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Research Paper

Job Demands, Job Control, and Well-Being: A JDCS Model Study among Public Utility Employees

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ABSTRACT

Initial work on the JDCS model began around 1985. This theory proposes that elements such as job expectations, job control, and job support contribute to the social construction of stress in the workplace. The Employee Satisfaction Index was used as a measure of employee well-being, and one of the objectives was to find out how job demands and job control influenced it. Workload requirements are the sum of normal working hours, overtime, and the percentage of workers that are short-staffed. Sixty people working for public utility organizations participated in the study, which was structured as a quantitative, cross-sectional, and explanatory survey. Employee satisfaction and average weekly work hours are negatively correlated (r=-0.434, 0.434, p =.001), according to SPSS Pearson correlation and simple linear regression. This association also accounts for 18.9% of the total variance (R 2 =.189), as explained further. The rate of staff shortage is positively and strongly impacted by the employee satisfaction rating (r =.292, 2 =.292, p =.023; R 2 =.085). Overtime hours and well-being did not show a significant association (r = -.133, p =.310). Decision autonomy (=.289, p =.025; R2 =.083) is another possible metric for employee happiness. Staff satisfaction is unaffected by training expenditure (=.112, p =.396; R2 =.012). The JDCS model, which emphasizes the importance of job demands and increasing decision autonomy in contributing to sustainability of state among employees, can validate the following outcomes within specific limits.

Keywords: *Job Demands, Job Control, Employee Well-Being, Public Utility Employees, Job Demand–Control–Support Model*

The well-being of the workers has turned out to be a serious challenge in the modern organizations particularly in the departments of the public utility where the continuity of service, efficiency of work and public accountability take precedence. The employees of the utility industry like electricity boards, water supply companies and transport services to the populace are prone to work under adverse conditions that are characterized by excessive working hours, understaffing, work pressures and inadequate resources. The attitude of an employee may be highly influenced by the work environment thus influence the performance of employee with regard to motivation and psychological

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welfare. Therefore, the mortality within an environment must be aware of those things that influence the growth of its employees. This is what determines the sustainability of organizations and quality of services (Ceular-Villamandos et al., 2024; Dillulio, 2023; Lu & Zhuang, 2023; Zou et al., 2024).

Employee well-being is not petite just to being sick or stress-free but also are satisfied and are stable emotionally, engrossed in work and are overall doing well at work. In cases where organizations are eager to take care of their employees, the rate of turnover is minimal, there is minimal absenteeism, productivity is high and creatively delivery of services is improved. Alternatively, job demands and lack of control by employees may also be a cause of burnout and dissatisfaction, in addition to lessened dedication to the organization. The most important in the society are the Public Utility Services. In this way, healthy and content employees will be a strategic consideration (Dutheil et al., 2022; Kanwal and Isha, 2022, 2022; Kohnen et al., 2023).

The authors mention an ancient conceptual model Job Demand Control Support Model (JDCS) upon which a notion of influence of workplace conditions on the outcome of the employee is based. Job demands and the form of job control are two essential characteristics that the model thinks establish the well-being of the employees. Overtime, excessive hours, and a lack of available workers are all examples of employment demands that necessitate prolonged mental or physical exertion. The situations when the demands are over the capacity of the employee may result in a strain and the loss of well-being. The other aspect of autonomy and discretion that the employees stand to enjoy when it comes to the execution of the duties is Job Control. These negative effects can be reduced with greater control of the employees on the decision processes and work processes that increase satisfaction and motivation (Ahmad et al., 2022; Akanksha Anand and Kenrick D. Cato, 2021; Borst, 2022; Ruokangas et al., 2022; Siddiqui et al., 2021; Wemken et al., 2021).

Job demands are usually structural, and cannot be avoided in a public utility organization as the service needs and the prescripts over the workforce exist. The employees may be required to work extra hours or do some emergency work or fill shortages in the staff. At the same time, the job control process, such as the decision-making autonomy and the participation in the employee development as a training, can have an impact on the perception of the employee to demand and response. Even though job demands may be a stressful problem, through proper control and organization support, the negative effect may be minimized and encourage resiliency (Chambel et al., 2020; Lee and Cho, 2020).

Although the theoretical aspect of the JDCS model is applicable, little empirical research has been done concerning the precise issue of the staff of the state utility. This disparity in the understanding of how these dynamics work within the important public service is the majority of the extant literature, which focuses upon the units of the private sector or healthcare facilities. Besides, minimal attempts have been undertaken with one framework on the analysis of the workload indicators, staffing situation, autonomy and training investment. This study aims to fill that void by employing a quantitative cross-sectional research approach to determine the connection between job demand, job control, and the welfare of this public utility's employees Such data of this study can be applied to the theory and practice in relation to the empirical test to prove such relationship. Hopefully, it will work to the policy makers and organizational leaders interested in creating evidence-based interventions that can enhance the well-being of employees but not efficiency of services.

LITERATURE REVIEW

I explored the correlations among the JDCS variables as one in each of the identified profiles (Portoghese, Galletta, et al., 2025). Based on the LPA outcome in terms of the types of Inmates, the strain is moderate, low strain, participating, and isolated prisoner. Specification of responsibilities made the persons more likely to accomplish low strain, moderate strain, as well as participatory profile of leaders. However, the probability that the employment associations were represented in the profile of an individual inmate decreased. The density (number of ties between the nodes) and the strength of the ties (strength of the links between the two nodes) were the two important characteristics used to distinguish the networks. Our research offers information to previous JDCS researches by indicating that researchers are advised to use experimentally obtained profiles instead of theoretically defined common subgroups. Besides, we comment on the implications of the stress theory on practice, future research and studies.

A total of 31,587 wage earners, ranging in age from 19 to 59, were surveyed for the six-part Korean Working Conditions Survey (KWCS) in 2020 and 2021. There were 57.06 percent males and 42.94% females in the sample. In order to classify the participants into the five profile job characteristics outlined in the job demand-control-support (JDCS) model, we used latent profile analysis, a person-centric statistical technique for identifying the observable subgroups of a population. All four dimensions of a job—physical, quantitative, emotional, and social—were evaluated in the research. We also looked at how much leeway you have to conduct your work as a way to gauge job control. How much help you've been getting from your boss and coworkers was one way to gauge job support. The intention to retire early was an outcome variable that provided the desired retirement age. Our enquiries regarding retirement age yielded this variable. We used logistic regression to perform a multivariate sociodemographic and occupational analysis to see if there was a correlation between a certain employment position and the intention to retire early. Findings: The identification of the five latent profiles was prompted by the job demands, which had both enabling and regulating effects. Those goods that are listed as JDCS are as follows: low strain collective (5.52%), active collective (27.99%), passive collective (28.92%), high strain collective (32.56), low strain isolated (5.01), and so on. Job expectations, job control, and job support are all combined in the names of the groupings. Multivariate logistic regression outcomes showed significantly higher rates of early Presenteeism, gender, age, education, income contribution to the family, occupation, and work type were also strongly correlated with the intention to retire early. Employees should be given job options that take into account their personal and work characteristics in order to decrease the motivations for early retirement, according to our research. Additionally, you need to make sure that workers have a lot of leeway in how they go about their work. Additionally, it is important for companies and employees to provide a supportive work atmosphere.

In order to better understand the relationship between JD and JR trends, burnout, job engagement, and health among Korean nurses, their research was structured to take a person-centred approach. The authors conducted the research using secondary data from the Sixth Survey of Korean working conditions. Nearly four hundred and fifty nurses were assessed. After validating the basic measurement models, we used latent profiles to determine candidate job profiles. Now we've seen a correlation between the profiles and job satisfaction. In terms of efficiency, the JD/JR configurations that made up 100% fell into five categories: low demanding work, terrible job, balanced job, demanding job, and severely demanding job. A higher level of well-being perception was found in those whose jobs were low-demanding and had poor work profiles. On the other side, a lack of work

engagement and increased levels of physical and emotional exhaustion were observed in the extremely demanding and poor profiles. The study found that compared to nurses whose occupations were less demanding or inadequate, those whose jobs were highly demanding or extremely demanding reported higher levels of emotional and physical exhaustion. As far as the nurses were concerned, the most engaged workers were located in the workplaces with the least demanding conditions, suggesting that these settings promoted overall wellness.

The results of the research may assist nurse managers and administrators in selecting options to decrease JD without decreasing JR support to the average level.

(Kristiana et al., 2025) comes up with a positive relationship between job demands and resources, such as service-oriented job crafting, and employee well-being. The most crucial role in the working of the above-mentioned interaction is in the form of service-oriented job crafting which includes job resources. As the results of the studies show, it is possible to have a professional certification in the sphere of hospitality. Besides, it bears significant consequences on the management side with regards to encouraging the work resources, balancing the demand and program development. The current study, whose purpose is to carry out research on other cities in Indonesia by using job engagement and servant leadership as the mediators that can bring the most appropriate intervention to address the well-being of hotel workers.

Prediction score of the general risk of cardiovascular disease from the Framingham Heart Study (CVD); the Italian National Anti-Corruption Authority program; and the World Health Organization's Fifth Assessment of Health (WHO-5). Looking at people through a prism, we can see that those who reported having low levels of employment support were much more likely to have an increase in their CVD-Risk score and a decrease in their well-being index compared to those who reported having high levels of support. Additionally, compared to those whose employment were less stressful, those whose stress levels were extremely high had very good well-being scores. Nearly 58% of those who took the survey fell into the "low CVD risk" category, meaning their chance of cardiovascular disease was less than 10%; 31% were in the "medium CVD risk" category, meaning their risk was between 10% and 20%; and 11% were in the "high CVD risk" category, meaning their risk was greater than 20%.

METHODOLOGY

Research Framework

The suggested research is theoretically grounded in the Job Demand Control Support Model (JDCS Model), which incorporates employee happiness as a component between job demand and job control. The research design applies is quantitative, cross-sectional and explanatory study. The thesis provides increased worker job control in public utility sectors reduce job demand and increase well-being. The aim of the study is to substantiate these correlations between these two parameters.

Research Objectives

The study is guided by the following objectives:

- Objective 1: To examine the relationship between job demands and employee well-being among public utility employees.
- Objective 2: To assess the impact of job control on employee well-being among public utility employees.

Research Hypotheses

- H1a: There is a significant negative relationship between average working hours per week and employee well-being among public utility employees.
- H1b: There is no significant relationship between average overtime hours per month and employee well-being among public utility employees.
- H1c: There is a significant positive relationship between staff shortage rate and employee well-being among public utility employees.
- H2a: There is a significant positive relationship between decision autonomy and employee well-being among public utility employees.
- H2b: There is no significant relationship between training expenditure per employee and employee well-being among public utility employees.

Research Design

The assumptions of the relationships were tested using a quantitative research study. The test is conducted with the help of correlation and regression analysis to predict the well-being of employees using job demands and job control variables.
The research design is cross-sectional, as data were collected at a single point in time.

Population and Sample

Employees of the state utility firm, including those working in the water supply department, transportation services, and electrical boards, were the primary focus of the research. The purpose of the research is to determine how job demands and job control impact the health and happiness of certain workers.

- **Sample Size (N):** 60 employees
- **Sampling Technique:** Convenience sampling
- **Unit of Analysis:** Individual employee

It was determined that the sample size was sufficient to conduct regression and Pearson correlation analyses. In a correlation study, the formula can be used to determine the minimum sample size needed to discover a medium effect size (r = ∼0.30) with a significance level of 0.05 and power (1-0.80):
$N=(Z\alpha/2+Z)2r2+3$
Where:

- $Z\alpha/2$ = Z-value for the desired confidence level (1.96 for 95% confidence)
- Z = Z-value corresponding to desired statistical power (0.84 for 80% power)
- r = expected correlation coefficient

Substituting a medium effect size (r = 0.30) into the formula:
$N=(1.96+0.84)20.302+3\approx60$
Hence, there is a statistically significant correlation between work demands, job control, and employee well-being, as shown by the sample of 60 employees.

Measurement of Variables

1. Independent Variables

A. Job Demands Variables

- Average Working Hours per Week
- Average Overtime Hours per Month
- Staff Shortage Rate Percentage

B. Job Control Variables

- Decision Autonomy Index

- Training Expenditure per Employee (INR)

2. Dependent Variable

The Employee Satisfaction Index served as the dependent variable in regression models, which aimed to measure employee well-being. Additionally, the number of sick days taken by employees and the proportion of stress/burnout ratings were utilised and compared. A continuous foundation was used to measure all variables.

Data Collection

The information was collected using the systematic organizational documentation and administrative measures on the level of the employee. The data set included quantitative variables, such as the workload, staffing situation, autonomy, investment in training, and the well-being results.

Statistical Analysis

Data analysis was conducted using IBM SPSS Statistics.

The following analytical techniques were applied:

1. Descriptive Statistics

To describe the data, we computed measures of central tendency (mean), which show the average and standard deviation (SD), as well as minimum (min) and maximum (max). This established normality, identified outliers, justified further parametric tests.

2. Pearson Correlation Analysis

Employment demands, job control characteristics, and employee well-being were all examined using the Pearson correlation coefficient (r).

Significance was tested at:

a. 0.01 level (two-tailed)
b. 0.05 level (two-tailed)

3. Regression Analysis

The simple linear regression models were formulated separately to test the predictive value of Average Working Hours per Week, Staff Shortage Rate Percentage, Decision Autonomy Index, and Training Expenditure per Employee on employee well-being. All models were evaluated using R, R 2, and adjusted R 2 to ascertain the percentage of the variance each was explaining.

The overall model fit was evaluated by ANOVA (F-statistic and significance). The strength of the predictor was evaluated by unstandardized and standardized beta coefficients. The statistical significance was determined using T-values and P-values. Examination of Tolerance and VIF diagnostic tests of collinearity sought to confirm none of the multicollinearity exists and thus regression estimation is trusted.

Model Specification

The regression models are expressed as:

Employee Satisfaction=$\beta 0+\beta 1$(Job Demand)+

Employee Satisfaction=$\beta 0+\beta 1$(Job Control)+

Separate models were estimated for each predictor variable in alignment with the stated hypotheses.

Ethical Considerations

- Data were used solely for academic research purposes.
- Confidentiality of participants and organizations was maintained.
- No identifiable personal information was disclosed.

DATA ANALYSIS

Data Analysis according to Objectives

Objective 1: To examine the relationship between job demands and employee well-being among public utility employees.

Table 1 Correlation Matrix of Job Demands and Well-Being

Correlations							
		Average_ Working_ Hours_per_Week	**Average_ Overtime_ Hours_per_Month**	**Staff_Shortage_Rate_Percentage**	**Employee_Satisfaction_ Index**	**Average_Sick_Leave_Days_per_Employee**	**Reported_Stress_or_Burnout_Percentage**
Average_Working_Hours_per_Week	Pearson Correlation	1	.008	-.161	-.434**	.051	-.139
	Sig. (2-tailed)		.950	.218	.001	.701	.290
	N	60	60	60	60	60	60
Average_Overtime_Hours_per_Month	Pearson Correlation	.008	1	-.266*	-.133	.090	.089
	Sig. (2-tailed)	.950		.040	.310	.492	.499
	N	60	60	60	60	60	60
Staff_Shortage_Rate_Percentage	Pearson Correl	-.161	-.266*	1	.292*	.006	-.314*

Correlations							
		Average_ Working_ Hours_per_Week	**Average_ Overtime_ Hours_per_Month**	**Staff_Shortage_Rate_Percentage**	**Employee_Satisfaction_Index**	**Average_Sick_Leave_Days_per_Employee**	**Reported_Stress_or_Burnout_Percentage**
	ation						
	Sig. (2-tailed)	.218	.040		.023	.966	.014
	N	60	60	60	60	60	60
Employee_ Satisfaction _Index	Pearson Correlation	-.434**	-.133	.292*	1	.004	-.006
	Sig. (2-tailed)	.001	.310	.023		.975	.963
	N	60	60	60	60	60	60
Average_Sick_Leave_ Days_per_Employee	Pearson Correlation	.051	.090	.006	.004	1	.143
	Sig. (2-tailed)	.701	.492	.966	.975		.275
	N	60	60	60	60	60	60
Reported_Stress_or_Burnout_Percentage	Pearson Correlation	-.139	.089	-.314*	-.006	.143	1

Correlations							
		Average_Working_Hours_per_Week	Average_Overtime_Hours_per_Month	Staff_Shortage_Rate_Percentage	Employee_Satisfaction_Index	Average_Sick_Leave_Days_per_Employee	Reported_Stress_or_Burnout_Percentage
	Sig. (2-tailed)	.290	.499	.014	.963	.275	
	N	60	60	60	60	60	60
**. Correlation is significant at the 0.01 level (2-tailed).							
*. Correlation is significant at the 0.05 level (2-tailed).							

The results have established that the average working hours are highly correlated with employee satisfaction in a negative direction. Both satisfaction and burnout have a negative correlation with the rate of staff shortage. Overtime hours are not significantly related to satisfaction and this partially proves suggested hypotheses.

Table 2 Variables Entered/Removed in Working Hours Regression Model

Analysis Phase	Factors Included	Factors Excluded	Selection Logic
Model 1	Weekly Labor Commitment (Avg. Hours)	None	Simultaneous Entry

The regression model entered the Average Working Hours per Week as the only independent variable that predicts Employee Satisfaction Index. There were no dropped variables and the enter approach was used. This substantiates a straightforward linear regression model was employed to investigate predictive effect.

Table 3 Model Summary for Working Hours Regression

Step	Correlation Coefficient (R)	Coefficient of Determination (R2)	Modified R2 (Adjusted)	Standard Deviation of Residuals
01	.434	.189	.175	8.1589

The model shows moderate correlation with working hours (R = 0.434). R 2 0.189 means that the working hours account for 18.9 percent of the variation in satisfaction. Adjusted R-squared is a guarantee of consistent explanatory power.

Table 4. ANOVA for Working Hours Regression Model

Variation Source	Sum of Squares	df	Mean Square	F Statistic	p Value
Regression Model	897.645	1	897.645	13.485	.001
Residual (Error)	3860.925	58	66.568	—	—
Total	4758.570	59	—	—	—

Based on the analysis of variance, the regression model is found to be statistically significant (F = 13.485, p =.001). Both the model's greater prediction compared to a null model and the average working hours' strong predictive impact on employee satisfaction are confirmed by this.

Table 5. Coefficients for Working Hours Predicting Satisfaction

Coefficients[a]								
Model		Estimate Coefficients		Normalise Coefficients	T value	Sig.	Multicollinearity Indicators	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	101.907	9.434		10.802	.000		
	Average_Working_Hours_per_Week	-.766	.209	-.434	-3.672	.001	1.000	1.000
a. Dependent Variable: Employee_Satisfaction_Index								

Working hours coefficient is negative and significant (β = -0.434, p =.001) where the more hours that employees work per week, the less satisfaction they will have. The unstandardized coefficient presents the satisfaction decreases with increase in working hours, which favors the hypothesis of negative relation.

Table 6. Collinearity Diagnostics for Working Hours Model

Collinearity Diagnostics[a]					
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	Average_Working_Hours_per_Week
1	1	1.994	1.000	.00	.00
	2	.006	17.857	1.00	1.00
a. Dependent Variable: Employee_Satisfaction_Index					

The statistics of the collinearity indicate that the tolerance and VIF values are acceptable, which does not raise any concerns regarding multicollinearity. The condition index is acceptable showing stability in the model and reliability of regression estimates of working hours in predicting satisfaction.

Table 7 Variables Entered in Staff Shortage Regression Model

Variables Entered/Excluded[a]			
Model	Predictors Added	Predictors Removed	Entry Technique
1	Staff_Shortage_Rate_Percentage[b]	.	Enter
a. Dependent Variable: Employee_Satisfaction_Index			
b. All requested variables entered.			

The independent variable in the regression model is the percentage of staffing shortage as it is an indicator of employee happiness. Using a simple linear regression method without dropping any of variables and with enter method proves that staffing has an impact.

Table 8 Model Summary for Staff Shortage Regression

Model Summary				
Model	Correlation (R)	Explained Variance (R^2)	Adjusted R^2	Estimation Std. Error
1	.292[a]	.085	.070	8.6625
a. Predictors: (Constant), Staff_Shortage_Rate_Percentage				

Staff shortage rate and employee satisfaction have a medium correlation (R = 0.292) in the model. The value of R 2 = 0.085 means 8.5% variance is explained. Adjusted R also attests to insignificant yet significant predictive contribution.

Table 9 ANOVA for Staff Shortage Regression Model

ANOVA[a]						
Model		Sum of Squares	df	MS	F value	Sig.
1	Regression Model	406.359	1	406.359	5.415	.023[b]
	Error Residual	4352.211	58	75.038		
	Overall Total	4758.570	59			
a. Dependent Variable: Employee_Satisfaction_Index						
b. Predictors: (Constant), Staff_Shortage_Rate_Percentage						

The findings of ANOVA indicate statistical significance (F = 5.415, p = .023) such that the rate of personnel shortfall is a strong indicator of how satisfied employees are, The model is considerably more effective in prediction than a model without predictors.

Table 10 Coefficients for Staff Shortage Predicting Satisfaction

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	60.995	3.004		20.308	.000		
	Staff_Shortage_Rate_Percentage	.376	.162	.292	2.327	.023	1.000	1.000
a. Dependent Variable: Employee_Satisfaction_Index								

It has a positive and significant effect on the staff shortage rate (= 0.292, p =.023). This shows that staffing levels have a great impact on employee satisfaction, which validates the relations suggested with job demands.

Table 11 Collinearity Diagnostics for Staff Shortage Model

Collinearity Diagnostics[a]					
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	Staff_Shortage_Rate_Percentage
1	1	1.928	1.000	.04	.04
	2	.072	5.178	.96	.96
a. Dependent Variable: Employee_Satisfaction_Index					

As both the tolerance and VIF fall within the permitted range, the diagnostics of collinearity do not reveal any evidence of multicollinearity. Regression estimations of the staff shortage rate are valid, as the status of the condition index confirms model stability.

Hypothesis Testing Results (Objective 1)

The results of Objective 1 indicate a partial support of the hypotheses proposed on the relationship between job demands and well-being of employees. The H1a is proven in that the high negative correlation is found between mean working hours/week and employee satisfaction (r = 0 -0.434 p = 0.001). The effect of the same is also corroborated by the regression analysis (= -0.434, p = .001) which indicates that it explains the variance in satisfaction at 18.9%. The outcomes of the ANOVA (F = 13.485, p =.001) indicate that one of the most important predictors of well-being is working hours; thus, it is possible to consider that the longer the working hours, the less satisfied the employee is.

H1b is also supported, as average overtime hours per month do not show a statistically significant relationship with employee satisfaction ($r = -0.133$, $p = .310$). This suggests that overtime alone does not significantly influence well-being in this sample.

H1c is supported, as staff shortage rate demonstrates a significant positive relationship with employee satisfaction ($r = 0.292$, $p = .023$) and a significant regression effect ($\beta = 0.292$, $p = .023$). The model explains 8.5% of variance, confirming staffing conditions significantly influence employee well-being.

Objective 2: To assess the impact of job control on employee well-being among public utility employees.

Table 12 Correlation Matrix of Job Control Indicators and Well-Being Variables

Correlations					
		Decision_Autonomy_Index	Training_Expenditure_per_Employee_INR	Employee_Turnover_Rate_Percentage	Reported_Stress_or_Burnout_Percentage
Decision_Autonomy_Index	Pearson Correlation	1	.081	-.063	.061
	Sig. (2-tailed)		.539	.631	.644
	N value	60	60	60	60
Training_Expenditure_per_Employee_INR	Pearson Correlation	.081	1	.133	.023
	Sig. (2-tailed)	.539		.312	.864
	N value	60	60	60	60
Employee_Turnover_Rate_Percentage	Pearson Correlation	-.063	.133	1	.248
	Sig. (2-tailed)	.631	.312		.056
	N value	60	60	60	60
Reported_Stress_or_Burnout_Percentage	Pearson Corr	.061	.023	.248	1

Correlations					
		Decision_Autonomy_Index	Training_Expenditure_per_Employee_INR	Employee_Turnover_Rate_Percentage	Reported_Stress_or_Burnout_Percentage
	elation				
	Sig. (2-tailed)	.644	.864	.056	
	N value	60	60	60	60

The analysis of Pearson correlation enables to suggest that decision autonomy, training expenditure, turnover rate, and reported stress or burnout have or generally weak relationships. Training expenditure (r =.081), turnover rate (r = -.063) and stress (r =.061) all demonstrate very weak correlations with decision autonomy which are not significant (p >.05). Training expenditure is also found to have weak and no significant relationships with turnover (r = .133) and stress (r =.023). The reported stress is positively correlated with the turnover rate of employees, but with a small correlation (r = .248) and statistical significance ratio (p =.056). In general, the results indicate that there is little direct correlation between job control variables and well-being indicators in this sample (N = 60)

Table 13 Variables Entered/Removed – Regression Model (Decision Autonomy and Employee Satisfaction)

Variables Entered/Removed[a]			
Model	Predictors Added	Predictors Excluded	Entry Procedure
1	Decision_Autonomy_Index[b]	.	Enter
a. Dependent Variable: Employee_Satisfaction_Index			
b. All requested variables entered.			

Utilizing the entry technique to include the Decision Autonomy Index in the regression model, according to the table no variables were removed. Dependent variable was Employee Satisfaction Index. This confirms that a basic linear regression model has been developed to study the direct predictive influence of choice autonomy on employee satisfaction. All the necessary factors were input together and without a stepwise process, hence the study will only look at the independent effect of choice autonomy and we will not alter the models or remove variables.

Table 14 Model Summary – Decision Autonomy and Employee Satisfaction

Model Summary				
Model	**Correlation (R)**	**Variance Explained (R^2)**	**Adjusted Variance (Adj. R^2)**	**Estimation Std. Error**
1	.289[a]	.083	.068	8.6717
a. Predictors: (Constant), Decision_Autonomy_Index				

Decision autonomy describes a 8.3 per cent variance of satisfaction with a significant predictive relationship of employee well-being albeit with a low degree of significance.

Table 15 ANOVA – Regression Model for Decision Autonomy and Employee Satisfaction

ANOVA[a]						
Model		Sum of Squares	df	MS	F value	P Value
1	Regression	397.053	1	397.053	5.280	.025[b]
	Residual	4361.517	58	75.199		
	Total	4758.570	59			
a. Dependent Variable: Employee_Satisfaction_Index						
b. Predictors: (Constant), Decision_Autonomy_Index						

The results of the analysis of variance show that the regression model is statistically significant (F = 5.280, p =.025). At the 0.05 level of significance, this confirms that the Decision Autonomy Index considerably predicts the Employee Satisfaction Index. When compared to the error, the model explains a large percentage of the variation, suggesting that choice autonomy is a major factor in explaining the variation in public utility workers' happiness.

Table 16 Coefficients – Decision Autonomy and Employee Satisfaction

Coefficients[a]								
Model		Estimate Coefficients		Standardized effect	T value	P Value.	Multicollinearity Measures	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	52.011	6.825		7.620	.000		
	Decision_Autonomy_Index	.243	.106	.289	2.298	.025	1.000	1.000
a. Dependent Variable: Employee_Satisfaction_Index								

The choice autonomy index correlates positively with employee happiness (2.298 t =.289, p =.025). Individuals seem to feel more satisfied with their autonomy, a finding corroborated by a happiness coefficient of.243. The model faces no problems with multicollinearity, with tolerance and VIF values indicating this.

Table 17 Collinearity Diagnostics – Decision Autonomy Regression Model

Collinearity Diagnostics[a]					
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	Decision_Autonomy_Index
1	1	1.986	1.000	.01	.01
	2	.014	12.111	.99	.99
a. Dependent Variable: Employee_Satisfaction_Index					

Condition index (12.111) is lower than the critical value of 30 and the shares of variances are good. This means that the problems of multicollinearity do not exist in the regression model applied to discuss the problem of decision autonomy and employee satisfaction.

Table 18 Variables Entered/Removed – Training Expenditure Regression Model

Variables Entered/Removed[a]			
Model	Predictors Added	Predictors Excluded	Entry Procedure
1	Training_Expenditure_per_Employee_INR[b]	.	Enter
a. Dependent Variable: Employee_Satisfaction_Index			
b. All specified predictors were included.			

Using the enter method the training Expenditure per Employee (INR) was entered as predictor. We are testing a basic linear regression model to determine the variable's effect on employee happiness.

Table 19 Model Summary – Training Expenditure and Employee Satisfaction

Model Summary				
Model	Correlation (R)	Variance Explained (R^2)	Adjusted Variance (Adj. R^2)	Estimation Std. Error
1	.112[a]	.012	-.005	9.0012
a. Predictors: (Constant), Training_Expenditure_per_Employee_INR				

It has a low relationship (R =.112) and its explanatory power (R 2 =.012) is very low. The degree to which training expenditure can predict employee satisfaction is only 1.2 percent, which is very weak.

Table 20 ANOVA – Training Expenditure Regression Model

ANOVA[a]						
Model		SS	df	MS	F value	P valuecss
1	Regression	59.290	1	59.290	.732	.396[b]
	Residual	4699.280	58	81.022		
	Total	4758.570	59			
a. Dependent Variable: Employee_Satisfaction_Index						
b. Predictors: (Constant), Training_Expenditure_per_Employee_INR						

The model does not exhibit any significance according to the ANOVA results (F =.732, p =.396). This finding disproves the hypothesis that training cost significantly correlates with employee satisfaction in this study.

Table 21 Coefficients – Training Expenditure and Employee Satisfaction

Coefficients[a]								
Model		Estimate Coefficients		Standardized Effect	T value	P value	Multicollinearity Measures	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	64.942	3.189		20.367	.000		
	Training_Expenditure_per_Employee_INR	9.457 E-5	.000	.112	.855	.396	1.000	1.000
a. Dependent Variable: Employee_Satisfaction_Index								

With a value of only.396 the standardised beta coefficient is tiny and meaningless. When there is no statistically significant relationship between the amount of money spent on training and employee happiness.

Table 22 Collinearity Diagnostics – Training Expenditure Regression Model

Collinearity Diagnostics[a]					
Model	Component	Eigenvalue	Condition Index	Variance Proportions	
				(Intercept)	Training_Expenditure_per_Employee_INR
1	1	1.931	1.000	.03	.03
	2	.069	5.299	.97	.97
a. Dependent Variable: Employee_Satisfaction_Index					

Both the condition index (5.299) and the proportions of variance are good, falling well below critical thresholds. These results rule out the possibility of multicollinearity in the given regression model.

Hypothesis Testing Results – Objective 2

The findings for Objective 2 provide partial support for the proposed hypotheses regarding job control and employee well-being among public utility employees.

H2a stated that there is a significant positive relationship between decision autonomy and employee well-being. The regression results support this hypothesis. Decision Autonomy Index significantly predicts Employee Satisfaction Index ($\beta = .289$, $t = 2.298$, $p = .025$). The model is statistically significant ($F = 5.280$, $p = .025$) and explains 8.3% of the variance in employee satisfaction ($R^2 = .083$). The positive unstandardized coefficient ($B = .243$) indicates that higher decision autonomy is associated with increased employee satisfaction. Collinearity diagnostics confirm no multicollinearity concerns. Therefore, H2a is accepted.

H2b proposed that there is no significant relationship between training expenditure per employee and employee well-being. The regression model for training expenditure is not statistically significant ($F = .732$, $p = .396$), with very low explanatory power ($R^2 = .012$). The standardized beta coefficient ($\beta = .112$, $p = .396$) is small and non-significant. Thus, training expenditure does not significantly influence employee satisfaction, and H2b is accepted, decision autonomy plays a meaningful role in enhancing well-being, whereas training expenditure does not demonstrate a significant impact.

CONCLUSION

Indirectly, job demands and job control impact well-being among public utility workers who participate in research using the Job Demand Control Support (JDCS) Model. Research shows that workers' mental and emotional health declines in direct proportion to the amount of time they put in at the office. On average, workers are less satisfied when their weekly working hours are lower (= -0.434, =.001). With an explanation for 18.9% of the total variation, this variable was determined to be the most predictive of happiness. Another factor that defines staff scarcity (0.292, P = 0.23) accounts for 8.5% of the variation in staff satisfaction. Worker satisfaction was positively and significantly correlated with job control (r=.289, p=.025), accounting for 8.3% of the total variation. On the other hand, average monthly overtime is not significantly related to job satisfaction (p =.310). The current study on a utility organization and a public sample contradicts previous research by finding no significant link (p =.396) between employee satisfaction and per capita training spending. Working hours are perceived as being within the control of the employees. Ensuring the well-being of employees requires decision-making autonomy. Job expectations should be balanced while staff control methods be improved, according to the report.

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Conflict of Interest

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