

An Empirical Study on the Relationship between High Performance Work Practices and Work Engagement: Moderated by the Demographic Variables

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Abstract: *The main thrust of this research is to investigate the relationship between HPWS and work engagement among the working middle managers in the selected four Egyptian banks. For testing the proposed model and the developed major and sub-hypotheses, this research is based on the collected data from a proportional stratified random sample of 385 working middle managers in the four selected banks. The obtained results from analyzing the collected data through using SPSS indicated the following: (a) there is strong, positive and significant relationship between HPWS practices and work engagement, (b) all the selected HR practices are positively and high significantly related to work engagement, (c) employees' perceptions for "employees participation practice" and "performance-based compensation practice" are more strongly and significantly related to work engagement than their perceptions for "employment security practice" and "employees training and development practice", (d) gender and age (as demographic moderating variables) have a significant influence on the relationship between HPWS practices and work engagement, (e) the selected four HR practices operating jointly and explain 46% of work engagement variations.*

Keywords: HPWS practices, work engagement, employment security, employees' participation, employees' training and development, performance-based compensation

INTRODUCTION

Today's businesses and organizations environment all over the world is characterized by an increased number of demanding workforce and a number of trends complexities

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which impose several challenges to the organizations that attempt to win the battle and remain competitive.

In the last decades, organizations found out that the most important competitive advantage lies in the human resources. The resource-based view of the firm – according to Dessler (2017, p.52) – suggested that “the optimal use of human capital can be considered the key source of competitive advantage because it is rare and difficult for imitating the highly talented and motivated ones.” This means that the workforce of any organization cannot be easily acquired or imitated such as the other organization’s resources like technology, (Chen et al (2016, 79)); (Bakker et al, 2011, p20).

Owing to businesses and organizations’ awareness of the real value of human resources in these businesses and organizations, a considerable attention was given to the term “work engagement.” Across the world, this term grabbed the attentions of, and won a great deal of interests of many researchers, managers and practitioners. However, there was a considerable debate over the meaning of “work engagement.” There are many developed definitions by the researchers for it. This because, there is no common agreement among the researchers and practitioners upon one definition for that term as each defines it from his/her point of view. In addition, some of the researchers used “personal engagement”, “employee engagement”, and “work engagement” as synonymous, while they are different. This caused some researchers to consider “engagement” as nothing but are packaging or recalling of those known synonymous in a new term. (Schaufeli et al (2016, p708); Miner et al (2015, p60)); Geldenhuys et al (2014, p9)). Some others indicated that there is a kind of mixing between “work engagement” and other well-known constructs as: commitment, satisfaction, involvement, and organizational citizenship behavior. (Duplooy and Roodt (2010, p912); Schaufeli et al (2016, p709).

Meanwhile, the developed research about work engagement can be mainly classified into two groups. *The first group* focused on the outcomes or the consequences of work engagement. The researchers indicated that work engagement has many positive consequences for the employees and their organizations. Among the most important of these consequences : the increase in organizational commitment; increase in performance level (on the individuals and on the organization levels); increase in the level of loyalty and involvement; increase in the level of organizational citizenship behavior; increase in self-esteem level; and decrease in the intention to leave.(Walt (2018, p10); Van De Voorde et al (2018, p189); Miner et al (2015, p60)); Geldenhuys et al (2014, p9). On the other hand, *the second group* concentrated on figuring out the main drivers or antecedents of work engagement. Researchers indicated that, the main

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antecedents of work engagement can be categorized in two groups. *The first* is related to “**work demands**” such as: physical work load; time pressure; recipient contact; physical environment and shift work. *The second* is related to “**work resources**” such as: feedback; rewards; control; participation; security and stability; supervisors support; and organizational support. (Bakker and Leiter (2011, p185); De Oliveriro and De Silva (2015, p1029); Hoole and Bonnerna (2015, p 10); Kim and Park (2017, p10)); Van De Voorde et al (2016, p 197); Geldenhuys et al (2014, p10) and Walt (2018, p8).

Although there was a significant attention given by the researchers to the drivers of work engagement, fairly number of them indirectly examined the impact of the “high performance work systems (HPWS) on work engagement. Therefore, the main purpose of this research is to study and analyze the impact of HPWS on work engagement in one of the services sectors in Egypt.

LITERATURE/THEORETICAL UNDERPINNING AND HYPOTHESES

This section will focus on the literature review regarding the theoretical framework of work engagement (the dependent variable), “high performance work systems (HPWS)” (the independent variable) and the development of the research hypotheses.

Work engagement (the dependent variable):

The term “engagement” gained a considerable amount of attention from the researchers, practitioners and human resource centers as “the society of human resource management (SHRM)” and Gallup work organization.

In the literature, the term engagement was referred to as “employee engagement”, “personal engagement” and “work engagement”. As a result, there are several conceptualizations of the term engagement was found in the literature since, there is no common agreement among the researchers and practitioners upon one definition for it, each defines the term according to his/her point of view. Moreover, several researchers aimed at developing a clear definition for the term engagement. In this section, the researcher will not be able to cover all the developed definitions but will try to highlight some of the most known of them as follow. Sannentag (2011, p28) and Saks (2013, p605) both of them agreed that engagement can be represented as “the cognitive, emotional and behavioral investment of employee at work”. Saks (2013, p602) defined engagement as “a distinct and unique construct that consists of: cognitive, emotional and behavioral components that are associated with individual role performance”.

Bakker and Leiter (2010, p10)) defined engagement as “a persistent positive affective state characterized by high level of activation and pleasure.” Geldenhuys et al (2014, p5)) defined employee engagement as “an individual employee’s cognitive, emotional and behavioral state directed toward desired organization outcomes.” Karatepe (2013, p136) pointed that “the engaged staff or employees are not only those who exert time and efforts in their work, but those who experience what is called “flow”.”Schaufeli et al (2016, p707) referred to engagement as “a positive fulfilling, work related state of mind that is characterized by: vigorous, dedication and absorption.”

Meanwhile, it should be noted that the focus of this research will be on:

- “Work engagement” and not “employee engagement” or “personal engagement”, because there is a difference between “work engagement” and “employee engagement”. The “work engagement” refers to “the relationship of an individual with his/her job, while “employee engagement” refers to the relationship of the individual with both his/her job and organization.”(Kim and Park (2017, p11)).
- “Work engagement” as a three dimensions construct and as it was defined by Schaufeli et al (2016, p712) as “a positive fulfilling work related state of mind that is characterized by: vigor, dedication, and absorption”. These three dimensions – according to the later researchers and Coetzee and De Villiors (2010, p30) can be defined as follows:
 - a. **Vigor:** Refers to the “physical component of work engagement which includes high level of energy and mental resilience while working, willingness to invest effort in one’s work and persistence in the face of difficulties.”
 - b. **Dedication:** Refers to “the emotional side of work engagement, and it includes characteristics such as: sense of significance, efficacy, enthusiasm, inspiration, pride, and challenge.”
 - c. **Absorption:** Refers to “the cognitive component of work engagement which includes aspects such as: being fully focused on something and experiencing a high level of concentration while performing a task.”

Meanwhile, the developed researches about “work engagement” can be categorized into two groups according to the main goal(s) of each. *The first group*, developed to determine the main consequences of work engagement. The findings of those researches indicated that: work engagement is negatively related with the intention to leave, absence rate, and the tendency to be involved in any counter-productive work behavior. But on the other hand, findings indicated that work engagement is positively related with : level of performance (for both the employee and the organization), level of organizational commitment, level of organizational citizenship behavior, loyalty,

self-esteem, and job satisfaction.(Schaufeli et al (2016,703), Miner et al (2015, p63), Spreitzer et al (2010, 138), Van de Voorde et al (2016, 199) and Van der Walt (2018, 46). **The second group** concentrated on figuring out the main antecedents or drivers of work engagement. Researches by Calitz (2013, p11); Geldenhuys et al (2014, p8); Bakker et al (2011, 10); Van Der Walt (2018, p7); Miner et al(2015, p63); and Kim and Park (2017, 10) indicated that work engagement has mainly two groups of antecedents, they are namely: (a) **work demands** such as : physical work load, time pressure, recipient contact, physical environment, and shift work, (b) **work resources** such as: feedback, rewards, work control, participation, job security and stability, supervisors support, and organizational support. The absence of these resources would be finalized by disengagement.

High performance work practices (HPWP): the independent variable:

The growing economies and globalization push organizations in the competitive environment to sustain their repute to retain the qualified employees and increase the firm performance. On the other hand, the multinational environment increases the employees' expectations toward their organizations. (Dessler (2017, p41); Ivancevich, (2017, p59). In this circumstances, traditional HRM practices cannot satisfy the employees and hinder organizations to compete within the existing environment. Therefore, organizations searched for a system that can satisfy their employees to enhance retention, commitment and can contribute in the firm's ultimate objectives for having high levels of productivity and performance that in turn, lead to survival and growth.

Researchers found out that “high performance work practices” (HPWP) provides the way for the organization to make their employees more productive, and to establish vigorous competitive advantages. As a result, in the last two decades, there has been increased interest in the significance of HPWP for organizational survival to gain competitive edge. Organizations in response to the multiple pressures originating from globalization and fluctuations in the market place, need to constantly develop HPWP to enhance flexibility, efficiency, productivity, performance and the quality of the organizations' goods or services.(Bashir et al (2011, p66),

In general, HPWPs represent management maneuvers to encourage employees' effort towards improved performance levels through flexibility and power transfer. Management tactics are often described as “high performance” practices that may raise employees' productivity (Tawk,2021; Ogbonnaya & Valizade, 2018). Although, HPWPs are modern employee management practices, such as formal employee

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training, high pay levels, group-based performance pay and self-directed teams (Karatepe & Olugbade, 2016), it is claimed that increased implementation of HPWPs results in better performing organizations (Robineau, Ohana, & Swaton, 2015). Best practices recipes and labels do not end; but it is not the number of practices that matter, but the way they are linked to performance. So as per Waqas (2017), there is no magic formula in this regard; it could be a combination of different practices that can deliver the desired results.

These HPWS according to Boxall (2012, 175); Garcia-Chas et al (2019, 81); Jyati and Rani (2017, 1773) are “complex set of distinct, but interrelated innovative workplace policies and practices that are combined into a “bundle”, and utilized as a coherent system to select, develop, motivate and retain a competent workforce to achieve and obtain the organizational strategic goals and objectives.”

Researchers suggested that organizations need to use the appropriate bundles of HPWP to realize their synergistic effects which can lead to multiplicative higher organizational performance than the individual practices. (Boxall (2012, 173); Garcia-Chas et al (2016, 85); Gibbs and Ashill (2013, 311); Gang and Punia (2017, 329); Jyati and Rani (2017, 1776); Kehoe and Wright (2013, 370). Researches indicated that through carefully selecting and implementing HPWP, the organizations can enhance their own staff capacity, improve their employees’ motivation, and ensure their organizational satisfaction. These practices in turn, will motivate and help the employees to increase their knowledge, skills, abilities, self-esteem, creativity, self-confidence, commitment, helping behavior and decrease physical and psychological withdrawal. These in turn, will lead to greater individual and organizational performance. (Akhtar et al (2016, 712); Chen (2018, 125); Fabi et al (2015, 776); Garcia-Chas et al (2019, 80); Jyoki and Dev (2016, 120); Karadas and Karatepe (2019, 70); Min et al (2019, 159); Shahzad et al (2019, 980); Tang et al (2017, 1322).

Based on the previous discussion, the researcher can develop the first major hypothesis as follow:

H1: High performance work practices (HPWP) are expected to have strong, positive and significant relationship with work engagement.

Meanwhile, the debate is still going on about: which practices constructed HPWP as single entities. However, as mentioned and explained by: Fabi et al (2015, 778), Garcia-Cha et al (2016, 458), Gang and Punia (2017, 326), Karadas and Karatepe (2019, 72), Lu et al (2015, 359), Nadeem et al (2018, 570), Nadeem et al (2019), Shahzad et al

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(2019, 980) and (Tawk, 2021) various HR practices were used as HPWP in these studies to approve the linkage between HR practices and employees and organizations outcomes. The most common used of these practices are: targeted selection, training and development, internal promotion, employee participation, formal performance appraisal, merit-based promotion, formal communications programs, development appraisal, performance-based pay, reduced differential status between managers and employees egalitarian, employment security, fair compensation, feedback system, job definition, career opportunities, inspirational work design, HR planning and strict formal diversity. In this research, the researcher selected four of these HR practices that can be considered – according to his opinion the key HR practices. These practices are:

- (a) Employment security;
- (b) Employees' participation;
- (c) Employees' training and development; and
- (d) Performance based compensation.

(a) Employment security:

Employment security reflects how secured the employees feel regarding their jobs, which is an important determinant of quality of work life. The feelings of employment security and stability may affect the employees' commitment level, loyalty level, and their contributions for their organizations' performance. (Ahmed, 2013, 75). Business world today is full of acquisitions, downsizing, mergers, and layoffs. All of these inspire fear and anxiety among the employees regarding their jobs (the main source of their life income that helps them in surviving) and careers as there is no steadiness in one's job. This can have implication on job satisfaction, loyalty and retention of employees (Kurdu and Gohlawat, 2016, 1590). Accordingly, employee security has become among the most important concerns to HRM, management and organizations, particularly in the current existing environment that mainly characterized by high degree of uncertainty.

Based on this discussion, the researcher can propose the following sub-hypothesis:

H1a : The level of employment security is expected to have strong, positive, and significant relationship with work engagement.

(b) Employee participation:

According to Ageela and Vivek (2018, 8), Akhtar et al (2018, 710) participation has been defined as “**taking part**”. “It is the mental and emotional involvement of

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employees in group situations that encourage them to contribute to group goals and share responsibility for them.” Accordingly, one can say that the participation practice has three main elements, mainly called: (a) involvement, (b) contribution as it motivates and encourages employees to contribute and improve their motivations by helping them understanding and clarifying their ways and paths toward the previously stated or planned goals or objectives, (c) acceptance of responsibility as participation encourages employees to accept the full responsibility for their actions and activities.

Studies by, Ageela and Vivek (2018, 9), Agarwal and Famdale (2017, 445), Bashir et al (2011, 65), Chen (2018, 125) and Karadas and Karatepe (2019, 70) indicated that “participation has a significant impact on the employees’ performance, satisfaction, creativity and innovation, reducing conflicts and increase their commitment and loyalty levels.”

Based on the previous discussion, the researcher can develop the following sub-hypothesis:

H1b: Employees’ participation are expected to have strong, positive, and significant relationship with work engagement.

(c) Employees’ training and development:

Training has been typically defined as “attainment of knowledge, and skills to perform different types of work in the organization” (Dessler, 2017, p260). According to the later researcher, the role of training in organizational effectiveness is two folds. *The first*, “training programs enhance the employees’ skills, talents, and abilities such that they became more productive workers and the organization in turn will become more productive”. *The second* is that “training serves as a latent function of disseminating the worthiness of the employees in front of their organizations”. Those employees in turn, will show greater commitment, loyalty and performance.

Based on the previous discussion, the researcher can propose the following sub-hypothesis:

H1c: Employees’ training/development are expected to have strong, positive, and significant relationship with work engagement.

(d) Performance –based compensation:

Performance appraisal plays vital role in any fair compensation system. According to Dessler (2017, 250) and Ivancevich (2017, 358) it is the process of “evaluating the performance of the employees, sharing that information with them and searching for ways to improve their performance”. This means – according to them – “it is a process of systematically evaluating performance and providing feedback on which performance adjustments can be made”. Thus, if the system of payment is based on the obtained information from performance appraisal, this system will be fairer for both the employees and their organizations. For the employees, the more they perform, the more they will get as compensation for their exerted efforts, knowledge, and time. In this case, they will be more motivated to exert more to get more. On the other hand, their organizations are going to benefit from applying it, as increase in the level of performance, will decrease the fixed cost per unit and consequently the total cost, which decreases the product (goods or service) price which will increase the sales volume and the achieved profit.

Thus, if the organizations applied performance –based compensation system, their employees are going to be more satisfied, committed, loyal, and retained in their organizations.

Based on the previous discussion, the researcher can develop the following sub-hypothesis:-

H1d: Performance –based compensation is expected to have strong, positive, and significant relationship with work engagement.

Additionally, demographics nowadays are considered one of the most important factors in the human resource and management decisions because they persuade work behavior and productivity of the employees to a considerable extent.

Accordingly, the researcher can develop the second major hypothesis as follow

H2: Demographic variables (gender, age) are expected to have an impact on the relationship between HPWP and work engagement.

Research problem:

In the last decades, organizations found that the most important competitive advantage lies in human resources, that is, the workforce of these organizations as they are persistent and unique. Owing to the increase of organizations’ awareness of the real

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value of human resources, a considerable attention was given to the term “work engagement”. Work engagement has been studied in relation to a number of the organizational outcomes or to some of its antecedents mainly in the manufacturing sector.

Therefore, this research will focus on investigating the link between HPWP and work engagement in the Egyptian banking sector. In other words, the problem of this research can be expressed in the following questions:

- (a) What are the expected relationships between HPWP (i.e. some of its practices) and work engagement in the Egyptian banks?
- (b) What are the coefficients of determination (R^2) of work engagement?
- (c) What are the influences of the demographic variables (gender, age) on the relationship between HPWP and work engagement?

Research objectives:

This research mainly aimed at:

- 1. Exploring**, through the literature survey , what do we mean by work engagement , how It differs from the other concepts, and what are its main dimensions?
- 2. Figuring out and determining** the main practices which can be considered the antecedents or drivers of work engagement.
- 3. Identifying and determining** which of these HR practices will be considered the main determinants of work engagement.
- 4. Figuring out** the main influences of the demographic variables on the relationship between HPWS practices and work engagement.
- 5. Providing some** recommendations that can help the responsible people at banks in establishing the appropriate programs for enhancing work engagement among the banks' Employees to gain its desired benefits.

Research importance:

The importance of this research springs mainly from its valuable contributions to HRM and OB fields on two levels as follows:

- (1) On theoretical level:**

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(a) This research will contribute to the theory through supporting and enhancing the existing literature that are related to HPWP and work engagement.

(b) This research will explore an important issue that can be major area for future research concerning the effective application of HR practices in the banking sector in the eastern developing countries.

(c) This research will provide for the Arabic libraries in general and the Egyptian library in particular an empirical study related to work engagement and its relationship with HPWP in the banking sector. It is considered very important as most of the developed studies about these variables were in the western and developed countries and mainly in the manufacturing sector.

(2) On empirical level:

On this level, this research will provide the following contributions:

- a. It will improve our understanding of HPWP as one of the most important drivers of work engagement in Egypt, especially in one of the most important service sector, i.e. the banking sector.
- b. It will provide an empirical diagnose for the predisposing HR practices that may affect positively or negatively on work engagement. This diagnose will enable the management in the selected banks to recognize the main HR practices that may help in enhancing work engagement among the working employees in these banks.

Configuration of the research model:

Based on the research problem, objectives, and importance, the relationships between the high performance work system practices (HPWS) and work engagement can be illustrated in the following figure (1)

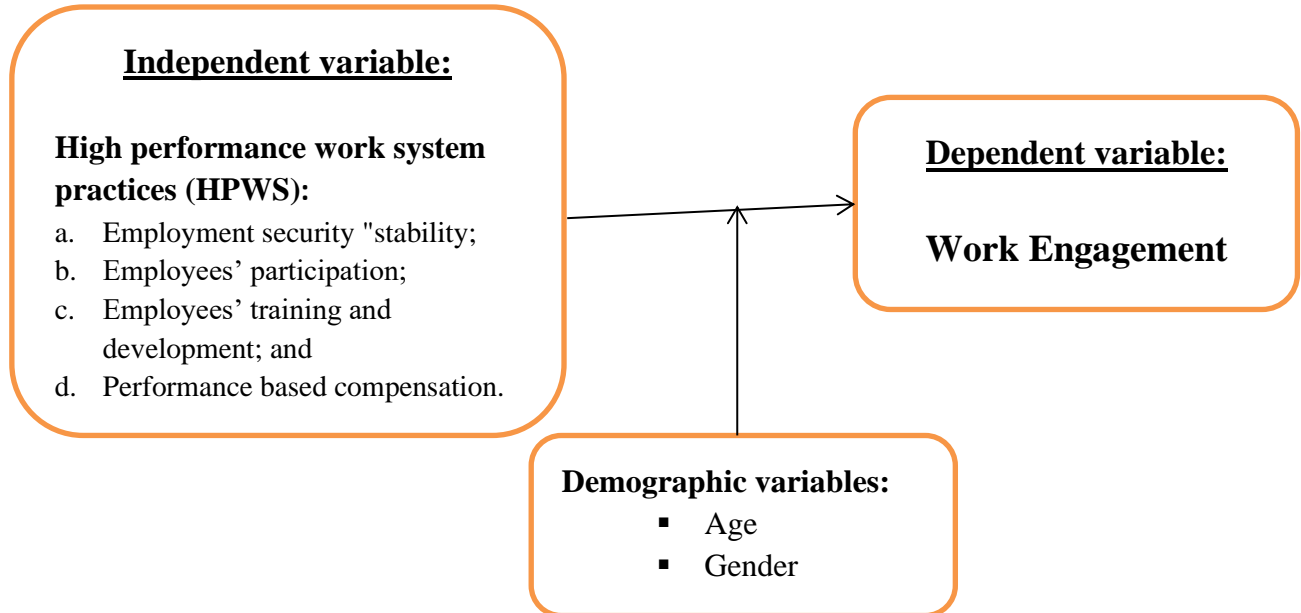


Figure (1): The Suggested Research Model

Source: Prepared by the author.

Research variables' measurements:

The dependent variable (work engagement):

Work engagement was measured using Utrecht Work Engagement Scale developed by Schaufeli et al (2002). The scale consists of nine items that indicate the three characteristics that this research has used to define "work engagement": i.e. vigor, dedication, and absorption. The respondents are asked to determine the degree of their agreement regarding each of the scale items on a five-point Likert type scale where: 5 = strongly agree, while 1 = strongly disagree. Meanwhile, all the items are coded in the positive direction and summed on the whole scale.

The independent variable (High performance work practices (HPWP) :

High performance work practices are measured through measuring the employees' perception of the four high performance work practices, which was adopted from Delery and Doty (1996) scale. The first work practice is "employment security or stability"; it was measured by 4 items. The second work practice is "Employees participation"; it was measured by four items. A sample item is "employees in this job are often asked by their supervisor to participate in making and taking the decisions". The third work practice is training "it was measured by four items. A sample example

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is “employees in this job will normally go through training programs every few years”. The fourth work practice is “performance – based compensation”; it was measured by using three items. The respondents are asked to determine their agreement regarding each item on a five point Likert type scale, where all the items are coded in the positive direction and summed on the whole scale.

The moderating variable (demographic variables):

The researcher considered only two dimensions of the demographic variables, mainly called: gender (male and female); and age (different ranges of age in years).

RESEARCH METHODOLOGY

Research population and sample:

Since there are many different types of banks in Egypt, this research will focus only on four selected banks, two from the public sector and two from the private sector. According to the annual report of the “Central agency for public mobilization and statistics 2021/2022”, the population of middle managers in all banks is equal 25200 in public sector and 17340 in the private with total equal 42540 middle managers.

According to the statistical table, the sample size was equal 385 managers with a significance level of 95% and margin error 5%. The research depended on “proportional stratified random sample (PSTRS). Based on the request of the top management of the selected banks “not to mention the name of the banks in the research”, these four banks will be called in this research (A, B for the public and C, D for the private). These banks are selected because they represent the largest four in the public and private based on their activities and their market share in the Egyptian banking sector . The descriptive statistics of the sample indicated that 260 (72%) are males and 101(28%) are females, 195 (54%) their age are greater than 36 years (mean age) and 166(46%) are equal or less than 36 years old.

STATISTICAL ANALYSIS AND RESULTS

Validity and reliability:

Validity:

Although the researcher depended for measuring the research variables on valid published and widely common scales, it was necessary to re-validate them because they are going to be used in different cultures and situations. The researcher depended on a panel of judges and experts consisted of 15 professors who are research specialists in psychology, organizational behavior, HRM, and management. Their comments are reviewed and the appropriate corrections were made. Additionally, their feedback assured the validity of these measurements.

Reliability:

The reliability of the used variables' measurements were examined by computing Cronbach Alpha Coefficients. The obtained results are shown in table (1).

Table(1) Cronbach Alpha Coefficients (α) for the research variables measurements

Variables	Mean	SD	Reliability(α)
-High performance work practices.	3.211	0.81	0.81
-Employment security.	3.212	0.91	0.87
-Employees' participation.	3.320	0.85	0.86
-Employees training & development.	3.112	0.90	0.92
-Performance- based compensation.	3.212	0.93	0.92
-Work engagement.	3.332	0.98	0.89

Results in table (1) show acceptable reliability coefficients of the research variables' measurements as the Cronbach Alpha Coefficients (α) for all the measurements are very high. This means that they satisfy the basic requirements for developing the research.

Testing the hypotheses:

In order to test the developed hypotheses, Pearson Correlation technique was used to test the relationship between the independent and dependent variables. The obtained results from the analysis **on the total sample** are shown in Table (2).

Table(2) Pearson Correlation Coefficients (r's) for the study variables

Variables	1	2	3	4	5	6
HPWP (Practices)	-----					
Employment security	0.422**	-----				
Employees participation	0.401*	0.385*	-----			
Employees training & development.	0.392**	0.331*	0.234*	-----		
Performance-based compensation.	0.482**	0.421**	0.332*	0.412*	-----	
Work Engagement	0.498***	0.495**	0.501**	0.478**	0.521***	---

(*** = $P < 0.001$, ** = $P < 0.01$, * = $P < 0.05$)

The correlation coefficients shown in this table indicate the following:

- There is a strong, positive and significant relationship between High Performance Work Systems (practices) and work engagement as the correlation coefficient (r) for their relationship is equal (**0.498, $p < 0.001$**). This means that **H1 is accepted and significantly supported**.
- There is a strong, positive and significant relationship between employment security and work engagement as the correlation coefficient (r) for their relationship is equal (**0.495, $p < 0.01$**). This means that, **H1a is accepted and significantly supported**.
- There is a strong, positive and significant relationship between employees participation and work engagement as the correlation coefficient for their relationship is equal (**0.501, $P < 0.01$**). This means that, **H1b is accepted and significantly supported**.
- There is a strong, positive and significant relationship between employees training and development and work engagement as the correlation coefficient for their relationship is equal (**0.478, $P < 01$**). This means that, **H1c is accepted and significantly supported**.
- There is a strong, positive and significant relationship between performance-based compensation and work engagement as the correlation coefficient (r) for this relationship is equal (**0.521, $P < 0.001$**). This means that **H1d is accepted and significantly supported**.

In addition to the usage of Pearson Correlation, and for more testing the relationship between the independent and dependent variables, Multiple Regression (Stepwise method) is used to determine the coefficient of determination (R^2). Data in table (3) show the multiple regression statistics **on the total sample**.

Table (3) Multiple regression statistics for the variables affecting work engagement

Variables	Reg. Coef. (β_i)	SD	T-value	Sign.
-Work Engagement with:				
Employment security	0.431	0.90	3.43	0.001
Employees participation.	0.422	0.87	3.52	0.01
Employees training & development.	0.381	0.89	3.43	0.001
Performance-based compensation.	0.511	0.91	3.53	0.001

Total Model	$R^2 = 0.460$	$F = 14.21$	Sign. Level = 0.01
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The results in table (3) revealed that:

- The standardized regression coefficients (β_i) for employment security, employees participation, employees training and development, and for performance-based compensation follow the patterns of correlation coefficients (r 's) that have been previously reported in table (2).
- The employment security, employees' participation, employees' training and development and performance -based compensation operating jointly and explain **46%** of work engagement variation since (R^2) was equal 0.460 and $P < 0.01$.
- There are strong and significant relationships between employment security, employees' participation, employees' training, performance-based compensation and work engagement as beta for all of them respectively were equal: **$\beta_1=0.431$, sign 0.001, $\beta_2=0.422$, sign. 0.01, $\beta_3=0.381$,sign.0.001 and $\beta_4=0.511$,sign. 0.001.**

In order to determine the impact of the demographic variables (gender and age) on the relationship between the independent and dependent variables, the researcher developed correlation analysis on the sub-samples. Results of this analysis are shown in table (4).

Table (4): The correlation coefficients for the relationship between HPWP and work engagement moderated by gender and age

HPWP:	Work engagement for:		Work engagement for:	
	Males	Females	LT mean	GT mean
Employment security	0.510 ***	0.480 **	0.490 **	0.485 **
Employees participation	0.490 **	0.482 **	0.511 **	0.520 **
Employees training & development.	0.501 ***	0.492 **	0.505 **	0.512 **
Performance-based compensation.	0.540 ***	0.510 **	0.525 **	0.495 *

***=P < 0.001 , **=P < 0.01 , *=P < 0.05, LT= less than mean of age, GT=greater than mean of age

Results in table (4) indicated that:

- H2 is strongly supported at a high level of significance.**
- Employment security for males and those less than the mean of age is more strongly related to work engagement than those for females and who are greater than the mean of age. The correlation coefficients (r's) for: males =0.510 (P < 0.001), for LT the mean =0.490 (p < 0.01), for females =0.480 (p< 0.01), and for those GT the mean =0.485 (p<0.01).
- Employees' participation for males and for those GT the mean of age is more strongly related to work engagement than for females and for those LT the mean of age. The correlation coefficients (r's) for: males =0.490 (p < 0.01), for GT the mean of age = 0.520 (p < 0.001), for the females =0.482 (p < 0.01) and for those LT the mean =0.511 (p< 0.01).
- Employees training and development for males and those GT the mean of age is more strongly related with work engagement than females and those LT the mean of age. The correlation coefficients (r's) for: males =0.501 (p< 0.001), for GT the mean of age =0.512 (p < 0.01), for females = 0.492 (p < 0.01), and for those LT the mean of age =0.505 (p < 0.01).
- Performance-based compensation for males and those LT the mean of age is more strongly related with work engagement than for females and those GT the mean of age. The correlation coefficients (r's) for: males =0.540 (p < 0.001), for those LT the mean of age = 0.525 (p < 0.01), for females =0.510 (p < 0.01), and for GT the mean of age =0.495 (p < 0.5).

Meanwhile, in order to figure out whether there are some significant differences between males, females and between those LT the mean of age, those GT the mean of age, the researcher develops **T- test** for the differences. Results from test are shown in table (5).

Table (5) T– test results for the differences between groups regarding Work engagement and its antecedents

Variables	Male		Female		T value	Sig.	LT		GT		T value	Sig.
	M	SD	M	SD			M	SD	M	SD		
Employment security	3.21	0.58	3.61	0.75	2.21	0.05	3.55	0.75	3.01	0.82	2.01	0.05
Employees' particip.	2.95	0.62	3.11	0.70	0.99	0.15	3.21	0.82	2.99	0.84	0.46	0.20
Employees' training+d	3.01	0.87	3.10	0.92	0.95	0.15	3.45	0.79	2.99	0.82	2.43	0.01
Per. –based compensa.	3.10	0.68	3.43	0.93	2.23	0.01	3.12	0.88	2.90	0.85	2.10	0.01

M=mean,SD=standard deviation,LT=less than the mean of age,GT=greater than the mean of age.

Results in table (5) revealed that:

- There are some differences between males/ females, and between those LT/ GT the mean of age regarding the relationship between employment security and work engagement and these differences are significant as **T value** for males and females is =**2.21** and for LT/GT is=**2.01** and both of them are greater than +, - **1.96** (**the critical value for 0.05 level of significance**).
- There are some differences between males/females and between LT/GT regarding the relationship between employees' participation and work engagement and those differences are not significant as **T-value** for males/females=**0.99** and for LT/GT is=**0.46** and both of them is less than +, - **1.96** (**the critical value for 0.05 level of significance**).
- There are some differences between males/females, and between LT/GT regarding the relationship between employees training and development and work engagement. The results indicate that the differences between males/females are not significant as **T-value is=0.95** which is less than +, - **1.96**, but the differences between LT/GT are significant at **0.01** level as **T-value is =2.43** which is greater than +, - **1.96** (**the critical value for 0.05 level of sig.**)
- There are some differences between males/females, and between those LT/GT regarding the relationship between performance -based compensation and work engagement. These differences are significant at 0.01 level as **T-value** for males/females=**2.230** and for LT/GT is =**2.10** and both of them are greater than +, - **1.96** (**the critical value for 0.05 level of significance**).

DISCUSSION

This research aimed at investigating the relationship between HPWS and work engagement among the working middle managers in the Egyptian banking sector (public and private). Also, it aimed at figuring out the role of some of the demographic variables (gender and age) as a moderator variable on the relationship between HPWS and work engagement.

The obtained results from analyzing the research data revealed the following:

First: All the used measurements (scales) for measuring the independent and the dependent variables of the research are valid and highly reliable with Cronbach Coefficients above the conventional minimum value of 0.70.

Second: There is strong and highly significant support for all major and sub-developed hypotheses. As most of the correlation coefficients and standardized beta are highly significant. This means that the relationships between the independent and dependent variables are real relationships. Meanwhile, these results generally indicated that all the selected bundle of HR practices are positively related to work engagement but the relationships between “employees’ participation, performance-based compensation” and work engagement are relatively stronger than the other two practices (employment security and employees training and development). This results may be attributed to:

- (a) The nature of the participation practice as it represents the mental and emotional involvement of the employees in their work. In addition, this participation practice has mainly three elements: involvement, contribution and acceptance for responsibility. These elements usually encourage the employees to be more engaging in their banking work.
- (b) The relative importance of performance-based compensation practice because it is related to the most outcome that any employee is looking for from his/her involving in any type of work, i.e. payment or what called compensation. Additionally, it refers to the most important element of any effective and fair compensation system. According to this practice, there will be a guarantee to deal with all the employees in work according to this rule: **“the more the employee contributes to his/her work, the more compensation he/she will get”** (i.e. having more objective and fair compensation system).

Third: The study findings are in lines with the previous studies of **Akhtar et al (2016)**, **Jyoki and Dev (2016)**, **Ageela and Vivek (2018)**, **Karadas and Karatepe (2019)** and **Min et al (2019)** which explained that HPWS practices directly influence the employees attitudes and behaviors such as their performance level, their organizational commitment level and their intentions to leave. Additionally, these studies asserted that the selected HPWS practices emphasize on skills development, decentralization in decision making and effective use of knowledge, skills and abilities that can trigger employees' motivation to be more engaging in their work. Also, they are supporting the **social exchange theory** as when organizations use HPWS as an incentive and investment in the human capital, these organizations will be able to attract and motivate their employees to increase their work engagement level (**Lu and Bao (2015)**, **Min et al (2019)**, **Nadeem et al (2019)** and **Tang et al (2017)**). Moreover, the study findings are consistent with the **theory of connection** as it was explained by **Saks (2011)** in that “there is a positive, strong and significant relationship between the workplace expressed by the utilized HR practices and the employees work engagement level”. This is because work engagement implies simultaneous investment of all aspects of oneself: cognitive, physical, emotional and spiritual when performing any work role.

Fourth: The study tried to figure out the role of some of the demographic variables as gender and age (as a moderator variable) on the relationship between HPWS and work engagement. The obtained results supported the related developed hypothesis (**H2**). But it shows that relationship for males and for those who are younger (i.e. less than the mean age) are stronger than their counterpart. This may be attributed to the following:

- (a) According to the “**gender and social role theory**” especially in the Eastern and Arabic countries, females are more likely to see family role as critical part of their social identity than males. Thus, when work impinges on family demands, females are more likely to develop negative attitude toward their work context as it is viewed as more threatening to their central social role.
- (b) The male-oriented culture relatively supports the role of males in society as they are considered the main responsible for satisfying all the needs for their families. Thus, they have to work hard and to do their best in order to satisfy these demands. Therefore, they are more exposed and concerned about HPWS issues in their organizations than their counterpart.
- (c) Also, it shows the role of young employees in organizations, as they are starting their work career and they are highly motivated to exert more of their efforts,

energy, knowledge, skills and time in their work (i.e, are more engaging in their work) in order to achieve their main goal of survival and growth.

CONCLUSION

The term “engagement” in general and “work engagement” in particular gained a considerable amount of attention from the researchers, practitioners and human resource centers around the world in the last few years. Therefore, the primary purpose of this research was to investigate the relationship between HPWS practices and work engagement among the working middle managers in the selected four Egyptian banks (two public and two private). Based on a proportional stratified random sample of 385 drawn from the working middle managers in the four selected Egyptian banks, and on the analysis of the collected data from them through the use of SPSS, the study results revealed that: (a) there is strong, positive and significant relationship between the selected bundle of HPWS practices and work engagement, (b) all the selected HR practices are positively and significantly related to work engagement, (c) “employees participation practice” and “performance –based compensation practice” are more strongly related to work engagement than “employment security practice” and “employees training and development practice”, (d) gender and age (as demographic moderator variables) have an impact on the relationship between HPWS practices and work engagement, (e) the bundle of selected four HR practices operating jointly and explain 46% of work engagement level variations, (f) there are some differences between males/females and between those less than and those greater than the mean of age regarding the relationship between the bundle of selected four HR practices and work engagement, (g) some of the differences between males and females and between those less than and those greater than the mean of age are significant while the other some are not.

Its contributions:

This research will contribute to the theory through supporting and enhancing the literature that are related to the main consequences and outcomes of HPWS practices. In addition, it will fulfill the research gap in the literature the employees perceptions for HPWS practices and its attitudinal and behavioral outcomes, especially in one of the important service sector (i.e. banking) and in one of the Eastern and under-developing countries (i.e. Egypt). Also, it will give organizations’ management a good empirical experience regarding the effective applications of HR practices in the different services sector and in different cultures.

Study limitations:

- (a) All the correlations and multiple regression analysis that are presented in the study are drawn from cross-sectional and self-reported data. The biggest problems with cross-sectional and self-report are the potential opportunity for the inflation of the correlation coefficients and regression betas and the inability to make any firm inferences of variables causality.
- (b) Most of the measurements used for measuring the study variables are depending on the respondents' perceptions which may be a function of many variables, some of them may not account for in the study.
- (c) The primary data of the study were collected through the use of survey questionnaire technique and from a single source (i.e. middle managers). This may rise the common method variance and then the spurious effect.
- (d) Finally, the selected bundle of HPWS practices that were included in the study were not entirely representative of the previously HPWS studies. This because some of the not included practices are not applicable in the banking sector.

REFERENCES

- Agarwal, P. and Famdate, E. (2017) HPWS and creativity implementation: the role of psychological capital and psychological safety, *HRM journal*, 27(3), 440- 458.
- Ageela, M. and Vivek, R. (2018) The relationship between HPW practices and employees' attitudes : A study on small business private sector in Colombo district, *World Journal of innovative research*, 4(5), 5- 19.
- Ahmad, I. A. (2013) "Paradigms of Quality of Work Life", *Journal of Human Values*, 19(1), 73- 82.
- Akhtar, A., Nawaz, M.K., Mohmood, Z. and Shahid, M.S.(2016) The impact of HPWS practices on employees' performance in Pakistan: mediating role of employee engagement, *Pakistan Journal of Commerce and Social Sciences*, 10(3),708-724.
- Akhtar,M. N., Zhang, J., Bal, P.M. , Long, L., Zhang, Y. and Ma, Z. (2018) High performance work system and employees performance: the mediating roles of social exchange and thriving and the moderating effect of proactive personality, Unpublished manuscript.
- Bakker, A. B. and Leiter , M.P. (2010) Where to go from here : integration and future research on work engagement , In A. B. Bakker and M.P. Leiter (eds) *Work engagement: a handbook of essential theory and research* , NY: Psychology Press, 181-196.
- Bakker, A.B., Albrecht, S.L. and Leiter, M. P. (2011) Key questions regarding work engagement, *European Journal of Work and Organizational Psychology*, 20(1), 4- 28.
- Bashir, M., Jianqiaso, L., Zhang, Y., Ghazanfar, F., Abrar, M. and Khan, M.M. (2011) The relationship between HPWS , organizational commitment, and demographic factors in public sector Universities of Pakistan, *Interdisciplinary Journal of Research in Business*,1(8), 62-71.
- Boxall, P.(2012) HPWS: what, why, how, and for whom?, *Asia Pacific Journal of HR*, 50(2), 169-182.

- Caitz, T.M. (2013) An empowerment programs to regain positive work engagement for social workers in the North West province, Dissertation, North West University, 25.
- Chen, S. L. (2018) Cross level effects of high commitment work system and firm performance: impact of psychological capital and environmental uncertainty, *Asia Pacific Journal of HR*, 3(4), 120-132.
- Chen, T. J., Lin, C. C. and Wu, C. M. (2016) HPWS, psychology efficacy, job satisfaction, and task performance in the hotel workplace, *Open Journal of Social Sciences*, 4(7), 76-81.
- Coetzee, M. and De Villers, M. (2010) Sources of job stress, work engagement and career orientations of employees in a South African Institutions, *Southern African Business Review*, 14(1), 27-58.
- Danish, R. Q. (2019) Influence of HPWS on employees service performance and organizational citizenship behavior: the mediating role of resilience, *Journal of Global Entrepreneurship Research*, 9(1), 13.
- Delery, J. E. and Doty, D. H. (1996) Modes of theorizing in strategic human resource management: tests of universalistic contingency and configurations performance predictions, *Academy of Management Journal*, 39(4), 802-835.
- De Oliverira, L.B. and Do Siva, F.F.R. (2015) The effects of HPWS and leader- member exchange quality on employee engagement: evidence from a Brazilian non-profit organization, *Procedia Computer Science*, 55, 1023- 1030.
- Dessler, G. (2017) *Human Resource Management (15th ed) Global Edition*, Pearson: New York.
- Duplooy, J. and Roodt, G. (2010) Work engagement, burnout, SA *Journal of Industrial Psychology*, 36(1), 910-922.
- Fabi, B., Lacoursience , R. and Ray Mord, L. (2015) Impact of HPWS on job satisfaction, organizational commitment, and intention to quit in Canadian organizations, *International Journal of Manpower*, 36(5), 772-790.
- Gang, N. and Punia , B. K. (2017) Developing HPWS for Indian Insurance Industry, *International Journal of Productivity and Performance Management*, 66(3), 320-337.
- Garcia-Chas, R., Neira-Fontela, E. and Varela-Neira, C. (2016) HPWS and job satisfaction: a multilevel model, *Journal of Managerial Psychology*, 3(2), 451- 466.
- Garcia-Chas, R., Neira-Fontela, E. and Varela- Neira, C. (2019) HPWS and work role performance, a multilevel moderated mediation model, *Performance Improvement Quarterly* ,32(1), 77-101.
- Geldenhuis,M., Laba, K. and Venter, C.M. (2014) Meaningful work, work engagement and organizational commitment, *SA Journal of Industrial Psychology*, 40(1), 1-10.
- Gibbs, T. and Ashill, N.J. (2013) The effects of HPW practices on job outcomes , evidence from frontline employees, *Russia International Journal of Bank Marketing*, 31(4), 305-326.
- Hoole, C. and Bonnema, J. (2015) Work and meaningful work across generation cohort, *SA Journal of HRM*, 13(1), 1-11.
- Ivancevich, G. M. (2017) *Human Resource Management (15th ed)*, McGraw-Hill, New York.
- Jyoki, J. and Dev, M. (2016) Perceived HPWS and employee performance, role of self-efficacy and learning orientation, *Metamorphosis*, 15(2), 115-133.
- Jyati, J.and Rani, A. (2017) HPWS and organizational performance, role of knowledge management, *Personnel Review*, 46(8), 1770-1795.
- Karadas, G. and Karatepe, O.M. (2019) The impact of high-performance HR practices on employees' attitudes and behaviors, *Journal of Management*, 39(2), 366-391.
- Karatepe, O. M., & Olugbade, O. A. (2016). The Mediating Role of Work Engagement in the Relationship between High-Performance Work Practices and Job Outcomes of

- Employees in Nigeria. *International Journal of Contemporary Hospitality Management*, 28, 2350-2371.
- Karatepe, O.M. (2013) HPW practices and hotel employee performance, the mediation of work engagement, *International Journal of Hospitality Management*, 32, 132-140.
- Kehoe, R. R. and Wright, P. M. (2013) The impact of high performance HR practices on employees attitudes and behaviors, *Journal of Management*, 39(2), 366-391.
- Kim, W. and Park, J. (2017) Examining structural relationship between work engagement , organizational procedural justice, knowledge sharing and innovative work behavior for sustainable organizations, *Sustainability*, 9(2), 1-16.
- Kundu, S. C. and Gahlawat, N. (2016) HPWS and employees intention to leave : exploring the mediating role of employee outcomes, *Management Research Review*, 39(12), 1587-1615.
- Lu, K., Zhu, J. and Boo, H. (2015) HP HRM and firm performance, the mediating role of innovation in China, *Industrial Management and Data System*, 115(2), 353-382.
- Min, M., Zhu, Y. and Bambacas, M. (2019) The mediating effect of trust on the relationship between HPWS and employee outcomes among Chinese indigenous firms, *Asia Pacific Journal of HR*, 3(2), 150-175.
- Miner, M., Bickerton, G., Dowson, M. and Sterland, S. (2015) Spirituality and work engagement among church leaders, *Mental Health, Religion, and Culture* , 18(1), 57-71.
- Nadeem, S., Raza, M., Kayani, N., Aziz, A. and Nayab, D. (2018) Examining cross-cultural compatibility of HPW practices, *International Business Review*, 27(3), 563-583.
- Ogbonnaya, C., & Valizade, D. (2018). High Performance Work Practices, Employee Outcomes and Organizational Performance: A 2-1-2 Multilevel Mediation Analysis. *The International Journal of Human Resource Management*, 29, 239-259.
- Robineau, A., Ohana, M., & Swaton, S. (2015). The Challenges of Implementing High Performance Work Practices in the Nonprofit Sector. *Journal of Applied Business Research (JABR)*, 31, 103-114.
- Shahzad, K., Arenias, P., Muller, A., Rasheed, M.A. and Bajwa, S.U. (2019) Unpacking the relationship between HPWS and innovation, performance in SMEs, *Personnel Review*, 48(4), 977-1000.
- Saks, A. M. (2013) Workplace spirituality and employee engagement, *Journal of Management, Spirituality and Religion*, 8(4), 317-340, *Organizational Psychology*, 20(1), 26-38.
- Schaufeli, W.B., Salanova, M., Bakker, A.B. and Ales-rom, V.G. (2002) The measurement of work engagement and burnout: a two-sample confirmatory factor analytic approach, *J. of Happiness Studies*, 3(1), 71-92.
- Schaufeli, W.B., Bakker, A.B. and Salanova, M. (2016) The measurement of work engagement with a short questionnaire, *Educational and Psychological Measurement*, 66, 701-716.
- Spreitzer, G. M., Lam, C.F. and Fritz, C. (2019) Engagement and human thriving: complementary perspectives on energy and connection to work, In A.B. Bakker and M.B. Leiter (eds) *Work engagement, Handbook of essential theory and research*, 132-146.
- Tang, G., Yu, B., Cooke, F.L. and Chen, Y. (2017) HPWS and employee creativity: the role of perceived organizational support and developed management, *Personnel Review*, 46(7), 1318-34.
- Tawk, C.J. (2021). Effects of High-Performance Work Practices (HPWPs) on Employee Performance: A Review Article. *Journal of Human Resource and Sustainability Studies*, 9, 397-412.

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- Van Der Walt, F.(2018) Workplace spirituality, work engagement and thriving at work, SA Journal of Industrial Psychology, 44, 1-10.
- Van de Voorde, K., Van Veldhoven, M. and Veld, M. (2016) Connecting empowerment-focused HRM and labor productivity to work engagement : the mediating role of job demands and resources, HRM Journal, 26(2), 192-210.
- Walt, F.V.D. (2018) Workplace spirituality, work engagement and thriving at work, Journal of Industrial Psychology, 44, 1-10.
- Waqas, M. (2017). *High Performance Work Practices: Buffer in Times of Job Insecurity*. University of Science and Technology of China.