



PAPER ID: 10A14B



AN EXPLORATION OF JOB SATISFACTION INDICES FOR TEACHERS IN BALOCHISTAN, PAKISTAN

Abdul Raziq ^{a,b*}, Raja M. Ilyas ^a, Mir G. H. Talpur ^a

^a Department of Statistics, University of Sindh, Jamshoro, PAKISTAN.

^b Department of Statistics, University of Balochistan, Quetta, PAKISTAN.

ARTICLE INFO

Article history:

Received 10 April 2019
Received in revised form 15
July 2019
Accepted 05 August 2019
Available online 19 August
2019

Keywords:

Job Satisfaction; Job
dissatisfaction of teachers;
Job Satisfaction Index;
Dimensional Scaling;
Principle Component
Analysis.

ABSTRACT

Over the years, much criticism has been evidenced by the constructs of job satisfaction. This study identifies the significant components of job satisfaction among teachers working at school, college and university level in Balochistan, one of the largest province of Pakistan. Constructing job satisfaction indices are the key dimension of this research. In the past literature job, satisfaction was proven to be linked with leaving intention and organizational turnover. However, there are limitations to the existing dimensions of job satisfaction. Thus, to validate the dimensions of the job satisfaction data was collected from 576 school teachers, 314 college teachers, and 158 university teachers. A set of 23 questions was included in the measurement scale to tap the dimensions of job satisfaction. The principal component analysis was used to identify the dimensions of Job satisfaction. The results explored seven dimensions of job satisfaction, further, factor loading weighted average was used to develop the Job Satisfaction Index (JSI) that best describes job satisfaction construct.

© 2019 INT TRANS J ENG MANAG SCI TECH.

1. INTRODUCTION

Researchers over the decades dedicated their efforts towards understanding several factors that can predict job satisfaction. Generally, one tends to be more satisfied with his or her job when their work environment is supportive and allows autonomy as well as there is greater person-environment fit (Duffy and Lent, 2009). Over time, a study in this field has risen and researchers have studied distinct worker populations, given the concept that some variables are strongly associated with job satisfaction among specific occupations. One such population that has gotten expanded consideration of the job satisfaction researchers is teachers, especially given their higher probability of turnover.

The present study is aimed to explore the job satisfaction indices for teachers in the Balochistan province of Pakistan by building on the past research work in this domain. This study has chosen to

study the job satisfaction indices of school, college and university teachers due to several reasons. Firstly, these indices have shown to strongly affect teacher turnover. Secondly, the teacher's dissatisfaction with the working conditions is the main reason for their decision to change their institute (Stuit & Smith, 2012). Analyzing job satisfaction among teachers provides an overview for human resource managers and educational policy managers to carefully design working conditions, job responsibilities, reward system, promotional opportunities, and job security for teachers to encourage teachers to meet educational and organizational goals.

Job Satisfaction is related to productivity. It also indicates passion and satisfaction leading to appreciation, salary, appraisal, promotion, and achievement (Statt, 2004). Like other organizations, the educational sector also faced with job satisfaction or dissatisfaction of teachers which sequentially, can affect their performance. Therefore, educational institutes are trying to explore the ways for lessening teacher's dissatisfaction and improving their satisfaction by identifying factors that correlate with the job satisfaction of teachers.

2. LITERATURE REVIEW

Several studies have been performed around the world to investigate job satisfaction among the employees and especially teachers. This paper reviewed the past literature in the context of job satisfaction to explore job satisfaction indices. The robust predictors of job satisfaction have been explored by past researchers while gauging individual differences and job environment variables (Dinham & Scott, 1998). It has been found that the intrinsic factors like the relationship with students, autonomy, intellectual challenge and activities directly related to teaching can highly influence the job satisfaction among school teachers. On the other hand, extrinsic factors can impact job dissatisfaction.

Duffy and Lent (2009) conducted a job satisfaction study based on a social cognitive model, it has been found that good working conditions, self-efficacy and organizational support all of them can predict teacher's job satisfaction. Similar findings by other researchers depict that demographic variables like gender (Raziq et al., 2019), age and service tenure have a relatively less effect on teacher's job satisfaction as compared to the variables like organizational support, working conditions and self-efficacy (Lent et al., 2011).

Marston (2010) established that working with energetic young people and experiencing student growth were found to be strongly linked with teacher's job satisfaction. Moreover, an interesting finding was that the significance of the subject being taught was found to be more crucial for high school teachers as compared to the elementary school teachers, but the

Liu & Meyer (2005) found that higher workload along with lower salaries tends to act as dissatisfied for school teachers. It was also revealed that the perception of autonomy within the classroom, professional development opportunities and support from the top management are the integral factors, influencing job satisfaction among school teachers.

Teachers' job satisfaction has been studied by Yuh & Choi (2017) in South Korea, the findings revealed a significant relationship between social support and job satisfaction of teachers. Workplace support from director and colleagues turned out to be the predictors of job satisfaction among the

female teachers. Therefore, it can be concluded that a supportive working environment can predict a high level of job satisfaction. Moreover, the past literature on job satisfaction pointed out that, compensation is an important tool to motivate workers.

The research work of Muguongo et al. (2015) revealed that fair compensation to teachers can result in a high level of job satisfaction. Therefore, the positive impact of compensation on job satisfaction was well established in past literature. This impact is because of two reasons, firstly money has prime importance in fulfilling the basic needs of an individual and secondly, employees view their salary as a tool to judge the top management's concern for them. Consequently, employees always demand a pay system that is fair, simple and harmonized with their expectations. Satisfaction is an ultimate outcome when employees perceive they pay system to be fair in relation to the job demands; their skill level and community pay standards.

As discussed earlier job satisfaction is a phenomenon having multiple dimensions, therefore, researchers have identified several job satisfaction factors. According to the research findings of Ellickson & Logsdon (2001), job satisfaction of a teacher is considerably affected by having good teaching opportunities, reasonable workload, and adequate work tools. While other researchers like Shah & Jalees (2004) are of the view that job satisfaction is the outcome of good relationships with colleagues, supervisors, the strategy of the company, compensation policies, promotion and development opportunities.

Similar were the findings of Luthans (1998) that job satisfaction is determined by the work itself, compensation packages, promotes, supervisory support and relationship with the colleagues. (Tella et al., 2007), is of the view that job satisfaction is linked with a number of attitudes, like job characteristics, career development opportunities, pay and compensation packages, social security, and technological challenges.

Buitendach & De Witte (2005) declares job satisfaction as a very complex construct influencing individual characteristics as well as job environment factors. There are two broader categories of these factors, namely intrinsic factors and extrinsic factors. Extrinsic factors comprise of pay, compensation packages, developmental and promotional opportunities, colleagues and supervisor, while the intrinsic factors include an individual's personality, ability, education, intelligence, marital status and age (Mullins, 1999). It has been reported that both intrinsic and extrinsic factors work with each other to impact an individual's job satisfaction, (Spector, 1985).

Atchison (1972) argued that extrinsic factors affecting job satisfaction are governed by those conditions which are beyond the employee control. A review of the literature revealed some of those factors and these are; administrative and organizational policy, promotional opportunity, salary, working conditions, supervision, job security to name a few. Whereas, the intrinsic factors affecting job satisfaction of an individual are psychological rewards like, challenging environment, sense of achievement, recognition, appreciation, caring and respectful treatment. These psychological rewards are reflected by the behavior and action of the managers.

While Kondalkar (2007) is of the view that job satisfaction which is driven by enjoyment in one's own work and depends on the employee itself rather than depending on any external factor can be termed as intrinsic job satisfaction. It is based on deriving pleasure out of work rather than working

for some external reward.

According to Schermerhorn et al. (2004), the positive work outcomes which do not require the participation of another source and employee receives it as a direct outcome of task performance is an intrinsic aspect of job satisfaction. In this backdrop, Herzberg was of the view that employees feel highly motivated and satisfied with those jobs which are meaningful and rich in intrinsic rewards. These intrinsic aspects can be derived from, challenging and meaningful work, recognition, achievement, career development, and growth.

Overall the review of past literature found mixed results about the determinants of job satisfaction. Therefore, the present study aimed at exploring some of the indices of job satisfaction. These findings can be helpful in improving the overall job satisfaction of teachers in Balochistan.

3. RESEARCH METHODOLOGY

The target population for this research was 59,713 teachers of Balochistan working in schools, colleges, and universities as per Pakistan Education Statistics 2014-15. The sample size was determined using Cochran's formula. Therefore, the total sample size was 1048 and in the total sample size, the share of school teachers was 576, 314 of college teachers, and 158 of university teachers and data collected from these teachers through designed job satisfaction questionnaire. A total of 23 statements was designed for evaluating job satisfaction and working behaviors. Principal Component Analysis was utilized in this study for the construction of the job satisfaction index for teachers.

4. RESULTS AND DISCUSSION

Cronbach's alpha was used to check the reliability and inter-consistency of scales constructed. Overall Cronbach's alpha was 0.921, which is excellent. This can be interpreted as 92% of teachers in this study hold a consistent opinion.

Table 1: Cronbach's alpha (a measure of inter-consistency)

Variable	Cronbach's Alpha	No of Items
Overall	0.921	48
Life Satisfaction Score Card	0.849	14
Job Satisfaction Score Card	0.903	34

Table 2: KMO and Bartlett's test for job satisfaction

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.882
Bartlett's Test of Sphericity	
Approx. Chi-Square	6938.88
Df	253
Sig.	<0.001

Kaiser Meyer of Olkin (KMO) for a set of variables included in the principal component analysis was 0.882, which exceeds the minimum requirement of 0.5 for the overall measure of sample adequacy. Bartlett's test of Sphericity was also found to be highly significant $p < 0.001$, it represents that factors computed are appropriate. The probability associated with the Bartlett test is $p < 0.05$, which shows that data is approximately normal and acceptable for factor analysis.

Table 3: Communalities for Principal Component Analysis

Components	Extraction
In my institute teachers can freely share their experiences and opinion regarding their Institute and supervisor	0.556
My institution is working too good at managing its responsibilities well	0.534
I am satisfied with my current salary	0.535
I am satisfied with my relationships with subordinates (Juniors)	0.549
My job responsibilities are as per my qualification and skills	0.407
I am satisfied with my job security	0.546
I have a variety of job responsibilities	0.597
My colleagues guide me or provides me moral and professional supports	0.556
I am overall satisfied with my current job	0.576
My colleagues are satisfied with the supervisor	0.618
I am satisfied with my relationships with my supervisor	0.578
My current level of competence is probably not enough to excel in this job.	0.641
I am satisfied with the opportunities given to me to utilize my skills and abilities	0.606
I am satisfied with opportunities given to me to learn new skills, abilities, and knowledge	0.672
I am satisfied with the availability of my promotion opportunities	0.652
In my Institute teaching procedures are very simple and straightforward	0.709
I am satisfied with my employment benefits	0.626
I am independent while performing my job responsibilities	0.685
I know what's exactly expected from me on job	0.752
I am independent while making decisions regarding my job responsibilities	0.681
I clearly know what are my job responsibilities	0.748
I am satisfied with policies and rules and regulations of my Institute	0.687
My job responsibilities and quality of teaching practices are influenced by my unhappiness and dissatisfaction.	0.661

Table 4: Total Variance Explained by Components

Component	Initial Eigen Values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.144	26.712	26.712	6.144	26.712	26.712	2.542	11.053	11.053
2	1.969	8.562	35.274	1.969	8.562	35.274	2.496	10.853	21.905
3	1.549	6.733	42.007	1.549	6.733	42.007	2.106	9.156	31.061
4	1.309	5.690	47.698	1.309	5.690	47.698	2.012	8.748	39.809
5	1.146	4.983	52.681	1.146	4.983	52.681	1.844	8.017	47.826
6	1.036	4.503	57.184	1.036	4.503	57.184	1.808	7.860	55.687
7	1.018	4.425	61.609	1.018	4.425	61.609	1.362	5.923	61.609
8	0.878	3.819	65.428						
9	0.761	3.309	68.737						
10	0.703	3.058	71.796						
11	0.662	2.876	74.672						
12	0.647	2.815	77.487						
13	0.603	2.623	80.110						
14	0.583	2.533	82.643						
15	0.572	2.487	85.130						
16	0.508	2.207	87.337						
17	0.493	2.142	89.478						
18	0.456	1.984	91.463						
19	0.437	1.899	93.362						
20	0.428	1.859	95.221						
21	0.385	1.673	96.894						
22	0.370	1.608	98.502						
23	0.345	1.498	100.000						

Tables 3, 4, and 5, the extraction method is from Principal Component Analysis.

Table 5: Rotated Component Matrix

	Component						
	1	2	3	4	5	6	7
I am satisfied with the availability of my promotion opportunities	0.755						
I am satisfied with my employment benefits	0.716						
I am satisfied with my job security	0.691						
I am satisfied with my current salary	0.644						
I am overall satisfied with my current job	0.507						
My colleagues are satisfied with the supervisor		0.736					
I am satisfied with my relationships with my supervisor		0.705					
My colleagues guide me or provide me moral and professional supports		0.674					
In my institute teachers can freely share their experiences and opinion regarding their Institute and supervisor		0.652					
I am satisfied with my relationships with subordinates (Juniors)		0.609					
I am satisfied with the opportunities given to me to learn new skills, abilities, and knowledge			0.720				
I am satisfied with the opportunities given to me to utilize my skills and abilities			0.647				
My institution is working too good at managing its responsibilities well			0.582				
I have a variety of job responsibilities			0.575				
I clearly know what are my job responsibilities				0.854			
I know what's exactly expected from me on job				0.853			
I am independent while performing my job responsibilities					0.765		
I am independent while making decisions regarding my job responsibilities					0.750		
In my Institute teaching procedures are very simple and straightforward						0.804	
I am satisfied with policies and rules and regulations of my Institute						0.781	
My current level of competence is probably not enough to excel in this job.							0.745
My job responsibilities and quality of teaching practices are influenced by my unhappiness and dissatisfaction.							0.723

5. ROTATION METHOD: VARIMAX WITH KAISER NORMALIZATION.

5.1 ROTATION CONVERGED IN 8 ITERATIONS

Examining the patterns of the factor loading (loading greater than 0.50) makes certain that each variable load on one and only one component.

‘I am satisfied with availability of my promotion opportunities’, ‘I am satisfied with my employment benefits’, ‘I am satisfied with my job security’, ‘I am satisfied with my current salary’ and ‘I am overall satisfied with my current job’ – all these are part of the First component explaining

26.7% of variation with the title “Pay and Benefits”.

‘My colleagues are satisfied with supervisor’, ‘I am satisfied with my relationships with my supervisor’, ‘My colleagues guide me or provide me moral and professional supports’, ‘In my institute teachers or professors can freely share their experiences and opinion regarding their Institute and supervisor’, ‘I am satisfied with my relationships with subordinates – all these are part of Second component explaining 8.5% of variation with the title “Working environment/employees relationships”.

‘I am satisfied with opportunities given to me to learn new skills, abilities, and knowledge’, ‘I am satisfied with opportunities given to me to utilize my skills and abilities’, ‘My institution is working too good in managing its responsibilities well’, ‘I have variety of my job responsibilities’ – all these are part of Third component explaining 6.7% of variation in the model with title “Learning opportunities in Job responsibilities”.

‘I clearly know what my job responsibilities are’ and ‘I know what’s exactly expected from me on the job’ – these are part of the Fourth component explaining 5.6% of the variation in the model with the title “Responsibilities awareness”.

‘I am independent while performing my job responsibilities’ and ‘I am independent while making decisions regarding my job responsibilities’ – these are part of the Fifth component explaining 5% of the variation in the model with title “Independence”.

‘In my Institute teaching procedures are very simple and straightforward’, ‘I am satisfied with policies, rules, and regulations of my institute’ – all these are part of Sixth components explaining 4.5% of variation with title “Policies, rules and regulation”.

‘My current level of competence is probably not enough to excel in this job’, ‘My job responsibilities and quality of teaching practices are influenced by my unhappiness and dissatisfaction’ – these are part of the Seventh component explain 4.4% of the variation in the model with the title “Growth and Passions”.

The factor score matrix is given in Table 6, these scores used for computation of factor scores. For each case and each factor. The factor score is computed by multiplying the case's standardized variable values by the component's score coefficients. All Factor scores are computed using standardized (Z-Score) of original variables.

Hence, our seven main dimensions of JSI of faculty members of the school, college, and university are:

- 1) Pay, promotion and other benefits,
- 2) Working Environment/ Working relationships,
- 3) Learning Opportunities/ Skills and abilities,
- 4) Responsibilities Awareness/ Role Ambiguity,
- 5) Independence/ Task autonomy,
- 6) Policies and Regulations, and
- 7) Growth and Passion/ Self-efficacy.

Table 6: Component Score Coefficient Matrix for Job Satisfaction Factors

Job Satisfaction Factors	Component Score Coefficient Matrix						
	1	2	3	4	5	6	7
In my institute teachers can freely share their experiences and opinion regarding their institute and supervisor	0.039	0.308	-0.065	0.114	-0.007	0.003	0.030
My institution is working too good at managing its responsibilities well	-0.118	-0.056	0.313	0.027	0.061	0.095	-0.078
I am satisfied with my current salary	0.265	-0.037	-0.096	0.021	-0.062	0.112	0.017
I am satisfied with my relationships with sub-ordinates (Juniors)	-0.049	0.258	-0.076	0.124	-0.006	-0.056	0.036
My job responsibilities are as per my qualification and skills	0.039	-0.010	0.062	0.048	-0.264	0.210	0.200
I am satisfied with my job security	0.326	-0.014	-0.189	0.017	0.101	-0.050	-0.028
I have variety in my job responsibilities	-0.141	-0.075	0.308	0.016	0.257	-0.102	-0.061
My colleagues guide me or provides me moral and professional supports	-0.047	0.316	0.010	0.047	-0.064	-0.064	0.098
I am over-all satisfied with my current job	0.189	-0.034	-0.005	0.201	0.035	-0.112	0.022
My colleagues are satisfied with supervisor	0.019	0.365	-0.086	0.090	-0.003	0.000	-0.067
I am satisfied with my relationships with my supervisor	-0.028	0.339	-0.008	0.011	-0.063	-0.019	-0.112
My current level of competence is probably not enough to excel in this job.	-0.032	-0.016	0.111	0.096	-0.145	-0.121	0.625
I am satisfied with the opportunities given to me to utilize my skills and abilities	-0.059	-0.037	0.363	0.044	-0.105	0.045	-0.003
I am satisfied with the opportunities given to me to learn new skills, abilities, and knowledge	0.063	-0.068	0.442	0.028	-0.115	-0.101	0.015
I am satisfied with the availability of my promotion opportunities	0.344	0.025	0.041	0.082	-0.068	-0.050	-0.063
In my institute teaching procedures are very simple and straight forward	-0.089	-0.060	-0.134	0.005	-0.004	0.585	-0.054
I am satisfied with my employment benefits	0.315	-0.034	0.084	0.068	-0.005	-0.093	-0.027
I am independent while performing my job responsibilities	-0.018	-0.037	-0.149	0.004	0.539	-0.039	-0.031
I know what's exactly expected from me on job	-0.062	-0.094	-0.007	0.493	-0.029	-0.006	-0.024
I am independent while making decisions regarding my job responsibilities	-0.001	-0.083	-0.038	0.055	0.514	-0.077	-0.066
I clearly know what are my job responsibilities	-0.035	-0.067	-0.042	0.493	-0.028	-0.025	-0.037
I am satisfied with policies and rules and regulations of my institute	-0.092	-0.069	0.001	0.071	-0.066	0.556	-0.022
My job responsibilities and quality of teaching practices are influenced by my unhappiness and dissatisfaction.	-0.102	-0.079	-0.291	0.046	0.179	0.062	0.628

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

The Summation method of factor scores from the principal component analysis was used to construct the job satisfaction index. Initially, a non-standardized job Satisfaction Index (NSI) would be computed using seven computed factor scores through PCA. I would be computed using a percentage of variation, explained by a given a variable dividing by total variation explained by all factors multiplying by factor score of a given variable. The mathematical equation used to compute NSI is as follows:

NSI

$$\begin{aligned}
 &= \left(\frac{26.712}{61.609}\right) * Factor1\ Score + \left(\frac{8.562}{61.609}\right) * Factor\ 3\ Score + \left(\frac{6.733}{61.609}\right) * Factor\ 3\ Score \\
 &+ \left(\frac{5.690}{61.609}\right) * Factor\ 4\ Score + \left(\frac{4.983}{61.609}\right) * Factor\ 5\ Score + \left(\frac{4.503}{61.609}\right) * Factor\ 6\ Score \\
 &+ \left(\frac{4.425}{61.609}\right) \\
 &* Factor\ 7\ Score
 \end{aligned} \tag{1}$$

Factors score computed from seven questions above would be used for computing factor analysis. The equation for first factor score is given as

Factor 1 Score

$$\begin{aligned}
 &= 0.039 * ZV1 - 0.118 * ZV2 + 0.265 * ZV3 - 0.049 * ZV4 + 0.039 * ZV5 + 0.326 * ZV6 \\
 &- 0.141 * ZV7 - 0.047 * ZV8 + 0.189 * ZV9 + 0.019 * ZV10 - 0.028 * ZV11 - 0.032 * ZV12 \\
 &- 0.059 * ZV13 + 0.063 * ZV14 + 0.344 * ZV15 - 0.089 * ZV16 + 0.315 * ZV17 - 0.018 \\
 &* ZV18 - 0.062 * ZV19 - 0.001 * ZV20 - 0.035 * ZV21 - 0.092 * ZV22 - 0.102 \\
 &* ZV23
 \end{aligned} \tag{2}$$

ZV1...ZV23 are standardized Z Scores of original values.

As mentioned in Table 6: Component Score Coefficient Matrix for Job Satisfaction Factors those values are multiplied with standardized Z-scores to calculate values of Factor 1 to 7 scores.

It's difficult to interpret the NSI because it can be both positive and negative. Hence, a standardized job satisfaction index (JSI) is computed, using the formula

$$JSI = \left[\frac{NSI_{xi} - Min_{NSI}}{Max_{NSI} - Min_{NSI}} \right] * 100 \tag{3},$$

where NSI_{xi} is the non-standardized job satisfaction index for each faculty member. Min_{NSI} and Max_{NSI} are the minimum and maximum value of non-standardized job satisfaction index, the value of which varies from 0 to 100. Each faculty member was classified into satisfied and dissatisfied groups. A faculty member was supposed to be dissatisfied if the SI value for a given member is less than and equal to 50 and satisfies otherwise.

Table 7 shows that on the average JSI of faculty members of Balochistan is 55.38 and 64% of teachers are satisfied with their job. Furthermore, demographic variables gender, age, education, marital status, job experience, salary, location, sector, and type of institution was tested with JSI.

Gender-wise, male teachers seem more satisfied with their job as compared to females, whereas no significant association was found between job satisfaction and gender. The age-wise analysis shows satisfaction with their job increases as the age of teacher increases. Association between the age of teachers and job satisfaction was found to be statistically significant. Education-wise, teachers having undergraduate, graduate, MPhil, and PhD qualification was found more satisfied with their job as compared to teachers with Masters educational qualifications. The statistically significant association between the age of teachers and job satisfaction was found.

Married teachers were found more satisfied with their job as compared to unmarried teachers. The association between the marital status of teachers and job satisfaction was statistically significant.

Table 7: Standardized JSI classified with studied parameters.

Parameters		Average of Standardized JSI	Dissatisfied N%	Satisfied N%	Chi-Square (P-Value)
Gender of Teacher	Male	56.00	35	65	0.464
	Female	54.33	37	63	
	Total	55.38	36	64	
Age of teacher in Years	<= 20	35.09	100	00	<0.001
	21-30	49.98	47	53	
	31-40	55.81	34	66	
	41-50	58.32	30	70	
	51+	64.16	21	79	
Education of Teacher	Under Graduate	63.11	21	79	<0.001
	Graduate	55.54	36	64	
	Masters	53.61	40	60	
	M.Phil	57.71	26	74	
	P.hD.	62.30	16	84	
Marital Status	Unmarried	48.66	51	49	<0.001
	Married	57.33	32	68	
Job Experience in Current Institute	<= 2	52.60	45	55	0.001
	3-5	54.32	40	60	
	6-10	55.75	31	69	
	11-15	57.40	32	68	
	16-20	59.40	24	76	
	21+	58.95	29	71	
Total Job Experience in Years	<= 2	49.63	51	49	<0.001
	3-5	50.84	45	55	
	6-10	52.81	39	61	
	11-15	56.98	31	69	
	16-20	59.63	27	73	
	21+	61.34	26	74	
Salary of Teacher	Up to Rs 30,000	35.88	81	19	<0.001
	Rs. 30,001-50,000	55.62	36	64	
	Rs. 50,001-80,000	56.88	31	69	
	More than Rs. 80,000	64.76	16	84	
Location	Rural	56.85	33	67	0.072
	Urban	54.28	38	62	
District	Quetta	53.61	41	59	0.007
	Other than Quetta	56.38	33	67	
Nature of Job	Permanent	59.00	28	72	<0.001
	Contract/Tenure	35.31	81	19	
	Track				
Sector of Job	Government	58.98	28	72	<0.001
	Private	37.94	74	26	
Institution Type where the teacher works	School	53.49	40	60	0.003
	College	56.50	34	66	
	University	60.09	25	75	

Teachers were found more satisfied the more time they spent in an institution. Association between years of job experience in the current institution and job satisfaction was found to be statistically significant. Teachers with more job experience were also found satisfied with their jobs. Total-experience and job satisfaction were significantly associated. Teachers with higher salaries were found satisfied with their jobs. The association between total job experience and the salary of the teacher was found to be statistically significant.

Furthermore, teachers in rural areas were more satisfied as compared to urban areas. There was found no statistically significant association between location type and job satisfaction. Teachers working in Quetta district were more dissatisfied with their jobs as compared to teachers of the rest of the districts of Balochistan. The association between the district and job satisfaction seems to be statistically significant. The permanent teacher showed more satisfaction as compared to teachers working on contract or tenure basis. The nature of job and job satisfaction was significantly associated.

The sector of job-wise analysis shows that teachers of the government sector seem to be more satisfied as compared to teachers working in the private sector. The association between sector type and job satisfaction seems to be statistically significant. University teachers were found more satisfied, followed by college teachers and school teachers. A significant association between the type of institution and job satisfaction was also found statistically significant.

6. CONCLUSION

This paper aims to identify the dimensions best represents the job satisfaction. To identify the main components of job satisfaction, 23 statements were used. The result of the factor analysis developed seven dimensions for job satisfaction. Finally, seven identified factors or components affecting job satisfaction include pay and benefits, working environment, learning opportunities, responsibilities awareness, independence, policies and regulations, and growth/ Passion. Results of Principal Component Analysis and factors score were used for the construction of job satisfaction indices. The job satisfaction indices identified by this study can be a starting point for the regulatory authorities to make effective policies so as to improve the job satisfaction of teachers by emphasizing on these indices. There is no other opinion that job satisfaction plays a crucial role in creating positive employee attitudes. The newly develop index can be used for the assessment of the job satisfaction level among teachers. However, the instrument may be valid for other sectors with slight variations.

7. DATA AVAILABILITY AND MATERIAL

Data involved in this study can be requested to the corresponding author.

8. REFERENCES

- Atchison, T., & Lefferts, E. A. (1972). The prediction of turnover using Herzberg's job satisfaction technique. *Personnel Psychology*, 25(1), 53-64.
- Buitendach, J. H., & De Witte, H. (2005). Job insecurity, extrinsic and intrinsic job satisfaction and affective organizational commitment of maintenance workers in a parastatal. *South African Journal of Business Management*, 36(2), 27-37.
- Dinham, S., & Scott, C. (1998). A three-domain model of teacher and school executive career satisfaction. *Journal of Educational Administration*, 36, 362–378. DOI:10.1108/09578239810211545.
- Duffy, R. D., & Lent, R. W. (2009). Test of a social cognitive model of work satisfaction in teachers. *Journal of Vocational Behavior*, 75, 212–223. DOI: 10.1016/j.jvb.2009.06.001
- Ellickson, M. C., Logsdon, K. (2001). Determinants of job satisfaction of Municipal Government employees. *State and Local government Review*, 33(3), 173-184.
- Kondalkar, V. G. (2007). *Organizational behavior*. India: New Age International (P) Lid.

- Lent, R. W., Nota, L., Soresi, S., Ginevra, M. C., Duffy, R. D., & Brown, S. D. (2011). Predicting the job and life satisfaction of Italian teachers: Test of a social cognitive model. *Journal of Vocational Behavior*, 79, 91–97. DOI:10.1016/j.jvb.2010.12.006
- Liu, X. S., & Meyer, J. P. (2005). Teachers' perceptions of their jobs: A multilevel analysis of the Teacher Follow-Up Survey for 1994-95. *Teacher College Record*, 107, 985-1003.
- Luthans, F. (1998). *Organizational behavior*. (8th ed.). India: McGraw-Hill.
- Marston, S. H. (2010). Why do they teach? A comparison of elementary, high school, and college teachers. *Education*, 131, 437–454.
- Mugungo, M. M., Muguna, A. T., & Muriithi, D. K. (2015). Effects of compensation on job satisfaction among secondary school teachers in Maara Sub-County of Tharaka Nithi County, Kenya. *Journal of Human Resource Management*, 3(6), 47-59.
- Mullins, L.J. (1999). *Management and organizational behavior*: (5th ed.). Great Britain: Pitman publishing.
- Raziq, A., Ilyas, R.M., Talpur, M.G.H. (2019). Impacts of Gender on Job Satisfaction and Work Motivation Relationship: A Case of Teachers in Balochistan, Pakistan. *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies*. 10(13): 10A11F, 1-10.
- Schermerhon, J. R., Hunt, J.G. & Osborn, R. N. (2004). *Organizational Behavior*. New York: John Wiley and Sons Inc.
- Shah, S., & Jalees, T. (2004). An analysis of the job satisfaction level of faculty members at the University of Sindh Karachi Pakistan. Shaheed Zulfiqar Ali Bhutto Institute of science and technology. *Journal of Independent Studies and Research (JISR) PAKISTAN*, 2(1):26-30.
- Spector, P. E. (1985). Measurement of human service staff satisfaction. *American Journal of Community Psychology*, 13 (6), 693-711.
- Statt, A. D (2004)., *The Routledge Dictionary of Business Management*, Detroit: Routledge Publishing, p. 78.
- Stuit, D. A., & Smith, T. M. (2012). Explaining the gap in charter and traditional public school teacher turnover rates. *Economics of Education Review*, 31, 268-279.
- Tella, A., Ayeni C. O., & Popoola S. O. (2007). Work Motivation, job satisfaction, and organizational commitment: Library personnel in Academic and Research Libraries in Oyo State Nigeria.
- Yuh, J., & Choi, S. (2017). Sources of social support, job satisfaction, and quality of life among childcare teachers. *The Social Science Journal*, 54(4), 450-457.



Abdul Raziq is an Assistant Professor at the Department of Statistics, University of Balochistan, Quetta, Pakistan. He earned his M.Sc and M.Phil. degrees from the University of Balochistan, Pakistan. Abdul Raziq is a Ph.D. scholar of the Department of Statistics, University of Sindh, Jamshoro, Pakistan. His research is related to statistics with emphasis on Financial Time Series, Social Statistics, Applications of Statistics in Medical and Livestock.



Professor Dr. Raja M. Ilyas was Professor at the Department of Statistics at the University of Sindh, Jamshoro, Pakistan, where currently he is working as a Visiting Professor. He earned his Ph.D. degree in Demography from University of Sindh, Jamshoro, Pakistan.



Professor Dr. Mir Ghulam Hyder Talpur is Professor in the Statistics at University of Sindh, Jamshoro Pakistan. He holds a B.Sc. (Hons) and M.Sc. Statistics from University of Sindh, Jamshoro and Ph.D. degrees in Operations Research from Shanghai University of Science & Technology, Shanghai, P. R. China (Now it has been renamed "Shanghai University", Shanghai, P.R. China). Dr. Talpur has extensive experience with Post Doctorate from Ball State University Muncie Indiana USA. His theoretical background is Probability, Queuing Theory, Markov Decision Chains, Regression Models, Sampling Survey, Time Series Analyses and Applied Statistics in the field of Agriculture, Metrology, etc. As his research is more in Applied, he uses more other methodologies, often in joint projects with specialists in those fields.