# Does High Performance Work System (HPWS) Yield Employee Well-Being During COVID-19 With Mediating Role Of Work Engagement?

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# **ABSTRACT**

During COVID-19 pandemic, this study was performed to investigate the impact of the High Performance Work System (HPWS) on Employee Well-being, specifically in the Higher Education Institutions (HEIs) of the South Punjab region in Pakistan. Thirty items in a questionnaire were graded on a 7.0-point Likert Scale, with effects ranging from "Strongly Disagree" to "Strongly Agree." The items covered three latent constructs: the High Performance Work System (HPWS), Employee Engagement, and Employee Well-being. Participants in the study were teachers and educators from the South Punjab region of Pakistan, employed in either public or private institutions. The research used Smart PLS with CFA and inter-construct correlation in their work for measurement and structural models. According to the study's conclusions, implementation of efficient High Performance Work System (HPWS) practices in Pakistan's South Punjab region improves Employee Well-being by a significant margin. The relationship between HPWS and Employee Well-being was found to be positive. In the association between the High Performance Work System (HPWS) and Employee Well-being, it was observed that Work Engagement had a significant mediation effect on the relationship. According to the findings of the study, to promote Employee Well-being, higher education institutions must implement an efficient High Performance Work System (HPWS) within their institutions.

**Keyword(s):** High Performance Work System (HPWS), Employee Well-Being, Work Engagement, Social Exchange Theory, COVID-19, Teachers and Higher Education Institutions (HEIs).

**JEL CLASSIFICATION:** M1, M11

# 1. INTRODUCTION

Previously, two competing views have been emerged out in the literature relative to employee wellbeing within the link between HRM as well as organizational performance. First view illustrates that employees, as well as employers, may be benefited from HRM (Appelbaum, 2013; Guest, 1997). This has been claimed as the 'mutual gains' perspective. On the other hand, the other view pays off HRM as a leading phenomenon for organizational performance but does not affect employee well-being (Legge, 1995; Ramsay et al., 2000). This perspective has been claimed as 'conflicting perspective'. In the current environment of the COVID-19 pandemic, more than 95% institutions especially of higher education, are striving to uphold long-term as well as everyday situations of declining level of education and this situation reveals a fact that an ingenious combination of leadership and HRM competencies are required to cope up this situation (Calonge et al., 2021). The study highlights that universities require effective HR and leadership development programs in an attempt to incorporate the authoritative positions in the current environment for the cultivation of massive size of people for supporting the management in an efficient manner (Calonge et al., 2021). The shortcoming which has been revealed in the literature has been found that previously, either the research investigations had focused on either investigating the association between HRM and organizational performance and/or drawing the conclusion regarding the bond between HRM and employee well-being. This insufficiency of knowledge has created difficulties for the managers to implement the HR practices in the best manner to influence these outcomes independently or optimization of the both outcomes may be invaded (Voorde et al., 2012). This study advances the HPWS literature in various ways: firstly, this study provides empirical evidence regarding the impact of HPWS on employee well-being, especially in the higher education context. Secondly, the study focuses on the underlying mediating mechanism through investigating the part of work engagement in strengthening the connection between HPWS and employee well-being. Finally, this paper will examine the multiple roles of HPWS activities in organizations that may influence employee well-being. The ultimate aim of the study is to find the effect of a high-performance work system (HPWS) on organizational performance as well as employee well-being with the mediating consequence of work engagement under the impact of current COVID-19 pandemic.

### 2. LITERATURE REVIEW

### 2.1. Employee Well-being

Multiple research studies have been done on this emerging concept, i.e., High Performance Work System as a mediation actor in illustrating the relationship between HRM and employee performance. Moreover, certain studies have investigated the role of leadership in HRM in determining the combined effect of leadership and HRM on employees' performance and well-being. The study conducted by (Salas-Vallina et al., 2020) resolved the relationship between employee well-being-oriented HRM (WBHRM) and their performance in pursuit of social exchange theory. This study explored the role of middle managers' leadership in establishing and exploring the relationship between WBHRM and the well-being of employees. The study finds that the engaging behaviour of leadership becomes a vital source for implementing the WBHRM in the true spirit and consequently, employee performance is directly impacted with WBHRM (Dastmalchian et al., 2020). Hauff et al. (2020) contributed to the

HPWS literature through the research conducted in the service sector in Oman and discussed interesting concepts like HPWS role in human capital development and strengthening the role of human capital as a mediator within the correlation between HPWS as well as performance. The study focused that the HR managers must incorporate their skills to enhance the overall well-being (life, job and psychological) of the employees. The findings of the study depict that the employees with a higher levels of well-being are found to be more creative, engaged, participative and put more tremendous effort to achieve their goals at work than those who are at lower level of well-being (Muduli & McLean, 2020). This reveals that the employee well-being is influential in enhancing the level of organizational outcomes like profitability and/or productivity. In order to enhance the employee well-being, the organizations must define such HR practices which encounter adversity and lead the employees to be at the top in terms of life, job as well as psychology. The study conducted by Srivastava and Agrawal (2020) illustrates that many firms are prioritizing employee well-being at the top and promoting such pleasant and happy workplace in an attempt to develop sustainability within their organizations. The study uses the HRM practices for enhancing the employee well-being as there are multiple types of HPWPs which may vary with the association of the employees as well as working environment and ultimately, leads to enhance the organizational performance (Dastmalchian et al., 2020). The employees are more work-oriented in organizations where the organizations have provided a pleasant workplace. The study examines the interrelationship between the employees' organizational commitment and identity, which provides the organizations with a sense of competitive advantage in terms of an effective HR system.

# 2.2. High Performance Work System (HPWS)

# 2.2.1. Relationship of HPWS with Employee Well-Being

Purwaningrum et al. (2020) examined the effect of HPWS on the performance of individuals in any organization with mediating effect of human capital. Multiple research studies have focused on this relationship but still this phenomenon is ambiguous. There is a need of identifying the factors to strengthen this relationship. The study is focusing HPWS as an integral factor which is influencing the outcomes relative to the performance which may be used to improve the performance of the employees. The study conducted by Purwaningrum et al. (2020), illustrates the bundle of HR practices to develop the essential effect of interconnected system to improve the employees' performance (Chen et al., 2020). The organizational settings maintain these practices with the subjective issue of company's mission and objectives. The study describes the HPWS as a work system which comprises managerial practices in order to establish a working environment in order to enhance the commitment, enthusiasm and responsibility within the employees for making them high achievers. The findings of the study illustrate that there exists a strong, considerable and positive relationship between HPWS as well as employee's well-being. In an attempt to build effective HR practices for the organizations to prosper the employee's well-being in an efficient manner especially during COVID-19, the companies must try to improve their inter- and intra-communication strategies. The question arises whether the companies are wellequipped within their communication strategies during COVID-19, especially in higher education

institutions. The study conducted by Calonge et al. (2021) found that during the first few months of this pandemic, institutions launched crises communication strategies and In such chaotic scenarios, the Cynefin Framework adopted social media sites in an Act-Sense-Respond mode. Furthermore, the study recommends that the institutions must shift their domains from reactive to proactive during such scenario for effective crises management and to launch effective communication strategies. According to Cynefin framework, higher education institutions must go beyond the effective usage of communication as well as management platforms in an attempt to move the crises scenario from chaotic domain to complex or complicated (Calonge et al., 2021). This reveals the following hypothesis statement:

**H1:** There exists positive relationship between HPWS and Teachers' Well-being.

# 2.2.2. Relationship of HPWS with Work Engagement

King et al. (2021) illustrated that like other working practices, there have been found an interruption in the training and development of the employees due to COVID-19 which led the employees to provide an extra-ordinary care as well as trust not only to themselves but also to their peers at their own personal cost. The study concluded with the fact that during any pandemic, effective training and psychological aid helps the workers to have distress and to respond the crisis in an effective manner (Mills et al., 2020; King et al., 2021). Similarly, Gan et al. (2020) also affirmed the fact that the workers require adequate psychological help as well as proper training to cope up against pandemic as well as to perform their duties in an efficient manner. According to Husin et al. (2021), employees reveal themselves as more effective performers if they have been engaged in the organizational decision making. The study postulates the fact that the employees tend to be highly involved in their work if the organization provides an effective HR practice to them. These postulates following hypothesis statement:

**H2:** There exists positive relationship between HPWS and Work Engagement.

# 2.3. Work Engagement as a Mediator:

## 2.3.1. Impact on relationship between HPWS and Employee Well-Being

Multiple research studies have investigated the role of work engagement for improving the organizational performance and found the positive impact of work engagement in an effective implementation of HR practices. The study conducted by Teo et al. (2019) reflected those employees who have high engagement towards their work roles are found to be more attached to their roles and it becomes very difficult for them to be separated from their roles as they have invested their time, energy as well as self-identity within their work role which ultimately strengthens their emotional bond with the organization, management and their peers. Aligning Social Exchange Theory with this phenomenon, Teo et al. (2019) suggested that through true implementation of HPWS with effective training, decentralization in organizational critical decision-making, crystal job description, efficient

performance evaluation as well as job security leads to enhance the employees' engagement towards their organization and they reciprocate the exchange relationship quality with the company. Alola and Alafeshat (2020) illustrated that HPWS has a direct impact on employee engagement and consequently, leads to impact the extra-role performance. Within their study, they also found the mediation effect of employee engagement between HPWS as well as employee well-being. Moreover, the study illustrates that according to social exchange theory, employee engagement is the consequence of reciprocal of their learned behavior. The employee with high work role engagement, exhibit positive attitude towards their work assignments and found to be more alert and active within work activities. This leads to their efficient and error-free work performance and ultimately, leads to increase the level of satisfaction within them regarding their job role and work responsibilities (Alola & Alafeshat, 2020). The study conducted by Qureshi et al. (2021) found that employees with efficient and smart HPWS practices exhibit high level of job engagement and ultimately, the higher level of performance at work regardless of gender as well as diversity. This reveals that HPWS exhibits a positive consequence with employee performance in the context of their job engagement. Another study conducted by Husin et al. (2021), found work engagement as a mediating variable between HPWS as well as employee innovative behavior. The study illustrates that HPWS if implemented in an efficient manner, lead to enhance the engagement of employees towards their degisnated duties and consequently, enhances the innovative behavior of the employees while they are performing their job functions. This ultimately leads to enhance the employee well-being (Husin et al., 2021). Following hypothesis statement reveals out from the above discussion:

**H3:** Work Engagement positively mediates the relationship between HPWS and Teachers' Well-being.

## 2.4. Conceptual Framework

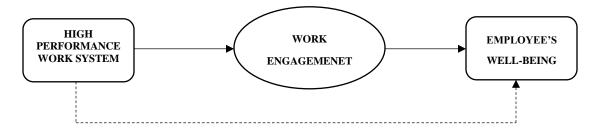


Figure 1: Conceptual Framework

# 2.5. Underpinned Theory: Social Exchange Theory

Social exchange theory is a phenomenon that relationship between two people in a society is based on cost-benefit analysis. In other words, it is considered as a measure used to find out determine the individual effort based on this relationship. This measurement enables to determine the level of effort someone is putting within any relationship. The foremost objective of the current study is to govern the level of effectiveness in HR practices an institution must possess in an attempt to enhance the level of engagement in the teachers through building their well-being.

### 3. METHODOLOGY

## 3.1. Research Design

During any research investigation, it is the primary responsibility of the researcher to clearly define the research design as which approach is going to be followed (Saunders et al., 2015). The current study adopts the quantitative approach as it uses a schematic questionnaire in order to elicit the responses from respondents. Within the current study investigation, the philosophy adopted is positivism as it apprehends universal philosophical position (Saunders et al., 2015). The study uses a deductive approach as Social Exchange Theory is being used which comprehends that HPWS is essential for any company to enhance the engagement of the employees with the firm (Teo et al., 2019). The study uses the survey research as the research strategy which is the next element of research design. Saunders et al. (2015) attempt to generalize the responses obtained from the sample over the whole population. To implement the research strategy, a formalized set of questions was used in the study consisting of a 5.0-point Likert Scale.

## 3.2. Population, Sample and Technique

The size of the sample selected for the survey is 200 as the total population of the study is an unknown number of teachers in the higher education institutions in southern Punjab, and according to Hair et al. (2010), the sample size for the unknown population is sufficient to be 100 - 200. The study entails the non-probability convenience sampling to investigate the effect of HPWS on teachers' well-being and their performance as it is found to be an impressive technique to collect the data from respondents (Anwar et al., 2020).

### 4. DATA COLLECTION

While gathering the data, the researchers visited multiple institutions providing higher education to the students in South Punjab, Pakistan as it is the population of the study. The teaching faculty members who were engaged to teach the students at any level in the universities, used to fill in the questionnaires. For conducting the survey, the sample size was taken of 200 as according to Hair et al. (2017), the sample size would be 200 if the population size is unknown. The disproportion for the gender within the respondents is considerable as more than 70 % of the total participants were male while the remaining 30 % were proportioned to female respondents.

### 4.1. Research Instrument and Scale Measures

For collecting the accurate and vigorous information, a questionnaire comprising of 50 formalized set of questions is used which have been developed through adapting multiple previous studies regarding the variables used in the current study: HPWS, teachers' well-being, and work engagement. According to Kirch (2008), the information adopted through questionnaire becomes vigorous if it consists of a proper measurement scale. The current study used Interval scale with 5.0-point Likert Scale as it has been found to be used widely within social sciences research studies (Derrick & White, 2017)

## 4.1.1. High Performance Work System (HPWS)

The study used a 10 items High Performance Work System (HPWS) scale drawn from the conducted research of Teo et al. (2020) on a 7.0-point Likert Scale ranging from "Strongly Disagree" to "Strongly Agree".

# 4.1.2. Work Engagement

In an attempt to measure work engagement, the current study adapted a 7.0-point Likert Scale for from (Teo et al., 2020), ranging from '1' means "Strongly Disagree" to '7' means "Strongly Agree".

# 4.1.3. Employee Well-Being

While attempting to measure employee well-being, the study adapts 10 items 7.0-point Likert Scale from Ilie et al. (2020), describing '1' as "Strongly Disagree" to '7' as "Strongly Agree".

### 5. DATA ANALYSIS

In an attempt to conduct the analysis for the study, the researchers used Partial Least Square – Structural Equation Modelling (PLS-SEM) very widely used in the current environment especially in the management disciplines. PLS is found to be very handy and useful in an attempt to generalize and integrate not only latent variables but also indicators of these latent variables through using principal component as well as regression analysis within these latent variables. PLS-SEM is very suitable and handy for the constructs which are formative in nature and could be supported theoretically (Hair et al., 2012). As this study contains employee well-being as a target construct within its structural model which is formative in nature, so, PLS-SEM is the best analytical tool (Hair et al., 2012). According to Hair et al. (2019), PLS-SEM is considered the best usable software/application for analyzing data that requires a smaller size of sample, focuses on exploratory research and is non-normally distributed. That is why; this research investigation is experienced with PLS-SEM to conduct the data analysis. The current study is enduring with PLS-SEM into two elements: Structural Modelling (investigating the association among the latent constructs which have been conjectured in hypotheses) and measuring the measurement model (investigating the validity as well as reliability of latent constructs).

#### 6. RESULTS

#### 6.1. Descriptive Statistics and Correlational Analysis

In an attempt to determine the significance of the relationships among latent constructs, Sample mean (M), standard deviations (STDEV), T-statistics along with their relative P-values are required (Hair et al., 2019). Table 1 exhibits the significance of relationships within these latent constructs.

**Table 1:** Descriptive Statistics

Original	Sample	Standard Deviation	T Statistics	P
Sample (O)	Mean	(STDEV)	( O/STDEV )	Values
	<b>(M)</b>			

HPWS ->	0.569	0.565	0.06	9.41	0.000
EWB					
HPWS ->	0.708	0.713	0.049	14.536	0.000
$\mathbf{WE}$					
$WE \rightarrow EWB$	0.266	0.274	0.07	3.799	0.000

Table 2 exhibits the correlation among the latent constructs and the correlation with other latent constructs.

Table 2: Inter-Construct Correlation

	EMPLOYEE WELL-	HPWS	WORK
	BEING		<b>ENGAGEMENT</b>
EWB_	1.000	0.756	0.671
<b>HPWS</b>		1.000	0.709
WE			1.000

Table 3 illustrates the correlation among the indicators for each latent construct.

Table 3: Indicators' Correlation

	E	E	E	E	E	E	E	E	Н	Н	Н	Н	Н	W	W	W	W	W	W
	$\mathbf{W}$	P	P	P	P	P	E	E	E	E	E	E							
	B	В	В	В	В	В	В	В	$\mathbf{W}$	$\mathbf{W}$	$\mathbf{W}$	$\mathbf{W}$	$\mathbf{W}$	2	4	5	6	7	9
	1	10	2	3	4	5	7	9	S 1	S 2	S 3	S 4	S 5						
$\mathbf{EW}$	1	0.5	0.	0.	0.	0.	0.	0.	0.6	0.4	0.4	0.6	0.3	0.	0.	0.	0.	0.	0.
В		66	48	47	56	51	63	45	82	72	96	03	01	40	49	36	25	50	32
1			6		3		9	9						7		8	3	3	
EW		1	0.	0.	0.	0.	0.	0.	0.4	0.3	0.4	0.5	0.3	0.	0.	0.	0.	0.	0.
В			63	38	46	50	72	70	72	85	7	53	79	45	21	41	41	48	59
10			4	5	4	5	8	1			0.4			9	7	4	4		2
EW			1	0.	0.	0.	0.	0.	0.3	0.1	0.4	0.4	0.3	0.	0.	0.	0.	0.	0.
В				23	62	51	47	51	87	9	33	53	84	39	10	11	11	18	52
2				2	6	0	1	0	0.2	0.2	0.4	0.2	0.1	4	2	4	0	7	3
EW				1	0.	0.	0.	0.	0.3	0.3	0.4	0.3	0.1	0.	0.	0.	0.	0.	0.
B					37	57	41	48	39	27	87	35	88	44	4	36	24	32	29
3 EW					5	7	9	2	0.2	0.2	0.2	0.4	0.2	0	0	0	4	0	4
EW					1	0.	0.	0.	0.3	0.2	0.3	0.4	0.2	0.	0.	0.	0.	0.	0.
B 4						62 7	49 9	44 9	94	58	34	71	77	31 9	31 4	23 6	20	40	57
EW						1	9 0.	9 0.	0.5	0.3	0.5	0.5	0.3	9 0.	0.	0.	0.	7	0.
B						1	63	61	68	34	93	2	23	50	24	22	16	0. 32	0. 44
5							5	3	00	34	73	2	23	5	2 <del>4</del> 7	3	9	4	8
EW							1	0.	0.5	0.4	0.3	0.5	0.3	0.	0.	0.	0.	0.	0.
В							1	57	35	81	56	94	41	33	19	26	44	41	39
7								8	33	01	50	<i>)</i>	'1	8	8	20	8	9	6
EW								1	0.3	0.1	0.3	0.5	0.2	0.	0.	0.	0.	0.	0.
В								•	45	95	46	78	9	45	22	41	36	38	52
9												, ,		8	1	1	4	5	5
HP									1	0.5	0.5	0.4	0.3	0.	0.	0.	0.	0.	0.
WS										66	78	95	36	59	31	26	21	29	30
1														5	7	8	6	8	6
HP										1	0.5	0.3	0.2	0.	0.	0.	0.	0.	0.
WS											18	66	59	35	47	33	67	39	15
2														4	9	6	3	4	1
HP											1	0.4	0.2	0.	0.	0.	0.	0.	0.
WS												24	15	48	41	35	25	33	23
3															6	9	2	7	5
HP												1	0.4	0.	0.	0.	0.	0.	0.
WS													05	33	34	47	41	56	47
4														2	9	3	7	1	4

HP	1	0.	0.	0.	0.	0.	0.
WS		36	13	24	19	26	48
5		8		1	5	2	8
WE		1	0.	0.	0.	0.	0.
2			36	31	30	19	45
			1	9	2	1	4
WE			1	0.	0.	0.	0.
4				62	48	58	02
					5	1	6
WE				1	0.	0.	0.
5					56	59	27
					2	7	1
WE					1	0.	0.
6						54	22
						5	9
WE						1	0.
7							43
							1
WE							1
9							

#### 6.2. Measurement Model

As mentioned in the previous sections, this current study is enduring with Smart PLS 3.0 in an attempt to conduct the analysis within the latent constructs: High Performance Work System (HPWS), Work Engagement (WE) and Employee Well-being (EWB). According to Hair et al. (2019), the value of Cronbach's Alpha as well as composite reliability should stay between 0.6 and 0.7 (acceptable internal consistency) for an exploratory research study. Moreover, if the values lay between 0.7 and 0.9, it illustrates that satisfactory and acceptable result for good reliability (Hair et al., 2019). On the basis of these guidelines provided by (Hair et al., 2019). Table 4 illustrates the results of measurement of construct validity and reliability for the current study.

**Table 4:** Construct Validity and Reliability

Constructs	Cronbach's	rho_A	Composite	Average Variance
	Alpha		Reliability	Extracted (AVE)
EWB	0.899	0.906	0.919	0.588
HPWS	0.781	0.798	0.852	0.538
WE	0.799	0.797	0.856	0.501

To measure the convergent validity, indicator loading value as well as value of average variance extracted (AVE) is used. The value of loadings of each indicator larger than 0.70 as well as the

AVE value of the latent construct be greater than 0.50, is acceptable for measuring the convergent validity of the model (Hair et al., 2017). For the current study, the value of AVE for each construct has been illustrated in Table 1 and found satisfactory and acceptable as the value of AVE for each construct is above 0.50. Moreover, the values for indicator loading have been given below in Table 5 indicating that the value of each indicator in each latent construct is greater than 0.7 exhibiting acceptable result.

**Table 5:** Indicators' Cross Loadings

	EMPLOYEE WELL- BEING	HPWS	WORK ENGAGEMNT
EWB1	0.78	0.713	0.558
EWB10	0.823	0.624	0.624
EWB2	0.716	0.508	0.361
EWB3	0.636	0.464	0.492
EWB4	0.74	0.484	0.499
EWB5	0.809	0.65	0.474
EWB7	0.824	0.64	0.495
EWB9	0.783	0.495	0.572
HPWS1	0.619	0.821	0.49
HPWS2	0.442	0.732	0.552
HPWS3	0.575	0.756	0.496
HPWS4	0.677	0.767	0.62
HPWS5	0.406	0.765	0.415
WE2	0.542	0.578	0.852
WE4	0.362	0.469	0.798
WE5	0.397	0.467	0.774
WE6	0.368	0.48	0.815
WE7	0.504	0.518	0.783
WE9	0.594	0.45	0.807

In Smart PLS, Fornell-Larcker criterion and values presented in cross-loadings are used to determine discriminant validity. The value of correlations with other latent constructs which are based on Fornell-Larcker criterion should be lessen than the square root of AVE for each latent construct. Furthermore, the value of outer loading for each indicator with corresponding latent construct should be greater than the values of cross loading with all of the rest constructs (Hair et al., 2017). For the current study, the values for cross loading have been illustrated in Table 3 and the correlations within latent constructs on Fornell-Larcker criterion have been exhibited in Table 6. The results exhibit the discriminant validity for the current study.

**Table 6:** Discriminant Validity

	EMPLOYEE WELL-BEING	HPWS	WORK ENGAGEMENT
EWB	0.767		
<b>HPWS</b>	0.756	0.733	
$\mathbf{WE}$	0.671	0.709	0.708

On the basis of the results exhibited in the above-mentioned tables 4, 5 & 6, it is evident that the items of the existing study investigation are found to be at a satisfactory level for both convergent validity and reliability with acceptable AVE (> 0.50), significant outer loading (> 0.70), good indicator reliability (> 0.50) along with the larger values of internal consistency for each latent construct of the current study (i.e., HPWS, work engagement and employee well-being) with Cronbach's Alpha and composite reliability values ranging in between 0.781 and 0.919 (Hair et al., 2019). The findings of the study exhibit that all the latent constructs discriminated each other transparently as the scale of the study has met the evaluating criteria for discriminant validity based on Fornell-Larcker criterion and larger values of cross loadings (Hair et al., 2019).

#### 6.3. Structural Model

In SMART-PLS utility, the former step is to measure the validity and reliability of the structural model after assessment of measurement model. While attempting to measure the validity of structural model, (R²) Coefficient of determination is the major element indicating the structural model validity. According to Hair et al. (2019). R² reflects the integrated effects on a target endogenous latent construct of exogeneous latent constructs within the acceptable range of values in between 0 & 1. The increased values indicate the higher explanatory power of model or research framework.

Table 7 indicates the value of  $R^2$  for employee well-being (EWB) (0.608) and work engagement (WE) (0.502) illustrating a strong and positive value (Hair et al., 2019).

**Table 7:** R Square

	R Square	R Square Adjusted
EWB	0.608	0.604
WE	0.502	0.499

While attempting to assess the change in  $R^2$  value, Table 8 indicates that  $f^2$  has been considered for endogenous latent construct (Hair et al., 2017). The size of impact of high-performance work system (HPWS) on work engagement (WE) has been found significant, strong and positive (1.008) whereas the impact of HPWS on employee well-being (EWB) has been found moderate (0.404). On the other hand, the impact of work engagement (WE) on employee well-being (EWB) was found low i.e., 0.094.

**Table 8:** F-Square

$\mathbf{EWB}$	HPWS	$\mathbf{WE}$

HPWS	0.404	1.008
WE	0.094	

Table 9 indicates that a bootstrap procedure was run to establish the CIs (confidence intervals) for the latent constructs' coefficients which doesn't require any assumption for normality for sampling distribution. The significance of path coefficients lies if zero doesn't fall in lower and upper 95% CIs. Table 9 highlights that current study doesn't contain any zero in the lower and upper 95% CIs.

**Table 9:** Confidence Intervals

	Original	Sample Mean	2.50%	97.50%
	Sample (O)	( <b>M</b> )		
HPWS -> EWB	0.569	0.565	0.434	0.674
$HPWS \rightarrow WE$	0.708	0.713	0.608	0.797
$WE \rightarrow EWB$	0.266	0.274	0.137	0.41

Furthermore, according to Hair et al. (2019), a t-value larger than 1.96 at p < 0.05 illustrates the path coefficients' significance. Table 10 indicates t-value larger than 1.96 with corresponding p-value lower than 0.05 which highlights the path coefficients' significance of the current study model.

**Table 10:** Path Coefficients (Direct Effect)

Нур.	Relationship(s)	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ( O/STDE V )	P Valu es
H1	HPWS -> EWB	0.569	0.565	0.06	9.41	0.000
<b>H2</b>	HPWS -> WE	0.708	0.713	0.049	14.536	0.000
H2a	$WE \rightarrow EWB$	0.266	0.274	0.07	3.799	0.000

# **6.4.** Mediation Analysis

On the basis of the results illustrated in afore-mentioned tables 4, 5 & 6, it is evident that High Performance Work System (HPWS), work engagement (WE) and Employee Well-Being (EWB) have been found statistically significant. The result indicate that High Performance Work System (HPWS) has been found in a strong, positive relationship with Work engagement (WE) (r=0.713, p<0.01) and employee well-being (EWB) (r=0.565, p<0.01). Additionally, there have been found a strong, significant and positive relationship between work engagement (WE) and employee well-being (EWB) (r=0.274, p<0.01). The above results indicate that the hypotheses statements 1, 2 & 3 have been supported. Moreover, Table 11 illustrates the mediation effect of work engagement (WE) within the relationship between high performance work system (HPWS) and employee well-

being (EWB) highlighting a strong, positive and significant mediation within high performance work system (HPWS) and employee well-being (EWB) (r=0.197, p<0.01).

**Table 11:** Indirect Effect

Hy p	Relationship	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Н3	HPWS -> WE ->	0.188	0.197	0.057	3.295	0.001
	EWB					

The illustration of indirect and direct effects through Tables 10 & 11 present the impact of HPWS on employee well-being with mediating effect of WE. It is evident from the findings that a significant effect has been found of independent latent variable (HPWS) on EWB through mediator (WE) (r=0.197, p < 0.05). The findings support hypothesis 3. While measuring the strength of mediation caused due to, WE, Variance Accounted For (VAF) is determined. VAF is calculated by dividing the indirect effect by the total effect (sum of direct and indirect effect) (Hair et al., 2017). In the current study, VAF has been found 0.2589, exhibiting 25.9 % impact of HPWS was determined on EWB through WE. According to Hair et al. (2019). if the mediation falls between 20 % to 80 %, it is classified as partial mediation. So, in the current study, the value of mediation has been found 25.9 % i.e., in the prescribed range, it exhibits the partial mediation. On the above discussion, it is noted that in the existing study, work engagement has been found to serve like a complementary mediator.

# 6.5. Results Discussion

An investigation has been made to determine the impact of HPWS on teachers' well-being with mediating effect of work engagement within the higher education institutions in South Punjab, Pakistan. The focal point of this study was to determine if the educational institutions use high performance work activities within their systems, what impact will be determined on teachers' well-being while they are working in any educational institutions. The study findings were in support to the hypotheses' statements of the study. The findings of the current study are found to be aligned with the pervious literature as it determines the interpretation of effective implementation of HPWS not only to benefit the employees but also to the institutions. Moreover, the study illustrates the situation in which employees consider that institution as well as employees both have been found benefited from HPWS becomes a sign of employees' positive reactions which is in line with the mutual gains' perspective. On the other hand, when they consider that HPWS implementations are led to improve the overall performance of the institution disregarding employee well-being, they tend to decrease their level of effort as well as engagement in the job (Gan et al., 2020). The findings of the study provide a new benchmark to the literature of employee well-being that teachers are found to be highly engaged and committed to their work and job responsibilities if they find effective HR practices are implemented for their well-being. With this

notion, the study also underpins the previous literature that the employees have been found highly engaged with their companies if they find the companies' HR practices for mutual gains – company objectives as well as employee well-being.

#### 7. CONCLUSION

The current study goes beyond the previous literature which focused on finding the focal points of HR attributions on the employee performance through theoretical development and argumentation. On the other hand, the current study exerts a mere exploration of HR attribution main effects on employee performance and focuses on the intricacy of employees' working environment. Moreover, the current study pinpoints the previous literature of mutual gains perspective of HPWS like it found to be very interesting to exhibit a combination of HR practices and service attributions have a stronger and significant effect on employees' engagement. This is due to positive connotation of effective HR practices for employees and are found to be supportive and enhance their skills to perform their routine job responsibilities exhibiting that these practices are inherent in their objective achievement. Briefly, the findings of the study exhibit that the response of employees might be very positive if HR practices have been implemented for their well-being.

#### 7.1. Limitations

The assessment of the contribution of the current study should be done against limitations. First, due to time and monetary constraints in COVID-19, the data collection was done at one point of time interval which limits the drawing of conclusions. Second, all constructs of the study are self-reported which becomes a source to enhance the common method biasness. Third, the study contains only one mediator – work engagement. There may be multiple other constructs which may be used as a mediator like organizational culture, organizational climate, workplace bullying (Teo et al., 2020); (Zhang et al., 2020)and some constructs may be added as potential moderator like positive leadership styles to extend this research study (Zhang et al., 2020).

## 7.2. Future Research Directions

The future research may enhance this research study by using the longitudinal data which may increase the domain of conclusion drawing. Secondly, future research could add other potential constructs as mediator to enhance this study like organizational culture, organizational climate and workplace bullying. Furthermore, future research may extend this study by using potential moderators like positive leadership styles (servant leadership, tolerant leadership, ethical leadership). Furthermore, future research might adopt some objective method for data collection as longitudinal data may enhance uncovering of causal effect among latent variables.

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