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**THE IMPACT OF HIGH-PERFORMANCE WORK SYSTEM ON THE EMPLOYEES' PERFORMANCE: MEDIATING ROLE OF EMPLOYEES RESILIENCE**

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KEYWORDS	ABSTRACT
High-Performance Work System, Employees' Performance, Resilience, HEIs	The high-performance work system, employees' performance and resilience are the critical success factors for any organization. To examine the concepts in native environment, the data was collected from different sources likewise, secondary from online databases while primary through questionnaire. The population of study comprises teaching faculty working in HEIs in southern region, KP, Pakistan. Literature was analyzed by comparing and examining the views of diverse researchers on matters under study while first hand data was analyzed over statistical procedure (correlation, & regression) to observe linkages amid research variables. Mediation procedure was used to inspect mediating role of employees' resilience. Results offer significant information about the relationships among variables like positive association, significant impact, and partial mediation. This study is likely to offer new literature, new methods and new implications for management of concerned institutions. Therefore, study in general may contribute in existing knowledge database and in specific to researcher in achieving the desired objectives behind the conduction of this particular research study.
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## INTRODUCTION

In modern era, organizations remained more competitive due to dynamic environmental and technological changes that forced the organizations to take certain quality measures to maintain their survival and to sustain their competitiveness (Huang et al., 2012). In this situation, education institutions are much exposed to these dynamic changes that created overwhelming scenario for the academic institution to establish their standing and ranking (Walker & Boni, 2014). The same is the situation in the higher education institutions where rivalry is more upsetting due to establishment of many private higher institutions (Graham & Antony, 2017). The higher education institution (HEIs), in prevailing situations are facing numerous problems related to claim of the advanced technologies, diversity in stakeholder

demands and adaptability of advanced strategies and systems force the higher institutions to revisit their existing policies and traditional systems and to introduce new arrangements in the concerned institutions.

The performance is main theme behind "high-performance work system" that is mainly used to augment the performances of employees. The employees' performance is main factor which support the institutions in achieving its objectives and desired standing in the prolonged manners (Riaz & Mahmood, 2017). In this connection, employees' motivation towards performance is significant attribute for institutions that can be possible through high-performance work system that contribute in inspiring employees toward respectable performances (Mahmood et al., 2016). Fair rewards, proper training, suitable compensation, active involvement and participation are prominent parameters of the high-performance work system that helps in cultivating employee competence, motivation and performance (Wu & Chaturvedi, 2009). Employees' best performances are supportive for institutions in attaining their strategic goals however, it may be influences whenever the employees lose their resilience to achieve tasks.

The employee resilience gradually developed as significant phenomenon that is concerned mainly towards the institutional role regarding preparation of employees for the current and future challenges (Bustinza et al., 2016). In this drive, the psychological contact and institutional fair and transparent decisions are vital in determining the employee resilience toward tasks and extra role behavior in attaining institutional strategic objectives (Cooper et al., 2014). In this regard, resilient employees have the capabilities to accept the realities, having strong values and possess reflective dedication that inspire the employees that the professional life is amazing and meaningful and they have the abilities to create conducive environment and adaptability toward the sympathetic change (Nadeem et al., 2019). The resilient offers encouraging coping in problematic situation and encourages the emotional stability however, can be influenced when the concerned employees feel the variations in the psychological contracts.

### **Problem Statement**

The "high-performance work system" is vital for the organizations in prioritizing their work values and standards leading to higher performance that is required to achieve strategic values and desired objectives. The HPWS is widely researched in the higher educational context thereby recommending its reliability for higher institutions. Therefore, this study aimed at probing relationships between employees' performance and high-performance work system in higher educational background. The study further aimed at examining mediating role of employees' resilience as mediators in connecting the "high-performance work system" and employees' performance in the higher educational setting in developing countries like Pakistan.

## **LITERATURE REVIEW**

The higher education institutions are considered as the nursery for nurturing the attitude and behavior of different stakeholders. These institutions are the grooming fields not only for the students but also for the workforces to reshape their behavior as per the demands of societies and markets as well (Butcher et al., 2000). The higher institutions around the globe are the best fields where the students are groomed and where these students are prepared for different sectors of economies to play their role in progress of concerned countries (Cullen et al., 2003). Therefore, higher institutions occupied a unique place in the organizational hierarchy in process of development of developed as well as developing countries. Higher education is vital for developing countries as it may help in increasing credibility of other organizations by proving capable workforces (Haider & Sultan, 2008), where they show their knowledge and expertise to develop the desirable consequences for organizations (Graham & Antony, 2017) wherein, they are inducted and where they are able to show professional abilities.

### **High-Performance Work System**

The high-performance work system has been used as global variable in this study which is basically the combination of various practices that when combined together established the overall high-performance work system (Paauwe & Boselie, 2003). The practices include the selection, training, compensation, engagement, empowerment and performance appraisal that are critical for determining the performance parameters for the concerned organization (high education) in present case (Hartog & Verburg, 2004). High-performance work system has been widely explored in different contexts (developed, developing & Pakistan) as global variable (high-performance work system) as well as explored through attributes namely practices (selection, compensation, training, empowerment, engagement, and performance appraisal) (Harley et al., 2007). In this study, the high-performance work system has been used as the global variable to examine its connection with the criterion variable (employees' performance) and mediating variable (employees' resilience) as used in the present research study.

### **Employees' Performance**

The performance is the main concept that is solely responsible for credibility and success of the organization as it is focused upon effective and efficient utilization of institutional resources in order to meet the long-term objectives of the concerned institution (Boxall & Macky, 2009). For this purpose, institutions are further focused on effective performance system that is vital in determining performance parameters that are critical for the success of institutions (Bonias et al., 2010). Without effective performance management system, the institutions might not be able to achieve their desired standards and outcomes as the performance denoted the main dimensions that are vital in determining the smooth functioning of institutions (Messersmith et al., 2011). In this connection, the employees are the main working unit of institutions and without the support of this unit, the institutions

cannot achieve their desired credibility. Consequently, the performance of the concerned employees matters a lot in determining the overall success of organizations including the higher education institutions.

### **Employees' Resilience**

The employees' resilience is basically the capability of the individuals to bounce back when face the undesirable challenges eventualities that they experience in their professional lives. The survival and development of organizations depends upon concerned employees and organization abilities to familiarize and endure to important challenges that are further contingent on their resilience (Jiang et al., 2012). Therefore, it is the capability of both to cater to undesirable situations to work for the betterment of the organizations. Consequently, the resilience is vital for organizations as it acts as a source of competitive advantage for the concerned organization (Bardoel et al., 2014). In this regard, it helps in strengthening the infrastructure and systems of the organizations in order to ensure the sustainable development of organizations. The resilience inspires the employees to show their elevated performance to attain stated objectives more effectively (Robertson et al., 2015). Consequently, it is ability of the employee to improve their performance while facing the diversities at workplace.

### **RESEARCH METHODOLOGY**

The procedures and methods for conducting research studies in attaining the particular objectives in particular context has been presented in the research methodology section. It further supports the researchers in offering the particular tools and techniques as required for conducting studies on particular issues based upon the nature of research. Therefore, this section offered the prerequisite methodology (tools and techniques) to conduct the study scientifically and to reach the conclusion based upon exploration of relationships among the research variables.

### **Research Philosophy**

The positivism is philosophical approach aims to recognize that knowledge can be verified scientifically and which further is capable of mathematical and the logical evidence, and consequently rejecting theism and metaphysics approached for conducting the study and achieving the desired objectives. So, based upon nature and requirements of current study, the research positivism philosophy is best suited philosophical approach to conduct the study and to reach conclusion.

### **Research Approach**

The survey is elastic in interrogative procedures, about the research questions asked from respondents in measuring the research variables by covering the topic by interacting with respondents (Malhotra et al., 2006). The surveys are helpful in providing quick responses about frameworks and results of study. Likewise, positivism approach also recommends

the survey approach to systematically conduct research studies and to reach conclusion more comprehensively.

**Population of Study**

However, there are certain limitations concerning the population as entire population is not accessible and sometimes it becomes difficult to approach them consequently, the researchers mostly rely on the sample of population under investigation for the particular purposes. In this connection, the population of current study include the faculty members (target population) from higher southern region educational institutions of KP, Pakistan wherein the sample has been extracted by using the statistical formula for the sample-size determinations.

**Sample & Sampling Technique**

The sampling techniques are broadly categorized into probability and non-probability sampling where probability sampling provide equal chance of representation to present entire population, non-probability sampling provide no equal chance of representation. In this connection, the most popular is convenient sampling technique under the umbrella of non-probability sampling technique wherein data is collected from those members of population who are conveniently offered, consequently, this technique has been therefore used in current study.

**Sample Determination**

Therefore, the sample of 277 has been selected by using the statistical formula for the determination of sample size. Thus, the sample from the population comprised of 277 faculty members from whom "primary data was collected over structured questionnaire". Therefore, total 277 questionnaires were therefore distributed among which total 260 questionnaires were recollected with the response rate of 94% which were then used for data analysis.

Table 1 Formula (Sample-Size)

E	N	Sample Size
0.05	902	277
Formula used	$n = 902 / (1+902 (0.0025))$	Distribute: 277
$n = N/1 + Ne^2$	$n = 277.112$	Re-collected: 260

(Yamani, 1967)

**Data Collection & Analysis**

The primary data was collected through adapted questionnaire from the earlier studies on issues under study wherein details have been providing in questionnaire design and measurement section with the purpose of understand the nature of the research variables and their required measurement. The secondary data was analyzed over argumentation

process by comparing and analyzing views of different researchers on the research issues like employees' performance, high-performance work system and employees' resilience. The primary data was analyzed by using procedures and methods of statistical operations to analyze the views of respondents and to reach the desired conclusion of study. Thus, both the primary and secondary methods for data analysis are vital in conducting research studies (Sekaran & Bougie, 2013). Therefore, the researcher used both the secondary and primary data analysis tools to conduct the study and to find out the answers of research questions to reach the conclusion systematically to find the better solution of the problem under considerations.

### Questionnaire Design

In social research, based upon requirements of survey approach, questionnaire method is appropriate to collect the views/opinion from the respondents (Presser & Krosnick, 2010). The "questionnaire was adapted from previous research studies" like high-performance work system (Veldhoven & Meijman, 1994), employees' performance (Linda et al., 2012), and employees' resilience (Grawitch et al., 2006). These questionnaires have been used in different context with different outcomes variables. The questionnaire measurement is an important part of the research process which aims to provide better understand as well as insight in measuring the research variables of the current study. The research variables were measured through 5-point Likert scale "questions ranging from strongly disagree to strongly" agree.

Table 2 Likert Scale (5-point)

Strongly Disagree	Dis-Agree	Neutral	Agree	Strongly Agree
1	2	3	4	5

### DATA ANALYSIS

The results of the current study obtained through different statistical procedures related with the examination of relationships among the research variables under consideration. These relationships were assumed through different hypotheses/ assumptions that were extracted from the theoretical framework of the study. Similarly, in discussion section, the results of current study have been discussed by matching them with the results of the previous studies keeping in view commonalities and differences that exists in the current as well as existing research studies to make clear position of present study and to reach the conclusion systematically. The main theme of this study is to produce new knowledge about the high-performance work system, employees' performance and resilience in the context under considerations.

**H<sub>1</sub>:** There is significant association between predictor, mediator and criterion variables

Table 3 Correlation Analysis

		HPWS	ERS
Employees Resilience (ERS)	Pearson Correlation	.698**	
	Sig. (2-tailed)	.000	
	N	260	
Employees Performance	Pearson Correlation	.726**	.681**
	Sig. (2-tailed)	.000	.000
	N	260	260

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The correlation provides association with regard to strength and direction in relationship among the research variables. The first hypothesis of present study was about association among research variables under considerations. The results show that research variables are significantly associated likewise, high-performance work system and the employees' performance (.726 & .000) (positive and significant association), employees' performance and employees' resilience (.681 & .000) (positive & significant association), and the high-performance work system and employees' resilience (.698 & .000). Consequently, from the correlation results about association, first hypothesis (H<sub>1</sub>) about association amid research variables is thereby accepted.

**H<sub>2</sub>:** The predicting variables have significant and positive impact on criterion variable

Table 4 Model Summary

Model	R	R Square	Adjusted R2	Std. Error of Estimate
1	.643a	.610	.606	.37524

Table 5 ANOVA of Regression

Model		Sum Squares	df	Mean Square	F	Sig.
1	Regression	88.196	3	29.399	208.788	.000b
	Residual	36.046	256	.141		
Total		124.242	259			

Table 6 Coefficients of Regression

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	SE	Beta		
1	(Constant)	.696	.151		4.623	.000
	High Performance Work System	.329	.070	.341	4.686	.000
	Employees Resilience	.118	.055	.091	2.131	.034

a. Predictors: (Constant): HPWS & Employees Resilience

b. Dependent Variable: Employees Performance



The second hypothesis was about the cause-&-effect relationship wherein the results show that 61% variance in the outcome variable (employees' performance) is due to the predictors (high-performance work system, and employees' resilience. The coefficient of regression showed that all the predictors have significant impact on the criterion variable in determining relationship wherein the high-performance work system show significant impact on employees' performance (.329 & .000), and also employees' resilience show the significance (.118 & .000) towards employees' performance. Consequently, the regression analysis provides significant information in determining cause-&-effect relationship and thus, the hypothesis (H2) about cause-&-effect is accepted and substantiated based upon outcomes from regression analysis.

**H3:** Employees Resilience Significantly Mediates Relationship between Employees' Performance and High-Performance Work System.

**Mediation First Step (a)**

Table 7 Model Summary

R	R Square	MSE	F	df1	df2	p
.6178	.3817	.1782	159.2678	1.0000	258.0000	.0000

Table 8 Coefficients of Regression

Model	Coefficient	se	t	p	LLCI	ULCI
Constant	1.8291	.1252	14.6055	.0000	1.5825	2.0757
HPWS	.4603	.0365	12.6201	.0000	.3885	.5322

Predicting Variable: High-Performance Work System

Dependent Variable: Employees' Resilience

**Mediation Second & Third Steps (b & c)**

Table 9 Model Summary

R	R Square	MSE	F	df1	df2	p
.8091	.6547	.1669	243.6554	2.0000	257.0000	.0000

Table 10 Coefficients of Regression

Model	Coefficient	se	t	p	LLCI	ULCI
Constant	.7313	.1638	4.4640	.0000	.4087	1.0539
HPWS	.7247	.0449	16.1405	.0000	.6363	.8131
ERS	.1127	.0603	1.8700	.0426	-.0060	.2313

Predicting Variable: High-Performance Work System, Employees' Resilience

Dependent Variable: Employees' Performance



**Mediation Fourth Step (c)**

Table 11 Model Summary

R	R Square	MSE	F	df1	df2	p
.8062	.6500	.1685	479.1763	1.0000	258.0000	.0000

Table 12 Coefficients of Regression

Model	Coefficient	se	t	p	LLCI	ULCI
Constant	.9374	.1218	7.6968	.0000	.6976	1.1773
HPWS	.7766	.0355	21.8901	.0000	.7067	.8464

Predicting Variable: High-Performance Work System

Dependent Variable: Employees' Performance

Table 13 Normal Theory Test (Sobel Test)

Effect	se	Z	p
.7247	.0449	.7524	.0000

The mediation model examined the desired mediating role of the employees' resilience in connection between high-performance work system and employees' performance thereby applying mediation procedure. The first path of mediation shows that 38% variance has been occurred in employees' resilience is due to the high-performance work system. The coefficient of regression provides significant information impact the impact of predicting variable (high-performance work system on criterion (employees' resilience). Similarly, the paths (b & c), provide information about the indirect relationships thereby including the employees' resilience and mediator which shows 65% variance in employees' performance is due to high-performance work system and employees' resilience thereby showing the significant impact of predictors on the criterion variable (.7247 & .000 and .1127 & .0426) respectively. Similarly, direct relation shows 77% change in criterion due to predictor with coefficient values (.7766 & .000).

All the four paths provide significant information about the mediating role of employees' resilience in connecting the high-performance work system and employees' performance. As the coefficient values in direct relationship (.7766) has been decreased to (.7247) when mediator has been included in mediation procedure. All the variables have been evident to have significant impact on the criterion variables while the coefficient values have been changed which shows the employees' resilience partially mediated connection between high-performance work system and employee performance. Mediating role of employees' resilience has also been confirmed by Sobel test which provide significant information about confirmation of mediation. Consequently, second mediator also partially mediated relationship between predictor and criterion variable under study in this research study.

Therefore, from the results of second mediation model that has been assumed through hypothesis (H3) has been accepted.

## **DISCUSSION**

Current study aimed to examine certain research phenomena and their interrelationships in the context of higher educational institutions in developing countries like Pakistan and especially in the southern region of Khyber Pakhtunkhwa. The study aimed to examine the relationships among research variables under study likewise the high-performance work system and employees' performance along with the mediating role of employees' resilience in order to explore vitality of these variables for higher educational institution. These issues and challenges have been already explored in the higher education contexts with diverse outcomes (Haider & Sultan, 2008; Khattak et al., 2012; Walker & Boni, 2014; Jawad et al., 2017; Saboor et al., 2018). Keeping in view trends in contemporary research, this study examines these research variables in order to produce new knowledge. The first hypothesis was about relationship (association) amid research variables that was examined through correlation procedure. The results of correlation showed that research variables significantly with each other.

Likewise, the results show significant association between high-performance work system and employees' performance (.726, .000) which has been validated over existing research studies having similar results to some extent about the association between the variables (Restubog & Bordia, 2006; Takeuchi et al., 2009; Cooper et al., 2014; Akhtar et al., 2016; Jyoti, & Mohsin, 2020). Therefore, the relationships between the high-performance work system and employees' have been significantly validated and supported through results of the previous studies conducted in diverse research contexts from time to time and in this connection thereby producing and recommended the significant relationships among research variables. The results of study confirmed significant association between high-performance work system and employees' resilience (.698 & .000), thereby showing the positive as well as significant association between variables. The results of study have been validated and confirmed through results of existing research studies (Cooper et al., 2014; Cooke et al., 2016; Kuntz, Malinen & Näswall, 2017; Nadeem et al., 2019). Similarly, results of present study also confirmed the association between high-performance work system and employees' performance.

## **CONCLUSION**

The study shows significant and positive as well as negative association among research variables based on their nature and contextual situations. Likewise, significant association was found among research variables supported by significant cause-&-effect relationships. The study also provides sufficient information about the mediating role of the employees' resilience in connecting the high-performance work system and employees' performance through partial mediation. This information thus helps researcher in reaching conclusion

and presenting the main objectives along with their attained solution in comprehensive manner. The researcher presents the concluding judgements thereby presenting the main theme of the study thus may help concerned readers in understanding the study objectives and ultimate achievements.

1. H<sub>1</sub>: The first hypothesis was about the association among the research variables like high-performance work system, employees' performance and employees' resilience. The results of the study confirmed significant and positive association amid high-performance work system, employees' performance and resilience. Therefore, due to significance association, H<sub>1</sub> is hence accepted and substantiated.
2. H<sub>2</sub>: The second hypothesis was about the impact of predicting variables on criterion variable of study. The results confirmed the significant influence of the predictors on the criterion variables wherein high-performance work system and employees' resilience have highly significant influence of employees' performance. Thus, from results, decision and supportive judgment is to accept the H<sub>2</sub> of study.
3. H<sub>3</sub>: The second mediation model to examine mediating role of employee resilience in connecting high-performance work system and employees' performance. Results from mediation confirmed mediating role of employee resilience in partial mediation due to statistical information obtained from mediation procedure.

### **Contribution of Study**

1. The study offered new suggestions and recommendations to management of higher institutions to revisit their policies regarding the research issues under study to cater to the situation thereby providing the opportunities to solve the issues in tailor made format to obtain the better outcomes.
2. The theoretical investigation thereby analyzing different theories about research variables and producing new solutions is also the main contribution of this study. This may help in providing an understanding to existing issues with new techniques to contribute in the development of the concerned context.
3. The theoretical and empirical insights are also contributions of this study as it helps the future researchers in investigating the existing issues with innovative methods and procedures to establish links with the stakeholders. This provides the chances of professional development at the institutional level.

### **Recommendations of Study**

1. The study provides significant information about relationships among the research that may help in understanding nature along with interrelationships in particular context, in present case, higher educational institutions. The results are thus helpful for maintaining the institutional credibility in prolonged manner.
2. The high-performance work system and employees' performance are the leading and burning issues that are vital for any organization including higher institutions.

In this context, the higher institutions are required to put their strong emphasis on these issues to effectively attain the institutional aims and objectives.

3. The employees' resilience shows their supportive role with high-performance work system in determination of employees' performance. Therefore, the institutions are required to provide respect to the contracts as agreed through the mutual consent of the employees and institution.

## REFERENCES

- Akhtar, A., Nawaz, M., & Shahid, M. (2016). Impact of High-Performance Work Practices on Employees' Performance in Pakistan: Examining Mediating Role of Employee Engagement. *Pakistan Journal of Commerce and Social Sciences*, 10 (3), 708-724
- Bardoel, A. E., Pettit, T. M., Cieri, H. D., & McMillan, L. (2014). Employee resilience: An emerging challenge for HRM. *Asia Pacific Journal of Human Resources*. <https://doi.org/10.1111/1744-7941.12033>.
- Bonias, D., Bartram, T., Leggat, S. G., & Stanton, P., (2010). Does psychological empowerment mediate the relationship between high performance work systems and patient care quality in hospitals? *Asia Pacific Journal of Human Resources*, 48 (3), 319-337.
- Boxall, P., & Macky, K. (2009). Research and theory on HPWS: progressing high-involvement stream. *Human Resource Management Journal*, 19(1): 3-23.
- Bustinza, O, Herrero, F., Arostegui, M., & Parry, G. (2016). Technological capabilities, resilience capabilities and organizational effectiveness. *The International Journal of Human Resource Management*, 1-23.
- Butcher, J., Moon, B., & Bird, E. (2000). *Leading Professional Development in Education*. Routledge. Falmer. London.
- Cooke, L., Cooper, B., Bartram, T., & Mei, H. (2016). Mapping the relationships between high performance work systems, employee resilience and engagement: A study of the banking industry in China. *The International Journal of Human Resource Management*, 1-22.
- Cooper, L., Liu, Y., & Tarba, S. (2014). Resilience, HRM practices and impact on organizational performance and employee well-being. *The International Journal of Human Resource Management*, 25(17), 2466-2471.
- Cullen, J., Joyce, J., Hassall, T., & Broadbent, M. (2003). Quality in higher education: from monitoring to management. *Quality Assurance in Education*, 11 (1), 5-14.
- Graham, S. A., & Antony, J. (2017). Academic leadership: Special or Simple. *International Journal of Productivity and Performance Management*, 66 (5).
- Grawitch, M. J., Gottschalk, M., & Munz, D. C. (2006). The path to a healthy workplace: A critical review link healthy workplace practices, employee well-being & organizational improvements. *Consulting Psychology Journal*, 58 (3), 129-47.

- Haider, Z., & Sultan, S. (2008). Challenges in higher education: Special reference to Pakistan and South Asian developing countries. *Nonpartisan Educational Review*, 4, 1-12.
- Harley, B., Allen, B. C., & Sargent, L. D. (2007), "High performance work systems and employee experience of work in the service sector: The case of aged care. *British Journal of Industrial Relations*, 45 (3), 607-633.
- Hartog, D., & Verburg, R (2004). High performance work systems, organizational culture and firm effectiveness. *Human Resource Management Journal*, 14(1): 55-78
- Huang, Y., Ma, Z., & Meng, Y. (2012). High- performance work systems and employee engagement: The empirical evidence from China. *Asia Pacific Journal of Human Resources*.
- Jiang, K., Lepak, D. P., Hu, J., & Baer, J. C. (2012). How does human resource management influence organizational outcomes? A meta-analytic investigation of mediating mechanisms. *Academy of Management Journal*, 55, 1264-1294
- Jyoti, T., & Mohsin, F. (2020). Current practices and challenges of performance management system in higher education institutions: A review. *Journal of Critical Reviews*, 7 (7), 921-925.
- Khattak, N. R., Khan, J., Khan, I., & Tariq, M. (2012). An analysis of the demand for higher education in Pakistan with special reference to Khyber Pakhtunkhwa. *City University Research Journal*, 3 (1).
- Kuntz, J.C., Malinen, S. and Näswall, K. (2017), "Employee resilience: directions for resilience development", *Consulting Psychology Journal: Practice & Research*, 69 (3), 223-242.
- Linda, K., Buuren, S., & Beek, A (2012). Development of an individual work performance questionnaire. *International Journal of Productivity and Performance Management*, 62 (1), 6-28.
- Mahmood, A., Khurshid, K., Bashir, M., & Muhammad, Z. (2016). The impact of high-performance work system on employee attitude: The mediating role of human resource flexibility, *Science International, Lahore*, 28 (4), 61-70.
- Malhotra, N. K., Hall, J., & Oppenheim, P. S. (2006). *Marketing research: An applied orientation* (3rd Edition). Frenchs Forest, N.S.W: Pearson/ Prentice Hall.
- Messersmith, J. G., Patel, P. C., Lepak, D. P., & Gould-Williams, J. S. (2011). Unlocking the black box: exploring link between high-performance work systems and performance. *Journal of Applied Psychology*, 96 (6), 1105.
- Nadeem, K., Riaz, A., & Danish, Q. (2019). Influence of high-performance work system on employee service performance and OCB: The mediating role of resilience. *Journal of Global Entrepreneurship Research*, 9 (13), 1-13.
- Pauwe, J., & Boselie, P., (2003). Challenging 'strategic HRM' and the relevance of the institutional setting. *Human Resource Management Journal*, 13 (3), 56-70.
- Presser, S., & Krosnick, J. (2010). Questionnaire design. *Handbook of Survey Research*. In: Oxford: Oxford University Press.

- Restubog, S.L.D., & Bordia, P. (2006). Workplace familism and psychological contract breach in the Philippines. *Applied Psychology: An International Review*, 55, 563-585.
- Riaz, A., & Mahmood, Z. (2017). Cross-Level Relationship of Implemented High Performance Work System and Employee Service Outcomes: The Mediating Role of Affective Commitment. *Pakistan Journal of Commerce and Social Sciences*, 11 (1), 252-274
- Robertson, I., Cooper, C. L., Sarkar, M., & Curran, T. (2015). Resilience training in the workplace from 2003-2014: A systematic review. *Journal of Occupational and Organizational Psychology*, 88, 533-562.
- Sekaran, U., & Bougie, R. (2013). *Research Methods for Business: A Skill-Building Approach* (6th Ed.). John Wiley and Sons, Inc.
- Takeuchi, R., Chen, G. & Lepak, D.P. (2009). Through the looking glass of a social system: Cross-level effects of high-performance work systems on employees' attitudes. *Personnel Psychology*, 62, 1-29.
- Veldhoven, M., & Meijman, T. (1994). Het meten van psychosociale arbeidsbelasting met een vragenlijst: de vragenlijst beleving en beoordeling van de arbeid (VBBA). Amsterdam: Nederlands Instituut voor Arbeidsomstandigheden.
- Walker, M., & Boni, A. (2014). Higher education and human development. Towards the public & social good. In Boni & M. Walker, *Human development and capabilities*.
- Wu, P.-C. & S. Chaturvedi. (2009). "The role of procedural justice and power distance in the relationship between high performance work systems and employee attitudes: A multilevel perspective". *Journal of Management*, 35(5): 1228-1247.