



Analysis of Individual Performance through Job Satisfaction: A Study of Faculty Members in Public Sector Universities in Sindh, Pakistan

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Abstract

Job satisfaction is the fundamental factor to enhance individual job performance. The teacher's performance affects the optimum level of university students learning and development. The main purpose of this research is to analyze the impact of job satisfaction on individual teachers' performance in public sector universities in the Sindh province of Pakistan. The empirical data was collected through structured questionnaires. A sample of 500 working faculty members was chosen and a structured questionnaire was distributed among them. KMO is 0.653. The reliability of scales is above 0.7. A single Harman test suggests 14% variations in 1st factor. Component matrix applied for the relationship among items. Findings suggest that compensation ($\beta=0.293$, $p=0.000$), promotional opportunities ($\beta=0.128$, $p=0.046$), work environment ($\beta=0.112$, $p=0.015$), training opportunities ($\beta=0.136$, $p=0.034$), relationship with supervisor ($\beta=0.223$, $p=0.000$), nature of work ($\beta=0.274$, $p=0.000$) and performance appraisal ($\beta=0.139$, $p=0.000$) are found conducive to enhancing individual performance but workgroup ($\beta=0.185$, $p=0.057$) has no impact in the enhancement of individual performance. It demonstrates that job satisfaction is a significant element in improving individual performance. Job Satisfaction policies should be developed by management to maintain the contentment of their teachers. The hygiene components of Herzberg's theory should be thoroughly studied and implemented in public sector universities to improve job satisfaction and maximize teaching performance.

Keywords: Individual Performance, Job Satisfaction, Faculty Members, Public Sector University, Enhancing.



Introduction

Job satisfaction is the most important factor for the enhancement of individual performance and organizational success. It has received immense importance in the corporate sector and academia (Alam, 2022). There are several definitions of job satisfaction found in the literature but most scholars have agreed on two of them. The first definition describes job satisfaction as the state of mind of a person who enjoys a job due to appropriate evaluation and achievement opportunities (Adamopoulos & Syrou, 2022) and that gives him/her feel the value of the job. Another definition describes the level of satisfaction and dissatisfaction towards a particular job how a person is satisfied or dissatisfied with his/her job, the attitude of the person towards his/her job how they enjoy their jobs (Irabor & Okolie, 2019). Most definitions suggest how a person feels about one's job. The attitude of the employees towards their responsibilities can further be categorized as to how employees feel about their working environment and colleagues (Raza et al., 2021). Their feelings towards these factors can determine their level of satisfaction. When employees enjoy their workplaces and develop friendly relationships with their colleagues they are highly satisfied with a particular organization (Amrutha & Geetha, 2021).

The mentality that workers have to work shows their level of contentment. A highly pleased worker outperforms a dissatisfied worker (Inayat & Jahanzeb, 2021). Individuals that are satisfied with their positions perform exceptionally well in courses of study, instructing obligations, as well as extracurricular endeavors at the higher education stage. Their achievement can be seen in how they participate in initiatives performed for the benefit of the university (Bruning & Campion, 2019). Satisfaction with one's job can be measured as well by how contented individuals are with their private affairs, meeting their basic needs, and leading an enjoyable lifestyle (Hameed et al., 2018). The ineffective assessment structure, corruption, and internal disagreements are key hurdles that may hinder job satisfaction as well as productivity (Sharaf et al., 2019). Several studies imply that job contentment improves worker efficiency; an increased degree of fulfillment improves performance at work (Aule et al., 2018). Personnel demand time flexibility, stable employment, a suitable reward arrangement, and efficient assessment according to current HR practices, and all of these things inspire them to thrive at their best. According to the latest studies, novel patterns have been warmly received by personnel all across the globe, increasing their overall degree of happiness (Davidescu et al., 2020; Raza et al., 2022). Employees must be favorable to improving their efficiency to keep up with new developments (Sanford, 2017). In most parts



of worldwide, four degrees of schooling are common: elementary, middle school, advanced secondary, and college or university. Advanced schooling has the most significant level, as it drives the whole country (Wang & Shao, 2019). It had been discovered that a greater percentage of college graduates and a greater literacy rate raises the general development measurements for an entire nation, particularly the national economy (Corso, 2020). A well-designed research study is very important in developing the social norms of society and provides a road map to accelerate the living standards of the people. Ongoing research and education are key pillars of human development (Sadiq et al., 2022). Their combination not only produces a sober individual who plays their role as an individual but also creates a good society where humanity prospers. History tells us this is a long-term process; humans have progressed over time with the help of education and research. It means the study which is going to be held today doesn't mean it would result promptly but after a long time, its impacts would appear (Winefield & Jarrett, 2001; Raziq & Maulabakhsh, 2015).

Significance of the study

This study is a positive contribution to the literature and provides a detailed analysis of individual performance through job satisfaction levels for teachers, especially teachers of public sector universities of Sindh.

Objectives of the study

- ❖ To analyze the Impact of job satisfaction through Compensation on individual performance.
- ❖ To analyze the Impact of job satisfaction through promotional opportunities on individual performance.
- ❖ To analyze the Impact of job satisfaction through work environment on individual performance.
- ❖ To analyze the Impact of job satisfaction through training opportunities on individual performance.
- ❖ To analyze the Impact of job satisfaction through a relationship with a supervisor on individual performance.
- ❖ To analyze the Impact of job satisfaction through work groups on individual performance.



- ❖ To analyze the Impact of job satisfaction through the nature of work on individual performance.
- ❖ To analyze the Impact of job satisfaction through performance appraisal on individual performance.
- ❖ To analyze the Impact of Overall job satisfaction level on individual performance.

Literature Review

The present research looked at Herzberg's principle of two factors. The results of this research revealed that hygiene variables had an important effect in terms of staff performance at work as measured by job satisfaction similar to (Chang et al., 2021). If salary, instruction, promotion, place of employment, and kind of work are addressed, the level of satisfaction increases (Dziuba et al., 2020). This research was conducted in Pakistan and demonstrated the actual implementation of Herzberg's principle in the Pakistani context. From the data, it is possible to conclude that the Herzberg hypothesis is relevant in countries that are developing as well as developed as humanity is nearly the same everywhere (Shaikh & Khoso, 2021). It is connected to mental health, which has become significant to human behaviors. Reactions among individuals are not limited by bounds (Bukhari et al., 2021). Individuals that are pleased operate at their best regardless of what they do at jobs. The research did not shed information on the behaviors of Pakistani staff members yet the data revealed that when workers feel happy, their productivity improves (Rehman et al., 2017; Raza et al., 2022). Two schools of thought discuss Herzberg's theory, one school of thought perceives Herzberg's theory as highlighting the most important factors of job satisfaction, and on another hand, it is criticized by the second school of thought and considered as an exaggeration. Ruthankoon & OluOgunlana (2014) evaluating Herzberg's Two-Factor Hypothesis within the Thai Development Sector. The extremely pleased staff performs at an optimal level, while the students' performance and educational experience improves (Malik et al., 2010). The ultimate target is to achieve quality in higher education which can only be obtained through faculty satisfaction (Ho et al., 2021; Demir et al., 2021; Raza et al., 2022). There are varieties of determinants that have been highlighted in different studies that affect faculty job satisfaction (Ismayilova & Klassen, 2019; Bäker & Goodall, 2020; Ashraf, 2020). There are multiple aspects that directly or indirectly influence faculty performance. The working environment and job description are the key factors to induce employees to perform their responsibilities. It has further explored that lacking job autonomy, inappropriate promotion



criteria, job insecurity, and non-competitive salary packages have adverse effects on job satisfaction (Muri et al., 2020; Ruch & Stahlmann, 2020; Kraft et al., 2020).

There have been several studies conducted from 2000 to 2020 to analyze the effect of job satisfaction of faculty members at the higher education level (Li & Wang, 2021; Mickson & Anlesinya, 2020; Lambert et al., 2019). These studies have been conducted in both international and national settings. Elton Mayo is considered one of the pioneers who identified the major factors of job satisfaction (Muldoon et al., 2022). It has further been explored by Frederick Herzberg who endorsed job security, compensation system, job security, appreciation, reward, and growth opportunities are the prominent factors that are conducive to enhancing employees' performance (Naseem & Salman, 2015; Memon et al., 2019). The literature suggests plenty of work has been carried out in the USA, Europe, Africa, Australia, and Asia. The national-level studies have been conducted in all provinces of Pakistan. These all studies have endorsed the factors highlighted by Job Satisfaction Survey (Sutarto et al., 2022). These factors are balanced work-life, affiliation with colleagues, fringe benefits, supportive work environment, reward policies, recognition, and appropriate career advancement opportunities (Memon & Khan, 2019).

As per Herzberg's two-factor theory, job dissatisfaction is not difficult to identify, it can be terraced with the help of interpersonal work stress as well as teamwork. There are several other factors such as the organizational system, and the attitude of a boss (Li et al., 2019; Rai, A., & Maheshwari, 2020). The same Herzberg's theory has further been extended and found it is one of the most important theories to gauge job satisfaction. Ruthankoon & OluOgunlana (2003) testing Herzberg's Two-Factor Theory in the Thai Construction Industry. This theory contains two factors one is satisfaction and the other is dissatisfaction it is found that these factors are opposite each other (Kam & Fan, 2020). Different other studies are suggesting there is a strong association between biographical, and hygienic factors and faculty job satisfaction (Mokhtar et al., 2021; Matla & Xaba, 2020; Fute et al., 2022). The biographical factors include gender, age, and marital status and hygienic factors include growth opportunities, job security, work environment, and relationship with colleagues (Guo et al., 2019; Ali et al., 2021). Based on above literature conceptual framework has been developed (See Figure 1).

Hypotheses of the Study

H₁: Compensation is conducive to enhancing individual performance through job satisfaction.



H₂: Promotional opportunities are conducive to enhancing individual performance through job satisfaction.

H₃: The work environment is conducive to enhancing individual performance through job satisfaction.

H₄: Training opportunities are conducive to enhancing individual performance through job satisfaction.

H₅: Relationship with the supervisor is conducive to enhancing individual performance through job satisfaction.

H₆: Workgroup is conducive to enhancing individual performance through job satisfaction.

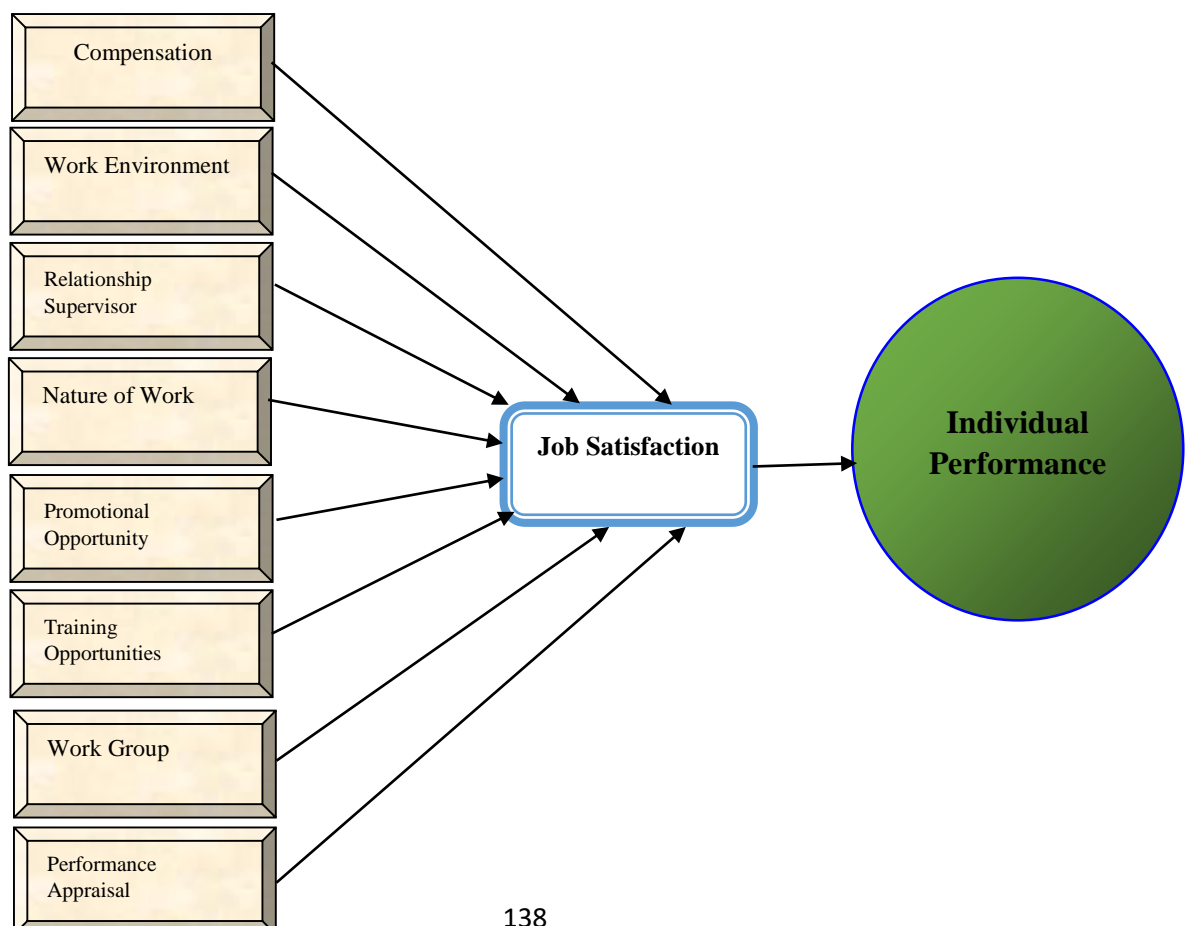
H₇: The nature of work is conducive to enhancing individual performance through job satisfaction.

H₈: Performance appraisal is conducive to enhancing individual performance through job satisfaction.

H₉: Job satisfaction is conducive to enhancing individual performance.

Conceptual Framework

Figure 1





Research Methodology

It's an investigation based on surveys that use the deductive method to reach its findings (Shaikh & Khoso, 2021). The core data was gathered via organized surveys. Inferential as well as descriptive statistical techniques were used in the empirical research (Cengel et al., 2022). Cross-tabulations and graphs were used to display the data on demographics, and regression modeling was used to evaluate assumptions (Muldoon et al., 2022; Alam, 2022). The well-organized survey created using Herzberg's theory employs a five-point Likert scale adopted from (Miah & Hasan, 2022), coded strongly satisfied with 5 to strongly dissatisfied with 1. The data from 500 teachers have been collected through simple random sampling. The teachers of public sector universities across the Sindh province of Pakistan have been included in the population of this study out of which a sample of 500 respondents has been drawn. The organized survey was delivered to 500 instructors chosen at random. Out of 500 participants, 456 surveys were returned, and 19 were eliminated owing to inadequate data or answer bias, leaving 437 questions to be chosen. A total of 437 surveys were used in the data evaluation. The data is going to be compiled and quantifiably analyzed using a powerful SPSS program.

$$y_1 = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 \pm u$$

$$y_2 = a + b_1x_1 \pm u$$

$$IP = C + b_1C + b_2PO + b_3WE + b_4TO + b_5RS + b_6WG + b_7NoW + b_8PA \pm u$$

$$IP = C + b_1JS \pm u$$

Discussion and Analysis

Exploratory Factor Analysis

Table 1 summarizes the KMO test outcomes, which indicate whether factor assessment is suitable or not. Due to the standards, if KMO is larger than 0.50, factor evaluation is acceptable; alternatively, it's inadequate. As a result, it can be preferable to have the KMO findings exceed 0.5; this measurement must be performed before advancing to the analysis of factors outcomes. If the results are less than 0.5 one cannot interpret factor analysis results rather than factor analysis test would be considered inappropriate for a particular question (Wang & Shao, 2019). There can be several reasons that the author has not designed appropriate questionnaires; other adopted questionnaires may not fit particular populations. Bartlett's test of sphericity suggests some indicators are highly correlated with each other. If



there is a correlation among some indicators it means, there can be one factor for each correlating indicator. The exploratory factor analysis can be processed further where at least one factor exists (Ruch & Stahlmann, 2020). Bartlett's test suggests some questions are highly correlated with each other. The guidelines suggest that if Bartlett's test sig value is less than 0.05 it confirms some questions are highly correlated with others and it means factor analysis is appropriate to run. Both KMO and Bartlett's test verify whether exploratory factor analysis can be appropriate or not. These tests validate the questionnaire for which exploratory factor analysis has been run. The results of KMO greater than 0.5 and the sig value of Bartlett's test is less than 0.05 are desirable. One cannot move until these guidelines are satisfied (Muri et al., 2020). This study has utilized the adopted questionnaire which is based on Herzberg's theory. This questionnaire is widely used and accepted across the world. There is a high chance that our results would be acceptable because of the wide acceptance of the questionnaire. There may arise some issues due to differences in culture but there are rare chances of occurrence. The results of KMO and Bartlett's sig value are 0.653 and 0.000 respectively suggesting that factor analysis can be applied to the questionnaire. Therefore, we proceed to explain further parts of EFA.

Table 2 presents the results of the total variance explained the percentage of total variance indicates how many factors or constructs a questionnaire possesses. It highlights what percent of the overall questionnaire is explained by a particular factor. It shows results in percentage wise first factor explains the overall questionnaire by such percentage, similarly the second factor explains the questionnaire by such percentage, and so on. It also provides an overall percentage column that explains the sum of percentages of overall factors. The questionnaire of this study is consisting of 30 questions and they are reduced to 10 factors. These results are consistent with previous studies because it is an adopted questionnaire and these factors have already been defined by different scholars as well as Herzberg's theory (Li et al., 2019). Table 3 summarizes the results of the Rotated Component Matrix which shows factor loading. It indicates what numbers of questions are highly correlated with each other. A questionnaire is designed to know about latent constructs. A few questions have been developed to explain one latent factor or construct (Mickson & Anlesinya, 2020; Lambert et al., 2019). The rotated component matrix explains why these particular numbers of questions are moving in a certain direction; it means these questions represent one factor. Similarly, some other questions are moving in a certain direction that represents the second factor, and so on. This matrix identifies these questions as representing a particular factor because they are moving in the



same direction. This matrix shows a clear picture of the questionnaire and identifies the number of factors and their corresponding questions (Muldoon et al., 2022). The questionnaire of this study was developed in the following way. Questions one, two, and three for compensation, questions four, and five for promotional opportunities, questions six, seven, and eight for the work environment, questions nine, ten, and eleven for training opportunities, questions twelve, thirteen, fourteen, and fifteen for a relationship with supervisor, questions sixteen, and seventeen for the workgroup, questions eighteen, nineteen, and twenty for nature of work, questions twenty-one, twenty-two, twenty-three, and twenty-four for performance appraisal, questions twenty-five, twenty-six, and twenty-seven for job satisfaction, and questions twenty-eight, twenty-nine, and thirty for individual performance have been developed.

Table 3 presents that questions twenty-one, twenty-two, twenty-three, and twenty-four are highly correlated with factor one which indicates that these four questions move in the same direction. It has been discussed above that these four questions have been developed for performance appraisal. The rotated component matrix confirms these questions are moving in the same direction. It verifies that these questions behave in the way they were intended at the time of questionnaire development. Similarly, questions one, two, and three are highly correlated with factor two, questions twenty-five, twenty-six, and twenty-seven are highly correlated with factor three, questions twenty-eight, twenty-nine, and thirty are highly correlated with factor four, questions eighteen, nineteen, and twenty are highly correlated with factor five, questions twelve, thirteen, fourteen and fifteen are highly correlated with factor six, questions six, seven, and eight are highly correlated with factor seven, questions nine, ten, and eleven are highly correlated with factor eight, questions four, and five are highly correlated with factor nine, and questions sixteen, and seventeen are highly correlated with factor ten (Sadiq et al., 2022). These all questions represent the factor in a way they were intended at the time of questionnaire development (Raziq & Maulabakhsh, 2015). It confirms that adopted questionnaires give the same results in the Pakistani context as they gave in other parts of the world. The exploratory factor analysis verifies the results of the factor analysis. It is now proved that these questions behave accordingly so they can further be put in detail analysis. Therefore, the next sections of this chapter cover a detailed analysis of the thesis. The next sections discuss the reliability test followed by hypotheses testing and model summary with related characteristics of the stochastic model.



Table 1
KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.653
Bartlett's Test of Sphericity Approx. Chi-Square	170.3
df	412
Sig.	.000

Table 2
Total Variance Explained Results

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.004	14.220	14.220	2.004	14.220	14.220	.933	6.622	6.622
2	1.903	13.509	27.729	1.903	13.509	27.729	1.540	10.928	17.550
3	1.755	12.452	40.181	1.755	12.452	40.181	.666	4.726	22.276
4	1.564	11.100	51.280	1.564	11.100	51.280	.640	4.541	26.816
5	1.449	10.282	61.563	1.449	10.282	61.563	1.911	13.562	40.379
6	1.063	7.546	69.108	1.063	7.546	69.108	1.420	10.080	50.458
7	.865	6.138	75.246	.865	6.138	75.246	1.746	12.391	62.849
8	.753	5.341	80.588	.753	5.341	80.588	1.856	13.170	76.019
9	.607	4.310	84.898	.607	4.310	84.898	1.095	7.769	83.788
10	.578	4.102	89.000	.578	4.102	89.000	.734	5.212	89.000
11	.286	2.030	91.030						
12	.252	1.790	92.820						



13	.188	1.336	94.156						
14	.187	1.328	95.484						
15	.163	1.157	96.641						
16	.141	1.002	97.643						
17	.114	.810	98.453						
18	.106	.750	99.203						
19	.029	.206	99.409						
20	.022	.156	99.565						
21	.014	.103	99.667						
22	.013	.092	99.759						
23	.011	.075	99.835						
24	.008	.060	99.895						
25	.007	.048	99.943						
26	.005	.034	99.978						
27	.002	.014	99.992						
28	.001	.008	99.999						
29	.000	.001	100.000						
30	.000	.000	100.000						

Table 3
Component Matrix Results

	Component									
	1	2	3	4	5	6	7	8	9	10
Q21	.474	-.009	-.022	.010	-.035	-.031	.005	.006	-.019	.001
Q22	.474	-.004	-.016	.006	-.041	-.030	.003	.007	-.016	.000
Q24	.474	.014	-.017	-.001	-.025	-.029	.005	.010	-.014	-.005
Q23	.472	-.003	-.029	-.007	-.030	-.026	.007	.015	-.012	-.014
Q1	-.001	.715	.024	-.006	-.002	-.014	.003	-.013	.007	.004



Q2	-.001	.715	.024	-.006	-.002	-.014	.003	-.013	.007	.004
Q3	-.001	.716	.023	-.007	-.002	-.015	.001	-.014	.007	.004
Q26	-.025	.018	.467	-.014	-.007	.019	.023	.018	.003	-.012
Q27	-.025	.014	.462	-.013	-.004	.020	.023	.016	.002	-.012
Q25	-.027	.016	.463	-.012	-.006	.017	.027	.023	.000	-.015
Q29	-.002	.000	-.009	.460	.006	.016	.002	.007	.008	.011
Q28	.003	-.003	-.011	.459	.014	.021	.001	.005	.001	.011
Q30	.007	-.009	-.016	.455	.013	.020	.000	.002	-.008	.015
Q19	-.071	.010	.002	.017	.808	-.007	.005	.004	.027	-.034
Q18	-.072	.016	.001	.019	.810	-.012	.003	.003	.030	-.035
Q20	-.063	-.032	-.030	.022	.767	.004	.007	-.010	.013	-.043
Q12	.017	-.031	.036	.050	.008	.612	.016	-.019	.070	.030
Q15	-.066	-.007	.028	-.015	.002	.595	-.023	-.001	-.005	.044
Q14	-.009	.009	-.028	.065	.013	.586	.027	-.031	.027	-.071
Q13	-.092	-.010	.044	-.014	-.034	.581	.025	.015	-.035	.033
Q6	-.005	-.010	.046	-.007	-.006	.014	.767	.031	-.027	-.010
Q8	.020	.021	.034	.005	-.008	.027	.756	.000	-.018	-.024
Q7	.014	-.004	.037	.009	.029	.011	.762	.004	.020	.021
Q10	.043	-.023	.021	.016	.025	-.011	-.014	.790	-.028	.047
Q9	.021	-.013	.012	-.001	-.036	.003	.022	.782	-.033	.014
Q11	-.006	-.010	.065	.009	.007	-.035	.027	.783	.025	-.005
Q4	-.041	.009	.003	.000	.029	.028	-.011	-.015	.735	.014
Q5	-.040	.011	.004	.001	.030	.028	-.012	-.016	.735	.015
Q16	-.009	.001	-.024	.023	-.040	.018	-.007	.023	.007	.599
Q17	-.011	.009	-.024	.023	-.039	.013	-.003	.017	.016	.597

Table 4 summarizes the results of the reliability test. There are several tests to check the reliability test. Cronbach's Alpha is the most prominent among them. The guidelines suggest Cronbach's Alpha is greater than 0.7 or 70% which means that the particular construct (variable) is reliable. It indicates that the survey was developed for the reason which is why it was designed. The outcomes for every concept are summarized in the table below. Every construct with values above 0.7, or 70%, indicates that these ideas are dependable, so



inquiries posed regarding specific concepts are fully valid. This survey also supported by (Adamopoulos & Syrou, 2022; Miah & Hasan, 2022). A survey (instrument) created to assess the satisfaction of instructors and its impact on one's performance is adequately structured to produce the anticipated findings. Each build is correct and satisfies the function for which it was created. Table 5 presents the Hypotheses testing since all variable's p-values are less than 0.05, so it supports all hypotheses. Table 6 summarizes the model's overview and beta determination findings. Several factors that explain are indicated by the R Square of 0.745. Individual performance is explained by 74.5% of PA, C, TO, NW, RS, PO, WE, and workgroups. This suggests that these variables add 74.5% to improving the efficiency of teachers. Various more components in the structure are not included in this analysis which predicts 25.5% of the total variance. The modified value of R Square is 0.727, a value that is similarly close to the original R Square, indicating that the model works well. The Durbin-Watson test is a test that indicates the degree to which the predicted outcome has autocorrelation. The Durbin-Watson test checks the correlation between residual and its lag variable (Corso, 2020). The Durbin Watson ranges from 0 to 2, if the test result is 0 it means there is perfect positive multi co-linearity between residuals and its lag variable ($r = (+1)$) and if the test result is 4 it means there is a perfect negative correlation between residuals and its lag variable ($r = (-1)$). When Durbin Watson's results equal 2 it means there is no correlation between residual and its lag variable ($r=0$). The findings from the model indicate that the coefficient for Durbin Watson is 2.081, which is close to 2, indicating that there is no serial/autocorrelation across residuals of data. It is preferable to have a serial correlation between residuals (Sutarto et al., 2022). The ANOVA table indicates whether the hypothesis is predictive or inaccurate. Following the (Muri et al., 2020; Ruch & Stahlmann, 2020) suggestions, if an F-value exceeds 4 or the probability value is 0.05, the framework is useful; else, the analysis is not beneficial. The fact that its F-statistic is above four while the significance level is 0.000 suggests the combination of the 2 can be utilized for prediction. The findings reported in prior parts are deemed to be accurate as the ANOVA table's findings support the hypothesis's conclusions. As a result, it is argued as the framework is beneficial for forecasting satisfaction with work by utilizing the research's descriptive components. Our findings are more close to (Amrutha & Geetha, 2021; Lambert et al., 2019; Mickson & Anlesinya, 2020).

Table 4
Construct Reliability



Variable	Cronbach's Alpha	N of Items
C	0.768	3
PO	0.899	2
WE	0.785	3
TO	0.789	3
RS	0.845	4
WG	0.889	2
NW	0.778	3
PA	0.866	4
JS	0.765	3
IP	0.759	3

Table 5
Regression Results

	Understand. Coeff.		Std. Coeff.	t	Sig.	VIF	Toler.
Constructs	B	Std. Error	Beta				
(Constant)	1.361	1.542		0.883	0.118		
Compensation	0.293	0.037	0.306	7.919	0.000	2.351	0.425
Promotional Opportunities	0.128	0.063	0.143	2.032	0.046	3.332	0.300
Work Environment	0.112	0.034	0.124	3.294	0.015	3.546	0.282
Training Opportunities	0.136	0.049	0.212	2.776	0.034	1.281	0.781
Relationship with Supervisor	0.223	0.0288	0.245	7.743	0.000	1.987	0.503
Workgroup	0.185	0.097	0.193	1.907	0.057	1.365	0.733
Nature of Work	0.274	0.044	0.283	6.227	0.000	2.658	0.376
Performance Appraisal	0.139	0.023	0.124	6.043	0.000	3.545	0.282
a. Dependent Variable: Individual Performance							



Table 6
ANOVA Results

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson	
1	0.863 ^a	0.745	0.727	1.324581	2.081	
a. Predictors: (Constant), Performance Appraisal, Compensation, Training Opportunities, Nature of Work, Relationship with Supervisor, Promotional Opportunities, Work Environment, Work Group						
ANOVA ^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	324.452	8	40.557	111.727	0.000 ^b
	Residual	155.364	428	0.363		
	Total	479.816	436			
a. Dependent Variable: Individual performance						
b. Predictors: (Constant), Performance Appraisal, Compensation, Training Opportunities, Nature of Work, Relationship with Supervisor, Promotional Opportunities Work Environment, Work Group						

Conclusion and Recommendation

The study was carried out on the topic of individual performance through job satisfaction at public sector universities in Sindh, Pakistan. The central idea of the research was derived from Herzberg's theory (Ho et al., 2021). This theory tested hygiene factors on individual performance via job satisfaction. There were several hygiene factors identified in Herzberg's theory. These were C, PO, WE, TO, RS, WG, NW, and PA. A detailed literature review was also carried out and several national, and international studies were referred to develop a strong theoretical framework (Ismayilova & Klassen, 2019). The studies of developed, developing, and Pakistan were referred to explore the differences across the world. The main focus of this study was the Sindh province of Pakistan especially public sector universities therefore studies that were previously held in the Sindh province context were especially focused in the literature part. It, therefore, gave a clear picture of the phenomena which was under consideration. There were ten factors highlighted through exploratory factor analysis (Shaikh & Khoso, 2021). The same factors which were previously identified in different studies were found in this study. The questions which were asked for particular constructs were found consistent with previously held studies in the case of the Sindh province context. Finally, regression models were run, three regression models were developed in this study to



check how these hygiene factors impacted individual performance through job satisfaction. The best characteristics of the regression model were also tested through different statistical tools such as Durbin Watson, ANOVA, Scatter Plot, Normality graph, VIF, and Tolerance (Demir et al., 2021). Individual performance was the response variable in the stochastic model and C, PO, WE, TO, RS, WG, NW, and PA were explanatory variables. The findings of the model suggested there was a significant impact of all variables on individual performance except work groups (Bellmann & Hübler, 2021). It meant compensation, promotional opportunities, work environment, training opportunities, relationship with supervisor, nature of work, and performance appraisal were conducive to increasing individual performance. The other parameters of the stochastic model were found appropriate and desirable. The R-square results showed the strong effect that explanatory variables impacted strongly on response variables. The best characteristic of the model was also proved in ANOVA which generated an F-statistic value. The value of F-statistics suggested the model was useful for prediction; it endorsed that model one which had been developed by using Herzberg's theory found appropriate. The other parameters of the Durbin-Watson test suggested there was almost no serial correlation between residuals which was another good characteristic of the model found through this test (Raziq & Maulabakhsh, 2015). The Durbin-Watson test also validated the results of variance inflating factor and tolerance tests for multicollinearity (Ashraf, 2020). It was normally found that the explanatory variables which were highly correlated with each other (Winefield & Jarrett, 2001). On the strength of the entire investigation, it can be determined that all the sanitation aspects provided by Herzberg's two-factor model correspond with the surroundings of universities owned by the government in the province of Sindh Pakistan.

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