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Educational and Psychological Measurement 1993; 53; 1095

DOI: 10.1177/0013164493053004022

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REPORT ON AN ALTERNATIVE MEASURE OF AFFECTIVE DISPOSITION

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Researchers investigating the dispositional source of job satisfaction often have used negative or positive affectivity to measure affective disposition. The present study tested the validity of an alternative measure of affective disposition which consists of an assessment of affective reactions to neutral stimuli common to everyday life. Results indicated that the measure, termed the Neutral Objects Satisfaction Questionnaire (NOSQ), displayed favorable psychometric properties. Furthermore, the NOSQ may be a better assessment of affective disposition than positive or negative affectivity because it had greater stability over time than one of the most common measures of positive and negative affectivity.

IN the last decade a stream of research has appeared which suggests that judgments of job satisfaction are significantly influenced by individuals' affective disposition (Judge, 1992). Researchers in this area often have used positive affectivity (PA) or negative affectivity (NA; Watson and Clark, 1984) to measure affective disposition. However, PA and NA are somewhat controversial constructs because it is not clear that they are totally independent,

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nor are they entirely stable over time as should be the case with purely dispositional measures. Such controversy suggests that there may be utility in exploring alternative measures of affective disposition for the purposes of organizational research.

Use of PA or NA as the measure of affective disposition has created two potential problems. First, it is not obvious that PA and NA are distinct constructs. Clearly, a substantial number of studies have supported the distinction between PA and NA (e.g., Watson, 1988; Watson, Clark, and Tellegen, 1988; Watson and Tellegen, 1985). On the other hand, a number of researchers have found that PA and NA are significantly inversely correlated (e.g., Judge and Locke, 1993; Warr, Barter, and Brownbridge, 1983; Zautra, Guarnaccia, and Reich, 1988). Furthermore, as noted by Diener (1990), the distinction between PA and NA has been found to depend on a large number of boundary conditions, including the time frame sampled, the type of response scale used, the particular emotions sampled, the subjects used, whether acquiescence was controlled, and the intensity of the emotions sampled.

Another possibility that has not been examined in the literature is that PA and NA display modest correlations with each other because individuals systematically respond differently to positive items than to negative items. As Judge (1992) pointed out, that positive with positive and negative with negative items display higher covariation than positive with negative items is not conclusive evidence that PA and NA are separate constructs. For example, Judge (1992) demonstrated that splitting well-accepted measures of job satisfaction into positive and negative sub-parts resulted in a significant improvement in fit over a single factor solution and over an odd-even split. These results suggest that covariation among positive and among negative scale items is greater than is the covariation between positive and negative items. This simply may mean that individuals respond differently to positive than to negative items. Unless one is prepared to argue that there is a construct of positive and negative job satisfaction, the above results suggest that rather than PA and NA being different constructs, the distinction is an artifact caused by different response tendencies of individuals to positive and negative adjectives. The fact that NA seems to correlate most highly with negative emotions such as stress, health complaints, and reports of unpleasant events, while PA is most highly related to positive outcomes such as social satisfaction and reported frequency of positive events, has been reasonably interpreted as evidence that PA and NA are distinct (Watson et al., 1988). However, it alternatively can be interpreted as supporting the

response artifacts just reported. Thus, past research has reached contradictory findings regarding the independence of PA and NA. At the very least, the distinction between PA and NA is controversial. In fact, Diener (1990) has concluded, "There is not replicable evidence across samples and methods that positive and negative affect are completely unrelated" (p. 14).

Perhaps even more important, researchers investigating the dispositional source of job satisfaction have assumed that PA or NA is a measure of a *trait* rather than a *state* (George, 1991; Levin and Stokes, 1989). Bradburn (1969), who is credited with first making the distinction between PA and NA, assumed that these were measures of subjective well-being, which is defined as an ongoing *state* of psychological wellness (Diener, 1984) rather than a trait. Although there is some support for the stability of PA and NA (Watson and Clark, 1984; Watson et al., 1988), it is possible that other measures may demonstrate greater stability.

Furthermore, the content of PA and NA measures appears to conceptually assess affect experienced. For example, the PANAS scales (Watson et al., 1988) assess PA and NA by asking the respondents to indicate how often they generally experience 10 positive and 10 negative emotions (e.g., upset, proud, ashamed, inspired). This emphasis on current emotions as a general state suggest that PA and NA may be best considered as measurements of subjective well-being (a state) rather than affective disposition (a trait). In fact, Judge and Locke (1993) found that PA and NA strongly and significantly loaded on a subjective well-being construct, along with other measures of subjective well-being such as the satisfaction with life scale (Diener, Emmons, Larsen, and Griffin, 1985) and the percent time happy item (Fordyce, 1977).

Yet, conceptually, subjective well-being and affective disposition are discrete constructs. How one typically affectively evaluates characteristics of one's environment (affective disposition) will not always determine the feelings one experiences or the judgment one makes about one's life (subjective well-being). The disposition toward an affect level is different from experienced affect. However, because typical measures of PA and NA fail to make this distinction, researchers investigating the effect of affective disposition on job attitudes and behaviors may actually have been measuring subjective well-being.

A measure that may come closer to affective disposition is a survey originally developed by Weitz (1952). Weitz suggested that "a worker's stated sources of job dissatisfaction are more meaningful if we can get some idea about how satisfied he is in everyday life"

(p. 201). Weitz measured disposition by surveying respondents' reactions to 44 stimuli common to everyday life (e.g., television programs, today's cars, the way people drive, 8 1/2" × 11" paper). He hypothesized that the correlation between reactions to these generally neutral items and job satisfaction would indicate the influence of disposition on reported job affect. Weitz's scale may represent a superior measurement of affective disposition because individuals who are predisposed to view even neutral objects critically may have a pervasive and stable predisposition to see their life in negative terms.

The present study tested the validity of an adapted version of Weitz's (1952) measure by employing confirmatory factor analysis to assess the degree to which items from the measure adequately represented an underlying construct. Furthermore, a critical test of whether the Weitz measure is a superior measure of affective disposition was conducted, ascertaining if it displayed greater stability over time than a prevalent measure of PA and NA.

Method

Subjects

The data used in this study were collected as part of a larger study on training program effectiveness (Bretz and Thompsett, 1992). In addition to including measures of training outcomes, dispositional measures were collected for the purposes of the present study. Subjects were 184 employees who were enrolled in a training course at a large manufacturing organization in the Northeast United States. Subjects were a representative sample of the organizational population. They were mostly male (73%), currently married (74%), and predominantly white (91%). Average age was roughly 42 years and average tenure with the company was approximately 18 years. All subjects were high school graduates, most (53%) had attended some college, and 26% were college graduates. Average educational attainment was 14.5 years. Job levels were distributed throughout the organizational hierarchy and salaries ranged from \$16,500 to \$98,000 ($M = \$37,227$; $SD = \$12,582$).

Procedure

The dispositional and attitudinal measures reported in this study originally were given to 184 individuals. Due to sample attrition, of these 184 individuals, 100 completed a training program which

included the measurement of the relevant dispositional and attitudinal measures at Time 1 and Time 2 (6 months later). All participants were informed about the purpose of the study, including the assessments about attitudes toward their lives. Participants were given the option to withdraw at any time without penalty. Thus, the confirmatory factor analysis reported in this study is based on the initial sample of 184 individuals, and the longitudinal analysis is based on the 100 subjects who completed dispositional and attitudinal measures at both Time 1 and Time 2. The sample of 100 subjects was representative of the larger sample, in that no significant differences on any measurement were detected between those who attrited and those who remained in the sample from Time 1 to Time 2. Thus, even though a sizeable proportion of the sample did not complete measures at both time periods, it is unlikely that this biased the results.

Measures

Affective disposition. Affective disposition was measured by what is termed the Neutral Objects Satisfaction Questionnaire (NOSQ), based on Weitz's (1952) survey, which had a split-half reliability of .75. The modified 25-item survey eliminates some "messy" measures of disposition. Items relating to socioeconomic status (e.g., "The area of the city in which you live"), previous employment (e.g., "Your last job"), and other items that would not apply to all individuals (e.g., "The college you attended") were excluded. Wording was also modernized (e.g., "automobile" was changed to "car"). Finally, to reduce the possibility that individuals used response sets in completing the survey, the response format was changed from a columnar checklist to a trichotomous response format. In the revised version of the survey, individuals were asked to circle the numbered response that best represented their feeling about the corresponding item. The possible responses were 1 = dissatisfied, 2 = neutral, and 3 = satisfied.

Conceptually, the survey measures disposition by reflecting affective bias toward items endemic to everyday life. Individuals highly satisfied with the objects as a whole may have a tendency to see everything (including the job) in a favorable light. The obverse also is thought to be true. Results by Judge and Hulin (in press) and Judge and Locke (1993) suggested that the NOSQ possesses favorable psychometric properties. In the present study, the coefficient alpha reliability estimate of the NOSQ was .82 at Time 1 and .88 at Time 2.

Positive and negative affectivity. The Positive and Negative Affect Schedule (PANAS; Watson et al., 1988) was used to measure PA and NA. The PANAS assesses both positive affect and negative affect by asking respondents to indicate how often they generally experience ten positive and ten negative emotions (e.g., jittery, determined, afraid, enthusiastic). Respondents indicate the degree to which they feel these emotions on average using a 5-point Likert-type scale (1 = very slightly or not at all; 5 = very much). Coefficient alpha for the PA scale was .89 at Time 1 and .88 at Time 2. Coefficient alpha for the NA scale was .88 at Time 1 and .90 at Time 2.

Results

Psychometric Evidence of NOSQ and PANAS

The relatively high reliability estimates for the NOSQ (.82 and .88) indicate that the NOSQ is a reliable measure of affective disposition. In terms of validity evidence, confirmatory factor analysis, conducted using LISREL 7 (Jöreskog and Sörbom, 1989), was used to determine if the items from the NOSQ adequately represented a single construct that could be interpreted as representing affective disposition.

Table 1 provides the parameter estimates (factor loadings) of the NOSQ items on a single construct assumed to represent affective disposition. All factor loadings were significant ($p < .05$). By typical conventions, the fit statistics from the confirmatory factor analysis indicate that the hypothesized measurement model provided an adequate fit to the data (chi-square/degrees of freedom = 1.70; goodness-of-fit index = .83; adjusted goodness-of-fit index = .80; root-mean-square residual = .08). If the fit of this model were poor, it would suggest that the NOSQ is not a unidimensional measure of affective disposition. Thus, these results suggest that items from the NOSQ converge on a single construct inferred to represent affective disposition.

In order to evaluate the PANAS using the same criteria by which the NOSQ was assessed, a confirmatory factor analysis was also conducted on the PANAS. The results of this estimation yielded mixed, although generally favorable, results. As can be seen in Table 2, the factor loadings of the items on the positive affect and negative affect subscales were quite strong and highly significant. On the other hand, the overall fit of the model was marginal (chi-square/degrees of freedom = 3.74; goodness-of-fit index = .71;

TABLE 1
Results of Confirmatory Factor Analysis of NOSQ

Item	Loading
1. The city in which you live	.433 (.078)**
2. The residence where you live	.345 (.080)**
3. The neighbors you have	.445 (.078)**
4. The high school you attended	.422 (.079)**
5. The climate where you live	.363 (.080)**
6. The movies being produced today	.285 (.081)**
7. The quality of food you buy	.392 (.079)**
8. Today's cars	.426 (.079)**
9. Local newspapers	.460 (.079)**
10. Your relaxation time	.423 (.079)**
11. Your first name	.257 (.081)**
12. The people you know	.371 (.080)**
13. Television programs	.412 (.079)**
14. Local speed limits	.418 (.079)**
15. The way people drive	.363 (.080)**
16. Advertising	.513 (.077)**
17. The way you were raised	.201 (.082)*
18. Telephone service	.500 (.077)**
19. Public transportation	.495 (.077)**
20. Restaurant food	.375 (.080)**
21. Yourself	.300 (.081)**
22. Modern art	.258 (.082)**
23. Popular music	.364 (.080)**
24. 8 1/2" × 11" paper	.298 (.081)**
25. Your telephone number	.370 (.080)**

Note. * $p < .05$; ** $p < .01$. Standard errors are in parentheses.

adjusted goodness-of-fit index = .63; root-mean-square residual = .09), although it did fit the data better than a single-factor model. Specifically, forcing the positive and negative affect items to load on the same factor resulted in a significant decrease in fit (increase in chi-square = 639.21 with 1 degree of freedom; $p < .01$). Finally, results from this estimation revealed that the corrected correlation between the positive and negative affect subscales was $-.18$ ($p < .05$). Although the results of this confirmatory factor analysis provide somewhat positive evidence regarding the psychometric properties of the PANAS, when interpreting this evidence it is important to keep in mind the earlier caveats about the independence of positive and negative affect.

Stability Evidence

A key test of the potential usefulness of the NOSQ concerns the relative stability of this measure when compared to measures of PA or NA. If the NOSQ truly is a better measure of affective disposi-

TABLE 2
Results of Confirmatory Factor Analysis of PANAS

PANAS Item	Factor Loading on PANAS Sub-Scale	
	Positive Affect	Negative Affect
1. Interested	.684 (.068)**	
3. Excited	.684 (.068)**	
5. Strong	.668 (.068)**	
9. Enthusiastic	.835 (.062)**	
10. Proud	.727 (.066)**	
12. Alert	.546 (.072)**	
14. Inspired	.744 (.066)**	
16. Determined	.612 (.070)**	
17. Attentive	.569 (.071)**	
19. Active	.581 (.071)**	
2. Distressed		.696 (.068)**
4. Upset		.605 (.070)**
6. Guilty		.575 (.071)**
7. Scared		.729 (.066)**
8. Hostile		.697 (.068)**
11. Irritable		.667 (.068)**
13. Ashamed		.602 (.070)**
15. Nervous		.734 (.066)**
18. Jittery		.706 (.067)**
20. Afraid		.687 (.068)**

Note. ** $p < .01$. Standard errors are in parentheses.

tion, it should be more stable over time than a measure of PA or NA. Table 3 displays the temporal correlations of the NOSQ, PA subscale, and NA subscale over the 6-month interval. As the table indicates, the NOSQ displayed greater stability over time than either the PA or NA subscales. Using Fisher's r to Z transformation, these correlations were significantly different. Thus, the NOSQ displayed significantly greater stability over time than either the PAS or NAS. Since traits such as affective disposition are definitionally stable over time, this provides supporting evidence for the proposition that the NOSQ is a better measure of affective disposition than the PAS or NAS.

Discussion

The present study supports the validity of an alternative measure of affective disposition, the Neutral Objects Satisfaction Questionnaire. Specifically, the results point to a number of advantages of NOSQ. First, the NOSQ avoids the controversial distinction between PA and NA that has characterized other measures of affective disposition. Second, the NOSQ displays favorable psychometric

TABLE 3
Relative Stability of NOSQ

Measure	Uncorrected Stability Coefficient	Corrected Stability Coefficient
Neutral Objects Satisfaction Questionnaire (NOSQ)	+.75**	+.88**
Positive Affectivity Scale (PAS)	+.63**	+.72**
Negative Affectivity Scale (NAS)	+.63**	+.71**
Difference (NOSQ-PAS)	+.12*	+.16**
Difference (NOSQ-NAS)	+.12*	+.17**

Note. * $p < .05$; ** $p < .01$. Stability coefficients represent correlations between measures at Time 1 and Time 2 (6-month interval). Corrected coefficients are adjusted for unreliability in the measures at Time 1 and Time 2. Tests for significant differences were conducted using Fisher's r to Z transformation.

properties, as evidenced by the reliability estimates and confirmatory factor analysis results suggesting that the items from the scale adequately represented an underlying construct of affective disposition. Finally, longitudinal results demonstrated that the NOSQ was significantly more stable over time than either PA or NA. This suggests that the NOSQ more closely represents an affective trait than does the PANAS. Thus, future researchers investigating the dispositional source of job satisfaction may wish to consider measuring affective disposition with the NOSQ.

The results do not invalidate the PANAS or the distinction between PA and NA; that was not the focus of the study. There is considerable research suggesting that measures of PA and NA are valid measures of well-being, and the results of the present study suggest somewhat favorable conclusions about the psychometric properties of the PANAS. Rather, the results suggest several benefits of an alternative measure of affective disposition. Since this is the first study to specifically test the validity of the NOSQ, future research should consider designs using both the PANAS and NOSQ so that additional evidence regarding the relative merits of the NOSQ can be gathered.

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