

Validity, Reliability, and Fairness of the Turnover Express Scale

The Turnover Express scale is adapted from the Tenure scale of the Personnel Selection Inventory (PSI®). The PSI has been used by numerous organizations for more than a decade to help control one of the most serious human resource cost drivers, employee turnover. This document summarizes some of the research that demonstrates the validity, reliability, and fairness of the PSI Tenure scale, and hence the Turnover Express scale.

PREDICTING INDIVIDUAL EMPLOYEE TENURE

Prior research has shown that individuals scoring better on the PSI Tenure scale tend to stay with a job longer than individuals with poorer tenure scale scores. The following table presents results from several studies in which Tenure scale scores were correlated with measures of job tenure.

Table 1. Correlations of PSI Tenure Scale with Measures of Job Tenure

Criterion	Industry	Sample Size	Test Statistic
Tenure in most recent job	Publishing	41	$r = .32^*$
Tenure in current job	Publishing	41	$r = .43^{**}$
Intended tenure in current job	Publishing	41	$r = .46^{**}$
Composite of 3 previous criteria	Publishing	41	$r = .40^{**}$
Intent to quit job within 12 months	Publishing	41	$r = -.35^{**}$
Tenure in current job	Telemarketing	62	$r = .23^*$
Tenure in current job	Restaurant	61	$r = .43^{**}$
Tenure in most recent job	Mixed (students)	82	$r = .22^*$
Tenure in current job	Mixed (students)	82	$r = .23^*$
Intended tenure in current job	Mixed (students)	82	$r = .51^{**}$
Intent to quit job within 12 months	Mixed (students)	82	$r = .33^{**}$
Whether still employed after 3 months	Telemarketing	154	$r = .35^{**}$
Completion of training program	Retail	192	$r = .18^*$
Supervisory rating (attendance)	Retail	82	$r = .13^*$
Intent to quit job within 12 months	Mixed	41	$r = -.30^*$
Whether still employed after 13 months	Pharmacy	59	$r = .28^*$
Whether still employed after 9 months	Telemarketing	128	$r = .18^*$
Whether still employed after 6 months	Retail	74	$r = .30^*$

* $p < .05$ ** $p < .01$

These results show that the PSI Tenure scale is capable of predicting the job tenure of individuals at statistically significant levels.

REDUCING TURNOVER IN ORGANIZATIONS

Numerous studies have shown the ability of the PSI to reduce turnover. Some of these studies are summarized in the following table.

Table 2. Impact of the PSI on Employee Turnover in Several Organizations

Organization	Time frame	Results
Supermarket chain (10 stores)	4 months	11% turnover reduction (159% to 141%) compared to the year prior to study Control group increased from 93% to 96% over the same time frame
Restaurant chain (2 regions)	7 months	47% turnover reduction (22% monthly to 12%) compared to the year prior to study. Turnover in the control group increased from 5% monthly to 12% over the same time frame.
Restaurant chain (9 restaurants)	9 months	5% turnover reduction (170% to 161%) from 2 years prior to study. Turnover in the control group increased from 149% to 171% over the same time frame.
Canadian retailer (133 stores)	12 months	21% turnover reduction (47% to 37%) from year prior to study.
Manufacturing organization	12 months	21% turnover reduction (58% to 46%) from year prior to study and another 13% reduction over the next year of use (46% to 40%).

SCALE RELIABILITY

The coefficient alpha internal consistency reliability of the PSI Tenure scale was .80 in a sample of 5,449 job applicants sample from a widerange of organizations. This is considered an adequate level of reliability.

FAIRNESS

Fairness analyses were conducted on data from 84,926 applicants who were administered a PSI version that includes the Tenure scale. Fairness ratios were computed based on a default cutoff that would screen out 14.7% of the cases. As shown in Table 3, all ratios satisfy the Equal Employment Opportunity Commission's (EEOC's) four fifths rule for defining fairness to protected groups. Therefore,these results suggest that using the Turnover Express scale to select job candidates would be fair to protected groups.

Table3. Fairness of Tenure Scale using Default Cutoff Scores

Comparison	Passing Rate	Fairness Ratio
By Gender:		
Males (N = 37,676)	82.1% (N = 30,939)	N/A
Females (N = 47,250)	87.8% (N = 38,947)	1.07
By Race:		
White (N = 59,808)	86.2% (N = 51,526)	N/A
Black (N = 17,083)	83.8% (N = 14,309)	.97
Hispanic (N = 6,816)	82.5% (N = 5,624)	.96
Asian (N = 879)	73.9% (N = 650)	.86
Native American (N = 340)	91.2% (N = 310)	1.06

SUMMARY

The studies reviewed in this document, along with many others, show that the PSI Tenure scale, and hence the Turnover Express scale, is a reliable measure that can predict individual employee tenure/turnover. When implemented as part of a preemployment screening process it should help contribute to substantial reductions in organizational turnover levels. Such a selection process should also be fair to protected groups.