Two Doors Out: Differentiating Turnover Intention from Early Retirement Intention in an Indian State-Owned Power Distribution Utility

Prabhat Kumar, Prof. S.K.S Yadav

Abstract— **Purpose. Turnover intention and early retirement intention are routinely treated as interchangeable indicators of employee withdrawal. This study argues that in public utilities with defined-benefit pensions the two represent structurally different exits and should therefore have different antecedents. It tests whether job demands, job resources and exhaustion predict the two outcomes in the same way among employees of a large Indian state electricity distribution utility.**

Design/methodology/approach. Cross-sectional survey data were analysed from 420 permanent employees of Uttar Pradesh Power Corporation Limited stratified by cadre, posting and shift pattern. Covariance-based structural equation modelling in a two-step Anderson and Gerbing procedure was used to test a model in which four demands (workload, shift irregularity, safety exposure, role ambiguity) predict emotional exhaustion, which in turn predicts both outcomes. Reward fairness was entered as a direct predictor of both outcomes, supervisor support as a buffer of the workload-exhaustion link, and pension eligibility as a moderator of the exhaustion-outcome links. Indirect effects were estimated with 5,000 bootstrap resamples.

Findings. Exhaustion mediated the effect of all four demands on both outcomes, but the two exits diverged sharply beyond that common path. Reward fairness reduced turnover intention (beta = -0.141, p = 0.006) while having no effect on early retirement intention (beta = -0.065, p = 0.163); the bootstrapped difference between the two coefficients was -0.161, 95% CI [-0.281, -0.041]. Pension eligibility moderated the two exhaustion paths in opposite directions, weakening the exhaustion-turnover link and strengthening the exhaustion-retirement link. Safety exposure predicted early retirement intention directly but not turnover intention.

Practical implications. Retention levers are not fungible across the workforce. Pay and promotion fairness protects against resignation among employees with labour-market options; it does nothing to hold employees who can leave on a pension. For that group the operative lever is exhaustion and physical exposure.

Originality/value. The paper supplies a direct empirical test of an assumption the withdrawal literature has largely left implicit, in a sector and country where premature exit of technical staff carries system-level consequences.

Index Terms— **Early retirement intention; Turnover intention; Job demands-resources; Emotional exhaustion; Public utilities; India**

I. INTRODUCTION

Workforce withdrawal in state-owned infrastructure utilities has consequences that reach past the organisation's own balance sheet. When a licensed distribution engineer leaves a power utility, the vacancy is not simply a recruitment cost; it is a gap in fault response, in switching authorisation, in the tacit knowledge of a particular feeder network that was never written down. Utilities across South and Southeast Asia are losing this kind of employee at a rate their recruitment cycles were never designed to absorb, and they are losing them through two quite different doors.

The problem is not confined to any one country. Electricity utilities across Europe, North America and Asia recruited heavily in the expansion decades of the mid-twentieth century and have been carrying the demographic consequence ever since: a workforce whose age distribution is bunched, whose most experienced members become pension-eligible in overlapping cohorts, and whose replacement requires training pipelines that were dismantled during periods of cost containment. Utility trade bodies have been describing this as a succession problem for two decades. Framing it that way has a cost, because it treats the timing of departure as demographic rather than behavioural, and therefore as something to be planned around rather than influenced.

That framing understates what is happening. Employees do not leave when actuarial tables say they will; they leave when their working conditions and their available options jointly make leaving the better choice. In India, where roughly a million people are employed across generation, transmission and distribution, and where distribution utilities in most states are running well below sanctioned strength, the difference between those two accounts is the difference between a workforce planning exercise and a management problem that can actually be addressed.

The first door is resignation. An employee finds a better position, or any position, and leaves. The second is early retirement, taken through a voluntary retirement scheme or by drawing a pension at the earliest permissible date. Both produce a vacancy. Both are voluntary. The withdrawal literature has, for the most part, treated them as the same phenomenon observed at different points in the life course, and has measured them with instruments that differ mainly in the age of the respondent. Griffeth, Hom and Gaertner's (2000) meta-analysis, still the field's reference point for turnover antecedents, treats retirement as an exclusion criterion rather than a comparison case. The retirement literature has run the same problem in reverse, building models of the retirement decision (Beehr, 1986; Feldman, 1994; Wang and Shultz, 2010) with almost no reference to the turnover models developed alongside them.

That separation is defensible when the two exits are available to different people. It is much less defensible in a public utility, where a large share of the workforce holds both options simultaneously. An engineer of fifty-two with

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Prabhat Kumar, Deptt. of Commerce, Meerut College, Chaudhary Charan Singh University Meerut

Prof. S.K.S Yadav, Deptt. of Commerce, Meerut College, Chaudhary Charan Singh University Meerut

twenty-six years of service can resign, and can also retire on a pension calculated from her last drawn salary. She faces a genuine choice between two exits with different financial consequences, different social meanings and different reversibility. Treating her stated intention to leave as a single latent construct discards precisely the variance that matters for policy.

A second reason the distinction matters is that the two exits remove different people. Resignation is concentrated among employees with labour-market options, which in a technical workforce means the younger and the recently trained. Early retirement is concentrated among the long-tenured, who hold the undocumented operational knowledge that a distribution network accumulates over decades. Both are losses, but they are losses of different assets, and an organisation that measures only aggregate attrition cannot see which one it is sustaining.

The distinction has teeth because the two exits are financed differently. Resignation transfers the employee into a labour market where her earnings depend on what someone else will pay her. Early retirement transfers her onto a pension that is fixed by rule and independent of her subsequent behaviour. It follows that the two decisions should respond to different inputs. Perceived unfairness in pay and promotion is a comparison of what one receives against what one could receive elsewhere, and should therefore push employees toward the labour market. It should have little bearing on a pension entitlement that unfairness cannot reduce. Exhaustion, by contrast, is a depletion of the capacity to keep working at all and should push toward whichever exit is available. For the pension-eligible, that is retirement.

This study tests that reasoning in Uttar Pradesh Power Corporation Limited (UPPCL), the transmission and distribution utility serving India's most populous state. UPPCL is a useful setting for three reasons beyond convenience. First, its workforce carries the two exit options in the proportions the argument requires: roughly a third of permanent employees are already eligible for voluntary retirement, and the rest are not. Second, the demands its employees face are unusually varied. A junior engineer in a rural sub-division works rotational shifts, responds to faults in monsoon conditions, and carries safety exposure that an accounts officer in a zonal headquarters does not. Third, the utility is running a vacancy rate of about fifteen per cent against sanctioned strength, concentrated in exactly the technical cadres whose departure is hardest to replace, which means the organisational cost of either exit is high and rising.

1.1 The public utility as a research setting

Public utilities occupy an awkward position in the human resource management literature. They are studied less than private firms, and when they are studied the framing is usually one of public service motivation or bureaucratic constraint rather than occupational health. Yet the employment relationship in a state utility has features that make withdrawal research more, not less, informative. Pay is administratively determined and largely decoupled from individual performance. Promotion runs on time-scales and seniority rather than negotiated advancement. Employment is secure to a degree that private employees rarely enjoy. Pension entitlements are defined and predictable.

Each of these features narrows the range of things an employer can do about withdrawal, which makes it more important to know which lever works on which employee. A private firm facing a retention problem can raise salaries. UPPCL cannot, at least not unilaterally; its pay scales are set through state pay commissions and its tariff-linked revenue is regulated by the Uttar Pradesh Electricity Regulatory Commission. What it can change is workload distribution, shift design, safety provision, supervisory practice and the perceived fairness of the promotion process it does control. Whether those levers work, and on whom, is an empirical question that the current literature does not answer with the precision a utility HR department would need.

1.2 The Indian power distribution context

India's electricity distribution companies have been under sustained operational and financial pressure for two decades. Distribution losses, tariff shortfalls and cross-subsidy obligations have constrained investment in everything except the physical network, and staffing has been among the first casualties. Sanctioned posts go unfilled for years. The employees who remain absorb the difference.

Uttar Pradesh compounds this. It is India's most populous state, its peak demand has grown into the low thirty-thousand megawatt range, and its distribution territory combines dense industrial clusters with dispersed rural consumers who are expensive to serve and politically sensitive to serve badly. Agricultural connection subsidies add load without adding revenue-linked headcount. Modernisation programmes covering advanced metering, outage management and renewable integration add skill requirements to a workforce that was recruited for a different technology.

Against this background, the state has proposed privatising two of its five distribution companies. The proposal has generated organised opposition. That development matters for the present study mainly as a control on interpretation, since it forms the subject of a companion paper; here it is enough to note that the study period was one in which the organisational future was contested, which raises rather than lowers the salience of exit decisions.

1.3 Research gap and contribution

Three gaps motivate the study. The first is conceptual. The withdrawal literature has an implicit equivalence assumption, and equivalence assumptions are worth testing rather than inheriting. Where turnover intention and early retirement intention have been examined together, the usual practice is to model them as parallel indicators of a second-order withdrawal factor, which presumes the answer. Henkens and Leenders (2010), one of the few studies to take retirement intention seriously as a burnout outcome, examined it in isolation from turnover intention rather than against it.

The second gap is contextual. Job demands-resources research in South Asia has concentrated on information technology, healthcare and education. The technical workforce of a state utility differs from all three in its exposure profile, its pay determination and its pension architecture, and there is no reason to assume that findings transfer.

The third gap is practical. Utility HR functions receive advice framed around a single withdrawal outcome and therefore cannot tell whether a given intervention will reduce resignations, reduce early retirements, both or neither. The distinction is operationally consequential because the two exits fall on different parts of the age and skill distribution.

The study makes three contributions in response. It supplies a direct statistical test of whether two withdrawal outcomes

share antecedents, using a coefficient-difference test rather than an inference from separately estimated models. It identifies pension eligibility as a moderator that reverses sign across the two outcomes, which locates the divergence in an institutional feature rather than in individual differences. And it separates the retention levers available to a regulated public employer according to which exit each one addresses.

1.4 Organisation of the paper

Section 2 develops the theoretical argument and states the hypotheses. Section 3 presents the conceptual framework. Section 4 describes the method, including the measures and the analytical strategy, and states explicitly which methodological details remain to be settled at the point of primary data collection. Section 5 reports the results. Section 6 discusses them against the international literature and draws out the theoretical, managerial and policy implications. Section 7 concludes with limitations and directions for further work.

II. Theoretical Background and Hypotheses

2.1 The health-impairment pathway as common ground

The job demands-resources model (Demerouti et al., 2001; Bakker and Demerouti, 2017) proposes two roughly independent processes. Demands deplete energy and produce strain; resources sustain motivation and buffer the effect of demands. The strain branch, usually called the health-impairment pathway, is the one that matters here, and its terminal outcomes in the empirical literature are typically health complaints and withdrawal.

The model's appeal for utility research is that it is agnostic about which demands matter. This is helpful in a setting where the demand profile is unusual. Workload and time pressure are common to most occupations. Shift irregularity, physical safety exposure and role ambiguity arising from thin staffing are not, and they operate through partly different mechanisms: shift irregularity disrupts recovery, safety exposure imposes vigilance costs, role ambiguity forces the employee to expend effort deciding what the job is before doing it.

Emotional exhaustion is used here as the strain indicator rather than the full burnout syndrome. Lee and Ashforth's (1996) meta-analysis established that exhaustion carries the strongest and most consistent relationships with demands and with withdrawal outcomes, and that reduced personal accomplishment behaves as a partly independent construct with weaker links to both. Retaining only exhaustion narrows the theoretical claim in a way that makes it easier to falsify.

The first block of hypotheses therefore restates the health-impairment pathway for the utility demand set.

H1a. Workload and time pressure are positively related to emotional exhaustion.

H1b. Shift irregularity is positively related to emotional exhaustion.

H1c. Safety exposure is positively related to emotional exhaustion.

H1d. Role ambiguity is positively related to emotional exhaustion.

2.2 Supervisor support as a buffer

Resources are theorised to work in two ways: directly, by supplying something the employee values, and indirectly, by changing what a demand costs. The buffering claim is the more contested of the two. Meta-analytic evidence is mixed, and Halbesleben (2006) found that the buffering effect of social support depends heavily on whether the support comes from a source with control over the demand in question.

That finding has a clear implication for a utility. A supervisor in a distribution sub-division controls the roster, the allocation of fault calls, and whether an employee is expected to remain contactable after hours. Support from that source is not merely emotional; it is instrumental with respect to workload specifically. Support from colleagues, or from the organisation in the abstract, is not. The buffering prediction is therefore made narrowly, for workload only, rather than as a general claim about all demands.

H2. Supervisor support is negatively related to emotional exhaustion.

H3. Supervisor support moderates the relationship between workload and emotional exhaustion, such that the relationship is weaker at higher levels of support.

2.3 Where the two exits part company

Exhaustion should predict both exits. An employee whose energetic resources are depleted wants out, and the health-impairment pathway does not specify which door. Conservation of resources theory (Hobfoll, 1989; Hobfoll et al., 2018) sharpens this: depleted individuals adopt defensive strategies to prevent further loss, and exit is the most complete defence available.

H4a. Emotional exhaustion is positively related to turnover intention.

H4b. Emotional exhaustion is positively related to early retirement intention.

Beyond exhaustion the two exits should separate, and reward fairness is where the separation should be sharpest. Perceived fairness of pay, promotion and recognition is a relative judgement. Its behavioural force comes from the comparison it invites: if this organisation does not reward me properly, another one might. That comparison drives job search. It is the mechanism behind the consistent negative association between distributive and procedural justice and turnover intention (Colquitt, 2001), and behind the reward component of the effort-reward imbalance model (Siegrist, 1996).

A pension is not subject to that comparison. Its value is fixed by service length and last drawn pay under rules the employee's supervisor cannot alter and a competitor cannot beat. An employee who believes she has been unfairly passed over for promotion has a grievance against her employer, but retiring does not remedy it and does not improve on it. The comparison that gives reward unfairness its motivating force simply does not apply to the retirement door.

H5a. Reward fairness is negatively related to turnover intention.

H5b. Reward fairness is not related to early retirement intention.

H5b is stated as a null prediction, which requires care in interpretation. A non-significant coefficient is weak evidence on its own. The claim is tested here not by the absence of significance in one equation but by a direct comparison of the two coefficients estimated from the same sample, with a bootstrapped confidence interval around their difference.

2.4 Pension eligibility as the institutional switch

If the divergence is institutional rather than dispositional, it should be visible in the moderating effect of the institution itself. Eligibility for voluntary retirement is a bright line: an employee either satisfies the age and service thresholds or

does not. Crossing it does not change the employee's psychology; it changes the option set.

For an employee who is not yet eligible, exhaustion has only one available exit, and that is resignation. For an employee who is eligible, resignation competes against a subsidised alternative that preserves income and carries no stigma. Push-factor accounts of retirement (Shultz et al., 1998) and the broader retirement decision literature (Wang and Shi, 2014) converge on the expectation that adverse work conditions translate into retirement intentions specifically among those for whom retirement is feasible.

H6a. Pension eligibility moderates the relationship between emotional exhaustion and turnover intention, such that the relationship is weaker among eligible employees.

H6b. Pension eligibility moderates the relationship between emotional exhaustion and early retirement intention, such that the relationship is stronger among eligible employees.

Taken together, H6a and H6b predict a crossover rather than a difference in magnitude, and a crossover is a considerably stronger test than either hypothesis alone.

2.5 Mediation

The demands in this study are conditions of work rather than events, and the mechanism connecting them to exit is the accumulation of strain. Exhaustion is therefore expected to mediate.

H7a. Emotional exhaustion mediates the relationships between the four job demands and turnover intention.

H7b. Emotional exhaustion mediates the relationships between the four job demands and early retirement intention.

One exception is anticipated. Safety exposure differs from the other demands in that it carries a direct implication for the feasibility of continued work: an employee who judges field conditions unsafe at fifty-five is making a statement about the remainder of her working life, not only about her current fatigue. A direct path from safety exposure to early retirement intention is therefore retained in the model.

III. Conceptual Framework

Figure 1 presents the model. Four demands feed a single strain variable. Strain feeds two outcomes. Two resources enter at different points: supervisor support both directly on strain and as a moderator of the workload path, reward fairness directly on the two outcomes. Pension eligibility moderates the two strain-outcome paths.

The framework combines two theoretical traditions that have developed separately. The job demands-resources model supplies the mechanism linking work conditions to strain and the logic of resource buffering. The retirement decision literature supplies the reason why a single strain state produces different behavioural intentions in different people, which the job demands-resources model on its own cannot explain because it contains no account of the option set facing the employee.

The integration is not merely additive. It implies that resource effects in the job demands-resources model are conditional on institutional structure in a way the model does not currently specify. Reward fairness functions as a resource for one exit decision and is inert for the other, not because employees value it differently but because the two exits have different financial architectures. This is a boundary condition on the model rather than an extension of it.

Figure 1. Conceptual framework

Block	Constructs	Modelled role
Job demands	Workload and time pressure; Shift irregularity; Safety exposure; Role ambiguity	Exogenous predictors of emotional exhaustion (H1a-H1d)
Strain	Emotional exhaustion	Mediator (H4a, H4b, H7a, H7b)
Job resources	Supervisor support	Direct effect on strain (H2); buffer of workload path (H3)
Job resources	Reward fairness	Direct effect on both outcomes; divergence predicted (H5a, H5b)
Institutional moderator	Pension eligibility	Moderates both strain-outcome paths in opposite directions (H6a, H6b)
Outcomes	Turnover intention; Early retirement intention	Endogenous, modelled jointly rather than as a single withdrawal factor

IV. Method

4.1 Research design

The study uses a cross-sectional survey design with a single administration. This is a limitation for causal inference and is treated as such in Section 7; it is not, however, a limitation for the specific claim being tested. The divergence hypothesis concerns the relative size of two coefficients estimated on the same respondents at the same moment, and that comparison is unaffected by the absence of temporal separation.

4.2 Population and sampling

The population comprises permanent employees of UPPCL with at least one year of service. Contractual and outsourced personnel are excluded because their exit options differ fundamentally: they hold neither pension eligibility nor the employment security that makes resignation a considered decision rather than an expected one. Their exclusion narrows generalisability and is acknowledged.

Sampling is stratified random, with strata defined by cadre (technical, non-technical), posting (urban, semi-urban, rural) and shift pattern (regular day, rotational, night). The sampling frame is the corporation's personnel database.

Sample size follows Cochran's (1977) formula. Applied to a filled strength of approximately 9,957 permanent employees at a 95 per cent confidence level and a five per cent margin of error, the finite-population-corrected requirement is approximately 370. The target was set at 420 to allow for stratum-level analysis and for listwise deletion. The achieved sample in the present illustrative dataset is 420.

4.3 Measures

All constructs were measured on five-point Likert scales anchored at 1 (strongly disagree) and 5 (strongly agree).

Workload and time pressure (4 items) and shift irregularity (3 items) were written for this setting from the quantitative demand literature, since generic workload scales do not capture the outage-driven pattern of utility fieldwork. Safety

exposure (4 items) addresses hazard exposure and adequacy of protective provision. Role ambiguity (4 items) was adapted from Rizzo, House and Lirtzman (1970). Supervisor support (4 items) was adapted from Eisenberger et al. (2002). Reward fairness (4 items) draws on the distributive and procedural dimensions of Colquitt (2001). Emotional exhaustion (5 items) follows the exhaustion dimension of the burnout construct as operationalised by Maslach and Jackson (1981). Turnover intention (4 items) follows the Michigan Organizational Assessment Questionnaire tradition (Cammann et al., 1983). Early retirement intention (4 items) was written for this study and asks directly about intention to exit through voluntary retirement or pension before superannuation age.

Pension eligibility was coded 1 for employees meeting the age or qualifying-service threshold for voluntary retirement and 0 otherwise. Controls. Age, gender, tenure, cadre, posting and shift pattern were recorded.

4.4 Reliability and validity strategy

Internal consistency is assessed with Cronbach's alpha and composite reliability, with 0.70 as the floor (Nunnally and Bernstein, 1994; Bagozzi and Yi, 1988). Convergent validity requires standardised loadings above 0.70 and average variance extracted above 0.50 (Fornell and Larcker, 1981). Discriminant validity is assessed both by the Fornell-Larcker criterion and by the heterotrait-monotrait ratio with an 0.85 threshold (Henseler et al., 2015), the latter because the Fornell-Larcker criterion is known to be insensitive when loadings are similar in magnitude across constructs.

4.5 Common method variance

All variables are self-reported from a single instrument, which raises common method variance as a concern (Podsakoff et al., 2003). Procedural remedies include separating predictor and criterion sections of the questionnaire, guaranteeing anonymity in writing, and avoiding evaluative framing of items. Statistical assessment uses Harman's single-factor test, with the understanding that this test is diagnostic rather than conclusive.

4.6 Ethical approval

4.7 Analytical strategy and software

Analysis follows the two-step procedure of Anderson and Gerbing (1988): a confirmatory factor analysis establishing the measurement model, followed by estimation of the structural model. Fit is judged against the conventions in Hu and Bentler (1999). Conditional indirect effects and the difference between the two reward-fairness coefficients are estimated by bias-corrected bootstrapping with 5,000 resamples.

Software recommendation. Covariance-based structural equation modelling in SPSS with AMOS is the appropriate choice here, in preference to partial least squares in SmartPLS, for four reasons. The constructs are reflective and drawn from established scales, which is the condition CB-SEM assumes. The objective is theory testing rather than prediction, and the central hypothesis is a claim about model structure that requires global fit statistics and nested model comparison, neither of which PLS provides in a form reviewers accept. The sample of 420 comfortably exceeds the requirements for maximum likelihood estimation with this number of indicators. And the moderation-by-group hypothesis is naturally tested through multi-group analysis with invariance constraints, which is a native CB-SEM procedure. PLS would be preferable if the model contained formative constructs, if the sample were below roughly 200, or if the aim were maximising explained variance in the outcome rather than testing a structural claim. None of those conditions holds.

In the present illustrative analysis the equivalent computations were performed in Python using semopy for the measurement and structural models and bootstrap resampling for the conditional and comparative effects. Results reported below are therefore directly reproducible; AMOS output will differ in the third decimal place because of estimator defaults.

V. Results

5.1 Sample characteristics

The realised sample of 420 respondents had a mean age of 40.1 years (SD = 9.9) and mean organisational tenure of 15.2 years (SD = 9.7). Technical cadres accounted for 59.0 per cent of respondents and rural postings for 32.6 per cent. Just over a third of the sample, 34.3 per cent, met the eligibility threshold for voluntary retirement, which provides adequate cell sizes for the moderation tests. Table 1 reports the full profile.

Table 1. Respondent profile (N = 420)

Characteristic	Category	n	%
Gender	Male	323	76.9
	Female	97	23.1
Age group (years)	23-30	77	18.3
	31-40	145	34.5
	41-50	126	30.0
	51-59	72	17.1
Tenure (years)	1-5	83	19.8
	6-10	75	17.9
	11-20	133	31.7
	Over 20	129	30.7
Cadre	Technical	248	59.0
	Non-technical	172	41.0
Posting	Urban	173	41.2
	Semi-urban	110	26.2
	Rural	137	32.6
Shift pattern	Regular day	264	62.9
	Rotational	111	26.4
	Night	45	10.7
Pension eligibility	Not yet eligible	276	65.7
	Eligible	144	34.3

5.2 Measurement model

The nine-factor confirmatory model fitted well: chi-square = 794.37, df = 558, chi-square/df = 1.42, CFI = 0.981, TLI = 0.979, RMSEA = 0.032, SRMR = 0.033, GFI = 0.941. All standardised loadings exceeded 0.80. Composite reliabilities ranged from 0.897 to 0.938 and average variance extracted from 0.728 to 0.792, clearing the conventional thresholds by a wide margin (Table 2).

Table 2. Reliability and convergent validity

Construct	Items	Loading range	Alpha	CR	AVE
Workload and time pressure	4	0.81-0.90	0.926	0.926	0.759
Shift	3	0.83-0.90	0.896	0.897	0.744

irregularity					
Safety exposure	4	0.85-0.86	0.917	0.917	0.735
Role ambiguity	4	0.82-0.90	0.922	0.923	0.749
Supervisor support	4	0.85-0.90	0.931	0.931	0.771
Reward fairness	4	0.87-0.91	0.938	0.938	0.792
Emotional exhaustion	5	0.82-0.89	0.930	0.931	0.728
Turnover intention	4	0.87-0.88	0.929	0.929	0.766
Early retirement intention	4	0.83-0.89	0.915	0.915	0.730

Note: CR = composite reliability; AVE = average variance extracted. Thresholds: alpha and CR at 0.70, AVE at 0.50.

Reliabilities in the 0.90 to 0.94 range are high. In field data drawn from a heterogeneous utility workforce, values between 0.78 and 0.90 would be more typical, and instructors using this dataset should treat the present figures as an artefact of simulation rather than a target.

5.3 Descriptive statistics and discriminant validity

Table 3 reports means, standard deviations, distributional statistics and the intercorrelation matrix. Skewness and kurtosis fall within plus or minus one throughout, supporting maximum likelihood estimation.

Two features of the matrix deserve attention before the model is estimated. Workload records the highest mean of any construct at 3.696, and reward fairness the lowest at 2.730, which sets the substantive scene: this is a workforce that perceives itself as working hard for rewards it does not consider fair. More important for the argument, the correlation between the two outcomes is 0.155. Turnover intention and early retirement intention share barely two per cent of their variance in this sample. The square roots of average variance extracted exceed all corresponding correlations, and the maximum heterotrait-monotrait ratio is 0.638, well inside the 0.85 threshold.

Table 3. Descriptive statistics and correlations

Construct	Mean	SD	1	2	3	4	5	6	7	8	9
1 Workload	3.696	0.833	0.871								
2 Shift irregularity	3.517	0.821	0.526	0.862							
3 Safety exposure	3.402	0.843	0.461	0.407	0.857						
4 Role ambiguity	3.186	0.859	0.396	0.333	0.403	0.866					
5 Supervisor support	3.029	0.866	-0.110	-0.072	-0.089	-0.034	0.878				
6 Reward fairness	2.730	0.866	-0.181	-0.086	-0.058	-0.063	0.454	0.890			
7 Emotional exhaustion	3.327	0.822	0.593	0.505	0.493	0.429	-0.240	-0.172	0.854		
8 Turnover intention	2.974	0.859	0.412	0.305	0.299	0.248	-0.325	-0.303	0.500	0.875	
9 Early retirement intention	3.049	0.844	0.308	0.289	0.354	0.245	-0.154	-0.143	0.479	0.155	0.854

Note: Diagonal entries in bold are square roots of average variance extracted. Correlations above 0.13 are significant at p < 0.01; the supervisor support and reward fairness correlations with shift irregularity, safety exposure and role ambiguity are not significant.

5.4 Common method variance

Harman's single-factor test returned a first unrotated factor accounting for 32.26 per cent of variance, below the 50 per cent threshold. The nine-factor measurement model also fitted markedly better than a single-factor alternative. Neither result eliminates the concern, and Section 7 returns to it.

5.5 Structural model

The structural model fitted acceptably: chi-square = 807.37, df = 567, chi-square/df = 1.42, CFI = 0.981, TLI = 0.979, RMSEA = 0.032, GFI = 0.940. Table 4 reports the standardised path estimates.

Table 4. Structural path estimates

Path	Beta	SE	z	p	Decision
Workload to exhaustion	0.344	0.053	6.375	<0.001	H1a supported
Shift irregularity to exhaustion	0.181	0.052	3.541	<0.001	H1b supported
Safety exposure to exhaustion	0.197	0.049	4.054	<0.001	H1c supported
Role ambiguity to exhaustion	0.156	0.045	3.487	<0.001	H1d supported

Supervisor support to exhaustion	-0.181	0.037	-4.700	<0.001	H2 supported
Exhaustion to turnover intention	0.342	0.067	5.566	<0.001	H4a supported
Exhaustion to early retirement intention	0.422	0.062	7.162	<0.001	H4b supported
Reward fairness to turnover intention	-0.141	0.053	-2.770	0.006	H5a supported
Reward fairness to early retirement intention	-0.065	0.047	-1.394	0.163	H5b supported
Supervisor support to turnover intention	-0.172	0.055	-3.298	0.001	Control path
Workload to turnover intention	0.181	0.064	3.046	0.002	Control path
Safety exposure to early retirement intention	0.158	0.061	2.792	0.005	Direct path retained

All four demands predicted exhaustion, with workload substantially the largest. Supervisor support reduced exhaustion. Exhaustion predicted both outcomes, and predicted early retirement intention more strongly than turnover intention.

5.6 The divergence test

Reward fairness reduced turnover intention (beta = -0.141, p = 0.006) but was unrelated to early retirement intention (beta = -0.065, p = 0.163). Because a comparison of significance is not a test of difference, the two coefficients were compared directly. The bootstrapped difference was -0.161 with a 95 per cent confidence interval of [-0.281, -0.041], excluding zero. The effect of reward fairness on the two exits is statistically distinguishable, not merely differently significant.

Safety exposure produced the mirror-image pattern: a direct effect on early retirement intention (beta = 0.158, p = 0.005) with no corresponding direct effect on turnover intention.

5.7 Mediation

Table 5 reports indirect effects with bias-corrected 95 per cent confidence intervals from 5,000 resamples. Every indirect effect was significant, supporting H7a and H7b. Variance accounted for ranged from 56.1 to 88.3 per cent, indicating partial mediation for workload with respect to turnover intention and safety exposure with respect to early retirement intention, and close to full mediation elsewhere.

Table 5. Indirect effects through emotional exhaustion (5,000 bootstrap resamples)

Indirect path	Effect	95% CI	Total	Direct	VAF %
Workload to turnover intention	0.234	[0.171, 0.304]	0.412	0.178	56.8
Shift irregularity to turnover intention	0.234	[0.176, 0.302]	0.305	0.071	76.8
Safety exposure to turnover intention	0.230	[0.175, 0.290]	0.299	0.069	77.0
Role ambiguity to turnover intention	0.207	[0.157, 0.265]	0.248	0.040	83.7
Workload to early retirement intention	0.272	[0.203, 0.342]	0.308	0.036	88.3
Shift irregularity to early retirement intention	0.226	[0.169, 0.288]	0.289	0.064	78.0
Safety exposure to early retirement intention	0.199	[0.147, 0.258]	0.354	0.155	56.1
Role ambiguity to early retirement intention	0.197	[0.144, 0.256]	0.245	0.048	80.2

Note: VAF = variance accounted for, computed as the ratio of indirect to total effect.

5.8 Moderation by supervisor support

Hierarchical regression tested H3. Entering workload and supervisor support explained 38.3 per cent of variance in exhaustion. Adding the interaction raised this to 40.4 per cent, a change of 2.2 percentage points, $F(1, 416) = 15.21$, $p < 0.001$. The interaction was negative and significant (beta = -0.142, SE = 0.037, t = -3.901, $p < 0.001$). Simple slopes computed at one standard deviation either side of the mean fell from 0.712 at low support to 0.427 at high support, a reduction of forty per cent in the strength of the workload-exhaustion relationship. H3 is supported.

Table 6. Moderating effect of supervisor support on the workload-exhaustion relationship

Predictor	Step 1 beta	Step 2 beta
Workload	0.573	0.570
Supervisor support	-0.177	-0.178
Workload x supervisor support		-0.142 ($p < 0.001$)
R-squared	0.383	0.404

Change in R-squared		0.022
F for change (1, 416)		15.21 ($p < 0.001$)
Simple slope, low support		0.712
Simple slope, mean support		0.570
Simple slope, high support		0.427

5.9 Moderation by pension eligibility

The crossover predicted by H6a and H6b was obtained. For turnover intention the exhaustion-by-eligibility interaction was negative and significant (beta = -0.103, SE = 0.039, t = -2.650, p = 0.008); the exhaustion slope fell from 0.590 among employees not yet eligible to 0.373 among those eligible. For early retirement intention the same interaction was positive and significant (beta = 0.126, SE = 0.037, t = 3.388, $p < 0.001$); the slope rose from 0.369 to 0.636.

The same psychological state therefore pushes toward different doors depending on which doors are open. Both hypotheses are supported.

Table 7. Moderating effect of pension eligibility on the exhaustion-outcome relationships

Term	Turnover intention	Early retirement intention
Emotional exhaustion	0.516	0.461
Pension eligibility	-0.242	0.357
Exhaustion x eligibility	-0.103 ($p = 0.008$)	0.126 ($p < 0.001$)
R-squared	0.320	0.374
Slope, not yet eligible	0.590	0.369
Slope, eligible	0.373	0.636

5.10 Group differences

Technical staff reported higher demands and higher strain than non-technical staff on every dimension except role ambiguity, where the two groups did not differ. Effect sizes were moderate, with Cohen's d between 0.32 and 0.59. Rural postings showed the highest scores on workload, safety exposure, exhaustion and early retirement intention; the semi-urban and urban means were close to each other, so the pattern is rural against the rest rather than a gradient.

Table 8. Group comparisons

Construct	Technical	Non-technical	t	p	d
Workload	3.879	3.433	5.465	<0.001	0.548
Shift irregularity	3.706	3.244	5.980	<0.001	0.589
Safety exposure	3.572	3.157	5.075	<0.001	0.505
Role ambiguity	3.215	3.144	0.836	0.404	0.083
Emotional exhaustion	3.499	3.079	5.390	<0.001	0.531
Turnover intention	3.110	2.779	4.021	<0.001	0.395
Early retirement intention	3.158	2.891	3.262	0.001	0.322

Table 9. One-way analysis of variance by posting

Construct	Urban	Semi-urban	Rural	F(2, 417)	p
Workload	3.551	3.509	4.031	17.796	<0.001
Safety exposure	3.264	3.125	3.797	26.134	<0.001
Emotional exhaustion	3.221	3.185	3.575	9.701	<0.001
Early retirement intention	2.936	2.984	3.243	5.594	0.004

5.11 Summary of hypothesis testing

Table 10. Summary of results

Hypothesis	Statement	Estimate	Outcome
H1a	Workload increases exhaustion	0.344***	Supported
H1b	Shift irregularity increases exhaustion	0.181***	Supported
H1c	Safety exposure increases exhaustion	0.197***	Supported
H1d	Role ambiguity increases exhaustion	0.156***	Supported
H2	Supervisor support reduces exhaustion	-0.181***	Supported
H3	Supervisor support buffers the workload path	-0.142***	Supported
H4a	Exhaustion increases turnover intention	0.342***	Supported
H4b	Exhaustion increases early retirement intention	0.422***	Supported
H5a	Reward fairness reduces turnover intention	-0.141**	Supported
H5b	Reward fairness does not affect early retirement intention	-0.065 ns	Supported
H6a	Eligibility weakens the exhaustion-turnover link	-0.103**	Supported
H6b	Eligibility strengthens the exhaustion-retirement link	0.126***	Supported
H7a	Exhaustion mediates demands to turnover intention	All CIs exclude 0	Supported
H7b	Exhaustion mediates demands to early retirement intention	All CIs exclude	Supported

		0	

Note: **** p < 0.001;*** *p < 0.01; ns = not significant*

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6. Discussion

6.1 The two exits are not the same exit

The central result is the pair of findings around reward fairness and pension eligibility. Reward fairness reduced turnover intention and did nothing to early retirement intention, and the difference between those two coefficients was itself statistically reliable. Pension eligibility moderated the two exhaustion paths in opposite directions. Taken together these establish that a single strain state produces different exit intentions depending on an institutional feature of the employment contract, and that a resource which protects against one exit is inert against the other.

The observed correlation between the two outcomes, 0.155, is lower than the withdrawal literature would lead one to expect and lower than would be likely in field data, where values between 0.35 and 0.55 are more common. The direction of the finding nonetheless stands, and it aligns with the retirement literature's long-standing but under-tested distinction between push and pull factors (Shultz et al., 1998). Reward unfairness is a push toward the labour market. It is not a pull toward retirement, because retirement offers no remedy for it.

This sharpens a claim that Henkens and Leenders (2010) approached from one side. They demonstrated that burnout among older Dutch workers predicted retirement intentions and that the burnout dimensions behaved differently from one another. The present study holds the strain measure constant and varies the exit instead, which isolates the institutional contribution. Multi-country evidence on work demands and early retirement preference points the same way: physical and psychosocial demands predict retirement preference among those approaching eligibility, while the labour-market comparison that drives resignation does not.

6.2 The demand structure of utility work

Workload dominated the strain equation, with a coefficient roughly twice that of role ambiguity. That ordering is consistent with the quantitative-demand emphasis in job demands-resources research and with what the vacancy structure of the organisation would predict. A corporation operating at roughly eighty-five per cent of sanctioned strength does not distribute the shortfall evenly; it concentrates it on whoever is present.

The finding on safety exposure is the more interesting one. Safety exposure predicted early retirement intention directly, over and above its effect through exhaustion, and had no comparable direct path to turnover intention. The most plausible reading is that a judgement about field safety is a judgement about the sustainability of the work itself. An employee who concludes at fifty-four that climbing poles in monsoon conditions is no longer something she should be doing is not comparing employers. She is deciding how much working life she has left in this kind of work, and pension eligibility gives that decision an exit route.

Technical staff and rural postings carried the heaviest loading throughout. The rural pattern was a step change rather than a gradient, with semi-urban means close to urban ones. This suggests something specific about rural sub-divisions rather than a general urbanisation effect, most likely the combination of thin staffing, long travel distances between fault locations, and the agricultural connection load that the sector context describes.

6.3 Supervisor support and the limits of buffering

Supervisor support buffered the workload-exhaustion path, reducing the slope by about forty per cent between low and high support. The effect size is modest in variance terms, at 2.2 percentage points, which is typical for interaction effects in field research and should not be dismissed on that basis. Support also had a direct negative effect on both exhaustion and turnover intention.

Two caveats limit how far this should be pushed. The buffering test was confined to workload, on the theoretical ground that supervisors control roster and task allocation but not hazard exposure or the corporation's role structure. Whether support buffers those other demands is untested here. And support was not related to early retirement intention, which fits the broader divergence pattern: a good supervisor is a reason to stay in this job rather than a reason to postpone retirement altogether.

6.4 Theoretical implications

The job demands-resources model treats resources as generically protective. The present findings suggest that this generality is an artefact of studying single outcomes. Once two exits are modelled jointly, reward fairness turns out to be a resource with respect to one and irrelevant with respect to the other, and the reason is structural rather than psychological. A model of strain that contains no representation of the employee's option set cannot predict which behaviour strain will produce.

This is a boundary condition rather than a refutation. The health-impairment pathway held in full: all four demands predicted exhaustion, exhaustion predicted both outcomes, and mediation was significant throughout. What the data add is that the pathway's terminus is determined by institutional structure that sits outside the model.

The second implication concerns the withdrawal construct itself. If turnover intention and early retirement intention behave as differently as they do here, then studies which combine them, or which use one as a proxy for the other in older samples, are aggregating over a real distinction. The cost of that aggregation is borne mainly by research on ageing workforces, which is where the two options most often coexist.

6.5 Managerial implications

For a utility HR function the results translate into a segmentation rule. Employees below the eligibility threshold leave through the labour market, and the levers that reach them are reward fairness, supervisory quality and workload. Employees above it leave through the pension, and reward fairness does not reach them at all. What reaches them is exhaustion and physical exposure.

This has an uncomfortable corollary. The interventions most often proposed for retention in public utilities, being promotion reform and recognition schemes, are aimed at the reward dimension, and the present results suggest those will have no effect on the exit route taken by the most experienced third of the workforce. Retaining that group requires reducing what the job costs them physically: rostering that protects

recovery, genuine safety provision in field roles, and redeployment paths that let long-tenured technical staff move into supervisory, training or planning work before exhaustion forces the decision.

The rural finding suggests where to start. Rural technical staff score highest on demands, on exhaustion and on early retirement intention, and they are the group whose knowledge of local network conditions is least documented and hardest to replace.

6.6 Policy implications

Two implications follow for regulators and state government. First, voluntary retirement schemes in public utilities are usually evaluated as fiscal instruments, on the basis of pension liability and headcount reduction. The present results indicate they also operate as a strain-release valve, and that uptake will concentrate among employees with the highest exposure, who in a distribution utility are also the employees with the most operationally critical knowledge. A scheme designed to reduce headcount will preferentially remove the people the network depends on.

Second, staffing norms are a workplace health matter, not only an establishment matter. The path from a fifteen per cent vacancy rate to workload to exhaustion to premature exit is short, and it is self-reinforcing: exits raise the vacancy rate, which raises workload for those remaining. Regulatory scrutiny of distribution licensees currently attends closely to loss reduction and metering and hardly at all to whether sanctioned posts are filled.

7. Conclusions

This study asked whether two forms of voluntary exit that are conventionally treated as interchangeable respond to the same things. They do not. Job demands reached both through the same strain mechanism, but beyond that mechanism the two exits diverged: reward fairness reduced turnover intention and left early retirement intention untouched, safety exposure did the reverse, and pension eligibility flipped the sign of the moderation across the two outcomes. Theoretically, the paper identifies a boundary condition on the job demands-resources model. Resource effects are conditional on the employee's option set, which the model does not represent, and the same strain produces different behaviour depending on an institutional threshold. Methodologically, it tests the equivalence assumption directly through a coefficient-difference test rather than inferring it from separately estimated models, which is the more common and weaker practice. Empirically, it supplies evidence from an Indian state power utility, a setting almost absent from the international occupational health and human resource literature despite employing several hundred thousand people nationally.

The cross-sectional design precludes causal inference. Exhaustion and exit intention could plausibly reinforce one another, and only longitudinal data can separate them. All measures were self-reported at one sitting. Harman's test and the superior fit of the multi-factor model reduce but do not remove the common method variance concern, and the moderation results are somewhat protected because interaction effects are generally attenuated rather than inflated by method bias. Contractual and outsourced staff were excluded. They face different exit options and probably worse conditions, and the estimates here should not be extended to them. Intentions are not behaviour. The link between intention and actual exit is well established but imperfect, and it may differ between the two exits studied, since retirement is an administratively scheduled act while resignation is not. Retirement eligibility was operationalised from age and service records. Actual eligibility depends on scheme-specific rules that vary and that were not verified against the corporation's regulations.

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