
HIGH-PERFORMANCE WORK SYSTEMS AND ACADEMICIANS' WORK PERFORMANCE: THE MEDIATING ROLE OF QUALITY OF WORKING LIFE

FATIN AMIRAH ABDUL MALIK¹, *MATHIVANNAN JAGANATHAN², NAZLINA ZAKARIA², AND LOGESWARI UTHAMA PUTHRAN³

¹ Mega Kulim Pharmacy; fatinamirahmalik@gmail.com

² School of Business Management, Universiti Utara Malaysia
mathivannan@uum.edu.my, nazlina@uum.edu.my

³ Aminuddin Baki Institute, Ministry of Education
logeswari@iab.moe.gov.my

* Correspondence: mathivannan@uum.edu.my

Abstract: Due to the many demands put on them, educators are a profession that faces many difficulties. In addition to being accountable for teaching, academics are now expected to complete other institutional requirements, such as writing for academic journals, research, publications, meetings, advice, volunteer work, and business partnerships. But they also have obligations to their own families and to themselves. Is it even possible for them to handle such accountability? Is it possible to satisfy their needs? Consequently, the purpose of this research was to investigate how a high-performance work system (HPWS) and academic job performance are related and how quality of working life (QoWL) functions as a mediator (AWP). To participate in the poll, 332 academics from targeted universities in Malaysia's northern region were chosen at random. The survey questionnaire had 76 items that covered three different factors: HPWS, QOWL, and work effectiveness. SmartPLS 3.0 was used to evaluate the survey data as a whole using structural equation modelling (SEM). This research supports the idea that the standard of work life is positively correlated with a workplace that is highly productive. Additionally, academic job performance is positively correlated with the quality of one's work-life balance. Overall, the findings of this research support the notion that QOWL functions as a mediator between high-performance workplaces and academic work success. Finally, because the introduction of HPWS can significantly enhance academicians' work performance and the quality of their working lives, this research makes a contribution to the social exchange theory. This study also discusses the suggestions for future research and considers the management consequences.

Keywords: High-performance work system, quality of working life, academicians' work performance, in-role performance, extra-role behavior.

Table of Contents

1. Introduction

2. Literature Review

2.1. Academicians' Work Performance

2.2 High-performance Work System

2.3 Quality of working-life

2.4 Relationship between High-performance work system (HPWS) and Academicians' Work Performance

2.5 Relationship between Quality of work-life (QoWL) and Academicians' Work Performances

3. Material and methods

3.2 Population and Sampling Procedures

3.2 Measures

3.3 Method of Analysis

4. Results

4.1. Assessment of the measurement model

4.2. Hypothesis testing

5. Discussion

6. Implication

7. Recommendation for Future Research

1. Introduction

The faculty is crucial to the success of higher education facilities. Academics are the core of a university's operations, and their success is decided by how well they align the university's competent pupils with the contribution's institutions organizations make to society (Capellaras, 2005). In an increasingly challenging environment, the academician seemly engaged in a complex task. Winfred (2013) explained that academicians play a role as teachers, researchers, consultants, and publications. Furthermore, the academician needs to prepare advice, correct the examination paper, and provide remedial support and related aspects.

Moreover, they also need to conduct excellent scholarly study, to contribute to books and journals with peer review, and the final responsibility is volunteering. Besides, academics also need to produce quality human capital (Amin, Wan, Siti & Richard, 2014). At the same time, they have to enhance university objectives by improving the university's ranking through academic university reputation, quality of research, research impact on society, the abilities, and the preparation of the graduate towards the future (Lew, 2009).

Many researchers found that the academicians consider their task is challenging due to continuous demand to fulfil yearly key performance indicators (Catano et al., 2010; Coetzee & Rothmann, 2005; Kinman et al., 2006; Tytherleigh et al., 2005; Winefield et al., 2008). This is clear when there is an increase in stress experienced by academics (Kinman & Wray, 2016) due to variations in the university system (Whitley & Gläser, 2014). Furthermore, the workloads and responsibilities held by academicians can cause job stress (Amalina, Huda, and Hejar, 2016). They could not commit to all of the tasks in a certain period if they continuously perform demanding responsibilities (Wu, 2010). Besides, a person who held responsibility tends to spend more time on work, leading to work stress and burnout (Barkhuizen, 2008; Winter, 2000; Winefield, 2002). The stressful circumstances enhance the anxiety that drives to poor performance, leading to negative impacts on family life, disruptive behaviour, and serious health conditions (Rusli, Edimansyah, & Lin, 2006; Gillespie, Walsh, Winefield, Stough, & Dua, 2001). A education of Malaysian academicians found that the academics having work stress because of the advancement of the Malaysian education system where it affects the conflicts of the role and role ambiguity have proved this (Zafir and Hizam, 2013). Consequently, these changes forces would affect academicians' emotions that lead to poor academician's work performance.

The challenge of rapid change has forced the management to find different techniques to manage the workplace and employees (Guest, 2011). Therefore, a high-performance work system (HPWS) is seen as a way of helping organisations solve this problem (Huselid, 1995). HPWS are capable of influencing workers' skills, attitudes and behaviour (Jyoti & Rani, 2017), as Combs, Liu, Hall and Ketchen (2006) has pointed out that these practices can improve employees' "knowledge, skills and abilities (KSA)". Indeed, HPWS is an effective HRM practice for academicians, ultimately improving the institutions' productivity (Amin, 2014). However, empirical research is required to evaluate employee perceptions of HPWSs and develop a mediating mechanism that connects HPWSs to behavioural effects (Kehoe and Wright's, 2013). Employee perceptions are indeed important because Guest (2002) explains that the organisation's performance appraisal depends on the employee's response to the HRM practices executed. Hence, a study of QoWL that considered a good measurement seeks to find out the mediating role of job satisfaction (Shen et al, 2014; Taylor, 1977; Zelenski, Murphy, & Jenkins, 2008). Past studies also found that QoWL is a major contributor to high-performance systems (Danford, Richardson, Stewart, Tailby, & Upchurch, 2008; Mackie, Holahan, & Gottlieb, 2001). Besides, QoWL becomes the main basis for attitudes and employee behaviour at the workplace (Lee, Singhapakdi, & Sirgy, 2007). Shen et al. (2014) suggest that QWL acts as a mediator of attitudes and behaviours in the associations between HPWSs and employee jobs. Therefore, this research intended to examine the role of QOWL mediators on the relationship between HPWS and academics' work performance.

Therefore, this study examines the relationship between academicians' job performance and the high-performance work systems are compared, and the working-life quality of both factors is tested as a mediator. A literature review reflects a wealth of literature available in HPWS, QOWL and academicians performance. Over this decade, the Malaysian higher education environment has undergone significant upward changes because of rapid growth and the demand for insufficient human capital to address economic challenges (Bibi, 2017). Therefore, there are need some mechanisms to push them to achieve the institution goals and respond to the challenges of the nation to produce skilled and quality people.

2. Literature Review

2.1. Academicians' Work Performance

Exertion performance is one of the most important predictor variables and has long been studied (Jankingthong & Rukkhum, 2012). Work performance can be described as the work completed in compliance with known standard operating procedures (Visser et al., 1997). In addition, Vigoda (2000) argues that work performance can be linked to employees' responsibilities to implement their tasks. However, academic performance can be considered a measure of research activities undertaken by individuals, organisations, nations, and territories completely (Wamala and Ssembatya, 2014). Work performance can be classified into two key categories: in-role and extra-role behaviour (Maarleyed, 2009). These work performances have positive effects on the productivity and competitiveness of the organisation (Grant & Mayer, 2009).

In-role performance is a documented job description and a contractual requirement for workers to perform (Kahya, 2007), also referred to as job execution (Miau, 2011). Performance in the position, act as the primary behaviour that has to achieve with the main fulfilment mission of the organisation (Saraih, 2015; Zhu, 2013). The in-role performance consists of necessary outcomes and employee actions as outlined in the job profile of employees, which led to the organisation's objectives (Motowidlo & Scotter, 1994; Wingerden & Poell, 2017). The common understanding of work performance is restricted only to task outcomes. This is due to the widely used methods of the work description, which still contribute to task dimensions (Kiyani, 2019).

Zhang's (2018) study found that employees with strong personalities lead to good task performance, improving organisational productivity. In-role performance is employees shown workplace behaviours based on their assigned task requirements (Edwards et al., 2008; Organ, 1988) and usually measured by structured processes (Organ, 1988). This allows in-role performance to view performance measurement at work (Shen et al., 2014). Chiaburu, Oh, Wang, and Stoverink (2017) explain that employees perceived to involve in task performance are proactive people and help to retain their employment.

Extra-role behaviour often referred to as "organisational citizenship behaviour (OCB)" and "organisational prosocial behaviour" (Shen et al., 2014). It is different from in-role performance because the in-role performance differs from one work to the next meanwhile, OCB is constant throughout all jobs (Asif et al, 2019). The OCB applies to all things such as assisting people with their jobs, promoting the organisation, and volunteering for additional work or duty. Zhu (2013) states that extra-role behaviour can be classified into two categories: organisation- OCB (OCBO) and individual-OCB (OCBI). The OCBO is focusing on the organisation in which the OCBO behaviour usually called obedience or enforcement. Meanwhile, OCBI's aiming of subjective actions is to help the individual, but in this way, it contributes indirectly to the organisation (Zhu, 2013)

The extra-role behaviour led to the improvement of the employees' performance ultimately to the institutions. It is important as OCB refers to a series of supportive employee behaviours that improved organisational performance (Horney, 2016; Klotz et al., 2018; Singh and Singh, 2019). Organ and Paine (1999) described the OCB as not part of the job description, but it is about colleagues, managers, and subordinates demand collaboration and behavioural assistance from one another. Kiyani (2019) indicates that OCB is significant among workers, and employers are increasing rapidly due to evolving organisational structures, global rivalry, team-based organisations, retrenchment, and customer service orientation. Furthermore, extra-role behaviour or discretionary behaviour helps the institution operate smoothly (Katz, 1964; Organ, 1988).

Previously, many studies have been conducted to study the antecedent and consequences of OCB. A study by Singh et al. (2019) revealed that the OCB contributes to job satisfaction. Besides, various examples of OCB and employee participation in Pakistan for workers employed in the corporate sector (Iqbal, Zameer,

Khan, Ahmed, & Sandhu, 2017). The results showed that the workers are participating displayed citizenship behaviours strongly. However, employees who represent OCB with zeal and tend to support their peers and subordinates can be discouraged from successfully achieving their individual goals (Sevi, 2010). In addition,

2.2 High-performance Work System

The idea of HPWS has grown over the last decade into a constructive field of research on human resource management, as stated by Shin & Konrad (2017). Based on the strategic HRM research, high-performance work systems can also be referred to as "high-performance work practices (HPWP)" and "HRM best practices" and become the attention of much research on the HRM topic (Jensen, Patel and Messersmith, 2013). The past research has shown that HPWS is a key element that enables organisations to be more productive and achieve customer value (Aryee, Walumbwa, Seidu, & Otaye, 2012; Bowen and Ostroff 2004; Liao, Toya, Lepak, & Hong, 2009). Hence, the rapidly increasing number of scholarly articles (Fu et al., 2017) demonstrates the increased growth in the HPWS topic.

There are different opinions from past research on the features of developing HPWS. HPWS is an integral group of HRM practices that enhance organisational efficiency in fostering employee commitment and participation in their employment and organisation objectives (Huang, Ahlstrom, Lee, Chen, and Hsieh, 2016). HPWS also refer to sets of job activities that rely on evaluation, training, and compensation (Shin & Konrad, 2017). Meanwhile, Jie Shen, John Benson and Binhua Huang (2014) have broadened HPWS as a range of HRM and selective staffing, rigorous training, internal mobility, security, job description, result-oriented assessment, incentive reward, and participation and involvement.

The comprehensiveness of recruiting and screening allows employers to hire workers with the expertise and skills needed to perform tasks. (Zhang et al, 2018). Selecting staffing or recruitment is a crucial element in HRM practices where it helps employers select capable employees to recruit into the organisation (Rehman, 2012). Besides, training is one of the main HRM activities employed to enhance the efficiency of the employees. Employers provide a training program to enhance employee performance in the workplace to improve employee knowledge and personal skills and thus help organisations avoid unnecessary management waste (Abugre & Adebola, 2015). Training program implementation requires sufficient periods before measuring effectively (Aragon et al., 2013).

Internal mobility, also known as job enrichment (Campos & Pina, 2004), comprises career planning, transfer decisions, and promotion decisions (Srimannarayana, 2010; Sun et al., 2007). Promotion of jobs and career growth for university staff focussed on their performance does not depend on a fixed place in the organisation's hierarchy. However, Muhammadi (2019) states that career opportunities are not a significant factor affecting job performance because of universities' essence of career growth. In addition, job promotion incentives for academic staff provided by the university are based on their accomplishments instead of the academicians' defined roles in the organisational structure. The employees will do their job more enthusiastically in doing their tasks and acquire a high employee performance when they feel safe working in their workplace. Prior research found that job security is a key tool of motivational factors to motivate workers to perform their jobs by shifting the negative perceptions of the work (Boya, Demiral, Ergor, Akvardar & Wittie, 2008; Chen, 2017; Kraimer et al., 2005; Poyraz & Kama, 2008; Şenol, 2011; Sverke et al., 2002; Ugwu & Okojie, 2017).

The employees' performance would be improved with a clear 'Job Description (JD)'. The job description is very important in presenting and explaining the tasks employees need to perform to be clear and understand their job. Besides, any changes in the description need to inform and explain to employees. Raju and Banerjee (2017) stated that poor job descriptions caused poor staff performance in their tasks. Moreover, employers need to evaluate employees' performance based on the organisation's standardisation through standard operating procedures (SOPs) established (Amin et al., 2014; Osman, Barbary, Sidani, Al-Ayoubi & Emrouznejad, 2011).

Furthermore, the satisfaction of the incentive reward may help the organisation recognise better employee performance because it would positively impact employees' behaviour to improve their commitment to work (Breevaart et al., 2014). Lastly, the involvement of employees is highly necessary for achieving organisational objectives (Cheung & Wu, 2011). In addition, the collaborative decision-making process serves to integrate management with employees who can help build a healthier working environment, reducing the stress of work that can have a positive effect on the involvement of employees (Benn et al., 2015).

2.3 Quality of working-life

Quality of work life is a good way to retain and attract employees by serving an appropriate working environment (Nor & Abdullah, 2012; Thipsena, Intrawong, Ayudhya, 2019). According to J. Richard and J. Loy, "Quality of work Life (QoWL) is the degree to which members of a work organisation can satisfy important personal needs through their experiences in the organisation" (Nagpal & Yadav, 2014). It indicates all the organisational inputs that strive to boost employee satisfaction and organisational performance. QoWL deals with a part of life, as it can balance employees' personal life with their current work, minimise stress burdens, and enhance employees' satisfaction for the mutual benefit of an individual and organisation.

QoWL is a very broad context in which it not measured based on employee satisfaction, but employees also evaluate QoWL from the point of view of their work environment (Van Laar, Edward & Simon, 2010). A good QoWL is essential because it reduces absenteeism, accidents, and turnover (Gayathiri, et al, 2013). QoWL was seen as a component of quality of life that represents the relationship between employees and their current situation (Issabella et al, 2015). The QoWL seeks to foster a great working environment for workers and output (Shariat et al, 2015; Tobassum, 2012). The QoWL aims at secure, healthy, more efficient, and satisfied employees and an organisation that is competent, flexible and successful (Mazlan, et al., 2018). Nagpal and Yadav (2014) define the essential element for the individual's quality of work-life comprises the mission, the physical work environment, the organisational social climate, the administrative structure and the relationship between life on and off the job. Theoretically, these results indicate that QoWL acts as a mediator in the employees working attitudes and behaviours with HPWS. The study focuses on six aspects of previous studies (Easton and Van Laar 2012, 2013; Edwards et al. 2009), including "home-work interface (HWI), working conditions (WCS), job and career satisfaction (JCS), job control (CAW), stress at work (SAW) and general wellbeing (GWB)".

Recently, the findings indicate that universities in Thai and Malaysia considered subjective wellbeing and psychosocial factors to improve the QoWL (Ngcamu, 2017). Moreover, it also improved through the interaction of co-workers and the degree of social support in the workplace. The practice is helpful if the Head of Department (HOD) or the university dean allows space and flexibility to ensure good working relationships among academic staff (Muhammadi, 2019). Besides, a few research found a strong significant between QoWL of employees and their satisfaction with the job (Raduan, Loo, & Khairuddin, 2006). A study of the relationship between organisational justice and QoWL by 1732 full-time healthcare providers and rehabilitation centres shows that fair resource provision and recipes have a stronger impact on work satisfaction and career satisfaction, according to the survey Rai (2015). However, there also may affect job dissatisfaction towards employee performance. Past studies found that low job satisfaction of employees is a strong indicator of their intention for turnover (Griffeth et al., 2000; Mosadeghrad et al., 2008; Yin et al., 2002).

In general, "Work Conditions" refers to the work environment who meets the worker's needs. Besides, WCS represents an employee's perception of the basic needs of the workforce as well as the level of job satisfaction of employees towards the physical work environment. In Muhammadi's study, he mentioned that institutions should focus on "tolerance" working conditions because Malaysia is a multi-racial and multi-religious work environment. Hence, the HOD and Deans may be applied the factor in order to boost academicians' work performance in the university. Besides, Basher and Kee (2014) suggested that the efficiency of a work-life balance policy is crucial for institutions as it helps to improve productivity and worker satisfaction and reduce negative impacts such as absenteeism, turnover, and actual turnover. Moreover, fairness in resource allocation and application of procedures is important as it affecting home-work interface quality (Rai, 2015).

The definition of 'Stress at Work' is based on one's experience depending on their perception of the situation and their ability to cope. The employees will respond to work stress that they face, whether in physical or emotional form when their job requirements do not meet their needs and requirements (Easton et al, 2018). Next, an employees' perception toward their 'Control at Work' is their engagement in the decision-making by applying their knowledge and give them opportunities to contribute their ideas (Easton & Van Laar, 2018; Karasek & Theorell, 1990).

2.4 Relationship between High-performance work system (HPWS) and Academicians' Work Performance

Researchers have found that effective HPWS can affect individuals and organisations (Boxall, Ang, & Bartram, 2011; Guest & Conway, 2011; Kehoe & Wright, 2013). In addition, the past study found that HPWS and employee performance linkage is like improved job performance, employee performance, and extra-role behaviour. (Guest, 2017; Jiang, Takeuchi & Lepak 2013; Kehoe & Wright 2013; Suzanneong, 2017). Besides, HPWS also has resulted in the enhancement of employee skills, organisational engagement, work satisfaction, and ultimately overall performance. (Korff, Biemann & Voelpel 2017; Messersmith, Patel & Lepak 2011; Takeuchi, Chen & Lepak 2009; Paauwe, Wright & Guest, 2013). HPWS encourages a healthy organisational atmosphere in which workers feel challenged and able to make extra efforts to achieve the organisational objectives to improve organisational efficiency (Kellner, Townsend, Wilkinson, Greenfield, & Lawrence, 2016).

Proper HRM practices at universities contribute to academics' motivation and job satisfaction and then encourage them to create a regional and global image for themselves and the university (Rowley, 2007). Efficient implementation HPWS of institutions able to improve university performance (Amin et al., 2014). Amin et al. (2014) reported that institutions that implement HPWS efficiently able to improve university performance. Besides, the institution is a centre of learning and research; thus, the institution must attract, recruit, shape, and retain highly skilled academicians' who can assist in the country's growth through research and training. Employees also play an important role in increasing performance in important elements such as research quality, faculty credibility, training quality, contribution to the society of research, readiness to create quality leaders and graduates for the future (Lew, 2009). Furthermore, HPWS can intensify the value, personality, and inadequacy of employee knowledge and abilities, leading to greater competitive advantage and performance of employees and organisation (Xiaomei et al. 2013; Zhang et al., 2014).

2.5 Relationship between Quality of work-life (QoWL) and Academicians' Work Performances

The ideology of Quality work-life demonstrates the crucial understanding of people in the working environment. The primary role of the QoWL is to adjust the practical and human working environment (Arifin, 1999). QoWL improves the positive attitude of employees towards their work and the institution through increased efficiency and motivation of staff, improved corporate efficiency and, ultimately, a competitive global environment (Tjahyanti, 2013). Ngcamun (2017) stated that the QoWL had evolved significantly in universities worldwide, with many viewpoints and multidimensional concepts developed (Ngcamun, 2017). This was obvious in studies of the relationships in the various universities such as QoWL with career growth (Idris, Samah, Wahat & Parsa, 2014), with work satisfaction (Kermansarvis, Navidian, Rigi & Yaghoubinia, 2014), with organisational involvement (Daud, 2012), and study the relationship between QoWL and performance and productiveness at Iranian universities (Shahbazi Shokrzadeh, Bejani, Malekinia & Ghoroneh, 2011).

A positive relationship between QoWL and employees' performance and consequently led to the effectiveness of institutions (Mohammadi & Karupiah, 2019). Lately, there a few studies have conducted to study the QoWL within the academician areas. Acheampong, Muhammed, and Agyapong (2016) have studied QWL and employment performance among academics at the Kumasi Campus, Winneba University in Ghana. Their study results have shown that QWL has a strong, important relationship to academic staff performance. Furthermore, Aketch et al. (2012) also found a significant relationship between QoWL and performance.

QoWL defined as "employee satisfaction with a variety of needs through resources, activities, and outcomes stemming from participation in the workplace" Sirgy et al., 2001). A low level based on financial support, employment opportunities, and work security would disrupt co-worker relationships (Vishwakarma, Lakhawat, & Poonam, 2013). It shows that employees were dissatisfied when institutions provide low resources to them. As found at Zahedan University of Medical Sciences, Iran, there is a positive relationship between work satisfaction and performance. Besides, the shift and application of QWL in the institutions may improve work satisfaction (Mohammadi & Karupiah, 2019).

3. Material and methods

3.1 Population and Sampling Procedures

Considering the need of the research, this study was conducted in quantitative methods as it is efficient and able to correlate between the variables (Mccusker, 2014). Moreover, the study performed a cross-sectional study and collected data from one point (Allen, 2017). The population size (N) of the study is 2023 academicians, thus according to the table used by Krejcie and Morgan (1970), the sample size (n) of this study is 322 academicians. Additionally, this study's sample size adhered to Roscoe's guideline (1975, as referenced in Sekaran, 2003), which stated that the ideal sample size for the majority of research should be greater than 30 and less than 500. Again, just a few of investigators believe that when data are analyzed using PLS-SEM, the number of samples is not necessary to take into account (Hair, Hult, Ringle & Sarstedt, 2014).

Furthermore, probability-random sampling techniques is selected in this research because the technique is a straightforward method, and everyone has the same chance to be the subject (Cresswell, 2014). A questionnaire was distributed via a computerised self-administrated questionnaire. An online survey has been developed by using online survey builder software (LimeSurvey). 322 survey questions were distributed, and 207 survey questions have completed answered. After two weeks, the researcher gathered the complete questionnaire and considered it unreturned for those who did not complete this questionnaire within two weeks. Unit of analysis of the research covered by individually from the University academicians from the northern region of Malaysia.

3.2 Measures

The questionnaire's items were created using the results of the research study. Various Likert scales are employed in accordance with the initial research items. For the HPWS measurements, seven Likert scales were used, spanning from strongly disputing to (1), Disagree (2), Disagree somewhat (3), Neither disagree nor agree (4), Agree somewhat (5), Agree (6) and Strongly agree (7) whilst the other variables was used five Likert-scales to range the value.

3.2.1 High-performance work system

According to Jie Shen, John Benson, and Bihuang Huang, high-performance work systems are evaluated using 7-point Likert measures with a range of measure from "1" (Strongly Disagree) to "7" (Strongly Agree). (2014). The factors from the previous study that were discussed included (a) choosing the right staff, (b) receiving extensive training, (c) internal mobility, (d) job security, (e) job description, (f) receiving result-oriented appraisal, (g) receiving incentive pay, and (h) being involved and participating.

3.2.2. quality of working-life

The instrument of QoWL was adapted from the Work-related quality of life (WRQoL) Scale developed by Darren Van Laar and Simon Easton (2010). QoWL measured by using 5-point Likert scales with the range of measure from "1" (Strongly Disagree) to "5" (Strongly Agree). The original item discussed six subscales in QoWL which were Job and Career Satisfaction (JCS), General Well-Being (GWB), Stress at Work (SAW), Home-Work Interface (HWI), Control at Work (CAW), and Working Conditions (WCS) meanwhile overall quality of working life item (OVL) is to recheck the all of the dimension.

3.2.3. Academician Performance

The academician' work performance divided into two parts, which were in-role performance and extra-role behaviour. The variable was adapted from other past research where in-role performance was adapted from Williams and Anderson (1991) and measured by seven items. Meanwhile, extra-role behaviour measured by deploying of 13-item Organization Citizenship Behaviour scale developed by Jimmieson et al. (2010). Extra roles include seven student virtue elements, three civic virtue items and three personal developments. The variable measured by using 5-point Likert scales with the range of measure from "1" (Strongly Disagree) to "5" (Strongly Agree).

3.3 Method of Analysis

Version 25 of the Statistical Package for Science (SPSS) programme and PLS-SEM 3.3's second-generation tools were used to analyse the results of this research. According to Hair et al. (2007), the method is used to analyse data, explain the characteristics of the sample, and look for potential connections in the research models. (Hair, Hult, Ringle, & Sarstedt, 2014; Wong, 2013). According to Hair, Ringle, and Gudergan (2018), the method is a user-friendly programme that helps social science researchers accomplish their publication and research objectives much more quickly and effectively. Additionally, the research presented a reflective and formative higher-order construct using a "repeated indicators approach" with (formative) measurement mode B and a "two-step approach" (Becker et al., 2012). (Hair et al., 2014). the graph below.

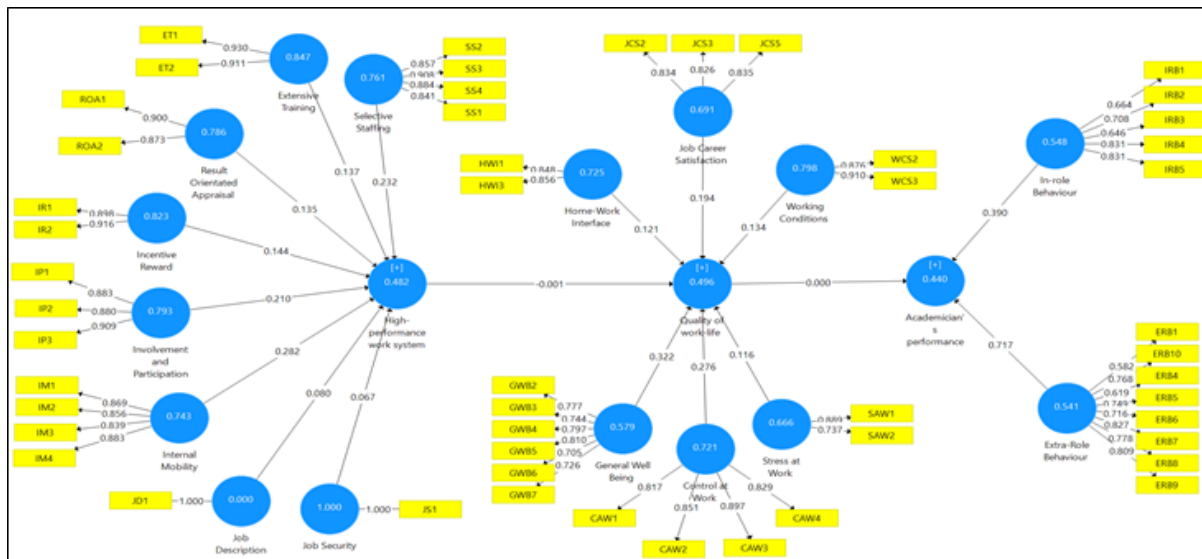



Figure1. Research model

4. Results

A 207 questionnaire out of 322 questionnaires were returned and represented a response rate of 66.1%. Table 1 indicates the descriptive statistic of the respondent.

Table 1 Descriptive Statistic of the Respondent

Demographic	Category	Frequency	Percent (%)
Gender	Male	105	50.7
	Female	102	49.3
Age	20 - 30	2	1
	31 - 40	82	39.6
	41 - 50	90	43.5
	51 - 60	30	14.5
	61 and above	3	1.4
Marital Status	Single	20	9.7
	Married	182	87.9
	Divorced	5	2.4
Education Level	Master	42	20.3
	PhD	165	79.7



Average Salary	Less than RM5,000	11	5.3
	RM5,001 - RM10,000	146	70.5
	RM10,001 - RM 15,000	45	21.7
	RM15,001 - RM 20,000	4	1.9
	More than RM 20,000	1	0.5
Work Experience	Less than 5 years	31	15
	6 years - 10 years	43	20.8
	11 years - 15 years	40	19.3
	16 years - 20 years	55	26.6
	More than 20 years	38	18.4
Position	Professor	5	2.4
	Associate Professor	46	22.2
	Senior Lecturer	120	58
	Lecturer	30	14.5
	Tutor	6	2.9

4.1. Assessment of the measurement model

This study composed both formative and reflective components to evaluate the variable by following (Hair's et al., 2014) recommendations. The measurement model evaluated by 'composite reliability (CR)' and 'Average Variance Based (AVE)'. Regarding table 2, the composite reliability (CR) indicates that the internal consistency of all the constructs was within an acceptable range from 0.582 to 0.930. The AVE factor loading is above 0.5 thresholds, so, the convergent validity was established. Overall, it has been showing that all the variables in this subject area are satisfactory.

Table 2 Result summary for Reliability and Validity of the Constructs

First Order Construct	Second Order Construct	Scale Type	Item	Loadings	CR	AVE					
Extra-Role Behaviour		Reflective	ERB1	0.582	0.903	0.541					
			ERB4	0.768							
			ERB5	0.619							
			ERB6	0.749							
			ERB7	0.716							
			ERB8	0.827							
			ERB9	0.778							
			ERB10	0.809							
			In-role performance				Reflective	IRB1	0.664	0.857	0.548
								IRB2	0.708		
IRB3	0.646										
IRB4	0.831										
IRB5	0.831										
First Order Construct	Second Order Construct	Scale Type	Item	Weight	VIF						



Construct	Construct	Scale Type	Item	Loadings	CR	AVE
	Academician Work Performance	Formative	Extra-Role Behaviour In-role performance	0.717 0.39		1.781 1.63
First Order Construct	Second Order Construct	Scale Type	Item	Loadings	CR	AVE
		Reflective	ET1	0.93	0.917	0.847
			ET2	0.911		
			IR1	0.898	0.903	0.823
			IR2	0.916		
First Order Construct	Second Order Construct	Scale Type	Item	Loadings	CR	AVE
			IM1	0.869	0.92	0.743
			IM2	0.856		
			IM3	0.839		
			IM4	0.884		
			IP1	0.883	0.92	0.793
			IP2	0.88		
			IP3	0.909		
				1		
				1		
			ROA1	0.9	0.88	0.786
			ROA2	0.873		
			SS1	0.84	0.927	0.761
			SS2	0.857		
			SS3	0.908		
			SS4	0.884		
First Order Construct	Second Order Construct	Scale Type	Item	Weight		VIF
	High-performance work system	Formative	Extensive Training	0.136		1.868
			Incentive Reward	0.144		
			Internal Mobility	0.281		2.706
						3.044



Involvement and Participation 0.212 1.981

First Order Construct	Second Order Construct	Scale Type	Item	Weight	VIF
			Job Description	0.081	2.527
			Job Security		
			Result-Orientated Appraisal	0.068	1.81
			Selective Staffing	0.136	2.605

First Order Construct	Second Order Construct	Scale Type	Item	Loadings	CR	AVE
Control at Work		Reflective	CAW1	0.817	0.912	0.721
			CAW2	0.851		
			CAW3	0.897		
			CAW4	0.829		
General Well Being			GWB2	0.777	0.892	0.579
			GWB3	0.744		
			GWB4	0.797		
			GWB5	0.81		
			GWB6	0.705		
			GWB7	0.726		
			Home-Work Interface			
HWI3	0.856					
Stress at Work			SAW1	0.889	0.798	0.666
			SAW2	0.737		
Working Conditions			WCS2	0.876	0.888	0.798
			WCS3	0.91		

First Order Construct	Second Order Construct	Scale Type	Item	Weight	VIF
	Quality of work-life	Formative	Control at Work	0.256	3.468
			General Well Being	0.297	2.903
			Home-Work Interface	0.112	2.431



Job Career Satisfaction	0.257	4.151
Stress at Work	0.107	3.104
Working Conditions	0.123	2.979

Note: Average Variance Extracted (AVE = $\sum (\text{factor loading})^2 / (\sum (\text{factor loading})^2 + \sum (\text{variance of error}))$); Composite Reliability (CR = $\sum \text{factor loading} / \{(\sum \text{factor loading})^2 + \sum (\text{variance of error})\}$); VIF= Variance Inflation Factor; Academician work performance (AWP); High-performance work system (HPWS); Quality of working-life (QoWL)

Fornell-Lacker and the heterotrait-monotrait ratio were two factors available in SmartPLS that were used to determine discriminant reliability (Henseler et al., 2015). (HTMT0.85). All of the numbers in the table below fell below 0.85, proving that the discriminant reliability was attained. Application of the discriminant validity analysis into the study's strategy and methodology is backed by Fornell-Larcker's (1981) measurement. Because all of the AVE values have been square roots, Table 2 indicates that the values were higher than other association values among the underlying constructs. In general, the assessment model shows strong construct-level discriminatory validity.

Table 3 Discriminant Validity

	CA W	ET	ER B	G W B	H WI	IR B	IR	IM	IP	JC S	JD	JS	RO A	SS	SA W	W CS
Control at Work	0.84															
Extensive Training	0.49	0.85														
Extra-Role Behaviour	0.51	0.30	0.73													
General Well Being	0.65	0.45	0.62	0.76												
Home-Work Interface	0.63	0.34	0.59	0.71	0.85											
In-role performance	0.39	0.28	0.96	0.78	0.61	0.74										
Incentive Reward	0.41	0.50	0.05	0.35	0.52	0.32	0.06	0.07								
Internal	0.50	0.00	0.30	0.50	0.40	0.00	0.60	0.00								

Mobility	19	63	1	28	78	25	48	86										
		5						2		2								
Involvement		0.				0.				0.								
and	0.4	47	0.4	0.6	0.5	35	0.6	0.5		89								
Participation	89	2	08	59	72	9	65	5		1								
Job Career	0.7	0.	0.4	0.6	0.5	0.	0.4	0.4	0.5	0.								
Satisfaction	9	40	63	79	93	43	13	55	35	83								
		6				7				1								
Job Description	0.4	0.	0.3	0.5	0.4	0.	0.5	0.5	0.5	0.3	N							
	35	52	01		6	32	96	7	22	26	A							
						9												
Job Security	0.3	0.	0.0	0.4	0.3	0.	0.4	0.5	0.3	0.2	0.	N						
	63	42	59	3	7	03	33	56	92	84	61	A						
		2				1					6							
Result		0.				0.					0.	0.	0.					
Orientated	0.4	54	0.3	0.5	0.5	31	0.6	0.5	0.5	0.4	67	44	88					
Appraisal	54	1	26	12	56	2	88	92	61	14	6	1	6					
Selective	0.3	0.	0.2	0.3	0.3	0.	0.4	0.6	0.3	0.4	0.	0.	0.4	0.				
Staffing	99	47	91	74	72	27	37	3	15	03	40	33	9	87				
		2				4					6			3				
Stress at Work	0.7	0.	0.3	0.6	0.5	0.	0.5	0.5	0.5	0.7	0.	0.	0.4	0.4	0.			
	18	43	87	57	9	48	49	13	7	31	48	35	82	28	81			
		9				7									6			
Working	0.7	0.	0.3	0.5	0.5	0.	0.4	0.5	0.5		0.	0.	0.5	0.4	0.7	0.		
Conditions	16	58	72	97	12	44	86	29	34	0.7	52	36	03	03	45	89		
		4				1					5					3		

Note: Bold values are loadings for items which are above the recommended value of 0.5

CAW (Control at Work); ET (Extensive Training); ERB (Extra-role Behaviour); GWB (General Well-being); HWI (Home-work Interface); IRB (In-role performance); IR (Intensive Reward); IM (Internal Mobility); IP (Involvement and Participation); JCS (Job Career Satisfaction); JD (Job Description); JS (Job Security); ROA (Result-Oriented Performance); SS (Selecting Staffing); SAW (Stress at Work); WCS (Working Conditions)

4.2. Hypothesis testing

This study has developed three hypotheses and the hypotheses constructed were analysed using the SMART PLS.

Table 4 Result of the inner structural model (Hypothesis testing)

Relationship	Beta value	Std. Error	T-value	P-value	Decision
High-performance work system -> Quality of work-life	0.771	0.035	22.002	P<0.01	Supported
Quality of work-life -> Academician's performance	0.553	0.059	9.32	P<0.01	Supported
High-performance work system -> Quality of work-life -> Academician's performance	0.426	0.058	7.405	P<0.01	Supported

Note: *p < .10; **p< .05; *** p < .01

Three hypotheses have been developed in this study in which to discover the relationship between variables.

H1: High-performance work system positively related to the quality of working life of academicians.

The findings demonstrate a significant relationship between a high-performance work structure and ($B = 0.771$, $t = 22.002$, $p < 0.01$) to the quality of working-life among academics. This indicates that the hypothesised path for H1 is significant. As a result, hypothesis H1 was confirmed, showing that academics at Northern Public University have a relationship between HPWS and QOWL.

H2: QOWL positively related to Academicians' Work Performance.

The findings of this hypothesis reveal a major link between the QOWL and the work performance of Academics (AWP), as demonstrated in Table 4 $B (= 0.553$, $t= 9.32$, $p<0.01$). These results prove that the hypothesised path for H2 is significant. Therefore, the H2 hypothesis supported by the fact that there is a relationship between the Quality of Working-Life and Academicians' Work Performance.

H3: Quality of work-life mediate the relationship between HPWSs and academician's performance.

The results show that QOWL plays a mediator in the relationship between HPWS and AWP, indicating a significant relationship ($B = 0.426$, $t = 7.405$, $p<0.001$). Therefore, these results support the hypothesis that H3 is significant in which the QOWL plays a role as a mediator in the relationship between HPWS and AWP among academicians.

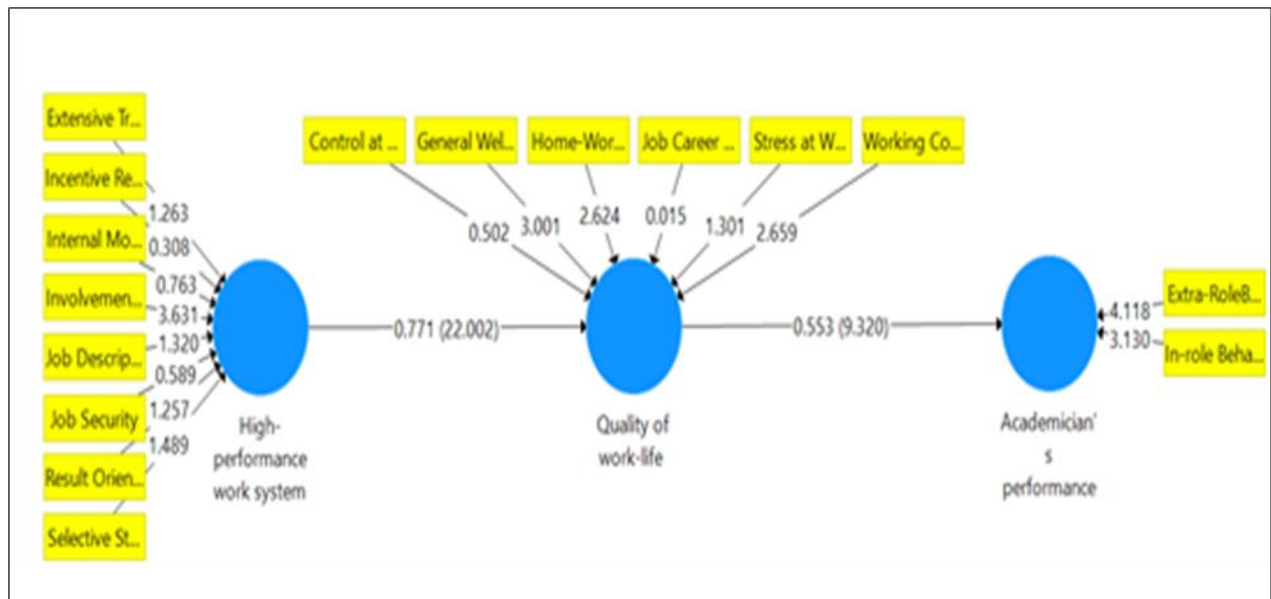


Figure 2. Path model significant result

5. Discussion

An method to quantitative research was used, and the analysis supported the hypothesis that there was a relation between HPWS and academicians' work performance. Meanwhile, QOWL plays a mediating role between them. Moreover, The findings of the proposed test show that all the hypotheses are significant (p= 0.001).

Several previous studies have supported the results of this study like Amin et al. (2014), Chang and Chen (2002), Huselid (1995), Jyoti & Rani (2017), Khan (2010), Qureshi et al. (2010), Rizov and Croucher (2009), Singh, Chand, Mittal and Aggrawal (2019) and Shen et al. (2014). Proper HRM practices enable organisations to meet their workforce needs while improving employee performance improved when the level of employee satisfaction reached. QOWL plays an essential role in connecting HPWS with academics because it acts as an intrinsic and extrinsic motivator.

For example, the provision of appropriate training programs and conferences for academics helps them increase their level of professionalism and skills and efficient and effective knowledge. Proper training programs help employees overcome work stress due to a lack of knowledge and skills. On the contrary, a lecturer with a high degree of professionalism can perform their tasks comprehensively and integrated. Moreover, employees will feel safe at work when they have secured employment and salaries. Thus, this element will influence their quality of life (Drobnic, Beham & Prag, 2010).

Good working conditions are one of the elements in the QoWL where the employer can meet the needs of the workers and make the workers happy as well as engaged in their job. Besides, work time flexibility enhances employees to engage in doing their task as they can make in anytime they want. As a lecturer, they are facing many workloads and at the same time they have to balance with their home-interface; thus, flexibility is a good black box for them in doing their task.

QOWL has an important positive relationship with academics' performance, and the results show that academics are happy with their work and have a good working life. The study has measured the factors to analyse the QOWL in a northern public university. This result showed QOWL and AWP consistent with a study conducted by Shen et al.'s (2014) stud. However, the present result contradicted Mohammadi & Karupiah (2019) studies in which a few of QOWL dimensions, such as meaningless, financial and colleagues' relationships are not affected employees' performance.

Generally, QOWL defines as an employee's satisfaction with the needs provided by the organisation in terms of resources, activities and the results of employee engagement in the workplace. QOWL related to employee satisfaction in the workplace in which employees make the engagement thru their attitudes and behaviours. Employee satisfaction is a key factor in employee performance as employees who are satisfied with their employees' needs will perform their jobs efficiently and effectively. Recently, studies from Raziq and Maulabaskh (2015) and studies from Subbarayalu and Kuwait (2019) found the QOWL factor of work conditions is to be positively significant related to employee satisfaction among acade-

mician. They find that a good work environment encourages employees to perform their duties well while improving communication skills with colleagues. Overall, academicians in northern public universities seen as satisfied with their job and their performance.

QoWL is responsive to the needs of its employees and serves as an important mechanism on the relationship between HPWS and academicians' work performance. Therefore, appropriate HRM practices are very important in an institution to meet the needs of the workers and thus improve the performance of the employees. The results of this study indicate that QoWL serves as a mediator variable in both HPWS and the work of academics; subsequently, it is consistent with the findings of Shen et al. (2014).

Employees' attitudes and behaviours answer back to their work based on their perception and experience of their work environment and organisation. Adequate organisational resources and managers' understanding of employee life can lead to employee satisfaction and lead to good employee performance. For example, the training program and conferences enable academicians to enhance their skill in research and teaching careers, subsequently enhancing their QoWL due to the factors of work satisfaction (Subbarayalu & Kuwait, 2017). As such, QoWL is a better mechanism to link performances with satisfaction. Besides, this study has become a crucial part of discovering a particular social process via HRM where it will influence employee work attitudes and behaviour.

6 Implication

There is little study towards the relationship between HPWS and performance by using QoWL as a black box in the relationship (Messermith et al., 2013). Moreover, the study develops social exchange theory to further explain "reciprocal norms" for those involved in the relationship (Blau, 1964). The researchers argued that further studies should focus on different approaches to better understanding how HPWS promotes favourable behaviour and attitudes for employees (Jiang, Takeuchi and Lepak 2013).

Moreover, the study contributes to the extent of the literature on the education sector by focusing on HRM practices. Therefore, the multi-level approach should be used in HPWS research (Zhang, Bal, Akhtae, Long, Zhang and Ma, 2018). However, some recent findings on the HRM black box show that the multi-level model lacks HRM research (Jiang, Takeuchi and Lepak 2013). The study on QoWL is essential because it helps future researchers understand the employees' needs in the workplace.

7 Recommendation for Future Research

There are some ideas that future studies could be extended which are future studies can apply the Dyad approach. This approach can be applied to obtain a more reliable and accurate result of measuring employee performance. The results obtained are sincerer when employers are responding to and evaluating employee performance. In addition, it becomes unfair when employees evaluate their work and the data is not reliable and valid. Furthermore, the Dyad method used to study interclass correlations to test for measurement and reliability testing because they do not distinguish some variables (Micheal, Bryman, and Liou, 2004).

Moreover, researchers can generalise future research by permits the collection of information from a wider range of sectors and cultural contexts. This study contributes to HRM literature in education, but it can influence the generalizability of the findings by using single or country sector data. Besides, future research also can test and compare the quality and performance of working life between academics and non-academics.

References

- [1] Abugre, J. B., & Nasere, D. (2020). Do high-performance work systems mediate the relationship between HR practices and employee performance in multinational corporations (MNCs) in developing economies? *African Journal of Economic and Management Studies*. <https://doi.org/10.1108/ajems-01-2019-0028>
- [2] Abugre, J. B., & Adebola, K. (2015). An examination of training and development of middle level managers in emerging economies. *International Journal of Organizational Analysis*, 23(4), 545-563. <https://doi.org/10.1108/ijoa-10-2011-0521>
- [3] Acheampong, A., Muhammed, M. A., & Agyapong, K. (2016). Perceived quality of work life and work performance among University academic staff. *International Journal of Current Research and Academic Review*, 4(4), 1-13. <https://doi.org/10.20546/ijcrar.2016.404.001>

- [4] Aketch, J. R., Odera, O., Chepkuto, P., & Okaka, O. (2012). *Effects of Quality of Work Life on Job Performance: Theoretical Perspectives and Literature Review*. *Current Research Journal of Social Sciences*, 4(5), 383-388.
- [5] Allen, M. (2017). *The sage encyclopedia of communication research methods (Vols. 1-4)*. Thousand Oaks, CA: SAGE Publications, doi: 10.4135/9781483381411.
- [6] Amin, M., Khairuzzaman Wan Ismail, W., Zaleha Abdul Rasid, S., & Daverson Andrew Selemani, R. (2014). *The impact of human resource management practices on performance*. *The TQM Journal*, 26(2), 125-142. <https://doi.org/10.1108/tqm-10-2011-0062>.
- [7] Aragon, I. B., & Valle, R. S. (2013). *Does training managers pay off? The International Journal of Human Resource Management*, 24(8), 1671-1684. <https://doi.org/10.1080/09585192.2012.725064>
- [8] Aryee, S., Walumbwa, F. O., Seidu, E. Y., & Otaye, L. E. (2012). *Impact of high-performance work systems on individual - and branch - level performance: Test of a multi-level model of intermediate linkages: Correction to Aryee et al. (2012)*. *Journal of Applied Psychology*, 97(3), 667-667. <https://doi.org/10.1037/a0028116>
- [9] Asif, M., Jameel, A., Hussain, A., Hwang, J., & Sahito, N. (2019). *Linking Transformational Leadership with Nurse-Assessed Adverse Patient Outcomes and the Quality of Care: Assessing the Role of Job Satisfaction and Structural Empowerment*. *International Journal of Environmental Research and Public Health*, 16(13), 2381. <https://doi.org/10.3390/ijerph16132381>
- [10] Barkhuizen, N., and Rothmann, S. (2008). *Occupational stress of academic staff in South African Higher Education Institutions*. *South African Journal of Psychology*, 38: 321 - 336.
- [11] Basher Rubel, M. R., & Daisy Kee, D. M. (2014). *Quality of work life and employee performance: Antecedent and outcome of job satisfaction in Partial Least Square (PLS)*. *World Applied Sciences Journal*, 31(4), 456-467.
- [12] Becker, B. E., & Huselid, M. A. (1999). *Overview: Strategic human resource management in five leading firms*. *Human Resource Management*, 38(4), 287-301. [https://doi.org/10.1002/\(sici\)1099-050x\(199924\)38:43.0.co;2-l](https://doi.org/10.1002/(sici)1099-050x(199924)38:43.0.co;2-l)
- [13] Benn, S., Teo, S. T., & Martin, A. (2015). *Employee participation and engagement in working for the environment*. *Personnel Review*, 44(4), 492-510. <https://doi.org/10.1108/pr-10-2013-0179>
- [14] Bowen, D. E., & Ostroff, C. (2004). *Understanding HRM-firm performance linkages: The role of the "Strength" of the HRM system*. *The Academy of Management Review*, 29(2), 203. <https://doi.org/10.2307/20159029>
- [15] Boya, F. O., Demiral, Y., Ergör, A., Akvardar, Y., De Witte, H. (2008). *Effects of perceived job insecurity on perceived anxiety and depression in nurses*. *Industrial Health*, 46(6), 613-619. <https://doi.org/10.2486/indhealth.46.613>
- [16] Boxall, P., Ang, S. H., & Bartram, T. (2011). *Analysing the 'black box' of HRM: Uncovering HR goals, mediators, and outcomes in a standardised service environment*. *Journal of Management Studies*, 48(7), 1504-1532. <https://doi.org/10.1111/j.1467-6486.2010.00973.x>
- [17] Breevaart, K., Bakker, A., Hetland, J., Demerouti, E., Olsen, O. K., & Espevik, R. (2014). *Daily transactional and transformational leadership and daily employee engagement*. *Journal of Occupational and Organizational Psychology*, 87(1), 138-157. <https://doi.org/10.1111/joop.12041>
- [18] Campos, R., & Pina, M. (2004). *Impact of strategy, HRM strength and HRM bundles on innovation performance and organisational performance*. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.882464>
- [19] Capelleras, J. (2005). *Attitudes of academic staff towards their job and organisation: An empirical assessment*. *Tertiary Education and Management*, 11(2), 147-166. <https://doi.org/10.1007/s11233-005-0346-1>
- [20] Catano, V., Francis, L., Haines, T., Kirpalani, H., Shannon, H., Stringer, B., & Lozanski, L. (2010). *Occupational stress in Canadian universities: A national survey*. *International Journal of Stress Management*, 17(3), 232-258. <https://doi.org/10.1037/a0018582>
- [21] Chang, P. L., & Chen, W. L. (2002). *The effect of human resource practices on firm performance: empirical evidence from high-tech firms in Taiwan*. *International Journal of Management*, 19(4), 622-631.
- [22] Chen, S. L. (2017). *Cross-level effects of high-commitment work systems on work engagement: The mediating role of psychological capital*. *Asia Pacific Journal of Human Resources*, 56(3), 384-401. <https://doi.org/10.1111/1744-7941.12144>
- [23] Cheung, M. F., & Wu, W. (2011). *Participatory management and employee work outcomes: The moderating role of supervisor-subordinate guanxi*. *Asia Pacific Journal of Human Resources*, 49(3), 344-364. <https://doi.org/10.1177/1038411111413528>
- [24] Chiaburu, D. S., Oh, I., Wang, J., & Stoverink, A. C. (2017). *A bigger piece of the pie: The relative importance of affiliative and change-oriented citizenship and task performance in predicting overall job*

- performance. *Human Resource Management Review*, 27(1), 97-107. <https://doi.org/10.1016/j.hrmmr.2016.09.006>
- [25] Coetzee, S. E., & Rothmann, S. (2005). Occupational stress, organisational commitment and ill-health of employees at a higher education institution in South Africa. *SA Journal of Industrial Psychology*, 31(1). <https://doi.org/10.4102/sajip.v31i1.179>
- [26] Combs, J., Liu, Y., Hall, A., & Ketchen, D. (2006). How much do high-performance work practices matter? A meta-analysis of their effects on organisational performance. *Personnel Psychology*, 59(3), 501-528. <https://doi.org/10.1111/j.1744-6570.2006.00045.x>
- [27] Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* (4th ed.). Thousand Oaks, CA: Sage.
- [28] Danford, A., Richardson, M., Stewart, P., Tailby, S., & Upchurch, M. (2008). Partnership, high performance work systems and quality of working life. *New Technology, Work and Employment*, 23(3), 151-166. <https://doi.org/10.1111/j.1468-005x.2008.00210.x>
- [29] Daud, N. (2012). The influence of quality of work life on organisational commitment: A study on academic staff in public institution of higher learning in Malaysia. 2012 International Conference on Innovation Management and Technology Research. <https://doi.org/10.1109/icimtr.2012.6236480> Drobníč, S., Beham, B. & Präg, P. Good Job, Good Life? Working Conditions and Quality of Life in Europe. *Soc Indic Res* 99, 205-225 (2010). <https://doi.org/10.1007/s11205-010-9586-7>
- [30] Easton, S., & Laar, D. V. (2012). User manual for the work-related quality of life (WRQoL) scale: A measure of quality of working life (1st ed.). Anchor Books.
- [31] Easton, S., & Laar, D. V. (2018). User manual for the work-related quality of life (WRQoL) scale: A measure of quality of working life, (2nd ed.). Anchor Books.
- [32] Edwards, B. D., Bell, S. T., Arthur, Jr., W., & Decuir, A. D. (2008). Relationships between facets of job satisfaction and task and contextual performance. *Applied Psychology*, 57(3), 441-465. <https://doi.org/10.1111/j.1464-0597.2008.00328.x>
- [33] Fu Y., Oliet J.A., Li G., Wang J. (2017). Effect of controlled release fertiliser type and rate on mineral nutrients, non-structural carbohydrates, and field performance of Chinese pine container-grown seedlings. *Silva Fennica*, 51(2). <https://doi.org/10.14214/sf.1607>
- [34] Gayathiri, R., Ramakrishnan, L., Babatunde, S. A., Banerjee, A., & Islam, M. Z. (2013). Quality of work life-Linkage with job satisfaction and performance. *International Journal of Business and Management Invention*, 2(1), 1-8.
- [35] Gillespie, N. A., Walsh, M., Winefield, A. H., Dua, J., & Stough, C. (2001). Occupational stress in universities: Staff perceptions of the causes, consequences and moderators of stress. *Work & Stress*, 15(1), 53-72. <https://doi.org/10.1080/02678370110062449>
- [36] Grant, A. M., & Mayer, D. M. (2009). Good soldiers and good actors: Prosocial and impression management motives as interactive predictors of affiliative citizenship behaviors. *Journal of Applied Psychology*, 94(4), 900-912. <https://doi.org/10.1037/a0013770>
- [37] Guest, D. E. (2017). Human resource management and employee wellbeing: Towards a new analytic framework. *Human Resource Management Journal*, 27(1), 22-38. <https://doi.org/10.1111/1748-8583.12139>
- [38] Guest, D. E. (2011). Human resource management and performance: still searching for some answers. *Human Resource Management Journal*, 21(1), 3-13. <https://doi.org/10.1111/j.1748-8583.2010.00164.x>
- [39] Guest, D. E. (2002). Perspectives on the Study of Work-life Balance. *Social Science Information*, 41(2), 255-279. <https://doi.org/10.1177/0539018402041002005>
- [40] Hair J.F., Black W.C., Babin B.J., Anderson R.E., and Tatham R.L. (2007). *Multivariate data analysis*. (6th Ed). Pearson Prentice Hall. New Jersey.
- [41] Hair, J. F., Sarstedt, M., Hopkins, L., & G. Kuppelwieser, V. (2014). Partial least squares structural equation modeling (PLS-SEM). *European Business Review*, 26(2), 106-121. <https://doi.org/10.1108/eb-10-2013-0128>
- [42] Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis: A global perspective* (7th Ed.). Prentice Hall.
- [43] Hair, J. F., Bush, R. P., & Ortinau, D. J. (2003). *Marketing research: Within a changing information environment*. Irwin/McGraw-Hill.
- [44] Hair, J. F., Hult, G. T., Ringle, C., & Sarstedt, M. (2014). *A primer on partial least squares structural equation modeling (PLS-SEM)*. SAGE Publications.
- [45] Hair, J. F., Money, A. H., Samouel, P., & Page, m. (2007). *Research Methods for Business*. England: John Wiley & Sons Ltd.
- [46] Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice*, 19(2), 139-152. <https://doi.org/10.2753/mtp1069-6679190202>

- [47] Henseler, Jörg & Hubona, Geoffrey & Ray, Pauline. (2016). Using PLS Path Modeling in New Technology Research: Updated Guidelines. *Industrial Management & Data Systems*, 116, 2-20. [10.1108/IMDS-09-2015-0382](https://doi.org/10.1108/IMDS-09-2015-0382).
- [48] Horney, N. (2016). The gig economy: a disruptor requiring HR agility. *People and Strategy*, 39(3), 20.
- [49] Huang, L., Ahlstrom, D., Lee, A. Y., Chen, S., & Hsieh, M. (2016). High performance work systems, employee wellbeing, and job involvement: An empirical study. *Personnel Review*, 45(2), 296-314. <https://doi.org/10.1108/pr-09-2014-0201>
- [50] Huselid, M. A. (1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of Management Journal*, 38(3), 635-672. <https://doi.org/10.5465/256741>
- [51] Idris, K. B., Samah, B. B., Wahat, N. W., & Parsa, P. (2014). Relationship between quality of work life and career advancement among Iranian academics. *Procedia - Social and Behavioral Sciences*, 152, 108-111. <https://doi.org/10.1016/j.sbspro.2014.09.164>
- [52] Iqbal, J., Zameer, M. S., Khan, H., Ahmed, I., & Sandhu, M. A. (2017). Antecedents and consequences of employee engagement: Evidence from corporate sector of Pakistan. *Paradigms*, 11(1), 78-86. <https://doi.org/10.24312/paradigms110113>
- [53] Jankingthong, K., & Rurkkhum, S. (2012). Factors Affecting Job Performance: A Review of Literature. *Silpakorn University Journal of Social Sciences, Humanities, and Arts*, 12, 115-127.
- [54] Jensen, J. M., Patel, P. C., & Messersmith, J. G. (2013). High-performance work systems and job control: Consequences for Anxiety, Role Overload, and Turnover Intentions. *Journal of Management*, 39(6), 1699-1724. <https://doi.org/10.1177/0149206311419663>
- [55] Jiang, K., Lepak, D. P., Hu, J., & Baer, J. C. (2012). How does human resource management influence organisational outcomes? A meta-analytic investigation of mediating mechanisms. *Academy of Management Journal*, 55(6), 1264-1294. <https://doi.org/10.5465/amj.2011.0088>
- [56] Jiang, K., Takeuchi, R., & Lepak, D. P. (2013). Where do we go from here? New perspectives on the black box in strategic human resource management research. *Journal of Management Studies*, n/a-n/a. <https://doi.org/10.1111/joms.12057>
- [57] Jyoti, J., & Rani, A. (2017). High performance work system and organisational performance: Role of knowledge management. *Personnel Review*, 46(8), 1770-1795. <https://doi.org/10.1108/pr-10-2015-0262>
- [58] Kahya, E. (2007). The effects of job characteristics and working conditions on job performance. *International Journal of Industrial Ergonomics*, 37(6), 515-523. <https://doi.org/10.1016/j.ergon.2007.02.006>
- [59] Katz, D. (1964). The motivational basis of organisational behavior. *Behavioral Science*, 9(2), 131-146. <https://doi.org/10.1002/bs.3830090206>
- [60] Karasek, R., & Theorell, T. (1990). *Healthy work: Stress, productivity, and the reconstruction of working life*. USA: Basic Books.
- [61] Kehoe, R. R., & Wright, P. M. (2013). The impact of high-performance human resource practices on employees' attitudes and behaviors. *Journal of Management*, 39(2), 366-391. <https://doi.org/10.1177/0149206310365901>
- [62] Kermansaravi, F., Navidian, A., Rigi, N. S. & Yaghoubinia, F. (2015). The Relationship Between Quality of Work Life and Job Satisfaction of Faculty Members in Zahedan University of Medical Sciences. *Global Journal of Health Science*, 7(2), 228-234. <https://doi.org/10.5539/gjhs.v7n2p228>
- [63] Kellner, A., Townsend, K., Wilkinson, A., Greenfield, D., & Lawrence, S. (2016). The message and the Messenger. *Personnel Review*, 45(6), 1240-1258. <https://doi.org/10.1108/pr-02-2015-0049>
- [64] Khan, M. A. (2010). Effects of human resource management practices on organisational performance - an empirical study of oil and gas industry in Pakistan. *European Journal of Economics, Finance and Administrative Sciences*, 24, 157-175.
- [65] Kinman, G., Jones, F., & Kinman, R. (2006). The wellbeing of the UK Academy, 1998-2004. *Quality in Higher Education*, 12(1), 15-27. <https://doi.org/10.1080/13538320600685081>
- [66] Kinman, G., & Wray, S. (2016). *Work-related wellbeing in UK higher education*. London, England: University and College Union.
- [67] Kiyani, A. A., Ayyup, K., & Rasool, S. (2019). Construct Validation of Organizational Citizenship Behaviour in an Asian Context: An Evidence among Academicians in Private Universities in Pakistan. *Journal of Social Science and Humanities*, 27, 155 - 172.
- [68] Klotz, A. C., Bolino, M. C., Song, H., & Stornelli, J. (2018). Examining the nature, causes, and consequences of profiles of organisational citizenship behavior. *Journal of Organizational Behavior*, 39(5), 629-647. <https://doi.org/10.1002/job.2259>
- [69] Korff, J., Biemann, T., & Voelpel, S. C. (2017). Human resource management systems and work attitudes: The mediating role of future time perspective. *Journal of Organizational Behavior*, 38(1), 45-67. <https://doi.org/10.1002/job.2110>

- [70] Kraimer, M. L., Wayne, S. J., Liden, R. C., & Sparrowe, R. T. (2005). The role of job security in understanding the relationship between employees' perceptions of temporary workers and employees' performance. *Journal of Applied Psychology*, 90(2), 389-398. <https://doi.org/10.1037/0021-9010.90.2.389>
- [71] Lee, D., Singhapakdi, A., & Sirgy, M. J. (2007). Further validation of a need-based quality-of-work-life (QWL) measure: Evidence from marketing practitioners. *Applied Research in Quality of Life*, 2(4), 273-287. <https://doi.org/10.1007/s11482-008-9042-x>
- [72] Lew, T. Y. (2009). Perceived organisational support: linking human resource management practices with affective organisational commitment, professional commitment and turnover intention. *The Journal of International Management Studies*, 4(2), 104-115.
- [73] Liao, H., Toya, K., Lepak, D. P., & Hong, Y. (2009). Do they see eye to eye? Management and employee perspectives of high-performance work systems and influence processes on service quality. *Journal of Applied Psychology*, 94(2), 371-391. <https://doi.org/10.1037/a0013504>
- [74] Mackie, K. S., Holahan, C. K., & Gottlieb, N. H. (2001). Employee involvement management practices, work stress, and depression in employees of human services residential care facility. *Human Relations*, 54(8), 1065-1092. <https://doi.org/10.1177/0018726701548004>
- [75] Mazlan, S. R., Md Tamrin, S. B., Guann, N. Y., How, V., Rahman, R. A., Basri, J., Zerguine, H., Saudi Nata, D. H., & Shariat, A. (2018). Quality of Work Life among Malaysian OSH Personnel and General Workers from Different Industries in Malaysia. *Malaysian Journal of Medicine and Health Sciences*, 14, 40-46.
- [76] McCusker, K., & Gunaydin, S. (2014). Research using qualitative, quantitative or mixed methods and choice based on the research. *Perfusion*, 30(7), 537-542. <https://doi.org/10.1177/0267659114559116>
- [77] Messersmith, J. G., Patel, P. C., & Lepak, D. P. (2012). "Unlocking the black box: Exploring the link between high-performance work systems and performance": Correction to Messersmith et al. (2011). *Journal of Applied Psychology*, 97(4), 824-824. <https://doi.org/10.1037/a0028854>
- [78] Miao, Rentao. (2011). Perceived Organizational Support, Job Satisfaction, Task Performance and Organizational Citizenship Behavior in China. *Journal of Behavioral and Applied Management*. 12. 10.21818/001c.17632.
- [79] Mohammadi.S & Karupiah. P., (2019): Quality of work life and academic staff performance: a comparative study in public and private universities in Malaysia, *Studies in Higher Education*, 10.1080/03075079.2019.1652808.
- [80] Motowidlo, S. J., & Van Scotter, J. R. (1994). Evidence that task performance should be distinguished from contextual performance. *Journal of Applied Psychology*, 79(4), 475-480. <https://doi.org/10.1037/0021-9010.79.4.475>
- [81] Nagpal, A., & Yadav, N. (2014). An overview of quality of work life. *International Journal of 360 Management Review*, 2(1), 1-8.
- [82] Ngcamu, B. S. (2017). Quality of Work Life Dimensions in Universities: A Systematic Review. *Global Journal of Health Science*, 9(10), 118. doi:10.5539/gjhs.v9n10p118
- [83] Nor Amalina M.Z., Huda B.Z., Hejar A.R. (2016). Job Stress and Its Determinants among Academic Staff in a University in Klang Valley, Malaysia. *International Journal of Public Health and Clinical Sciences*. 3(6), 125-136, ISSN 2289-7577.
- [84] Organ, D. W. (1988). *Organisational citizenship behavior: The good soldier syndrome*. California: Lexington Books.
- [85] Organ, D. W., & Paine, J. B. (1999). A new kind of performance for industrial and organisational psychology: Recent contributions to the study of organisational citizenship behavior. In C. L. Cooper & I. T. Robertson (Eds.), *International review of industrial and organisational psychology 1999*, Vol. 14 (p. 337-368). John Wiley & Sons Ltd.
- [86] Osman, I. H., Berbary, L. N., Sidani, Y., Al-Ayoubi, B., & Emrouznejad, A. (2011). Data envelopment analysis model for the appraisal and relative performance evaluation of nurses at an intensive care unit. *Journal of Medical Systems*, 35(5), 1039-1062. <https://doi.org/10.1007/s10916-010-9570-4>
- [87] Paauwe, J., Wright, P., & Guest, D. (2013). *HRM and Performance: Achievements and Challenges*. Chichester, UK: John Wiley & Sons.
- [88] Poyraz, K., & Kama, U. B. (2008). Perceived job security, job satisfaction, examining their impact on organisational commitment and intention to leave the job. *Journal of Economics and Administrative Sciences*, 13(2), 143-164.
- [89] Qureshi, M. T., Ayisha, A., Mohammad, A. K., Rauf, A. S., & Syed, T. H. (2010). Do human resource management practices have an impact on financial performance of banks. *African Journal of Business Management*, 4(7), 1281-1288.
- [90] Raduan. R., & Beh, Loo-See & Jegak, Uli & Idris, Khairuddin. (2006). Quality of Work Life: Implications of Career Dimensions. *Journal of Social Sciences*. 2. 10.3844/jssp.2006.61.67. Rai, G. S. (2015). Organisa-

- tional justice and quality of working life: A road that leads to a virtuous organisation. *Journal of Social Service Research*, 41(2), 269-294. <https://doi.org/10.1080/01488376.2014.987942>
- [91] Raju, K. K., & Banerjee, S. (2017). A study on job description and its effect on employee performance: case of some selected manufacturing organisations in the city of Pune, India. *International Journal of Latest Technology in Engineering, Management & Applied Science (IJLTEMAS)*, 6(2), 1-10.
- [92] Raziq, A., & Maulabakhsh, R. (2015). Impact of working environment on job satisfaction. *Procedia Economics and Finance*, 23, 717-725. [https://doi.org/10.1016/s2212-5671\(15\)00524-9](https://doi.org/10.1016/s2212-5671(15)00524-9)
- [93] Rehman, S. (2012). A Study of Public Sector Organisations with Respect to Recruitment, Job Satisfaction and Retention. *Global Business & Management Research*, 4(1), 76-88.
- [94] Rizov, M., & Croucher, R. (2009). Human resource management and performance in European firms. *Cambridge Journal of Economics*, 33(2), 253-272. <https://doi.org/10.1093/cje/ben037>
- [95] Rowley, J. (2007). The wisdom hierarchy: Representations of the DIKW hierarchy. *Journal of Information Science*, 33(2), 163-180. <https://doi.org/10.1177/0165551506070706>
- [96] Rusli BN, Edimansyah BA, Naing L (2006). Prevalence and associated factors of stress in dental healthcare workers of a Higher Institution of Learning in Kelantan. *Arch Orofacial Sci* 1, 45-50.
- [97] Saraih, U. N. (2015). The Development of Employees' Career in Relation to Task Performance and OCB. *International Journal of Humanities and Management Sciences*, 3(3), 166-170.
- [98] Senol, F. (2011). The effect of job security on the perception of external motivational tools: A study in hotel businesses. *Journal of Economic and Social Studies*, 1(1), 33-67. <https://doi.org/10.14706/jecoss11122>
- [99] Sevi, E. (2010). Effects of organisational citizenship behaviour on group performance. *Journal of Modelling in Management*, 5(1), 25-37. <https://doi.org/10.1108/17465661011026149>
- [100] Shahbazi, B., Shokrzadeh, S., Bejani, H., Malekinia, E., & Ghoroneh, D. (2011). A survey of relationship between the quality of work life and performance of department chairpersons of Esfahan University and Esfahan medical science University. *Procedia - Social and Behavioral Sciences*, 30, 1555-1560. <https://doi.org/10.1016/j.sbspro.2011.10.302>
- [101] Shariat, A., Bahri Mohd Tamrin, S., Daneshjoo, A., & Sadeghi, H. (2015). The adverse health effects of shift work in relation to risk of illness/Disease: A review. *Acta Medica Bulgarica*, 42(1), 63-72. <https://doi.org/10.1515/amb-2015-0009>
- [102] Shen, J., Benson, J., & Huang, B. (2014). High-performance work systems and teachers' work performance: The mediating role of quality of working life. *Human Resource Management*, 53(5), 817-833. <https://doi.org/10.1002/hrm.21614>
- [103] Shin, D., & Konrad, A. M. (2017). Casualty between high-performance work systems and organisational performance. *Journal of Management*, 43(4), 973-997.
- [104] Singh, S. K., & Singh, A. P. (2019). Interplay of organisational justice, psychological empowerment, organisational citizenship behavior, and job satisfaction in the context of circular economy. *Management Decision*, 57(4), 937-952. <https://doi.org/10.1108/md-09-2018-0966>
- [105] Singh, J. P., Chand, P. K., Mittal, A., & Aggarwal, A. (2019). High-performance work system and organisational citizenship behaviour at the shop floor. *Benchmarking: An International Journal*, 27(4), 1369-1398. <https://doi.org/10.1108/bij-07-2019-0339>
- [106] Sirgy, M. J., Efraty, D., Siegel, P., & Lee, D. (2001). A new measure of quality of work life (QWL) based on need satisfaction and spillover theories. *Social Indicators Research*, 55(3), 241-302. <https://doi.org/10.1023/a:1010986923468>
- [107] Srimannarayana, M. (2010). Status of HR measurement in India. *Vision: The Journal of Business Perspective*, 14(4), 295-307. <https://doi.org/10.1177/097226291001400406>
- [108] Subbarayalu, A. V., & Al Kuwaiti, A. (2019). Quality of work life (QoWL) of faculty members in Saudi higher education institutions. *International Journal of Educational Management*, 33(4), 768-779. <https://doi.org/10.1108/ijem-11-2017-0311>
- [109] Sun, L., Aryee, S., & Law, K. S. (2007). High-performance human resource practices, citizenship behavior, and organisational performance: A relational perspective. *Academy of Management Journal*, 50(3), 558-577. <https://doi.org/10.5465/amj.2007.25525821>
- [110] Sverke, M., Hellgren, J., & Näswall, K. (2002). No security: A meta-analysis and review of job insecurity and its consequences. *Journal of Occupational Health Psychology*, 7(3), 242-264. <https://doi.org/10.1037/1076-8998.7.3.242>
- [111] Tabassum, A. (2012). Interrelations between Quality of Work Life Dimensions and Faculty Member Job Satisfaction in the Private Universities of Bangladesh. *European Journal of Business and Management*, 78-89.
- [112] Taylor, J. C., Cooper, C. L., & Mumford, E. M. (1979). The quality of working life in western and Eastern Europe.

- [113] Thipsena, S., Intrawong, W., & Na Ayudhya, P. S. (2019). *Quality of work life antecedents of employees' organisational commitment of bank for agriculture and agricultural co-operative, Thailand [Conference session]. International Academic Research Conference, Vienna.*
- [114] Tjahyanti, S. (2013). *Effect of quality of work life on the productivity of employees. Media Bisnis, 5(1), 9-19.*
- [115] Tytherleigh, M. Y., Webb, C., Cooper, C. L., & Ricketts, C. (2005). *Occupational stress in UK higher education institutions: A comparative study of all staff categories. Higher Education Research & Development, 24(1), 41-61. https://doi.org/10.1080/0729436052000318569*
- [116] Ugwu, C. C., & Okojie, J. O. (2017). *Human resource management (HRM) practices and work engagement in Nigeria: the mediating role of psychological capital (PSYCAP). International Journal of Social Sciences and Humanities Review, 6(4), 71-87.*
- [117] Van Laar, D., Edwards, J. A., & Easton, S. (2007). *Work-related quality of life scale. PsycTESTS Dataset. https://doi.org/10.1037/t58303-000*
- [118] Vigoda, E. (2000). *Organisational politics, job attitudes, and work outcomes: Exploration and implications for the public sector. Journal of Vocational Behavior, 57(3), 326-347. https://doi.org/10.1006/jvbe.1999.1742*
- [119] Vishwakarma, A. C., Lakhawat, P. S., & Poonam. (2013). *Study on Quality of Work Life among Academicians of Private Technical Educational Institutions: Allahabad City, Uttar Pradesh.*
- [120] Visser, P. J., Breed, M., & Van Breda, R. (1997). *Employee-satisfaction: A triangulation approach. SA Journal of Industrial Psychology, 23(2). https://doi.org/10.4102/sajip.v23i2.626*
- [121] Wamala, R., & Ssembatya, V. A. (2014). *Productivity in academia. Quality Assurance in Education, 23(2), 184-195. https://doi.org/10.1108/qae-01-2014-0002*
- [122] Whitley, R., & Glaser, J. (2014). *Organisational transformation and scientific change: The impact of institutional restructuring on universities and intellectual innovation. Emerald Group Publishing.*
- [123] Winefield, A. H., Boyd, C., & Saebel, J. (2008). *Job stress in University staff: An Australian research study. Bowen Hills, QLD: Australian Academic Press.*
- [124] Winefield, A.H., Gillespie, N., Stough, C., Dua, J., and Hapuararchchi, J. (2002). *Occupational stress in Australian universities: A national survey 2002. Occupational Stress in Australian Universities. 1 - 102.*
- [125] Wingerden, J. V., & Poell, R. F. (2017). *Employees' perceived opportunities to craft and in-role performance: The mediating role of job crafting and work engagement. Frontiers in Psychology, 8 (1876), 1-9. https://doi.org/10.3389/fpsyg.2017.01876*
- [126] Young, S., Bartram, T., Stanton, P., & Leggat, S. G. (2010). *High performance work systems and employee wellbeing: a two stage study of a rural Australian hospital. Journal of health organisation and management, 24(2), 182-199. https://doi.org/10.1108/14777261011047345*
- [127] Zafir, M.M., and Sheikh Muhamad Hizam, S.K. (2013). *Stress among Malaysian academics: A conceptual study. International Journal of Academic Research in Business and Social Sciences. 2(1): 196 - 211.*
- [128] Zelenski, J. M., Murphy, S. A., & Jenkins, D. A. (2008). *The happy-productive worker thesis revisited. Journal of Happiness Studies, 9(4), 521-537. https://doi.org/10.1007/s10902-008-9087-4*
- [129] Zhang, J., Bal, P. M., Akhtar, M. N., Long, L., Zhang, Y., & Ma, Z. (2018). *High-performance work system and employee performance: The mediating roles of social exchange and thriving and the moderating effect of employee proactive personality. Asia Pacific Journal of Human Resources, 57(3), 369-395. https://doi.org/10.1111/1744-7941.12199*
- [130] Zhang, B., & Morris, J. L. (2014). *High-performance work systems and organisational performance: Testing the mediation role of employee outcomes using evidence from PR China. The International Journal of Human Resource Management, 25(1), 68-90. https://doi.org/10.1080/09585192.2013.781524*
- [131] Zhu, Y. (2013). *Individual behavior: In-role and extra-role. International Journal of Business Administration, 4(1). https://doi.org/10.5430/ijba.v4n1p23*