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**Analyzing the Effect of Psychological Capital Dimensions’ on Employee Innovative Behavior with Mediating Role of Work Engagement and Moderating role of Climate for Innovation in Advertising Agencies of Pakistan**

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**ABSTRACT**

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| **Aim of study:** This study analyzes the impact of Psychological Capital Dimensions on Employee Innovative Behavior with Mediating Role of Work Engagement and Moderating role of Climate for Innovation in Advertising Agencies of Pakistan  **Research Methodology:** Questionnaires were distributed to 250 employees working in advertising agencies total of N = (221) questionnaires were returned. Hayes macro models were used for regression analysis.  **Results:** The results show that psychological capital affects the innovative behavior with mediation of work engagement. The results also depicted that innovative climate does not moderate between work engagement and innovative behavior.  **Conclusion:** Overall this study reveals that psychological capital dimensions affect the employee innovative behavior among the employees of advertising agencies and strategies should be design at organizational level in order to boost the innovative behavior at workplace.  **Keywords:** Psychological Capital, Employee Innovative Behavior, Work Engagement, Climate for Innovation. | **Article History**  Received:  August 08, 2022  Revised:  November 29, 2022  Accepted:  December 17, 2022  Published:  December 30, 2022 |

**Introduction**

In the late 90s, numerous research was done on the negative side of person state such as anger, fear, depression or anxiety while very small amount of work was unfolded on positive side of person state such as wisdom, courage, gratitude, forgiveness or spirituality which given rise to the concept of positive psychology (Seligman & Csikszentmihalyi, 2000;2014; Money et al., 2009; Luthans 2002a). Profoundly,

Positive psychology focuses on the positive state of person either positive emotions or a positive trait (Seligman, Steen, Park, & Peterson, 2005). Later, the notion of positive organization behavior comes from positive psychology that emphasizes the effect of positivity at workplace. (Luthans 2002a; Wright 2003). Additionally, Psychological capital was introduced which is a positive organizational behavior that got potential to develop through training and practice (Luthans et al., 2007), which mean that Psy Cap are state like that is, it can adapt changes and is developable (Luthans & Youssef-Morgan, 2017; Ertosun et al., 2015; Demerouti et al., 2011) .Although, PsyCap arose as a greater order construct, having four core dimensions such as resilience, hope, optimism and Confidence (Luthans et al., 2007). Later Luthans and his coauthor identified that psycap have the capability to add more dimensions if they fulfil the criteria of Psycap along with four core dimensions for instance courage, wisdom, gratitude and spirituality (Luthans, Avolio, et al., 2007). Moreover, the literature identified gap of structural factor for psycap according to unique culture contexts (Dhir & Sharma, 2020; Wernsing, 2014), which lead to adding more dimension and testing empirically, for instance Bockorny (2015), empirically tested four core dimensions of psycap i.e., confidence, resilience, hope and optimism along with courage as a fifth dimensions of Psycap. Moreover, Ashraf & Khan (2017) empirically tested wisdom and gratitude as an extension of Psychological Capital dimensions in Asian culture context whereas, Dhir & Shamra, (2020), expanded psycap dimensions in India context, therefore added spirituality and courage as other dimensions of it. However, most of the researchers examined psycap as a composite variable instead of exploring its other unique dimensions in different culture setting (Wernsing, 2014; Dhir & Sharma, 2020)

The current study emphasis on multiple dimensions of psychological capital such as confidence, resilience, hope, optimism (four core dimensions) with other unique dimensions i.e., courage and wisdom, hence examine the relationship of these dimensions with employee innovative behavior in advertising agencies.

Broaden and build theory (Fredrickson’s, 1998, 2001) is an influential theory of positive emotions that encourages building personal resource as a formidable function. Positive emotions contribute to broadening repositories of thought-action of people and help widening the thoughts process and translate such thought into actions that leaps to the minds (Fredrickson, 2001; Bakker & Demerouti, 2008), in doing so it increases the capability of a person’s thoughts-actions which result in exhibiting innovative behaviors such as coming up with novel ideas and providing unique ideas to refine work (Avey et al., 2011). In addition to that the theory explains that positive emotions not only alter thought patterns but also broaden attention and focus of people (Fredrickson, 2001; Isen, 2000; Kahn & Isen, 1993). Such emotions and orientations aids in developing connection between different stimuli (Isen, 1999) and thus can be a manifestation of employee innovative behaviors (Avey et al., 2011). Previous researchers propound PsyCap which have a deepen root to positivity, is also a major benefactor of positive emotions (Abbas & Raja, 2015; Avey et al., 2011) for instance, if an employee demonstrated confidence in doing work, definitely after accomplishing it, he will feel delighted with what he have done. Therefore, it can be said that positive psychological resources broaden the thought process of an employee because of which novel ideas generated in his mind consequently he builds innovative behavior (Abbas & Raja, 2015).

**Literature Review**

***Psychological Capital and Employee Innovative Behavior***

Previous researchers found a direct positive relation between psychological capital (confident, hope, resilience and optimism) and employee innovative behavior (Sameer, 2018; Abbas & Raja, 2015; Han & Yang, 2011). Using Broaden and Build theory to explain how positive psychological resources triggers innovative behavior (Abbas & Raja, 2015), we argue that confident individuals are more likely to be involved in innovative behavior ,moreover Hope is a powerful positive motivational state, which conceptualized from goal directed energy, interactively derived feeling of successful agency and a path way to meet the goals, such hopeful individuals are more likely to exhibits innovative behavior (Sameer, 2018; Abbas & Raja, 2015), precisely, hopeful employees tend to be more proactive at their workplace and found a direct relationship with creativity (Yu et al., 2019) and therefore due to creativity they tend to indulge in innovative behavior when performing daily work tasks. In addition to that we argue that Optimism demonstrate different positive and favorable outcomes like high morale and high spirit, problem solving abilities, happiness, goal attainment, good health, long life, academic success, political and occupational effectiveness (Seligman, 2007) due to which it is likely that they might involve in ideas generation and successful implementation of such ideas (Sameer, 2018; Abbas & Raja, 2015), further resilient individuals prepare themselves for meeting with difficult situation using positively psychological resource therefore we argue that resilient individuals are likely to be involved in innovation and demonstrate innovative behavior (Sameer, 2018). Previous research conducted on the courage to and entrepreneurship which is a risky model that posted one need to be courage in order to be successful entrepreneurship (Bockorney, 2015) therefore, we argue that courageous individual is more likely to exhibits innovative behavior. Lastly, researcher developed a link between wisdom and creative performance, therefore, we also argue that wise person will more likely to be involved in innovative behavior.

*Hypothesis 1: Psychological capital has significant positive association with employee innovative work behavior.*

***Psychological Capital Dimensions’ and Work Engagement***

PsyCap’s dynamic model has been shown to be highly integrated and conceptually well aligned with the work engagement (Sweetman & Luthans, 2010). The researchers found a direct relationship between Confidence and positive emotions (Avey et al., 2008). Avey and his colleague found significantly direct relation between Confidence and positive emotions which resultantly reflects to positive attitude i.e., engagement. Confidence in one's value as a human being is a precious psychological resource and generally a highly positive factor in life; it is correlated with achievement, good relationships, and satisfaction. Sweetman & Luthan, (2010), stated a significant positive effect on work engagement. Therefore, we argue that Employees who are confident enough will cognitively absorb in the work role (absorption), will exert maximum energy and effort to produce desired outcome(vigor), last but not the least, they will experience the essence of pride and significance which mean they know that what they are performing (dedication). Such attitude led to engagement at work. Hence, we hypothesized as

*Hypothesis 2: Confidence has significant positive association with work engagement.*

High morale colleague has high hope which leads towards positive psychological state which motivate him to thoughtful process how to achieve goals and, when required, redirecting his goals so that he can achieve success (Luthans, Avey, Avolio & Peterson, 2010). When such employees face difficulty, they show more positive attitude and find new ways to approach their set targets. Hope pursuit aims and the proactive indication of ways that provide vigor and determination to approach goals, related to task engagement (Sweetman & Luthans, 2010). Therefore, we argue that the hope anticipated to relate to positive work outcome that may enhanced work engagement among employee, therefore, hypothesized that

*Hypothesis 3: Hope has significant positive association with work engagement.*

Optimistic employees contain positive emotions and views in respect to future expectations (Scheier & Carver,1985). Researcher showed that there is direct relationship between two variable i.e., optimistic employee and favorable outcome (Seligman, 1998). Employee with high optimistic personality will be more confident in performing work related task, because they can take their own responsibility (Seligman, 1998), hence they are highly integrated with work engagement (Yu et al., 2019).

*Hypothesis 4: Optimism has significant positive association with work engagement.*

Positive emotions lead to positive work attitude, resilience is a positive attitude who remain calm when meet in uncertain situation, such employee feel more engaged at work, and demonstrate vigor, absorption and dedication in the work. High psychological capital individuals are valuable resource (Youssef‐Morgan & Luthans, 2015). So, resilient individual when met with adversity, he will bounce back from the situation and will work with more eager, commitment and dedication. Therefore, we argue that such people tend to exhibit more work engagement. Thus, we hypothesized that

*Hypothesis 5: Resilience has significant positive association with work engagement.*

Individuals having distinct signature strengths for instance wisdom, courage and humor, such strengths are connected to a sense of personality, self and genuineness, which create inherent inspiration to practice them (Proctor, Tsukayama, Wood, Maltby, Eades & Linley 2011). Employees who operational zed their positive unique strengths such as courage and wisdom are likely to be seen as more engaged in their work role (Harter, Schmidt & Hayes, 2002) and consequentially more likely to accomplish their set goals (Biswas-Diener, Kashdan & Minhas 2011; Dubreuil et al. 2016). For instance, they will use their unique character strength for more positive at outcome, they feel positive energy hence more lively and vigorous at work. Moreover using these strengths, an employee will feel deep involvement and higher concentration which lead to absorption and dedication dimension of work engagement (Dubreuil et al. 2014). In line with this statement, authors proposed that

*Hypothesis 6: Courage has significant positive association with work engagement.*

*Hypothesis 7: Wisdom has significant positive association with work engagement.*

***Work Engagement and Employee Innovative Behavior***

Previous researcher found that when there is work engagement, employee will expose to more positive emotions which translated into positive thoughts which leap creative and novel ideas (Park & Allen, 2013). Several Researchers found a direct positive relation between work engagement and employee innovative behavior (Agarwal, Datta, Blake-Beard, Bhargava, 2012; Agarwal 2014; Jung & Yoon, 2018). According to broaden and build theory, employee who experience positive emotions will energize more positive thoughts in such a way that will create more chances of displaying innovative behavior of such individuals. Therefore, authors hypothesized as

*Hypothesis 8: Work engagement has direct and positive association with employee innovative behavior.*

***Mediating role of Employee Engagement***

Individuals who are confident promote work engagement, which states that they promote initiative taken at workplace, which resultantly inﬂuences innovation (Hakanen et al., 2008).Similarly Hopeful employees tend to be more proactive at their workplace and have risk-taking behavior and more indulge in creative when performing daily work tasks (Yu et al., 2019) An employee having positive experience say optimism tend to be more engaged at workplace and more likely to drive innovative behavior at work place (Michael et al., 2011). Resilient employees are intrinsically motivated are ready to deal with obstacles which they can face and proactively dealt with their work, such employee tend to be more creative (Cadwallader et al., 2010; Dulaimi et al., 2003; Zhang & Bartol, 2010). Therefore, they may also exhibit innovative behavior at work place. Moreover, employees who are resilient have a tendency to depict high work engagement, and they work enthusiastically for the organization. The courageous person tends to involve in innovation and innovative behavior (Koerner, 2010). He further added that courage encourages change and innovation at work place. Courage is required to initiate an innovative activity. Courageous person tend to be much involved at workplace (Harter et al. 2002). Wise person having highly engaged with work are more likely to indulge creativity, creative performance (Kalyar & Kalyar, 2018) and therefore likely to engaged in innovative behavior as well. Therefore, we hypothesized

*Hypothesis 9: Work engagement mediates the relationship between Confidence and employee innovative behavior.*

*Hypothesis 10: Work engagement mediates the relationship between hope and employee innovative behavior.*

*Hypothesis 11: Work engagement mediates the relation between optimism and employee innovative behavior.*

*Hypothesis 12: Work engagement mediates the relation between resilience and employee innovative behavior.*

*Hypothesis 13: Work engagement mediates the relation between courage and employee innovative behavior.*

*Hypothesis 14: Work engagement mediates the relation between wisdom and employee innovative behavior.*

***Moderating role of Innovative Climate***

Innovation climate as defined as the shared perception of employees whether at team or organizational level as to what level organization practice, policies, norms or processes support and enable innovation (West & Anderson,1996; Anderson & West, [1998](https://onlinelibrary.wiley.com/doi/full/10.1111/joop.12283#joop12283-bib-0008)). Researcher found that the individuals who are engaged with task have likely attributes of solving problems, develop successful relation with their colleagues and involve in innovation (Hakanen et al., 2008). Highly engaged employees have more tendency to perform and execute novel ideas at work, and demonstrate innovative behavior. Subsequently, engaged employees have more accessible individual resources to be included in innovation activity ad have innovative behaviors, and they execute remarkable performance. (Shalley & Gilson, 2004; Scott & Bruce, 1994). Organizations that encourage innovation, create a climate where individuals freely perform new concepts and where differences of imagination and conclusion is esteemed while doing so, they feel secure to do new experiments (Daft & Becker, 1978).

In this way, an innovative climate empowers an individual to be highly involved in innovative activities. The theory broaden and build ([Fredrickson, 2001](https://www.emerald.com/insight/content/doi/10.1108/MRR-07-2018-0266/full/html?casa_token=4YUKTLYgtBkAAAAA:Y3QgZRsEZH0GVXh5ykvc_ZDr2J2hGxo9sqzrlCgFj1gXwZ-oS2wJDRwdIkZY2UVzJMC2zmBmVgSYN7jIrLHBJb0aq3_3iTxmeR8u-nNPhNYOy1czvOg5Sg#ref033)) states that when individual possess positive resource (as in our case, work engagement), he will likely to build positive thoughts that shapes into to novel ideas at work (i.e., innovative behavior). It is essential for the innovative behavior that the climate for innovation prevails in the work setting. Therefore we proposed that innovative climate ac as a moderator which can strengthen or weaken the relationship between the two i.e., work engagement and employee innovative behavior, hence, author hypothesized that

*H15: Innovative Climate moderates the relationship between work engagement and employee innovative behavior. Such that greater the innovative climate stronger will be link between work engagement and employee innovative behavior.*

## **Conceptual Framework**

**Psychological Capital**

3

Confidence

**H1+**

**Work Engagement**

**H9 to H14**

**Employee Innovative Behavior**

**H3+**

**H2+**

**H4+** + +  
+ 371823

Hope

**H6+**

**H15+**

**H8+**

**H15**

**H6+**

**H5+**

**H4+**

+ +

Optimism

+

Wisdom

**H7+**

**Innovative**

**Climate**

Resilience

**Methodology**

Courage

The study follows a positivism research paradigm, deductive, quantitative study, and is correlational in nature. The target population was selected by using convenience sampling technique and these were employees working in advertising agencies of Pakistan. The researcher collects response through self administered questionnaire and also used google form.**:** Questionnaires were distributed to 250 employees working in advertising agencies total of N = (221) questionnaires were returned. Hayes macro models were used for regression analysis.

***Instrumentation***

### For all items participants rated their response on a 5 point Likert Scale starting from 1=Strongly Disagree and 5=Strongly Agree.

### *Psychological Capital*

Sixteen items comprising four dimensions of Psychological Capital was measured by the items established by Luthans et al. (2007) where it included dimensions i.e., hope, Confidence, optimism and resilience. The sample item of confidence was “I feel confident analyzing a long-term problem to find a solution”. The sample item of hope was “At the present time, I am energetically pursuing my work goals”. The sample item of optimism was “If something can go right for me work-wise, it will”. The sample item of resilience was “When I have a setback at work, I recover from it”.

### *Courage*

Five items of Courage were measured by adopting the scale of Norton and Weiss (2009). The items were “Even if I feel terriﬁed, I will stay in that situation until I have done what I need to do”.

### *Wisdom*

Four items of Wisdom scale were adopted by the study of Thomas, Bangen, Ardelt and Jeste (2017). The items are “A problem has little attraction for me if I don’t think it has a solution.”

***Work Engagement***

Six items of Utrecht Work Engagement Scale (Schaufeli, Bakker & Salanova’s, 2006) was used to measure work engagement. The sample item was “At my job, I feel strong and vigorous.”.

### *Innovative Climate*

Eight items of Innovative climate was adopted from Liu and Shi (2009) scale. The sample item was “Our Company often encourages employees to propose new ideas”.

### *Employee Innovation Behavior*

Six items were adopted from Lukes and Stephan (2017) scale to measure employee innovative behavior. The sample items was “I often generate original solutions for problems.

Table 1: *Reliability Analysis*

|  |  |
| --- | --- |
| **Variables** | **Cronbach’s Alpha** |
| Confidence | 0.73  0.75  0.79  0.77  0.74  0.79  0.80  0.85  0.87 |
| Hope |
| Optimism |
| Resilience Courage |
| Wisdom |
| Work Engagement |
| Innovative Climate |
| Innovative work Behavior |

## Table 2: *Descriptive Statistics of Demographics*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| **Gender** | | | | |
| Female | 47 | 21.3 | 21.3 | 21.3 |
| Male | 174 | 78.7 | 78.7 | 100.0 |
| **Age** | | | | |
| 21-25 Years | 55 | 24.9 | 24.9 | 24.9 |
| 26-30 Years | 101 | 45.7 | 45.7 | 70.6 |
| 31-35 Years | 36 | 16.3 | 16.3 | 86.9 |
| 36-40 Years | 14 | 6.3 | 6.3 | 93.2 |
| 41 Years or above | 15 | 6.8 | 6.8 | 100.0 |
| **Education** | | | | |
| Bachelors | 16 | 7.2 | 7.2 | 7.2 |
| Masters | 103 | 46.6 | 46.6 | 53.8 |
| MS/ M.Phil. | 97 | 43.9 | 43.9 | 97.7 |
| PHD | 5 | 2.3 | 2.3 | 100.0 |
| **Experience** | | | | |
| 2-4 Years | 82 | 37.1 | 37.1 | 37.1 |
| 5-7 Years | 54 | 24.4 | 24.4 | 61.5 |
| 8-10 Years | 27 | 12.2 | 12.2 | 73.8 |
| 11-13 Years | 21 | 9.5 | 9.5 | 83.3 |
| 14 Years or above | 37 | 16.7 | 16.7 | 100.0 |

*N=221*

**Results**

Table 3: *Correlation Analysis*

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** |
| **Confidence** | 1 |  |  |  |  |  |  |  |  |
| **Hope** | .587\*\* | 1 |  |  |  |  |  |  |  |
| **Optimism** | .218\*\* | .231\*\* | 1 |  |  |  |  |  |  |
| **Resilience** | .332\*\* | .359\*\* | .357\*\* | 1 |  |  |  |  |  |
| **Courage** | .283\*\* | .233\*\* | .267\*\* | .476\*\* | 1 |  |  |  |  |
| **Wisdom** | 0.09 | 0.07 | 0.03 | 0.15\* | 0.08 | 1 |  |  |  |
| **WorkEng** | .562\*\* | .599\*\* | .282\*\* | .477\*\* | .355\*\* | .156\* | 1 |  |  |
| **Inoclimate** | .449\*\* | .536\*\* | .337\*\* | .356\*\* | .432\*\* | 0.04 | .561\*\* | 1 |  |
| **InoBehavior** | .543\*\* | .566\*\* | .388\*\* | .469\*\* | .495\*\* | .171\* | .673\*\* | .641\*\* | 1 |
| \*\*. Correlation is significant at the 0.01 level (2-tailed). | | | | | |  |  |  |  |

Confidence and work engagement has also a positive and moderate relation (r=56.2, p< 0.01). work engagement has also a positive and moderate relation (r=59.9, p< 0.01). Optimism and work engagement has also a positive and weak relationship with work engagement (r=28.2, p< 0.01). Resilience and work engagement have also a positive and moderate relation (r=47.7, p< 0.01). Courage and work engagement have also a positive and weak relation (r=35.5, p< 0.01). Wisdom and work engagement have positive and weak relation (r=15.00, p< 0.05). Work engagement has a positive but strong relation with innovative work behavior (r=67.3 %, p< 0.01).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Table 4: *Regression Analysis (H1)* | | | | | |  |  |
| **Hypothesis** | **IV** | **R square** | **F** | **Beta** | **T** | **Sig.** | **Status** |
| **H1** | Psy Cap | .374 | 130.872 | 7.246 | 11.440 | .000 | Accepted |
|  |  |  |  |  |  |  |  |
| a. Predictors: Psychological capital | | | | | | | |
| b. Dependent Variable: Innovative Work Behavior | | | | |  |  |  |

The above model summary indicates that psychological capital has the positive impact on employee innovative behavior. Therefore H1 is accepted.

Table 5: *Regression Analysis (H2 to H7)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **IVs** | **R square** | **F** | **Beta** | **T** | **Sig.** | **Status** |
| Confidence | .316 | 101.104 | .953 | 10.055 | .000 | Accepted |
| Hope | .359 | 122.708 | .987 | 11.077 | .000 | Accepted |
| Optimism | .75 | 18.911 | .483 | 4.349 | .000 | Accepted |
| Resilience | .227 | 64.341 | .854 | 8.021 | .000 | Accepted |
| Courage | .126 | 31.541 | .458 | 5.616 | .000 | Accepted |
| Wisdom | .024 | 5.493 | .875 | 2.344 | .020 | Accepted |

1. Predictors: Psychological capital dimensions
2. Dependent Variable: work engagement

The above table shows that dimensions of psychological capital have the positive relationship with work engagement. So, hypothesis H2 to H7 are accepted.

Table 6: *Regression Analysis (H8)*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Hypothesis** | **IV** | **R square** | **F** | **Beta** | **T** | **Sig.** | **Status** |
| **H8** | Work Engagement | 0.45268 | 181.135 | 0.74045 | 13.4586 | 0.000 | **Accepted** |

1. Predictors: Work Engagement
2. Dependent Variable: Innovative Work Behavior

The above model summary indicates that the result of regression analysis, which shows that variation in employee innovative behavior, is because of work engagement. This states that work engagement has positive and significant effect on employee innovative behavior. Therefore, the hypothesis 8 is accepted.

Next analysis is about mediation analysis, the model exerted that work engagement mediates between psychological capital dimensions’ and employee innovative work behavior. The mediation model has been tested by running Preachers and Hayes, process macros, model 4. Following table represents the test.

Table 7: *Mediation Analysis of Work Engagement between Confidence and employee innovative behavior(H9)*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Effect** | **SE** | **t** | **p** | **LLCI** | **ULCI** | **z** |
| **Total effect of X on Y** | 1.0136 | 0.1058 | 9.5765 | 0.000 | 0.805 | 1.2221 |  |
| **Direct effect of X on Y** | 0.4504 | 0.1088 | 4.1388 | 0.000 | 0.2359 | 0.6648 |  |
| **Indirect effect of X on Y** | 0.5632 | 0.0794 |  |  | 0.4247 | 0.7324 |  |
| **Normal theory test** | 0.5632 | 0.0832 |  |  |  |  | 6.7729 |

Hence, the result indicates that the confidence positively effects work engagement and work engagement enhance the employee innovative behavior. This indicates hypothesis 9 i.e work engagement mediates the relationship between confidence and employee innovative behavior has been accepted.

Table 8: *Mediation Analysis of Work Engagement between Hope and employee innovative behavior* *(H10)*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Effect** | **SE** | **t** | **P** | **LLCI** | **ULCI** | **z** |
| **Total effect of X on Y** | 1.0268 | 0.101 | 10.1664 | 0.0000 | 0.8277 | 1.2258 |  |
| **Direct effect of X on Y** | 0.4613 | 0.1091 | 4.2282 | 0.0000 | 0.2463 | 0.6764 |  |
| **Indirect effect of X on Y** | 0.5654 | 0.088 |  |  | 0.4067 | 0.7535 |  |
| **Normal theory test** | 0.5654 | 0.0832 |  | 0.0000 |  |  | 6.7996 |

The result indicates that the hope positively effects work engagement and work engagement enhance the employee innovative behavior so work engagement mediates the relationship between hope and employee innovative behavior hence H10 has been accepted.

Table 9: *Mediation Analysis of Work Engagement between Optimism and employee innovative behavior H11*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Effect** | **SE** | **t** | **p** | **LLCI** | **ULCI** | **z** |
| **Total effect of X on Y** | 0.7323 | 0.1174 | 6.239 | 0.0000 | 0.501 | 0.9637 |  |
| **Direct effect of X on Y** | 0.4071 | 0.0945 | 4.3075 | 0.0000 | 0.2208 | 0.5934 |  |
| **Indirect effect of X on Y** | 0.3252 | 0.0888 |  |  | 0.1561 | 0.4998 |  |
| **Normal theory test** | 0.3252 | 0.0796 |  | 0.0000 |  |  | 4.0843 |

The results provide the ample support that the work engagement mediates the relationship between optimism and employee innovative behavior. That indicates that the hypothesis 11 i.e., work engagement mediates the relationship between optimism and employee innovative work behavior has been accepted.

Table 10: Mediation Analysis of Work Engagement between Resilience and employee innovative behavior (H12)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Effect** | **SE** | **t** | **p** | **LLCI** | **ULCI** | **Z** |
| **Total effect of X on Y** | 0.9254 | 0.1177 | 7.8625 | 0.0000 | 0.6934 | 1.1574 |  |
| **Direct effect of X on Y** | 0.3791 | 0.1094 | 3.4643 | 0.0006 | 0.1634 | 0.5948 |  |
| **Indirect effect of X on Y** | 0.5463 | 0.0972 |  |  | 0.3639 | 0.7421 |  |
| **Normal theory test** | 0.5463 | 0.086 |  | 0.0000 |  |  | 6.3503 |

The results indicates that the hypothesis 12 i.e., work engagement mediates the relationship between resilience and employee innovative work behavior has been accepted.

Table 11: *Mediation Analysis of Work Engagement between Courage and employee innovative behavior (H13)*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Effect** | **SE** | **t** | **P** | **LLCI** | **ULCI** | **z** |
| **Total effect of X on Y** | 0.7023 | 0.0834 | 8.4207 | 0.0000 | 0.538 | 0.8667 |  |
| **Direct effect of X on Y** | 0.4156 | 0.0707 | 5.878 | 0.0000 | 0.2763 | 0.555 |  |
| **Indirect effect of X on Y** | 0.2867 | 0.0617 |  |  | 0.1664 | 0.4125 |  |
| **Normal theory test** | 0.2867 | 0.0571 |  | 0.0000 |  |  | 5.0248 |

The above table indicates that the hypothesis 13 i.e., work engagement mediates the relationship between resilience and employee innovative work behavior has been accepted.

Table 12: *Mediation Analysis of Work Engagement between wisdom and employee innovative behavior (H14)*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Effect** | **SE** | **t** | **P** | **LLCI** | **ULCI** | **z** |
| **Total effect of X on Y** | 1.0539 | 0.4099 | 2.5711 | 0.0108 | 0.246 | 1.8618 |  |
| **Direct effect of X on Y** | 0.4161 | 0.3111 | 1.3377 | 0.1824 | -0.197 | 1.0292 |  |
| **Indirect effect of X on Y** | 0.6378 | 0.2908 |  |  | 0.046 | 1.1938 |  |
| **Normal theory test** | 0.6378 | 0.2908 |  | 0.020 |  |  | 2.3006 |

Results indicates that hypothesis H14 is accepted i.e., work engagement mediates the relationship between wisdom and work engagement.

Table 13: *Moderation Analysis (H15)*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **coeff** | **se** | **t** | **p** | **LLCI** | **ULCI** |
| **Constant** | 2.1312 | 6.526 | 0.3266 | 0.7443 | -10.731 | 14.9936 |
| **Climate for Innovation** | 0.455 | 0.2258 | 2.0151 | 0.0451 | 0.01 | 0.9 |
| **Work Engagement** | 0.6949 | 0.2802 | 2.4801 | 0.0139 | 0.1427 | 1.2471 |
| **Interaction term** | **-0.0065** | **0.0093** | **-0.6998** | **0.4848** | **-0.0249** | **0.0119** |

Outcome variable: Employee Innovative Behavior

The moderation analysis has been done by using process macros that was suggested by Hayes 2013. Their model 1 is designed to test moderation hypothesis. The above table representing that the overall model is fit for regression analysis but the interaction term which is described that the independent variable multiplied by moderation regression is insignificant (t = -0.6998, p>0.05). The result of the does not support the hypothesis H15 that innovative climate moderate between work engagement and employee innovative behavior, hence H15 is rejected.

**Discussion**

The basic aim of the study was to examine the effect of psychological capital and its dimensions on employee innovative behavior. The finding of the present study asserts that psychological capital is positively and significantly associated with employee innovative behavior. The employees who are high in psychological capital provide more novel ideas and are more engaged with innovative behavior. They are confident and courageous to experiment novelty at work place. They are hopeful and optimistic about the work that they perform. They bounce back when meet with any adverse situation and are wise enough to make complex decision. Such employee possesses mental capacity, they take initiative at work place and generate novel ideas (Akhtar, Khan, & Suleman, 2018). They are more creative and innovative at workplace, perform better than others at workplace, such individuals know how to cope up with stressful condition and they are capable enough to stay focused in the job (Abbas & Raja, 2015). Hence, the results are in line with the previous studies by different researchers that psychological capital positively associated with employee innovative behavior (Luthans, Youssef & Rawski, 2011; Sameer, 2018; Sun & Huang, 2019). The result is line with the recent study conducted that behavioral courage effects on innovative behavior (Bibi & Afsar, 2020). The result of wisdom on employee innovative behavior is also significant, which postulates that the wise person tends to involve in innovation and problem solving. The result is in line with the previous study conducted that wisdom effects on creativity (Kalyar & Kalyar, 2018). The result is line with the previous studies that confidence lead to engagement at work (Ibrahim et al, 2019; Dagher et al., 2015). Similarly, hope, optimism, resilience, courage and wisdom have the positive relation with the work engagement (Alessandri et al., 2018; Ibrahim et al., 2019; Peláez et al., 2019; Sweetman & Luthans, 2010; Ugwu & Amazue, 2014). Moreover, researcher demonstrated that engaged employee cooperate with other employee and enhance organizational performance by exerting innovative work behavior.

**Conclusion**

Psychological capital and its dimensions play a key role in innovation, among all dimensions hope is the most prominent element for innovative behavior. Further, the researchers tested mediation i.e., work engagement, which is again a positive aspect, the researchers found that work engagement mediates the relationship between psychological capital dimension and employee innovative behavior. It also tested moderation of innovative climate, which, unfortunately rejected, leaving a room for further research. The data for this particular research has been collected by the advertising agencies of Pakistan and in accordance with the research of Luthans (2002) and Seligman (2007), it is found that employee with high psychological capital exhibit positive outcome and more engage in innovative behavior. Perhaps innovation led to competitive edge and for that innovation, employee needs to be high in psychological capital. An organization must create a positive pleasant environment where employee can share new ideas; ideas should be proper discussed and implemented positively, in order to get positive result. Similarly, previous researchers also acknowledged the use of positivity in order to gain innovation (Sameer, 2019; Sun and Huang, 2019).

**Limitations and Future Direction**

The present studies have several limitations. First, the scale used for this research was self-administered which lead to personal biasness whereas manager can better describe if his/her employee is innovative. This limitation has been previously discussed by researchers (Hunter, Bedell and Mumford, 2007), where he added that self-administered do not possess good effect size on the relationship. Future researchers must use a scale where it limited self-reported/ administrated responses as it introduces personal biasness. Further, climate for innovation also get rejected, the reason of rejection might be, when psycap of individual is high and they tend to be more engaged in work, as a consequence, they will exhibit innovative behavior at workplace. There might be multiple reason of rejection, say, overall environment of workplace is good that’s why employee is engaged in work, or their job might demand innovative behavior. Having all said, it requires further investigation as to why innovative climate does not moderate the relation. Further, the sample size was small; the model should be study with larger sample in order to get better result**.** Moreover, research has been conducted on cross sectional due to short of time, whereas it is recommended to the researcher to do research on longitudinal basis. It has been recommended to use the model to other sectors as well, say; educational sector/ hospitality sector and so on, in order to get generalize ability.

In addition, the researchers recommended to examine psychological capitals’ other dimensions say mindfulness, in order to influence innovation as well. The analysis was on employee (individual), further researcher can examine team level and organizational level innovation, how to boost innovation? And does leader psychological capital improves organizational innovation (at larger level). Researchers can use other mediation/ moderation, in order to better understand, which element can be more influential for instance, wellbeing, organizational commitment or organizational justification.

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**Reference**

Abbas, M., & Raja, U. (2015). Impact of psychological capital on innovative performance and job stress. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, *32*(2), 128-138.

Agarwal Upasna, A., Sumita, D., Stacy, B. B., & Shivganesh, B. (2012). Linking LMX, innovative work behaviour and turnover intentions: The mediating role of work engagement. *Career Development International*, *17*(3).

Agarwal, U.A. (2014). Examining the impact of social exchange relationships on innovative work behaviour*. Team Performance Management: An International Journal, 20*(3/4), 102-120.

Akhtar, F., Khan, H., & Suleman, A. (2018). The Impact of Psychological Capital, Supervisor Support and Risk Tolerance in Managers on Innovative Work Behavior. European Online Journal of Natural and Social Sciences, 7(3), pp-632.

Alessandri, G., Consiglio, C., Luthans, F., & Borgogni, L. (2018). Testing a dynamic model of the impact of psychological capital on work engagement and job performance. *Career Development International*, *23*(1), 33-47.

Anderson, N. R., & West, M. A. (1998). Measuring climate for work group innovation: development and validation of the team climate inventory. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, *19*(3), 235-258.

Ashraf, F., & Khan, M. A. (2017). Broadening the Positive Psychological Capital Construct: An Asian Cultural Perspective. *Journal of Independent Studies & Research: Management & Social Sciences & Economics*, *15*(2), 91-106.

Avey, J. B., Reichard, R. J., Luthans, F., & Mhatre, K. H. (2011). Meta‐analysis of the impactof positive psychological capital on employee attitudes, behaviors, and performance. *Human resource development quarterly*, *22*(2), 127-152.

Avey, J. B., Wernsing, T. S., & Mhatre, K. H. (2011). A longitudinal analysis of positive psychological constructs and emotions on stress, anxiety, and well-being. *Journal of Leadership & Organizational Studies*, *18*(2), 216-228.

Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. *Career development international*,13,209-23

Bibi, A., & Afsar, B. (2020). Behavioral courage and its effect on innovative work behaviour of public sector employees: the role of managerial position and gender. *International Journal of Public Sector Performance Management, 6(1), 124-142.*

Biswas-Diener, R., Kashdan, T. B., & Minhas, G. (2011). A dynamic approach to psychological strength development and intervention. *The Journal of Positive Psychology*, *6*(2), 106-118.

Bockorny, K. M. (2015). *Psychological capital, courage, and entrepreneurial success* (Doctoral dissertation, Bellevue University).

Cadwallader, S., Jarvis, C. B., Bitner, M. J., & Ostrom, A. L. (2010). Frontline employee motivation to participate in service innovation implementation. *Journal of the Academy of Marketing Science*, *38*(2), 219-239.

Daft, R. L., & Becker, S. W. (1978). *The innovative organization: Innovation adoption in school organizations*. Elsevier Publishing Company.

Dagher, G. K., Chapa, O., & Junaid, N. (2015). The historical evolution of employee engagement and self-efficacy constructs. *Journal of Management History,* *21,* 232–256

Demerouti, E., van Eeuwijk, E., Snelder, M., & Wild, U. (2011). Assessing the effects of a “personal effectiveness” training on psychological capital, assertiveness and self awareness using selfother agreement. *Career Development International*, *16*, 60 – 81

Dhir, R., & Sharma, V. (2020). Exploring dimensions of psychological capital through grounded theory investigations. *International Journal of Indian Culture and Business Management*, *20*(1), 109-132.

Dubreuil, P., Forest, J., & Courcy, F. (2014). From strengths use to work performance: The role of harmonious passion, subjective vitality, and concentration. *The Journal of Positive Psychology*, *9*(4), 335-349.

Dubreuil, P., Forest, J., Gillet, N., Fernet, C., Thibault-Landry, A., Crevier-Braud, L., & Girouard, S. (2016). Facilitating well-being and performance through the development of strengths at work: Results from an intervention program. *International Journal of Applied Positive Psychology*, *1*(1-3), 1-19.

Dulaimi, M. F., Ling, F. Y., & Bajracharya, A. (2003). Organizational motivation and inter-organizational interaction in construction innovation in Singapore. *Construction Management N,\*/ nd economics*, *21*(3), 307-318.

Ertosun, Ö. G., Erdil, O., Deniz, N., & Alpkan, L. (2015). Positive psychological capital development: A field study by the Solomon four group design. *International Business Research*, *8*(10), 102.

Fredrickson, B. L. (1998). What good are positive emotions?. *Review of general psychology*, *2*(3), 300-319.

Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American psychologist*, *56*(3), 218.

Hakanen, J. J., Perhoniemi, R., & Toppinen-Tanner, S. (2008). Positive gain spirals at work: From job resources to work engagement, personal initiative and work-unit innovativeness. *Journal of vocational behavior*, *73*(1), 78-91.

Han, Y., & Yang, B. (2011). Authentic Leadership, Psychological Capital and Employee Innovative Behavior: The Moderating Role of Exchange of Leaders Member. *Management World*, *12*, 78-86.

Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: *A meta-analysis. Journal of Applied Psychology, 87*(2), 268–279.

Hunter, S. T., Bedell, K. E., & Mumford, M. D. (2007). Climate for creativity: A quantitative review. *Creativity research journal*, *19*(1), 69-90.

Ibrahim, S. N. H., Suan, C. L., & Karatepe, O. M. (2019). The effects of supervisor support and self-efficacy on call center employees’ work engagement and quitting intentions. *International Journal of Manpower,40*(4),*688-703.*

Isen, A. M. (1999). On the relationship between affect and creative problem solving. *Affect, creative experience, and psychological adjustment*, *3*(17), 3-17.

Isen, A. M. (2000). Some perspectives on positive affect and self-regulation. *Psychological inquiry*, *11*(3), 184-187.

Jung, H. S., & Yoon, H. H. (2018). Improving frontline service employees' innovative behavior using conflict management in the hospitality industry: The mediating role of engagement. *Tourism Management*, *69*, 498-507.

Kahn, B. E., & Isen, A. M. (1993). The influence of positive affect on variety seeking among safe, enjoyable products. *Journal of Consumer Research*, *20*(2), 257-270.

Kalyar, M. N., & Kalyar, H. (2018). Provocateurs of creative performance: Examining the roles of wisdom character strengths and stress. *Personnel Review*.

Koerner, M.M. Courage as identity work: Accounts of workplace courage. Academy of Management, 2014, 57, 63–93.

Liu, Y., & Shi, J. T. (2009). A study on the relationship between the effects of the organizational innovative climate and those of motivational preference, on employees’ innovative behavior. *Management world*, *10*, 88-114.

Lukes, M., & Stephan, U. (2017). Measuring employee innovation: A review of existing scales and the development of the innovative behavior and innovation support inventories across cultures. *International Journal of Entrepreneurial Behavior & Research*, *23*(1), 136-158.

Luthans, F. (2002). Positive organizational behavior: Developing and managing psychological strengths. *Academy of Management Perspectives*, *16*(1), 57-72.

Luthans, F., & Youssef-Morgan, C. M. (2017). Psychological capital: An evidence-based positive approach. *Annual Review of Organizational Psychology and Organizational Behavior, 4,* 339–366.

Luthans, F., Avey, J. B., Avolio, B. J., & Peterson, S. J. (2010). The development and resulting performance impact of positive psychological capital. *Human resource development quarterly*, *21*(1), 41-67.

Luthans, F., Avolio, B. J., Avey, J. B., & Norman, S. M. (2007). Positive psychological capital: Measurement and relationship with performance and satisfaction. *Personnel psychology*, *60*(3), 541-572.

Luthans, F., Youssef, C. M., & Avolio, B. J. (2007). *Psychological capital: Developing the human competitive edge* (Vol. 198). Oxford: Oxford university press.

Luthans, F., Youssef, C. M., & Rawski, S. L. (2011). A tale of two paradigms: The impact of psychological capital and reinforcing feedback on problem solving and innovation. *Journal of Organizational Behavior Management*, *31*(4), 333-350.

Michael, L. H., HOU, S. T., & FAN, H. L. (2011). Creative self‐efficacy and innovative behavior in a service setting: Optimism as a moderator. *The Journal of Creative Behavior*, *45*(4), 258-272.

Money, K., Hillenbrand, C., & Da Camara, N. (2009). Putting positive psychology to work in organisations. *Journal of General Management*, 34(3), 21-36.

Park, S. Y., & Allen, J. P. (2013). Responding to online reviews: Problem solving and engagement in hotels. *Cornell Hospitality Quarterly*, *54*(1), 64-73.

Proctor, C., Tsukayama, E., Wood, A. M., Maltby, J., Eades, J. F., & Linley, P. A. (2011). Strengths gym: The impact of a character strengths-based intervention on the life satisfaction and well-being of adolescents. *The Journal of Positive Psychology*, *6*(5), 377-388.

Safdar, G.,Khan, A. W., Chaudhary, M.U. (2016). Adoption of Information Technology and its impact on electronic media. *Specialty Journal of Electronic and Computer Science, 2*(1), 15-21.

Safdar, G.,Khan, A.W. (2017). Ethical Implications in Human Resource Management: A Case Study of Media Channels of Pakistan. *Journal of Ulum-e-Islamia, 23*(1), 11-18.

Sameer, Y. M. (2018). Innovative behavior and psychological capital: Does positivity make any difference? *Journal of Economics & Management*, *32*, 75-101.

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study*. Educational and psychological measurement, 66*(4), 701-716*.*

Scheier, M. F., & Carver, C. S. (1985). Optimism, coping, and health: assessment and implications of generalized outcome expectancies. *Health psychology, 4*(3), 219.

Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behavior: A path model of individual innovation in the workplace. *Academy of management journal*, *37*(3), 580-607.

Seligman, M. E. (1998). Building human strength: Psychology's forgotten mission. APA Monitor, January, 2.

Seligman, M. E. (2007). Coaching and positive psychology. *Australian Psychologist*, *42*(4), 266-267.

Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist, 55*(1), 5-14.

Seligman, M. E., & Csikszentmihalyi, M. (2014). Positive psychology: An introduction. In *Flow and the foundations of positive psychology* (pp. 279-298). Springer, Dordrecht.

Seligman, M. E., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress: empirical validation of interventions. *American psychologist*, *60*(5), 410.

Shabir, G., Ghani, B., Safdar, G.(2013). Role of Pro-activity in Career Management Practices. *Pakistan Journal of Social Sciences (PJSS), 33*(2), 471-483.

Shabir, G., Ghous, S., Safdar, G.(2017). Violation of Consumer Rights by Electronic Media Through Advertisements. *New Media and Mass Communication, 57*, 35-39.

Shabir, G., Safdar, G.,Hussain, T., Imran, M., Seyal, A.M. (2015). Media Ethics: Choosing the Right Way to Serve. *Research on Humanities and Social Sciences, 5*(3), 80-85.

Shabir, G., Safdar, G.,Imran, M., Seyal, A.M., Anjum, A.A. (2015). Process of Gate Keeping in Media: From Old Trend to New. *Mediterranean Journal of Social Sciences, 6*(1S1), 588-593.

Shalley, C. E., & Gilson, L. L. (2004). What leaders need to know: A review of social and contextual factors that can foster or hinder creativity. *The leadership quarterly*, *15*(1), 33-53.

Sun, Y., & Huang, J. (2019). Psychological capital and innovative behavior: Mediating effect of psychological safety. *Social Behavior and Personality: an international journal*, *47*(9), 1-7.

Sweetman, D., & Luthans, F. (2010). The power of positive psychology: Psychological capital and work engagement. *Work engagement: A handbook of essential theory and research*, *54*, 68.

Wernsing, T. (2014). Psychological capital: A test of measurement invariance across 12 national cultures. *Journal of Leadership & Organizational Studies*, *21*(2), 179-190.

West, M. A., & Anderson, N. R. (1996). Innovation in top management teams. *Journal of Applied psychology*, *81*(6), 680.

Wright, T. A. (2003). Positive organizational behavior: An idea whose time has truly come. *Journal of Organizational behavior*, *24*(4), 437-442.

Youssef-Morgan, C. M., & Luthans, F. (2015). Psychological capital and well-being. *Stress and health, 31,* 180–188.

Yu, X., Li, D., Tsai, C. H., & Wang, C. (2019). The role of psychological capital in employee creativity. *Career Development International*, *24* (5),420-437.