

The Level Of Employee Utilization And Its Effect On Subsequent Turnover

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Abstract

A longitudinal organizational field study examined the relationship between level of employee utilization and subsequent turnover. The subjects were classified into one of two employee utilization types, underutilized or utilized, based on their performance ratings in each of seven demand levels. Subjects were further classified into turnover or no turnover groups. A one-tailed test of the null hypothesis of turnover/utilization independence was rejected at the .005 level. Implications are addressed and future research directions are introduced.

Introduction

The concept of degree of suitability between employees and their work has been formalized as Person-Environment (P-E) fit theory. The relative merit of P-E fit theory is predicated on the assumption that just as employees' needs and abilities vary, so do jobs vary in their incentives and demands (French, Caplan, & Harrison, 1982). The theory predicts that the well-being of both the individual and organization suffers when there is an incongruent fit between the characteristics or demands of the job and the characteristics of the employee (Caplan *et al.*, 1980). Two forms of lack of fit have been distinguished. Specifically, the degree of fit between the demands of the job and the employee's ability to meet them and the degree of fit between the motives and goals of the employee and the rewards offered by the job (Harrison *et al.*, 1987). The focus of the present research involves the first distinction.

Person-Environment fit theory has particular relevance as regards the job characteristics literature dealing with various measures of job demand. P-E fit theory does not enumerate a preordained list of job demands that must be considered for research purposes. Rather, the selection of job demands worthy of investigation is dependent upon the particular situation. Job demands as a concept can be traced back to the seminal work of Kahn *et al.* (1964). They examined the effects of such environmental factors as role conflict, role ambiguity and role overload. Caplan (1972) expanded the list to include quantitative workload, responsibility for persons and participation. Unfortunately, these and other research efforts to measure demand level have concentrated primarily, if not solely, on the subjective perceptions of individual employees, to the neglect of both

objective characteristics of the job as well as behavioral outcomes such as employee turnover (French *et al.* 1982)

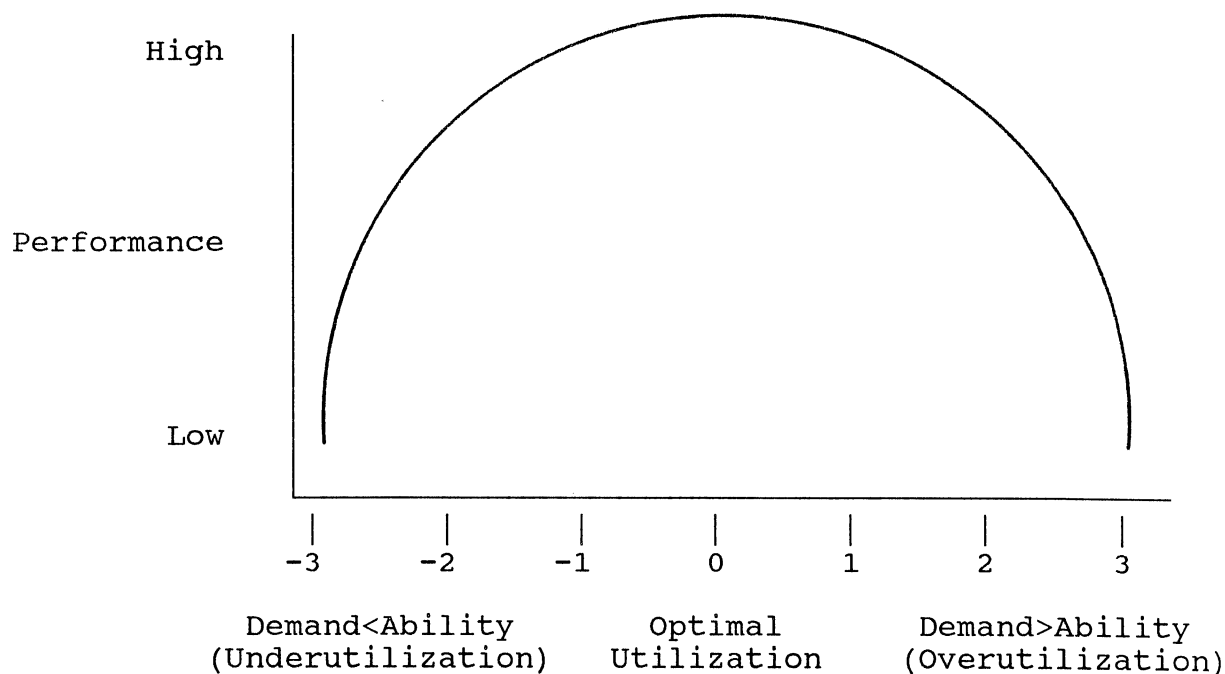
Furthermore, of the minimal research relating job demands and objective outcomes such as performance, most predicted a positive-linear relationship (Hackman & Oldham, 1976). In the current research, following this perspective, a series of linear P-E fit relationships are posited. Here, irrespective of the specific relationship between job demand and employee ability, the employee is underutilized. Specifically, no matter what the level of demand, the employee's performance -- whether good, bad or indifferent -- remains constant.

Alternatively, French (1973) posited that in some instances the relationship between P-E fit indices and various outcome measures, (i.e. performance) may have a curvilinear U-shape. When the fit is perfect, the P-E discrepancy is zero. Given either negative or positive discrepancy in fit, the level of potentially maladaptive outcomes increases. A negative discrepancy indicates that the demands of the job are less than the abilities of the employee, a situation involving the underutilization of available employee abilities and skills. Underutilization of abilities refers to the disuse of one's particular skills and abilities (French, Caplan, & Harrison, 1982, p. 18). Likewise, a positive discrepancy indicates that the demands of the job exceed the abilities of the employee, indicating overutilization of the employee's available resources. The zero discrepancy represents a perfect fit, a situation indicating an optimal utilization of employee abilities.

While conceptually important, degree of utilization

Figure 1

Hypothetical Shape of the Relationship Between
 Person-Environment Fit on Demand-Ability
 Dimensions and Job Performance for Optimally
 Utilized Employees



has not been extensively examined in P-E fit literature. In fact, until now, the utilization construct has only been operationalized through the use of self-report instrumentation (Caplan, 1972). The typical research involves self-report, cross-sectionally derived measurements of job demand, employee abilities and the resultant degree of fit: level of utilization. The present study incorporates an objective measure of utilization, supervisory performance evaluations across various levels of demand. Specifically, it is hypothesized that underutilized employees will subsequently turnover at a higher rate than employees more optimally utilized.

Previous research (French, Caplan, & Harrison, 1982) has identified employee education level as an individual (person) level determinant of degree of subsequent P-E fit. While education level is not equated with employee skills and abilities, it is posited that more education than is typically required to perform a given job can result in subsequent underutilization. Given this predicted role of education level, the present employee grouping, youth counselor in a juvenile detention center, was especially chosen as it provides a clear example of a likely P-E "misfit." While the counselors' primary duties are custodial, one of the job requirements is a four year college degree.

Method

Research Setting and Subjects

Twenty-three youth counselors employed at a juvenile detention center located in a large metropolitan area in California composed the subject base. The center is a short-term lock-up detention facility for juveniles who are

under the jurisdiction of the Superior Court of that county. Counselors are responsible for the direct supervision of the juveniles while they are incarcerated at the center. This supervision involves primarily those duties pertaining to the custodial function. Shift irregularities (24-hour operation) and high levels of absenteeism/turnover create a need for counselors on an on-call and floating basis. On-call counselors are available for random assignment to any one of the seven, minimum to maximum security, sections within the detention facility. Floaters are permanent full-time employees, but unlike other permanent workers who work in a particular unit (demand level), floaters, subject to the vagaries of scheduling, work throughout the units.

The sample represented 100% of those asked to participate. All subjects in the sample were men, and all had completed college. The mean age of this sample was 32.55 yr. (SD = 4.98).

Measures

All data were collected on site by the author over a two-year period.

Demand Level. The organizational units in which on-call and floating counselors may be asked to work are hierarchically distributed from minimum to maximum security sections of the detention center. These sections constitute an objectively determined demand level. In addition to this organizational measure, demand level was validated by the rankings of nine randomly selected employees. The results of this pilot study indicate that there is a very high level of agreement between the objective and subjective demarcations of demand level (Wright, 1989).

Turnover is considered here from the individual level of analysis (for other approaches, see Price, 1977). That is, was a given employee still with the organization performing the same job after a prescribed period of time? In this study, it was established, a priori, that the determination of employee turnover be set two years subsequent to the collection of the utilization measure. By definition, turnover involves only voluntary withdrawal from the organization.

Utilization. The degree of employee utilization has been previously operationalized solely in terms of subjective methods of evaluation (Caplan, 1972). As such, the role of this construct in P-E fit literature has been ambiguous and problematic. Specifically, it is difficult to define the degree of congruence between job demands and individual abilities based on self-report

construct measures. In the current research, degree of employee utilization is defined in terms of the pattern of supervisory performance ratings obtained across seven demand levels. A consistent performance rating in each of the seven levels indicates underutilization, while an inconsistent performance rating indicates utilization. All 23 employees worked under and were rated by the same supervisor. Each subject's performance at each demand level was rated on a five-point scale ranging from "poor to excellent." Wright (1989) has established the test-retest reliability of the measure as .71.

Procedure

The center's hiring practice substantiates the randomness of the research procedure. Discussions with both supervisors and employees revealed that all 23 subjects worked in all units more or less equally, limiting the possibility of subjects being confounded with the various units (for a more detailed description, see Wright, 1989).

Sample Size Determination

Sample size determination is one of the most important, but neglected, aspects of research design. In studies where subjects are difficult to obtain, it is important to determine the minimum number of subjects to sample that will allow us to detect a meaningful difference between populations while controlling the probability of Type I and Type II errors. Using a standard sample size determination procedure (Cohen, 1969), a total sample size of 20 gives power of .75 at an alpha level of .05 and an effect size (the difference in probability of turnover between the two employee type populations) of .5. Thus, the sample size of 23 used in the present study provides sufficient power.

Results and Discussion

The 23 subjects were classified into one of two employee utilization types, consistent or inconsistent performers, based on their performance ratings in each of the seven demand levels. After the prescribed two years, subjects were classified into turnover or no turnover groups. The resulting 2 x 2 contingency table is presented in Table I.

A one-tailed test of the null hypothesis that turnover and employee utilization type are independent is rejected at the .005 level ($\chi^2 = 7.41$, $df = 1$). The estimated probability of turnover for consistent performers (underutilization) equals .93; the estimated probability of turnover for inconsistent performers (utilization) equals only .43.

Table I

Cross-Classification of Employee Utilization Type and Turnover

		Employee Type	
		Consistent Performers	Inconsistent Performers
Job Turnover	YES	15	3
	NO	1	4

The hypothesized relationship between employee utilization type and turnover is supported. That is, consistent performers withdrew from the job at a higher rate than did inconsistent performers. The experiences of the youth counselors in our sample are illustrative of the situation found in many occupations. The incongruence between the required educational level of the job incumbents and the primarily custodial nature of their work duties leads to P-E misfit among many youth counselors.

Traditionally, turnover has been viewed as a negative phenomenon (McEvoy & Cascio, 1987; Staw, 1980). In fact, whether the organizational consequences of turnover are negative depends upon who stays and who leaves (Mobley, 1982). For instance, in the present research, from the perspective of the organization, the process of voluntary turnover did not adequately select out the marginal performer.

In fact, all employees obtaining a rating of "excellent" subsequently withdrew. These results indicate that an organization choosing the "most" able applicants may be using a less than optimal selection strategy. Specifically, they may be choosing individuals who will become dissatisfied with their work and quit (Forbes & Barrett, 1978). Jackofsky and Peters (1983) suggest that selection criteria be enhanced to allow for the hiring of prospective employees who are not only able to accomplish the task(s) involved, but are able to do so for an extended period of time.

The design employed here is nonexperimental and the results must be interpreted with caution. Development and implementation of a research design allowing for causal inferences about selection, placement, training, and retention issues would be useful. Future work should evaluate and further clarify the consequences of underutilization on employee job satisfaction, commitment, motivation, absenteeism, and turnover.

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