HUMAN RESOURCE MANAGEMENT (HRM) PRACTICES ADOPTED IN THE GOVERNMENT BUILDING CONSTRUCTION PROJECTS IN SINDH

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ABSTRACT

Objective: This paper aims to identify HRM practices along with their attributes adopted in the construction organizations in Sindh.

Research Method: In depth study was carried out on HRM practices from literature review. From literature review, various HRM practices were identified through mapping. However, for identification of the HRM practices along with their attributes in the government building construction organizations, two questionnaires were designed for collection of the data. Then the collected data was analyzed on excel sheet and SPSS ver.25 for obtaining the results.

Findings: Results were arrived at finding 13 HRM practices from the literature review and first questionnaire survey. Furthermore, from 13 HRM practices, top four HRM practices were taken for further analysis obtained in the form of attributes with low; medium and high perception category. No any HRM practices fell into low category; however, attributes to HRM practices were mostly in medium category and to some extent in high category. The results obtained displayed the need for improving the HRM practices in the construction sectors in Sindh.

Originality: The study's objective is to identify the attributes of HRM practices in construction industry in Sindh. The results obtained are distinctive with respect to construction industry in Sindh. Moreover, it would help construction industry in Sindh to improve HRM practices based on the identified attributes in this study.

Keywords: HRM practices, Construction, Attributes

1. INTRODUCTION

Various researchers have worked out from time to time to identify HRM practises in the construction sector in Sindh: Kotey and Sheridan (2004) discovered that as the number of employees in Queensland, Australia, grows, HRM practises adopt hierarchical structures, increased documentation, and more administrative processes, all of which have an impact on employment relationship management. According to Yeganeh and Su (2008), training and development programmes in the Iranian public sector are haphazard and unplanned, and fixed pay, seniority, awards, and a hierarchical pay system are key features of compensation. According to Ahmed, Zaman, and Khattak (2017), transparent recruitment and selection, better training and development, and attractive compensation and benefit incentives increased employee satisfaction. Malik and Lenka (2019) investigated ten HRM practises, namely human resource planning, job design, training and development, work-life balance, monitoring and control, employee participation, performance management, career advancement opportunities, employment security, and reward system, which were found to be beneficial in resolving destructive deviance among public sector employees. To get to the point, proper identification of HRM practises in the construction public sector has been rare in the past, particularly in Sindh. It is now critical to investigate the identification of HRM practises in government building construction projects in Sindh.

2. LITERATURE REVIEW

Construction is a resource-intensive industry, so resources play a big role in whether a project succeeds or fails (Rahman et al. 2013). Memon et al. (2019) pointed out that resources are a basic requirement for any construction project to be completed within the projected budget. Project resources offer the means for achieving the goals of the work. The type and volume of work on a project determine the resources needed to complete activities. Resources are the various trades and workers that make up the work force for a project (Memon and Zin, 2010). There are several resource related issues which affect the project performance. Hence, it is essential to perform resource management for effective project management.

Human Resource Management (HRM) is a practice that focuses on finding the best people for the best jobs (Ellahi et al. 2017). Rao (2009) defined HRM as the management of human resources by employing, developing, compensating, and utilising human resources through planning, directing, and controlling. Armstrong (2006) defined Human Resource Management (HRM) as a strategic and unified approach to managing the organization's most important resource; the employees who are involved in achieving their goals individually or collectively. Armstrong (2006) defined HRM as a strategic approach to managing employee relations that encourages obtaining benefits by utilising people's capabilities; this can be accomplished through comprehensive policies. According to Dessler (2004), human resource management (HRM) refers to the practises and policies that are implemented to drive human resource; it includes HR planning, performance measurement, job analysis, compensation, selection, recruitment, training, labour relations, and development. Minbaeva (2005) defined HRM practises as a collection of practises used by organisations to manage human resources by enhancing capabilities to create relationships and knowledge for the organization's benefit. Tiwari and Saxena (2012) defined HRM practises as organisational tools for managing a large number of human resources and keeping them employed in order to achieve organisational goals. Furthermore, HRM practises have been studied from various perspectives in the past, some of which can be discussed. Che et al. (2020) discovered that the four HRM practises i.e. remuneration, working environment, training and development, and recognition, working environment and training and development had the strongest relationship with employee commitment. According to Hossain (2020), social status, promotion, and appropriate remuneration had a positive impact on job satisfaction of women employees in the private sector. According to Zardasht et al. (2020), the most important factor of employee job satisfaction is rewarding and motivation; empowerment makes them satisfied with their job; and communication and motivation are important factors that affect employee job satisfaction. Crucke et al. (2021) investigated the effect of perceived organisational support and societal impact on public service motivation on organisational sustainability. Thu et al. (2021) discovered that work (itself), training and development, salary, working environment, and coworker relationships all had a positive impact on employee job satisfaction. According to Badre et al. (2021), rewards and recognition, performance appraisal, and compensation have a greater impact on employee satisfaction than training and development activities. According to Aseefa and Kassa (2021), four independent HRM practises, compensation, performance appraisal, employee participation, and recruitment and selection, had a positive impact on employee job satisfaction in the banking sector, while one independent variable, training and development, had an insignificant impact. In this study, HRM practises are examined in the table of literature review mapping presented in Table 1.

Table 1: Mapping of HRM Practices

S.No	HRM practices	Tabassi & Abu Bakar 2008	Longet al. 2013	Dzansi & Winifred 2010	Jimenez & Sanz-Valle 2013	Okpara& Wynn 2008	Chand &Katou 2007	Lee & Chong 2011	Theriou & Chatzoglou 2009	Ling, et al 2017	Malik & Lenka 2019	Azungah et al 2019	Ameh & Daniel 2017	Mudor & Tooksoon 2011	Hussain & Rehman 2013	Alhammadi & yahya 2021	Al-Kahtani 2018	Mohyin et al 2012	Akhtar et al. 2008	Naing & Lwin 2019	Patterson et al. 2010	Anwar & Abdullah 2021	Ping & Kassim 2019	Almarashda et al. 2021
1	Training and development	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
2	Motivation	√											√											
3	Performance appraisal	√	√	√	√	√		√		√	√	√			√		√	√	√	√	√		√	
4	Compensation and benefits		√	√		√		√	√	√		√			√	√	√	√			√		√	
5	Communication among employees		√	√		√							√		√	√	√				√			
6	Recruitment and selection			√	√	√	√	√	√	√	√	√	√				√			√	√	√	√	
7	Pay system			√			√							√		√								
8	Career development			√	√		√		√		√				√			√	√	√	√			
9	Working conditions			√					√								√				√			
10	Job design				√	√	√		√	√	√						√	√	√		√		√	
11	Teamwork				√			√	√													√		√
12	Job security								√		√				√		√		√			√		
13	Recognition																			√				

This research also conducted Cronbach's Alpha to assess the internal consistency and reliability of the questionnaire. Rahman et al. 2013b and Memon et al. 2013 cited that the data is considered satisfactory if Alpha values reaches to 0.7. Schakib-Ekbatan, et al., 2019 reported several levels acceptability of data as presented in table 2.

Table 2: Reliability Test Description

Alpha<0.5	Data is unacceptable
0.5≤Alpha≤0.6	Data is poor
0.6≤Alpha≤0.7	Data is questionable
0.7≤Alpha≤0.8	Data is acceptable
0.8≤Alpha≤0.9	Data is good
0.9<Alpha	Data is excellent

3. METHODOLOGY

The first questionnaire survey included brief demographic questions such as name, designation and the experience. In addition, it involved the identification of the HRM practices in the government building construction organizations along with their ranking. The second questionnaire had the same demographic questions as in the first questionnaire. However, the second questionnaire involved additional demographic and other questions necessary for the data collection.

3.1 DATA COLLECTION

For the first questionnaire, the data was collected by physically approaching the respondents. The ten experts having experience of at least 15 years in the government building construction sectors were the targeted respondents for the collection of the data. For the second questionnaire, the people having the experience of Government Building Construction organizations in Sindh were the main respondents. The minimum size of the sample was calculated using the formula:

N= 50+ 8(m)

Where N is sample size and m= number of independent variables.

Hence,

N= 50 + 8*4= 82

Therefore, the sample size was not less than 82. So the collected samples were more than 82. Thus, samples used in this study are suitable for analytical process.

Moreover, the second questionnaire design for data collection included two sections: Section one comprised of demographic questions including gender, name, company/organization, and level of education, experience, type of organization, position of respondents in the organization, and type of project. Section two included four HRM practices each having questions in it to measure HRM practices from their relevant questions. These four HRM practices include Training and Development (having four questions), Performance Appraisal (having five questions), Compensation (having four questions) and Recruitment and Selection (having five questions). All items of HRM practices of the questionnaire were measured on 5 Likert type scale as 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree.

3.2 DATA ANALYSIS

Data analysis for the first questionnaire was made on excel sheet. While the data analysis for the second questionnaire was made through comprehensive process. It involved different checks before reaching the actual result analysis.

3.2.1 CRONBACH'S ALPHA VALUE TEST

Cronbach's Alpha test was conducted to assess the internal consistency and reliability of the questionnaire. The standard values were compared with the table 2.

3.2.2 DESCRIPTIVE STATISTICS

This process included Arithmetic Mean, Standard Deviation, and Relative Importance process. Arithmetic Mean was calculated for each HRM practice to identify the level of response. Standard Deviation was calculated to identify the spacing degree of responses about Arithmetic Mean. Relative Importance was calculated using following method:

Class Interval= (Maximum class – Minimum class)/Number of Levels

- Class interval for HRM practice= (5-1)/3= 1.33
- The low degree= 1 to 2.33
- The medium degree= 2.34 to 3.66
- The high degree= 3.67 to 5

3.2.3 MULTI-COLLINEARITY DIAGNOSIS

The multicollinearity diagnosis was conducted to confirm that there are no high correlations among independent variables. For that, Variation Inflation Factor (VIF) and tolerance values were measured. VIF was not to exceed 10 and tolerance to have value greater than 0.05.

3.2.4 DESIGNATION OF QUESTIONS

The questions of HRM practices were designated with shortcut to have easy analysis in following way in table 3.

Table 3: Designation of the Questions of the HRM Practices

Category/ Questions	Code
Training and Development	
I get training opportunities to enhance my capabilities	TD1
Training provided to me relates with my job	TD2
For next promotion, I get training from the organization	TD3
I receive training through advanced technology	TD4
Performance Appraisal	
Feedback of performance is given	PA1
Performance appraisal is made by Project manager	PA2
The method of performance appraisal is conveyed to us	PA3
Employees are allowed to interact with PM for appraising results	PA4
Performance appraisal are based on quantifiable and qualitative results	PA5
Compensation	
Compensation is provided on merit system	C1
Benefits provided are enough for needs	C2
Medical allowance paid is sufficient	C3
Compensation programs are made based on performance	C4
Recruitment and Selection	
Examination/Test is conducted before hiring	RS1
Recruitment and selection process is based on merit	RS2
Employees have to go through probation period before being hired	RS3
Many interviews are conducted for hiring of employees	RS4
High quality employees are preferred	RS5

In the above table 3, the four questions of the 'Training and Development' were designated as TD1, TD2, TD3, and TD4. Similarly, for 'Performance Appraisal' were designated as PA1, PA2, PA3, and PA4. For 'Compensation', the questions were designated as C1, C2, C3, and C4. For 'Recruitment and Selection', the questions were designated as RS1, RS2, RS3, RS4, and RS5.

4. RESULTS AND DISCUSSIONS

The following results were obtained from the analysis of the study.

4.1 IDENTIFICATION OF THE HRM PRACTICES

All HRM practices identified from literature review were asked from various experts exercising HRM practices. Survey questionnaire was manually distributed to those experts and the opinion necessary was sought from them. In the survey questionnaire, all these HRM practices were asked for whether they are used in their respective organizations. Apart from that, additional HRM practices with above 13 were asked to write if exercised in their organization. From 10 experts, the proper response was sought. No any respondent wrote any additional HRM practice apart from those identified from literature review. The results were analyzed in excel sheet demographically as under.

Table 4: Demography of the Respondents

S.No	Respondents	Gender	Designation	Experience (no. of years)
1	R1	Male	Monitoring Officer	18
2	R2	Male	Superintending Engr	19
3	R3	Male	PM	15
4	R4	Male	XEN	20
5	R5	Male	Chief Engr	22
6	R6	Male	XEN	23
7	R7	Male	Resident Engr	17
8	R8	Male	XEN	19
9	R9	Male	PD	22
10	R10	Male	PM	16
Average Experience				**19.1**

As depicted in above table 4, all the 10 respondents were male having different designations in their respective organizations. The average experience of the respondents was 19.1 years. The results with respect to HRM practice usage in their organization and importance with rank 13 to 0 were analyzed as under as shown in table 5.

Table 5: HRM Practices

S.No	HRM Practices	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	Total Score
1	Recruitment and Selection	12	11	12	13	12	11	12	13	12	12	120
2	Training and Development	13	13	11	11	13	12	11	12	10	13	119
3	Performance Appraisal	10	12	13	12	11	10	13	11	9	11	112

4	Compensation	9	10	10	8	10	13	10	10	13	10	103
5	Career Development	4	8	9	10	8	8	5	5	11	8	76
6	Pay System	11	1	5	9	9	4	6	9	4	5	63
7	Recognition	5	9	7	5	7	6	1	8	7	0	55
8	Teamwork	7	4	6	2	5	3	8	6	6	7	54
9	Job Security	6	7	8	4	6	7	2	4	0	6	50
10	Motivation	8	3	3	7	0	0	9	3	0	9	42
11	Communication among empl.	0	2	4	6	0	0	7	0	8	0	27
12	Job Design	0	6	0	3	0	5	3	7	0	0	24
13	Working Conditions	0	5	0	0	0	9	4	0	5	0	23

The above results in the table 5 were technically analyzed. The score from 13 to 1 from respondent indicate that HRM practice was used in the organization while the score 0 indicate that HRM practice was not used. Highest the score, the highest important was HRM practice while lowest the score, the lowest important was HRM practice. The top four HRM practices found from above result were taken for further assessment in another stage discussed below.

4.2 IDENTIFYING THE ATTRIBUTES OF THE HRM PRACTICES

The identification of the attributes of the HRM practices involved following process.

4.2.1 DEMOGRAPHIC DESCRIPTION OF THE RESPONDENTS

Demographic description of the respondents is represented in table 6 given below:

Table 6: Characteristics of the Respondents

Demographic Characteristics	**Frequency**	**Per cent**
1. Gender		
Male	101	99.02
Female	1	0.98
2. Level of Education		
Diploma	3	2.94
Bachelors	83	81.37
Post-graduation	1	0.98
Masters	15	14.71
PhD	0	0.00
Other	0	0.00
3. Experience		
1 to 4	23	22.55
>4 to 8	45	44.12
>8 to 12	14	13.73
>12 to 16	15	14.71
>16 to 20	5	4.90
>20	0	0.00
4. Type of Organization		

Client	56	54.90
Contractor	28	27.45
Consultant	18	17.65
5. Designation		
Director	2	1.96
General Manager	4	3.92
Project Manager	19	18.63
Construction Manager	4	3.92
Planning Engineer	23	22.55
Resident Engineer	8	7.84
Site Engineer	30	29.41
Other	12	11.76
6. Type of Projects		
Infrastructure	48	47.06
Non-Residential	3	2.94
Residential	14	13.73
Social Amenities	30	29.41
Other	7	6.86

Table 6 showed that the respondents in gender category showed 101(99.02%) were males and 1(0.98%) was female. Level of education of the respondents resulted in 3(2.94%) respondents were diploma holders; 83(81.37%) respondents were Bachelor degree holders; 1(0.98%) respondents were Master degree holders.Experience of the respondents results showed 23(22.55%) respondents had experience from 1 to 4 years; 45(44.12%) respondents had experience from 4 to 8 years; 14(13.73%) respondents had experience from 8 to 12 years; 15(14.71%) respondents had experience from 12 to 16 years; and 5(4.90%) respondents had experience from 16 to 20 years. Type of organization results of respondents showed 56(54.90%) respondents were from client; 28(27.45%) respondents were from contractor; and 18(17.65%) respondents were from consultant. Designation of the respondents resulted in 2(1.96%) were Directors; 4(3.92%) respondents General Managers; 19(18.63%) were Project Managers; 4(3.92%) respondents were Construction Managers; 23(22.55%) respondents were Planning Engineers; 8(7.84%) respondents were Resident Engineers; 30(29.41%) respondents were Site Engineers; and 12(11.76%) respondents were in designations other than described above. Type of projects of the respondents working in included 48(47.06%) respondents were in infrastructure projects; 3(2.94%) respondents were in Non-residential projects; 14(13.73%) respondents were in Residential projects; 30(29.41%) respondents were in Social Amenities projects; and 7(6.86%) respondents were in projects other than described above.

4.2.2 CRONBACH'S ALPHA TEST OF THE QUESTIONNAIRE

The following table 7 shows actual reliability test values:

Table 7: Characteristics of the Respondents

Variables	No. of items	Cronbach's Alpha Value
Training and Development	4	0.847
Performance Appraisal	5	0.853

Compensation	4	0.853
Recruitment and Selection	5	0.871

From the above table, it can be observed that internal consistency and reliability of the data of the questionnaire is above acceptable level and is in the range of good data as per the values described in table 2.

4.2.3 DESCRIPTIVE ANALYSIS OF THE STUDY

Descriptive analysis of the study included relative importance of the detailed statements of each HRM practice. This process included estimation of mean and standard deviation. The analysis results for the importance index of the factors related to training and development were performed with arithmetic mean and standard deviation of each statement as presented in the table 8.

Table 8: Descriptive Statistics of Training and Development

Variables	N	Mean	Std. Deviation	Relative Importance
TD1	102.00	3.39	1.24	Medium
TD2	102.00	3.43	1.12	Medium
TD3	102.00	3.10	1.19	Medium
TD4	102.00	2.48	1.09	Medium
Valid N (list wise)	102.00	3.10		Medium

Arithmetic Mean of 'Training and Development' in above table 8 shows range (2.48-3.43) and general arithmetic mean (3.10).

In the above table, all statements have medium relative importance, the high mean was to TD2 (Training provided to me relates with my job) with arithmetic mean of 3.43 and standard deviation 1.12. However, the low mean was to TD4 (I receive training through advanced technology) with arithmetic mean of 2.48 and standard deviation 1.09. These results show that training provided to employees in government building construction organizations in Sindh relates with their job, however, government building construction sectors need to raise training through advanced technology. Similarly, arithmetic mean and standard deviation of each statement of Performance Appraisal are measured in following table 9. On the basis of these results, relative importance has been assigned to those statements.

Table 9: Descriptive Statistics of Performance Appraisal

Variables	N	Mean	Std. Deviation	Relative Importance
PA1	102.00	3.31	1.02	Medium
PA2	102.00	3.57	1.11	Medium
PA3	102.00	3.22	1.05	Medium
PA4	102.00	3.25	1.10	Medium
PA5	102.00	3.80	1.08	High
Valid N (list wise)	102.00	3.46		Medium

The above table 9 shows the values of mean ranging from 3.22 to 3.80. It also depicts general mean of 3.46. Based on the above results, all statements have medium relative importance except that of PA5 (Performance appraisal are based on quantifiable and qualitative results) with arithmetic mean of 3.80 and standard deviation of 1.08.

The low mean was to PA3 (The method of performance appraisal is conveyed to us) having arithmetic mean of 3.22 and standard deviation of 1.05. Results depict that performance appraisal is made by project manager in the construction industry while the government building construction organizations need to increase awareness of the methods of performance appraisal to the employees. Important values representing relative importance for the prameters of compensation are shown in the table 10.

Table 10: Descriptive Statistics of Compensation

Variables	N	Mean	Std. Deviation	Relative Importance
C1	102.00	3.14	1.16	Medium
C2	102.00	2.89	1.18	Medium
C3	102.00	2.59	1.06	Medium
C4	102.00	3.10	1.14	Medium
Valid N (list wise)	102.00	2.93		Medium

In the above table, the arithmetic mean ranges from 2.59 to 3.14 while general arithmetic mean is 2.93. Based on the above table results, all statements of compensation had medium relative importance. The high mean was to C1 (Compensation is provided on merit system) having mean of 3.14 and standard deviation of 1.16. The low mean was to C3 (Medical allowance paid is sufficient) with mean of 2.59 and standard deviation of 1.06. Results indicate that compensation provided to employees in government building construction organization was on merit system while medical allowance was needed to be increased for employees of government building construction industry. The questions in the categort of Recruitment and Selection were also analysed with relative importance as shown in the table 11.

Table 11: Descriptive Statistics of Recruitment and Selection

Variables	N	Mean	Std. Deviation	Relative Importance
RS1	102.00	4.06	1.00	High
RS2	102.00	3.06	1.14	Medium
RS3	102.00	4.27	1.05	High
RS4	102.00	3.20	1.15	Medium
RS5	102.00	3.47	1.22	Medium
Valid N (list wise)	102.00	3.50		Medium

The above table results show mean values ranging from 3.06 to 4.27. The general arithmetic mean is 3.50. Above results depict RS1 and RS3 have high relative importance and RS2, RS4 and RS5 have medium relative importance. RS3 (Employees have to go through probation period before being hired) has the high mean of 4.27 and standard deviation of 1.05 while RS2 (Recruitment and selection process is based on merit) has low mean of 3.06 and standard deviation of 1.14. The results indicate that employees of government building construction organizations have to go through probation period before being hired, however, recruitment and selection process needs to be made more transparent in the construction projects in Sindh.

5. CONCLUSION

The proper application of HRM practises in any organisation is critical to its success. HRM practises in construction projects are also important for their success. To do so, first identify the HRM practises that are in place. There were 13 HRM practises identified in the first stage of research. Furthermore, the first stage research revealed a ranking of those HRM practises. The top four HRM practises identified in the first stage were analysed in the second stage for further analysis of the HRM practises in terms of their attributes. The attributes were discovered separately for each of the four HRM practises. Employee perception of all statements in 'Training and Development' was in the'medium' category. Employee perception of one statement in 'Performance Appraisal' was in the 'high' category, while perception of other statements was in the'medium' category. All statements in the 'Compensation' category received a'medium' rating from employees. Employee perception of two statements in 'Recruitment and Selection' was in the 'high' category, while other statements were in the'medium' category. The characteristics of those HRM practises that fall into the'medium' category in the actual results found and described above indicate the need for reforms in the usage of the HRM practises used in government building construction projects in Sindh.

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