteem for subjective well-being

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Abstract

In recent years, researchers have developed a variety of techniques to measure implicit self-esteem. Bosson, Swann, and Pennebaker (2000) examined the reliability and validity of these measures. Only some implicit measures were reliable, and even these measures failed to show convergent and predictive validity. In contrast, explicit self-esteem predicted subjective well-being (SWB). However, the predictive validity of explicit self-esteem measures may have been inflated because SWB was assessed by means of self-reports. The present article addresses this concern. We correlated self-reports and informant reports of subjective well-being with an explicit (Rosenberg's self-esteem scale) and an implicit measure of self-esteem (preferences for initials). Explicit self-esteem was a significant predictor of all SWB measures. Preferences for initials were not significantly correlated with any of the SWB measures.

1. Introduction

Most variables in personality psychology are assessed with self-report measures because (a) they are easier to administer than alternative measures (e.g., assessment of response latencies, physiological indicators), and they have proven to be reliable and valid in numerous studies. For example, self-report measures show convergent validity with informant reports (Costa & McCrae, 1988; Diener, Smith, & Fujita, 1995; Funder, 1995), and they predict important outcomes such as longevity and marital satisfaction (Friedman et al., 1995; Watson, Hubbard, & Wiese, 2000). Subsequently, we will refer to self-report measures as *explicit measures*.

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Explicit measures can be contrasted with *implicit measures* of personality traits. Implicit measures of personality have proven useful since the beginning of personality psychology (Murray, 1938; Wilson, Lindsey, & Schooler, 2000). They do not rely on individuals' conscious representations of their selves to assess personality. Hence, they promise to overcome the limitation of explicit measures that participants have to be both willing and able to report their personality. Given the promising qualities of implicit measures of personality, it is important to examine the utility of these measures for personality assessment by examining their reliability and validity.

1.1. Reliability and validity of implicit self-esteem measures

Bosson, Swann, and Pennebaker (2000) examined the retest-reliability of seven implicit measures of self-esteem. The results varied greatly across the different measures. Four measures showed unsatisfactory retest-correlations (rs $< .30$), which compromises their utility as personality measures. However, three measures of implicit self-esteem showed tolerable reliabilities, namely the Implicit Association Test (IAT, .69), Preferences for Name Initials (.63), and Preferences for Birth Dates (.53). Similar results have been obtained in other studies (Greenwald & Farnham, 2000; Koole, Dijksterhuis, & van Knippenberg, 2001).

Bosson et al. (2000) also examined the convergent validity of different implicit self-esteem measures. As expected, unreliable measures failed to show convergent validity with reliable measures. However, even reliable implicit measures failed to show convergent validity with each other (rs $= -.11$ to .23). Bosson et al. (2000) also examined the predictive validity of explicit and implicit self-esteem measures (see also Greenwald & Farnham, 2000). It is well known that explicit self-esteem is correlated with subjective well-being (high life-satisfaction, high positive affect, low negative affect), especially in individualistic cultures (Diener & Diener, 1995). Bosson et al. (2000) replicated this finding. Explicit self-esteem (e.g., Rosenberg's self-esteem scale) predicted individual differences in positive and negative affect. Only one of the implicit measures (i.e., preferences for initials) was a significant predictor of positive affect, and none of the implicit measures predicted negative affect.

A minor caveat of Bosson et al.'s (2000) study was the reliance on self-report measures for the assessment of subjective well-being. As a result, the criterion variables may have shared method variance with the explicit self-esteem measure. For example, social desirable responding could have inflated scores on the explicit self-esteem measure and positive affect ratings. This shared bias could inflate the correlation between explicit self-esteem and positive affect. More importantly, social desirability could also attenuate the relation between implicit self-esteem and subjective well-being. The aim of this study was to address this concern. For this purpose, we compared the predictive validity of explicit and implicit self-esteem measures for informant reports of subjective well-being. We used preferences for initials as a measure of implicit self-esteem, mainly because it was feasible to use this paper–pencil method in a large sample. In addition, preferences for initials were the only implicit measure that was significantly correlated with well-being measures in Bosson et al.'s (2000) study.

2. Method

2.1. Participants

One hundred and forty-one students at the University of Illinois, Urbana-Champaign participated in the study as part of a course on personality and well-being.

2.2. Materials and procedure

2.2.1. Explicit self-esteem

Explicit well-being was assessed at the beginning of the semester with Rosenberg's self-esteem scale (Rosenberg, 1965).

2.2.2. Implicit self-esteem

Preferences for initials were also assessed at the beginning of the semester, but in a different session than the assessment of explicit self-esteem to avoid shared influences due to mood effects or other state influences. Participants were told that people have slight preferences and dislikes even for seemingly neutral objects. To assess these preferences, they rated each letter of the alphabet on a seven-point scale from 1 = very much dislike to 7 = very much like. The participants' initials were taken from their names (see Section 3 for the computation of implicit self-esteem from these data).

2.2.3. Subjective well-being

Self-reported well-being was assessed two months into the semester to avoid shared variance due to mood effects or other state influences. The affective component of well-being was assessed with frequency judgments of emotions on a seven-point scale ranging from 1 = never to 7 = nearly always (Diener et al., 1995). Four items assessed Unpleasant Affect (UA: unhappiness, sadness, loneliness, depression) and four items assessed Pleasant Affect (PA: happiness, joy, contentment, pride). The cognitive component of well-being was assessed with the Satisfaction-with-Life-Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985). The SWLS is a five-item scale with good reliability and validity (e.g., "I am satisfied with my life"). Questionnaires with the same SWB items were given to participants for distribution to two or three friends and two or three family members. Friends and family members completed the informant reports and mailed them to the experimenters. The reliability of informants' subjective well-being ratings was determined by averaging family and peer's ratings of each item and computing the internal consistency (Cronbach's *alpha*) of the items belonging to the same scale. Reliabilities were high (family SWLS .89, PA .80, UA .85; peers SWLS .91, PA .79, UA .87). We also computed the correlations between family reports and peer reports for the three SWB scales as a measure of convergent validity across different methods (i.e., informants). Convergent validity was moderate (SWLS $r = .36$, PA $r = .35$, UA $r = .43$). Family and peer reports were averaged to obtain reliable and valid informant measures of SWB. Correlations between self and informant measures of SWB were in the typical range of these correlations (Diener et al., 1995; Funder, 1995), namely .55 for SWLS, .38 for PA, and .39 for UA.

3. Results

3.1. Preferences for initials

We followed Bosson et al.'s (2000) procedure to derived Preferences for Initials from the letter ratings. That is, we subtracted the overall liking of a letter averaged across all participants from the rating of initials. That is, if "B" was rated on average a 4 and Bob rated "B" a five, Bob's liking of his first name initial would be 1 (i.e., $5-4$). This procedure controls for differences in the liking of letters in general. For example, we found that participants on average liked "A" much more ($M = 5.93$) than "F" ($M = 3.22$), $t(140) = 14,\ p < .01$. If Anna were rating "A" a six, her rating would show only a slight preference for her initial. In contrast, if Frank were rating "F" a six, his rating would reflect a strong preference for his initial. These preference scores were highly correlated with the direct ratings of initials ($r = .93$).

Preferences for initials of the first name ($M = 1.32,\ SD = 1.25$) and for initials of the last name ($M = 1.01,\ SD = 1.46$) were positive and significantly different from zero, $Fs(1, 140) > 60,\ ps < .01$. The magnitude of this effect is consistent with previous studies (Bosson et al., 2000; Kitayama & Karasawa, 1997). Preferences for first name initials and last name initials were positively correlated ($r = .33,\ p < .01$). Following Bosson et al., we averaged preferences for first name and last name initials to obtain a general measure of preferences for initials.

Bosson et al.'s formula for preference scores does not consider general individual differences in ratings of the letters. For example, Bob could rate "B" and "F" higher than other participants. Ratings of letters that are not initials (Bob's rating of "F") may reflect response styles or a positive attitude to letters in general. To examine this possibility, we also computed the average rating of all letters other than the initials. This measure of letter liking correlated positively with preferences for initials ($r = .32,\ p < .01$).

3.2. Correlations between self-esteem measures and outcome measures

The correlation between explicit self-esteem and preferences for initials was low, although statistically significant ($r = .21, p = .01$). Bosson et al. (2000) found a correlation of .13, which did not reach significance in their smaller sample. Explicit self-esteem was also marginally correlated with letter liking ($r = .15,\ p = .07$). After controlling for letter liking, the correlation between explicit self-esteem and preferences for initials was weaker but remained significant ($r = .17,\ p < .05$). In construct validation research, statistical significance is less important than the amount of shared variance. In this regard, our findings are consistent with previous studies that implicit and explicit measures share no more than 7% of variance (Bosson et al., 2000).

Table 1 shows the correlations of explicit and implicit self-esteem measures and general letter liking with SWB variables. The results for affect measures were fully consistent with Bosson et al.'s findings, namely significant correlations for explicit self-esteem and a weak but significant correlation between implicit self-esteem and

Table 1
Simple correlations of explicit and implicit self-esteem and letter liking with subjective well-being measures

Criterion	Mean	*SD*	ESE	IP	LL
Self-report					
Life-satisfaction	24.17	6.73	.59*	.11	.17*
Pleasant affect	4.54	1.05	.45*	.17*	.19*
Unpleasant affect	2.74	0.91	−.40*	−.06	−.11
Informant report					
Life-satisfaction	24.20	4.36	.42*	.05	.18*
Pleasant affect	4.67	0.63	.39*	.10	.13
Unpleasant affect	2.83	0.55	−.36*	−.13	−.14

Note. ESE, explicit self-esteem; IP, initial preferences; LL, letter liking.
* $p < .05$.

PA. However, our new measure of letter liking also showed a significant correlation with PA. Hence, this correlation is not unique to liking of initials. After controlling for letter liking, preferences for initials were no longer significantly correlated with PA ($r = .12,\ p = .17$).

The most important finding concerned the informant reports of SWB. Explicit self-esteem was a significant predictor of all three well-being measures. Implicit self-esteem was not significantly correlated with any of the informant reports of well-being. Interestingly, general liking of letters produced a small significant correlation with informant reports of life-satisfaction. Maybe seeing the positive in rather neutral objects such as letters contributes slightly to subjective well-being. However, there is no evidence that preferring initials to other letters predicts higher well-being, even when well-being is assessed with informant reports.

4. Discussion

The present study compared the validity of an explicit measure of self-esteem with the validity of an implicit measure of self-esteem. Bosson et al. (2000) found that explicit self-esteem was a better predictor of self-reported well-being than preferences for initials. The present study replicated this finding. Furthermore, we extended the finding to informant reports of well-being. Informant reports of well-being were related to explicit self-esteem but unrelated to preferences for initials. Informant reports of well-being are an unbiased validation criterion because they do not share method variance with explicit or implicit measures of self esteem.

4.1. Limitations

It is important to note some limitations of our study. We did not assess the reliability of our implicit measure. It is possible that preferences for initials were not reliable in our study. However, previous studies found moderate reliability of this measure in similar samples (Bosson et al., 2000; Koole et al., 2001). Another limita-

tion of our study is the reliance on a single implicit measure. As different implicit measures are unrelated to each other, it is possible that other implicit measures such as the IAT could have produced different results.

4.2. Implications for the construct validity of implicit self-esteem measures

Implicit measures promise to assess important personality traits like self-esteem without relying on participants' willingness and ability to report these traits. However, before personality psychologists can use these measures to assess personality, they need to validate these measures. In our study, preferences for initials failed to predict subjective well-being. There are several interpretations of this finding. First, it is possible that preferences for initials do not assess self-esteem. Alternatively, it is possible that explicit and implicit measures assess two distinct types of self-esteem (cf. Wilson et al., 2000). However, the interpretation of preferences for initials as an implicit form of self-esteem is problematic because preferences for initials are unrelated to other implicit measures and criterion variables such as subjective well-being. Hence, there is no compelling empirical evidence to suggest a construct of implicit self-esteem that is revealed in preferences for initials. Future research needs to examine the predictive validity of other implicit measures before they can be used in the assessment of individual differences.

Finally, it is remarkable that individual differences in preferences for initials were unrelated to well-being, while respondents as a group showed a clear preference for their initials. The most plausible explanation for this finding is that initials are a relatively unimportant aspect of the self, whereas individual differences in explicit self-esteem and well-being are based on more important aspects of the self (Schimmack, Diener, & Oishi, 2002).

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References

Bosson, J. K., Swann, W. B., & Pennebaker, J. W. (2000). Stalking the perfect measure of implicit self-esteem: The blind men and the elephant revisited. *Journal of Personality and Social Psychology, 79*, 631–643.

Costa, P. T., & McCrae, R. R. (1988). Personality in adulthood: A six-year longitudinal study of self-reports and spouse ratings on the NEO personality inventory. *Journal of Personality and Social Psychology, 54*, 853–863.

Diener, E., & Diener, M. (1995). Cross-cultural correlates of life satisfaction and self-esteem. *Journal of Personality and Social Psychology, 68*, 653–663.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*, 71–75.

Diener, E., Smith, H., & Fujita, F. (1995). The personality structure of affect. *Journal of Personality and Social Psychology, 69*, 130–141.

Friedman, H. S., Tucker, J. S., Schwartz, J. E., Martin, L. R., Tomlinkson-Keasey, C., & Wingard, D. L., et al. (1995). Childhood conscientiousness and longevity: Health behaviors and cause of death. *Journal of Personality and Social Psychology, 68*, 696–703.

Funder, D. C. (1995). On the accuracy of personality judgment: A realistic approach. *Psychological Review, 102*, 652–670.

Greenwald, A. G., & Farnham, S. D. (2000). Using the Implicit Association Test to measure self-esteem and self-concept. *Journal of Personality and Social Psychology, 79*, 1022–1038.

Kitayama, S., & Karasawa, M. (1997). Implicit self-esteem in Japan: Name letters and birthday numbers. *Personality and Social Psychology Bulletin, 23*, 736–742.

Koole, S. L., Dijksterhuis, A., & van Knippenberg, A. (2001). What's in a name: Implicit self-esteem and the automatic self. *Journal of Personality and Social Psychology, 80*, 669–685.

Murray, H. (1938). *Explorations in personality*. New York: Science Editions.

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

Schimmack, U., Diener, E., & Oishi, S. (2002). Life-satisfaction is a momentary judgment and a stable personality characteristic: The use of chronically accessible and stable sources. *Journal of Personality, 70*, 345–385.

Watson, D., Hubbard, B., & Wiese, D. (2000). General traits of personality and affectivity as predictors of satisfaction in intimate relationships: Evidence from self- and partner-ratings. *Journal of Personality, 68*, 413–449.

Wilson, T. D., Lindsey, S., & Schooler, T. Y. (2000). A model of dual attitudes. *Psychological Review, 107*, 101–126.