

## Research Article



# Assessing the Antecedents of Work Performance among Health Care Practitioners: Testing a Partial Least Squares Structural Equation Modeling Sequential Model

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**Abstract** | Work performance (WP) in the healthcare sector has hitherto remained an underexplored area of research. Despite the fact that the implications of WP in the healthcare sector context are far more expensive for both doctors and hospitals, the predictors of WP among the healthcare practitioners appear to have contextual nuances. One of the significant factors and increasing vulnerabilities of the healthcare sector is work-life balance (WLB). However, it is futile to study WLB in isolation, the literature suggests that positive psychological capital (PPC) triggers WLB. Moreover, WLB also assists in enhancing vitality at work that in turn improves WP. Therefore, this study intends to examine the sequential mediation of WLB and vitality at work between the relationship of positive psychological capital and WP.

**Methods:** A cross-sectional study was conducted at 80 hospitals in the province of Punjab. The stratified sampling design was employed to select a sample from the population. Out of 80, a total of 53 hospitals were consented to participate in the study. A structured questionnaire was administered to a sample of 1100 doctors with a response rate of 83%. The sequential model was tested by applying Partial Least Squares Structural Equation Modelling 3.2.

**Results:** The sequential model proved significant with a partial mediation of work life balance and vitality at work between the relationship of positive psychological capital and work performance.

**Conclusion:** The study provides recommendations to the policy makers to invest time and resources for nurturing the psychological and attitudinal behaviors of the healthcare practitioners that could ultimately enhance their WP.

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**Keywords** | Positive psychological capital (PPC), Work-life balance (WLB), Vitality at work (VAW), Healthcare practitioners (HCP)

## Introduction

The healthcare sector is among the nascent research terrains concerning work performance (WP). However, despite the significance and complexity of the healthcare sector, very little is known about the antecedents and implications of WP. Many

factors, such as lack of clinical knowledge and skills, physical illness<sup>(1)</sup> and mental health of doctors<sup>(2)</sup> have been reported to have a significant impact on WP. However, research is proposed to study, in detail as to how other more psychological factors influence WP.

Work-life balance (WLB) is another essential empiric-

ical phenomenon that is the most talked about topic in everyday life, particularly in the healthcare sector. Given the escalated issue of deficiency in the availability of HCP's, the study of WLB and its impact on WP calls for a 'fresh' look.

It is noteworthy that the non-availability of skilled health professionals creates two major problems. First, it creates a threat to provide better health facilities; and, second, it increases the burden on the skilled health professionals, which creates an imbalance between work and life. Such an imbalance would not only affect WP but will also prove detrimental to the personal life.

Professionals such as HCP's require full-time attention and commitment, and a little negligence may lead to a considerable cost regarding the loss of patients' life may lead to a lifetime ban from the profession. According to the Economic Survey of Pakistan 2016-2017 (see Table 1), despite healthcare reforms leading to greater number of HCP's the delivery of healthcare is still facing issues such as growth in population, unfair distribution of HCP's and deficient workforce. Until 2016-2017, the doctor-to-population ratio stands at 1:997 which is alarming <sup>(3)</sup>. Moreover, Pakistan falls on the sixth last position above countries like Yemen, Afghanistan, and Somalia, etc. with a density of less than one physician per 1000 population <sup>(4)</sup>.

**Table 1:** *Healthcare facilities*

| Health Manpower        | 2014-15 | 2015-16 | 2016-17 |
|------------------------|---------|---------|---------|
| Registered Doctors     | 175223  | 184711  | 195896  |
| Registered Dentists    | 15106   | 16652   | 18333   |
| Population per Doctor  | 1073    | 1038    | 997     |
| Population per Dentist | 12447   | 11513   | 10658   |

**Source:** *Pakistan Bureau of Statistics*

The above discussion highlights two challenges in the healthcare sector. One is to introduce reforms in the area of health which the government is already underway. The second is to understand the psychological underpinnings of the HCP's who are working in such an adverse environment. Therefore, this paper builds upon and contributes to the WP literature, and aims to shed an empirical light to and unearth its nuances in the healthcare sector. Most importantly, the present study provides practical implications for the policymakers in the healthcare sector.

Guest <sup>(5)</sup> conducted a meta-analysis to explore various theories that define the concept of WLB. The study reveals that it is pivotal to create meaning for both work and personal life. Border Theory, proposed by Zheng, et al. <sup>(6)</sup> demonstrate that human beings can manage multiple roles of work and life. Therefore, they are regularly involved in conciliation between the different work and life roles to achieve WLB.

Work-life enrichment (WLE) is another theory that explores the salient role of individuals in achieving WLB <sup>(7)</sup>, which leads towards better employees health and well-being. Greenhaus and Powell <sup>(7)</sup> have claimed that individuals needed to obtain several resources and skills to cope up with the daily cross-border interaction of work and life roles.

Moreover, Border and Enrichment theories have argued that individuals adopt different strategies to achieve WLB. These strategies are classified into two types, i.e., attitude, and ability. Attitude is an individual's positive or negative evaluation of something, person or an event. Moreover, researchers assert that a person is having an optimistic approach towards his/her surrounding is more likely to achieve WLB by reducing the conflict between multiple roles of work and life <sup>(8,9)</sup>. While ability is an individual's self-control over disputes that arise due to the interaction of work and life roles. So this ability develops a strong locus of control of a person who can achieve WLB by not allowing the problems to control him/her <sup>(10)</sup>. While exploring the attitudes and abilities to achieve WLB, this study assumes that the four characteristics of psychological capital, develop an optimistic approach and personal locus of control among individuals as suggested by Luthans et al. <sup>(11)</sup>. The present study indicates that PPC can work as a predictor of WLB because it is a blend of optimistic attitude and ability to maintain an internal locus of control.

The first three characteristics of PPC (optimism, self-efficacy, and hope) create a positive attitude among the individuals to accept challenges in both work and personal life-related roles. The optimistic approach creates a positive attitude, which induces individuals to take challenging goals, show determination with the established goals (hope) and exert efforts with the hope to succeed in the future (self-efficacy). The fourth characteristic of PPC – resilience helps an individual to establish an active internal locus of control. Resultantly, the strong locus of control



will, in turn, strengthen the individuals to stand back even after any hostile situation. Based on the above discussion, this study hypothesizes that PPC has a positive impact on WLB.

*H<sub>1</sub>: PPC has a positive and significant impact on WLB.*

The enrichment theory posits that WLB consequently improves employee health and well-being<sup>(7)</sup>. There is a body of knowledge that deals with occupational health that emphasizes on employee health and well-being and conceptualizes as VAW<sup>(12)</sup>. VAW refers to a 'subjective state of energy and enthusiasm,' where individuals recognize themselves as fully functioning, physically and psychologically, and are prepared to commit their abilities towards work in a positive and enabling environment.' As per this definition, VAW has three dimensions, (a) a positive feeling 'of well-being and energy,' (b) positive work attitudes, and (c) positive and enabling environment.

Since the present study is concerned only with employee health and well-being, so for this study only first and third dimensions of VAW (a positive feeling of well-being and energy; and, a positive and enabling environment) are used. Since the aim of the current research is to explore the individual perception of HCP's about their health and positive synergy, so positive work attitude (the second dimension) is purposely excluded as it measures goal and organizational commitment which is beyond the scope of the present study.

Resultantly, as asserted by WLE<sup>(7)</sup>, WLB improves employees' positive feeling of well-being and energizing connection through VAW. Since no study is available to testify this context, so the following hypothesis is developed.

*H<sub>2</sub>: WLB has a positive and significant impact on VAW.*

Moreover, a study was conducted by Franco-Santos, et al.<sup>(13)</sup> to assess the performance management of faculty members and revealed that employees with better health and well-being showed an improvement in their WP (WP). Therefore, based on this argument the following hypothesis is developed.

*H<sub>3</sub>: VAW has a positive and significant impact on WP.*

Although in the recent past several studies<sup>(17-19)</sup> indicate the mediating role of WLB. Most importantly,

Greenhaus and Powell<sup>(7)</sup> proposed to examine the impact of WLB on employees' health and well-being that can, in turn, improve WP. Moreover, as PPC is considered as an essential construct that triggers WLB so instead of examining WLB as an independent construct, the current study proposes to assess the sequential mediation of WLB and VAW between the relationship of PPC and WP (See Figure 1).

*H<sub>4</sub>: WLB and VAW sequentially mediate between the relationship of PPC and WP.*



**Figure 1:** Conceptual framework

## Methods

The study selected 80 public and private hospitals of Punjab from the information provided on the website of Pakistan Medical and Dental Council<sup>(20)</sup>. Out of 80 hospitals, 53 hospitals (13 public and 40 private) consented to participate in the study.

The population of doctors in Punjab consists of 19746 HCP's<sup>(20)</sup>. Therefore, the sample size was determined using the online sample size calculator (<https://www.surveysystem.com/sscalc.htm>) with 95 % confidence interval and 5% margin of error. However, another criterion for sample size determination is a multiple of 20 of each item of the questionnaire<sup>(21)</sup>. Therefore, in light of this, a sample of 1100 doctors was considered appropriate to collect the data.

The demographical characteristics show that majority of the respondents were male (52.8%) and (47.2%) females. Moreover, the results of this study reveal that junior doctors who have less than five years of experience work 51-100 hours per week as compared to the senior doctors (See Figure 2).

A 55-item questionnaire is adapted from different sources as shown in Table 2 below. The overall reliability of the instrument is acceptable as the value of Cronbach's Alpha is 0.888 as suggested by Nunnally

<sup>(22)</sup>. Moreover, the composite reliability (CR) is applied to measure the reliability of each construct, and the calculated value was higher than 0.70 as suggested by Hair et al. <sup>(23)</sup> (see Table 2).

Additionally, a criterion proposed by Fornell and Larcker <sup>(24)</sup> was used to assess the convergent and

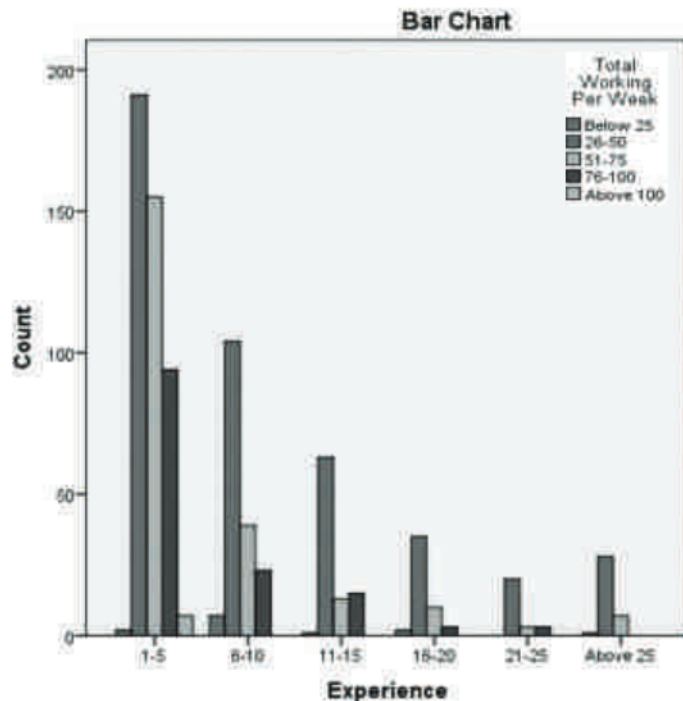
discriminant validity. Average Variance Extracted (AVE) is used to evaluate the convergent validity, and the value of AVE for all constructs is in the acceptable range (AVE>0.50) as suggested by Hair, et al. <sup>(25)</sup> (See Table 2).

**Table 2:** Measures reliability and validity

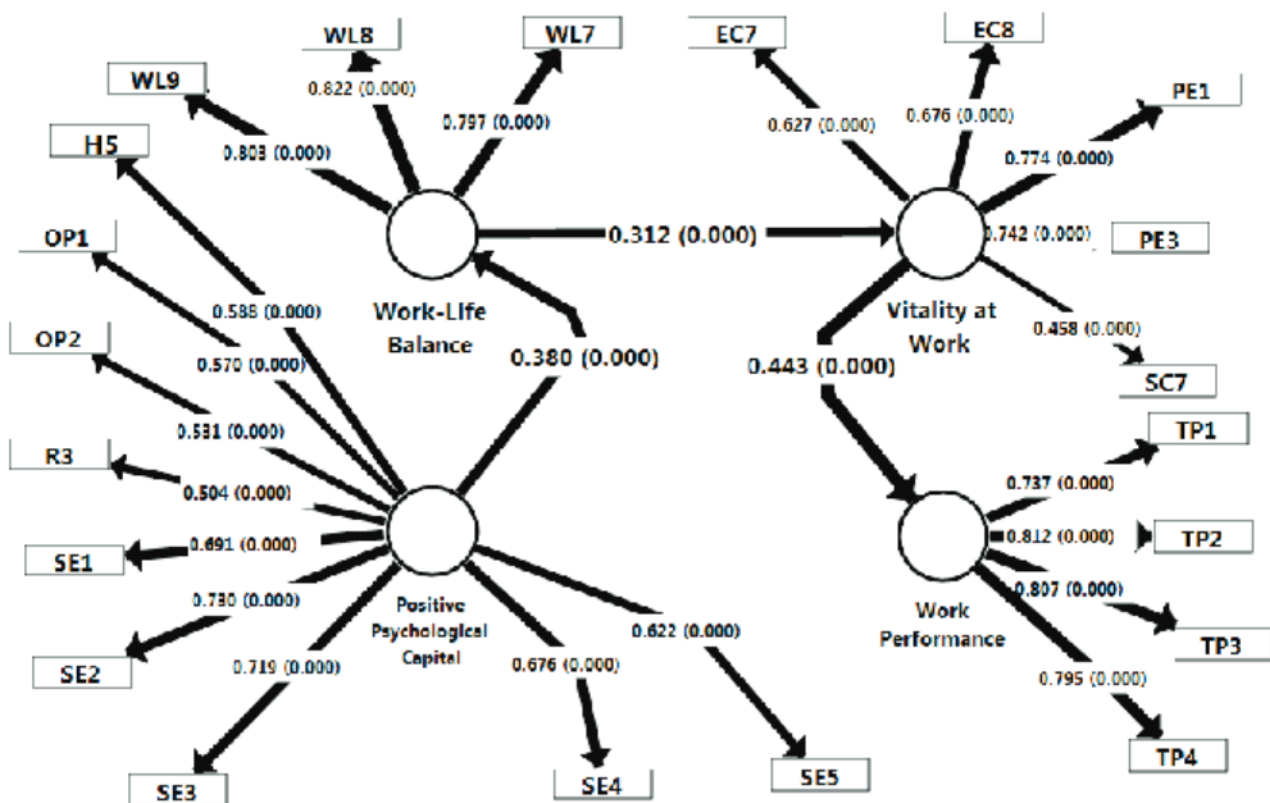
| Factors | No. of Items | Sources | CR   | AVE  |
|---------|--------------|---------|------|------|
| WLB     | 3            | (17)    | 0.85 | 0.65 |
| PPC     | 20           | (11)    | 0.85 | 0.40 |
| VAW     | 28           | (12)    | 0.79 | 0.44 |
| WP      | 4            | (26)    | 0.87 | 0.62 |

## Results

For the purpose to test the model fitness and hypothesized relationship, bootstrapping procedure with 2000 iterations was used to measure the weights of sub-constructs and path coefficients <sup>(27)</sup>. To assess the model fitness, Smart PLS calculated the value of standardized root mean square (SRMR) as suggested by <sup>(28)</sup>. For the model used in this study, the value of SRMR was 0.13 indicating model is deemed acceptable as it falls between zero to one. Following the measurement model and goodness of fit, hypothesized relationship in the proposed structural model was tested. Figure 3 shows the structural model extracted through bootstrapping procedure.



**Figure 2:** Experience wise total working hour per week



**Figure 3:** PLS-SEM Model



**Table 3:** Hypothesis testing

| Hypothesis                 | Direct Effect | Indirect Effect | Decision  |
|----------------------------|---------------|-----------------|-----------|
| $H_0$ PPC > WLB            | 0.380**       |                 | Supported |
| $H_1$ WLB > VAW            | 0.312**       |                 | Supported |
| $H_2$ VAW > WP             | 0.443**       |                 | Supported |
| $H_3$ PPC > WLB > VAW > WP |               | 0.053**         | Supported |

\*\* Significant at the level of 1% or 0.01

Table 3 shows that all the hypotheses were accepted and show a highly significant effect at the level of 1% or 0.01 of significance. Moreover,  $H_1$  shows that WLB and VAW positively and significantly partially mediate between PPC and WP.

## Discussion

Given the high costs and significant destructive consequences of WP in the healthcare sector and the scant studies in the field of WLB among HCP's, as explained earlier in this paper, this study aimed to investigate the sequential impact of PPC, WLB, and VAW on WP. Results indicate that WLB and VAW significantly mediate between the relationship of PPC and WP. Moreover, the results also show relatively a high level of work-life balance among those doctors who work less than 50 hours per week.

Furthermore, the results of this study have a significant contribution to the existing body of knowledge as it identifies and examines employee perceived health and well-being through VAW. The findings of the present study confirm that WLB is a strong predictor of VAW<sup>(7)</sup>. Also, the results of the current research confirm the conclusions of Franco-Santos, et al.<sup>(13)</sup> that employees better health and well-being positively influences their WP.

The current study aimed to examine the doctors' perception towards WP. The findings of the present study reveal that PPC is the most critical element, which in turn influences the WP of healthcare professional. PPC becomes the most significant predictor of WP for medical professionals as it triggers the WLB that improves VAW, which resultantly enhances WP. The findings of the current study suggest paying particular attention to improve PPC.

By the results of the present study suggests the Government and Health Department the following

points: Doctors can perform their duty only when they are mentally and physically relaxed. So, in order to build a balance between work and life roles, support is required from both the home and workplace. Mishra<sup>(29)</sup> asserts to pay particular attention to create family-work enrichment among HCP's. If medical professionals are involved in the family responsibilities, this will help them to gain several resources/skills that trigger PPC. Moreover, while establishing strategies for improving the doctors' WP, policymakers should consider the families of HCP's essential. For this purpose, policymakers should conduct meetings with the relatives of the doctors and seek their feedback. Such meetings and the feedback will help to formulate strategies that improve family-work enrichment, which in turn influences PPC. Goertzen and Whitaker<sup>(30)</sup> have asserted that today workplace environment is prone to constant change that leads towards anxiety. Based on Goertzen and Whitaker findings, the current study implicates to conduct special training and relaxation sessions for the development of PPC among doctors. Moreover, such training sessions improve the doctors' perceptions about their mental and physical capability to perform their duties which in turn positively influence their WP. It is essential to increase the number of doctors systematically to provide better health facilities and to improve the working conditions of skilled health professionals. The findings of this study suggest Government and Medical associations develop a roadmap for increasing the number of doctors. So that at least the regional level standard could be reached. The results of the present study reveal that the senior doctors have less working hours (less than 50 hours/week) as compared to the new or junior doctors (more than 50 hours/week). Therefore, the findings of the current study strongly recommend amending the recently promulgated labor laws concerning the service sector and suggests to establish minimum criteria regarding some hours per week for each doctor at each cadre. Moreover, doctors should also be paid for the over time. Doctors should be offered recreational activities on a regular basis. In this way, they can better focus on their personal life will help them to regain their energies and concentrate on their work. To recognize the services of doctors for the betterment of humanity, Government should award special incentives, which in turn will enhance WP. The results of the current study significantly contribute to the existing literature by identifying two psychological behaviors that reduce the adverse effects of WLB and helps to im-

prove WP of employees. However, some limitations can be overcome in the future studies. Firstly, the data was collected from the doctors working in different hospitals of the province of Punjab, Pakistan only and ignored the other regions. Secondly, it was a self-reported study. Therefore, it might have chances of response bias. Thirdly, this study only considered two positive aspects of an individual's personality. Future studies should consider the other positive aspects of a person's personality such as, VIA (Values in Action) characteristics as suggested by Peterson and Seligman<sup>(31)</sup> that facilitate individuals in maintaining their WLB.

Fourthly, this study only considered WP. Future studies should consider the other variables such as organizational citizenship behavior, employees' engagement, employee turnovers and employee satisfaction.

### Author's Contribution

**Fouzia Hadi Ali:** Did all the research and wrote the article.

**Farhat Naz and Aban Abid Qazi:** Helped the first author in research and finalizing the article.

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