

Do psychological and sociological capitals predict employee engagement

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ABSTRACT

Employee engagement is a concept that is capable of predicting various employee outcomes. It could directly influence the success of any organization and its overall financial performance. The present study was undertaken to determine the relationship between Psychological and Social capitals and employee engagement. Data for the study was collected randomly from 395 respondents. Structural equation modeling was used to analyze the collected data. The data was found to be powerfully fitting, with all the indices having values above the thumb's identified rules. The results indicated positive relationships between the constructs. The results of the study have multiple theoretical and practical implications.

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1. Introduction

Employee engagement (EE) is the emotional and intellectual commitment that an individual, as an employee, feels towards his/her respective organization (Richman, 2006; Saks, 2006). It is also considered as the discretionary effort of employees displayed at the workplace (Frank et al., 2004). It could also include various actions undertaken to safeguard the organization's success. Engaged employees demonstrate complete care, deep dedication, profound enthusiasm, extreme accountability, and focus on results. EE could predict various employee outcomes, organization success, and overall financial performance (Richman, 2006). EE's antecedents and consequences have been a matter of deep empirical interest (Saks, 2006). It is something that organizations worldwide are trying to inculcate in employees, and senior executives consider their top business priority (Welbourne, 2007). Due to EE's advantages, and to a certain extent, its indispensability, social scientists, and management experts have been keen to identify its antecedents. This has led to a massive accumulation of literature about EE (Sandhya & Sulphey, 2020). Despite the exceptional surge in literature and interest and efforts towards improving EE, there still exists a certain degree of disagreement as to what it is, how to achieve it, and how to know when it is achieved (Welbourne, 2007). Substantial evidence exists to show the positive influence of EE on employee attitudes, behavior, and individual and organizational outcomes/performance (Sandhya & Sulphey, 2020; Schaufeli & Bakker, 2004; Shuck & Wollard, 2010). Evidence suggests that EE can enhance positive attitudes like job satisfaction (Hakanen & Schaufeli, 2012), conscientiousness (Kim et al., 2009), and innovative behaviors (Slatten & Mehmetoglu, 2011). Employees having EE are also likely to have a deep sense of psychological meaningfulness (Kahn, 1990; Resick et al., 2007) and are found to accomplish tasks with passion (Harter et al., 2003). It is also found to have a negative relationship with absenteeism (Schaufeli & Bakker, 2004), turnover intention (Agarwal et al., 2012; Sandhya & Sulphey, 2020); deviant workplace behaviors (Shantz et al., 2014), and the like. Though substantial literature exists concerning the consequences of EE, very few exist for its antecedents (Karrasch, 2003; May et al., 2002; Saks, 2006; Shuck et al., 2011). A few precursors identified include job fit (Shuck et al., 2011), affective commitment (Hoffman & Woehr, 2006; Robinson et al., 2004; Shuck & Rocco, 2011), job characteristics (Saks, 2006), etc.

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Ye et al., (2007) found cost control and revenue enhancement to be positively related to EE. However, certain other antecedent factors like Psychological and Sociological capitals seem to have not been empirically examined. Based on this literature gap, the following research questions are sought to be answered: Do Psychological and Sociological capitals related to EE? Based on the research question, the study's objective is to determine the relationship between PsyCap and Sociological capital on EE.

1.1. Review of literature

EE appeared on the management scene and literature not long back. Its birth occurred reasonably recently due to the drastic shift in employers' expectations before and after the 1980s. Earlier to the 1980s, employers expected employees to be loyal to the organization. In return to unstinted employee loyalty and commitment, employers offered job security and lifetime employment. All these changed by the end of the 1980s. It is then that organizational behaviourists and social scientists started looking at workplace relationships from a different perspective (Sandhya and Sulphey, 2020; Sulphey, 2020; Welbourne, 2007). After that, positive psychology constructs like EE, Psychological contract, Psychological capital (PsyCap), etc. emerged. This section, which is divided into three, presents relevant literature about EE, PsyCap, and Social capital constructs.

1.2. EE

EE is one construct associated with employee performance (Knight et al., 2017). It has been defined in various ways. Schaufeli et al., (2002, p. 74) defined as the "positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption". According to hem, it is a persistent and pervasive affective-cognitive state. According to Saks (2006), it is:

"a distinct and unique construct that consists of cognitive, emotional, and behavioral components associated with individual role performance".

Bakker (2011) states that it is "a measure of the levels of vigor, dedication, and absorption in work among employees". Engaged employees facilitate individual and organizational outcomes. They are observed to be healthy emotionally and have a higher level of wellbeing (Fredrickson, 2009). Shuck and Wollard (2010 p. 103) identified EE as "an individual employee's cognitive, emotional, and behavioral state directed toward desired organizational outcomes". Perceived organization support and person-organization were found to be antecedents of EE (Biswas & Bhatnagar, 2013). Albrecht (2012) identified organizational, team, and job resources, in addition to job-demand resources, to enhance EE. Partly agreeing with study Gan and Gan (2014) found job resources to predict burnout and engagement. Similarly, Sawang (2012) found job demands to be a positive driver of EE. Azoury et al. (2013) and Karatepe (2013) found work practices like employee empowerment and appropriate compensation to create a synergy form that could trigger EE. A few other studies, for instance, Slatten & Mehmetoglu (2011), Slattery et al. (2010), and Xu and Thomas (2010), found job characteristics enable better autonomy and resultant EE. Assertiveness and persistence were positively and neuroticism to negatively influence EE by Woods and Sofat (2013). Kim et al. (2009) identified conscientiousness to be a strong driver of EE. Leadership style and EE has also been a subject of investigation of many social scientists (Breevaart et al., 2014; Jorge and van Dierendonck, 2014; Sarti (2014) Zhang et al. (2014). Identifying the particular style, servant leadership style was found to be positively related to EE by Jorge and van Dierendonck (2014) and De Clercq et al. (2014). Compensation and psychological climate were found to significant association with EE by Azoury et al. (2013). A study by Alkahtani et al. (2020a) using regression analysis found PsyCap to be positively related to EE. The same relationship was also observed with Sociological capital.

1.3. PsyCap

Though of recent origin, PsyCap has been a subject matter of deep empirical interests (Grover et al., 2018; Luthans et al., 2007; Luthans & Avey, 2014; Stajkovic, 2006). Considered as a "higher-order" construct and a positive psychological state, it is defined as the "positive appraisal of circumstances and probability for success based on motivated effort and perseverance" (Luthans et al., 2007, p. 550). It is considered to have four overlapping components of hope, efficacy, optimism, and resilience (Luthans and Youssef, 2004). A brief discussion of the four constructs are now provided:

1. Hope, is the "positive motivational state that is based on an interactively derived sense of successful (a) agency (goal directed energy) and (b) pathways (planning to meet goals)" (Snyder et al., 1991, p. 287).
2. Efficacy is "the employee's conviction or confidence about his or her abilities to mobilize the motivation, cognitive resources, or courses of action needed to successfully execute a specific task within a given context." (Stajkovic and Luthans, 1998, p. 66).
3. Optimism as "a positive outcome outlook or attribution of events, which includes positive emotions and motivation and has the caveat of being realistic" (Luthans, 2002).
4. Resiliency is the "positive psychological capacity to rebound, to 'bounce back' from adversity, uncertainty, conflict, failure, or even positive change, progress, and increased responsibility" (Luthans, 2002, p. 702).

PsyCap has been found to influence various workplace attitudes and behaviors (AlKahtani et al., 2020b; Choi & Lee, 2014). A few of them include innovation, creativity, motivation, commitment, organizational citizenship behavior, EE, to name a

few (Abbas & Raja, 2011; Norman et al., 2010; Sweetman et al., 2011; Simons & Buitendach, 2013; Soni & Rastogi, 2019). The capability of PsyCap to enhance employee performance through positive cognition and motivation have been identified by many social scientists and management experts (Choi & Lee, 2014; Luthans, et al., 2007; Walumbwa et al., 2010).

1.4. Workplace social capital

The workplace is a social organization with abundant social capital. Recently, considerable empirical interest is evidenced by understanding the role of social capital in determining workplace health (Kawachi et al., 1999). Social capital is considered an elusive construct, and there is a lack of consensus concerning its conceptualization (Sato, 2013). Putnam (2000) conceptualized it as a feature of social organization. It could include aspects like trust, norms, and networks, the coordinated actions of which could improve efficiency. Lin (2001, pp. 29) defines it as a “resources embedded in a social structure that are accessed and/or mobilized in purposive actions”. Bourdieu (1986, pp. 51) defined it as:

“the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition”.

Workplace social capital is related to multiple work-related outcomes. It has been found related to depression (Oksanen et al., 2010), employee engagement (Fujita et al., 2016; Meng et al., 2018; Stromgren et al., 2016), and negatively related to constructs like depression (Oksanen et al., 2010), emotional exhaustion (Kowalski et al., 2010), etc. It is also found to enhance trust and recognition (Stromgren et al., 2016; Suzuki et al., 2010), social cohesion (Stromgren et al., 2016). Though it has found that interventions to enhance workplace social capital could improve employee wellbeing, only a few studies have this relationship (Sun et al., 2014). Substantial empirical evidence exists about the positive effects of workplace social capital on employee health (Oksanen et al., 2010; Sato, 2013). Better workplace social capital will bring in seamless communication, better teamwork, and enhanced information, support, and resources (Oksanen et al., 2010). This, in turn, will facilitate employee wellbeing, better retention and cooperation between members, and resultant positive organizational outcomes (Firouzbakht et al., 2018).

2. Methodology

The study has used a cross-sectional study design that is quantitative to address the research questions. This particular design would be ideal to answer the research question and to address the objectives identified for the study.

2.1. Data collecting instruments

The study used a set of three questionnaires for the collection of the data. Samples were limited to employees who were gainfully employed in one form or the other. A group of three standardized questionnaires were used to collect data. A separate section that elicited demographics was also included. This section elicited information like gender, age, experience, and the like. The details of the questionnaire used for the study are as under:

1. **PsyCap:** This was measured with the help of PsyCap Questionnaire (PCQ 12) was developed by (Luthans, Avolio, Avey, and Norman, 2007b). The questionnaire consists of 12 items under four dimensions.
 - a. Self-efficacy – three items,
 - b. Hope – four items.
 - c. Resilience – three items
 - d. Optimism – two items.

The total of all the items forms PsyCap. The Cronbach’s alpha reported for the scale was 0.90. A sample item is “*I always look on the bright side of things regarding my job*”.

2. **Workplace Social capital:** The scale developed and standardized by Firouzbakht, Tirgar, Ebadi, Nia, Oksanen, Kouvonen, and Riahi (2018) was used to measure workplace social capital. The scale consists of eight items. A sample item is “*People feel understood and accepted by each other.*”
3. **Employee engagement:** To measure employee engagement, the UWES-3 scale developed by Schaufeli, Shimazu, Hakanen, Salanova, and De Witte (2017) was used. The tool was standardized on global populations. The scale has very strong cross-national reliability and validity. The authors reported alphas of 0.90 and above across the globe. A sample item of the scale is “*I am enthusiastic about my job*”.

All the tools used for the study were on a five-point scale ranging from Totally agree to Totally disagree. Since the study was conducted in Saudi Arabia, an Arabic translated version was used for a better understanding of the respondents. This was done through the back-translation method, as stipulated by Brislin (1980). Google docs were used to collect data. The link of the Google docs was posted on different social media groups of employees. A total of 395 responses were collected through a data collection process that extended around four months. Since all the Google docs items were compulsory, all reactions were complete in all respects and hence ideal to be analyzed. According to Krejcie and Morgan (1970), 384 would be an

appropriate sample size for a population of one million. Thus, the adequacy of the sample can be well assumed. The Kaiser-Meyer-Olkin (KMO) was also used to assess the adequacy of sampling (Kaiser, 1970). The KMO value turned out to be 0.835. The Bartlett's Test of Sphericity was significant at 0.000, with a value of 1714.455. Thus, the sample collected for the study is adequate. The sample was also diverse. While 44.6 percent were males, 55.4 percent were females. Concerning marital status, 75.9% percent were married, 19.5 percent unmarried, and the balance (4.6 percent) divorced. The minimum age was 19 years. The maximum age of the respondents stood at 61 years. The average age was 41 years. The experience of the respondents also varied drastically. I was a minimum of less than a year and a maximum of 40. The mean experience of the respondents was 13.5 years.

2.2. Reliability and validity

Reliability and validity were assessed with confirmatory factor analysis (CFA) (Byrne, 2013). The results of the CFA model are provided below:

2.2.1. Confirmatory factor analyses

CFA helped to examine the factor structure of the constructs identified for the study. The results obtained from CFA were above the prescribed rules of thumb. This is an indication that the data of the study fits perfectly. The details of CFA and the respective citations are provided in Table 1.

Table 1
Model fit indices

Index	Recommended value	Model value	Citation
χ^2/df		17.234	
Goodness of fit index (GFI)	Greater than 0.900	0.937	Hair, Black, Babin and Anderson (2010)
Adjusted goodness of fit index (AGFI)	Greater than 0.800	0.818	Gefen, Karahanna, and Straub (2003)
Incremental fit index (IFI)	Greater than 0.900	0.919	Davey and Savla (2010)
Comparative fit index (CFI)	Greater than 0.900	0.988	Bentler (1992), Hair et al. (2010)
Root mean square error of approximation (RMSEA)	Less than 0.050	0.0434	Diamantopoulos and Siguaaw (2000), Hu and Bentler (1999)

Convergent validity assesses the extent to which a particular measure correlates positively with the construct's other measures. This validity can be assessed through average variance extracted (AVE) and the respective item loadings (Hair, Hult, Ringle, and Sarstedt, 2016). The average variances that are shared between the construct and its measures are termed AVE. As per the thumb rule, any AVE value equal to or over and above 0.50 is acceptable (Hair et al., 2016; Barclays et al., 1995). From Table 2 it can be observed that no AVEs values are below the stipulated value of 0.05. This indicates good AVE. The details of the convergent validity are provided in Table 2.

Table 2
Convergent Validity: Standardized Regression Weights: (Group number 1 - Default model)

Item	Variable	Item reliability	Error (Delta) = (1 - item reliability)	AVE	Estimate sum	Sum of Error (Delta)	CR
H1 ←	Hope	0.585	0.415	0.679	3.287	1.284	0.894
H2 ←		0.621	0.379				
H3 ←		0.658	0.342				
H4 ←		0.852	0.148				
E1 ←	Efficiency	0.578	0.422	0.630	2.373	1.111	0.835
E2 ←		0.539	0.461				
E3 ←		0.773	0.227				
R1 ←	Resilience	0.748	0.252	0.582	2.277	1.253	0.805
R2 ←		0.460	0.540				
R3 ←		0.539	0.461				
O1 ←	Optimism	0.962	0.038	0.787	1.763	0.426	0.879
O2 ←		0.612	0.388				
SC1 ←	Social capital	0.590	0.410	0.598	6.178	3.218	0.922
SC2 ←		0.621	0.379				
SC3 ←		0.506	0.494				
SC4 ←		0.591	0.409				
SC5 ←		0.621	0.379				
SC6 ←		0.552	0.448				
SC7 ←		0.585	0.415				
SC8 ←		0.716	0.284				
EE1 ←	Employee engagement	0.745	0.255	0.751	2.599	0.748	0.900
EE2 ←		0.748	0.252				
EE3 ←		0.759	0.241				

Composite reliability (CR) is a superior reliability estimation than the traditional Cronbach Alpha, as it assesses the internal consistency of the variables (Fornell & Larcker, 1981). CR 0.70 is considered robust by Hair, Hult, Ringle, and Sarstedt (2016) and Henseler and Sarstedt (2013). It can be seen from Table 2 that all CR values exceed the prescribed 0.70. This is an indication of reliability. Discriminant validity tests whether a concept is not highly correlated with other tests that are ordinarily designed to measure theoretically different concepts. It highlights the uniqueness of a particular construct and confirms that a specific construct is not in any manner reprehensive of other constructs in the model (Hair et al., 2016). Though no standard value is prescribed towards discriminant validity, any value less than 0.85 enjoys discriminant validity. If the value is higher than 0.85, it is considered that there is an overlap between the two constructs, and they are assumed to measure the same aspect. The details of discriminant validity are presented in Table 3. It is an indication that a particular construct is sharing more variance than with any other construct within the model (Hulland, 1999).

Table 3
Discriminant Validity

			Estimate = Internal Correlation (IC)	SIC = Square of Internal Correlation
Hope	↔	PsyCap	0.311	0.097
Efficiency	↔	PsyCap	0.342	0.117
Resilience	↔	PsyCap	0.021	0.001
Optimism	↔	PsyCap	0.231	0.053
Social capital	↔	PsyCap	0.011	0.001
PsyCap	↔	Employee engagement	0.124	0.015
Social capital	↔	Employee engagement	0.321	0.011

To assess discriminant validity, the comparison needs to be made between the correlations of the variables and the square root of AVE (Fornell & Larcker, 1981). For discriminant validity to be present, AVE's squared root has to be of a higher value than the highest correlation of the constructs (Hair et al., 2016). The details are presented in Table XX. The square roots of AVE are provided in the diagonal of the correlation matrix. From the table, it can be observed that none of the r value is greater than 0.70 (Anderson and Gerbing, 1988). The r values are less than the diagonal values (square roots of AVE), which is as per the stipulation of Fornell and Larcker (1981). It can thus be seen that all results are in line with the rules of thumb, presenting a picture of discriminant validity (Fornell & Larcker, 1981; Hair et al., 2016). In addition to this, all Cronbach's Alpha values exceeded 0.70, which is as per the stipulations of Nunnally and Bernstein (1978). This confirms the reliability. For a better view, the convergent and discriminant validities are presented in a single table (Table 4).

Table 4
Convergent and Discriminant validities

Factors	Convergent Validity		Discriminant Validity								
	CR	AVE	SIC (Squared Inter Correlation)								
Hope	0.894	0.564	1.000								0.811
Efficiency	0.835	0.602	0.247	1.000							0.765
Resilience	0.805	0.678	0.094	0.066	1.000						0.891
Optimism	0.879	0.670	0.306	0.316	0.095	1.000					0.761
PsyCap	0.811	0.520	0.044	0.059	0.003	0.053	1.000				0.894
SC	0.922	0.674	0.071	0.071	0.077	0.119	0.076	1.000			0.975
EE	0.900	0.711	0.098	0.089	0.098	0.035	0.098	0.076	1.000		0.807

2.3. Results of the study

The measurement model having been validated using CFA, the Structural Equation Modelling (SEM) was done with the package using *semopy*, in the *Python* platform (Igolkina & Meshcheryakov, 2020), with a view of assessing the relationships among the variables and test the various hypothesis formulated for the study.

2.3.1. Structural Equation Modelling

SEM was used to analyze that data as it has the advantage of being comprehensive. It tests the extensive and simultaneous associations between the variables (Tabachnick and Fidell, 2007). SEM also evaluates the measurement as well as structural models regarding predictive validity (Becker et al., 2013). It does the testing of theories involving multiple equations regarding dependence relationships (Hair et al., 2010). Since the present study involves numerous variables, SEM is ideal for addressing research questions.

2.3.2. Path analysis

The structural model made based on the analysis is provided in Fig. 1. The figure presents the relationships among the different constructs.

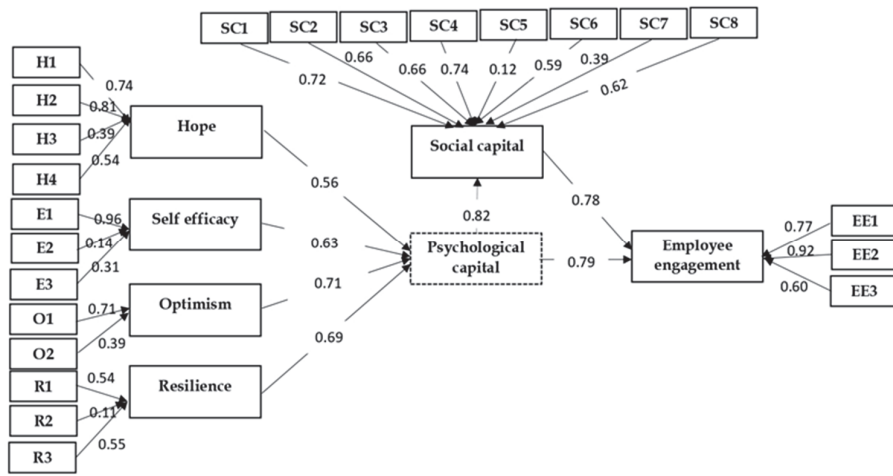


Fig. 1. Structural model

The results of the SEM and the path coefficients are presented in Table 4. Two out of three main relationships were found to be statistically significant at conventional levels ($p < 0.05$). The details are presented in Table 5.

Table 5
Structural equation modeling results

	Hypothesis	Standardized Path Coefficient	t-value	Result
H5	Social capital → PsyCap	0.411***	6.75	Supported
H6	PsyCap → Employee engagement	0.218***	5.44	Supported
H7	Social capital → Employee engagement	0.543***	7.65	Supported

The β coefficients of independent variables on the dependent variables and the t-statistic about the path estimates have been obtained. According to Aibinu and Al-Lawati (2010), higher values of β suggest the independent variable's robust effect on the dependent variables. The t-statistics tests the significance of β values. The significance of all the path coefficients are significant based on Hair et al., (2016). The details of the path analysis are presented in Fig. 2.

From table 5 it can be observed that all the three hypotheses formulated for the study are supported. This signifies significant positive relationships at 0.005 level for the respective constructs. The robust t-values show the strong effect of the model's paths and the strengths of the relationship between the constructs (Hair et al., 2016). The β values for all the constructs have $p < 0.005$. These values indicate reasonably good acceptance (Akter, D'Ambra, & Ray, 2011; Lleras, 2005; Lu, 2014).

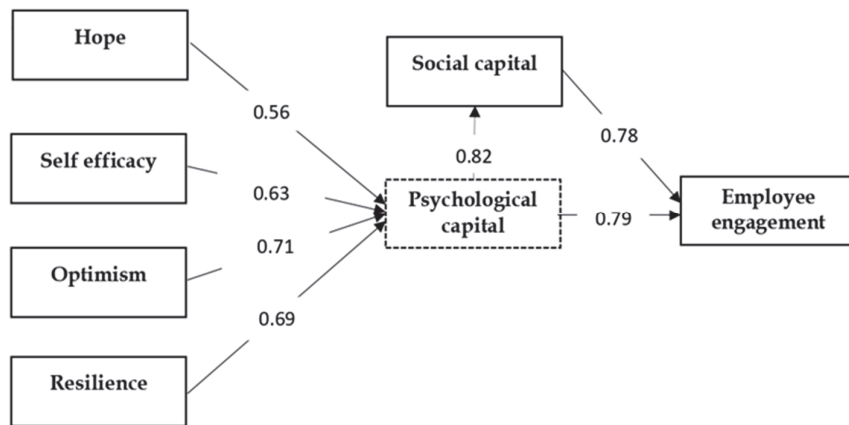


Fig. 2. Path analysis

From the analysis, it can be inferred that PsyCap has a significant positive relationship with Social capital and EE. Social capital also has the same relationship with EE.

3. Discussion and Conclusion

The study was undertaken to examine if psychological and social capitals predict EE. Though many studies have been undertaken to explore the antecedents and consequences of PsyCap (Al-Kahtani et al., 2020), this is the first such study that examined its relationship with Social Capital and EE in the kingdom of Saudi Arabia. Saudi Arabia has a culture which is unique in itself. The culture is strongly based on patriarchy and collectivism (Sulphey & Al-Kahtani, 2018; Sulphey & Salim, 2020). Thus, the current study can be considered highly relevant and is a fresh addition to management literature.

There is a definite need for organizations to focus on constructs that can contribute towards employee engagement. Though there is adequate literature about PsyCap and EE, only a few studies have examined social capital (Firouzbakht et al., 2018) as an antecedent of EE. This is the main contribution of the present article. The findings of the study have numerous theoretical and practical implications. The main implications are that Psychological and Social capitals do have a positive relationship with EE. The capability of PsyCap to aid management practices, as it has investigated the role of PsyCap in making the workplace more meaningful and enhancing the level of employee engagement. PsyCap, a construct that can be developed, can help make workplaces meaningful and pleasurable (Choi and Lee, 2014). This construct, combined with social capital, can facilitate in enhancing the engagement level of employees. The finding of this study has importance and applicability across multiple cultural and social backgrounds.

3.1. Implications

There is ample proof that PsyCap can be developed with short interventions (Luthans et al., 2008a b; Luthans et al., 2010). The present study has identified that PsyCap could influence social capital and engagement positively. This is the first study in Saudi Arabia to determine the relationship between these constructs. The constructs studied those that are capable of having a positive organizational climate. A favorable environment is now essential in the present situation, wherein organizations are struggling to cope with the new normal. Focussing on PsyCap could help managements to tackle the changed harsh conditions effectively and rebuild their organizations.

This study also presents multiple practical implications and new directions for organizations to enhance employee engagement levels. PsyCap could be used to influence engagement and social capital, both of which would go a long way in bringing in an ideal organizational climate and positive attitude among members. These findings could be a pointer that could help managers in making their organizations more effective, productive, and socially acceptable.

3.2. Limitations and scope for further research

There could be various other personality traits that could influence the variables that were studied. There could be extreme variations between individuals concerning personality (Barrick et al., 2001), self-evaluations (Judge and Bono, 2001), the general outlook (Bakker and Schaufeli, 2008), attitude towards various organizational variables (Jose & Mampilly, 2014), psychological contract (AlKahtani et al., 2020; Naidoo et al., 2019), intention to leave (Sandhya & Sulphey, 2020), etc. Future research could consider these variables and attempt to control them while examining their impacts. Further, the data for the present study were collected only from Saudi Arabia. As such, the possible impact that culture could have on the variable was not examined. Future studies could examine this aspect too.

This present study was conducted in the context of Saudi Arabia. The results of the study would have been influenced by the unique culture existent in the kingdom. It has succeeded substantially in contributing to behavioral literature in general, and in the context of PsyCap and social capital in particular. There is, however, a need to ascertain the generalizability of the findings in diverse cultures. This opens up other vistas for future research in this fecund area. The present study, it is expected, will trigger more empirical examinations in this area.

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References

- Abbas, M., & Raja, U. (2011). *Impact of Psychological Capital on Innovative Performance and Job Stress*. In 15th International Business Research Conference.
- Agarwal, U. A., Datta, S., Blake-Beard, S., & Bhargava, S. (2012). Linking LMX, innovative work behaviour and turnover intentions: The mediating role of work engagement. *Career Development International*, 17(3), 208-230.
- Aibinu, A. A., & Al-Lawati, A. M. (2010). Using PLS- SEM technique to model construction organization's willingness to participate in e-bidding. *Automation in Construction*, 19(6), 714-724, DOI: 10.1016/j.outcome. 2010.02.016.

- Akter, S., D'Ambra, J. & Ray, P. (2011). Trustworthiness in health information services: an assessment of a hierarchical model with mediating and moderating effects using partial least squares (PLS). *Journal of the American Society for Information Science and Technology*, 62(1), 100-116.
- Albrecht, S. L. (2012). The influence of job, team and organizational level resources on employee wellbeing, engagement, commitment and extra-role performance: Test of a model. *International Journal of Manpower*, 33(7), 840-853.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411-423. <https://doi.org/10.1037/0033-2909.103.3.411>
- Azoury, A., Daou, L., & Sleiaty, F. (2013). Employee engagement in family and non-family firms. *International Strategic Management Review*, 1(1), 11-29.
- Bakker, A. B. (2011). An evidence-based model of work engagement. *Current Directions in Psychological Science*, 20(4), 265-269. <https://doi.org/10.1177/0963721411414534>
- Barclay, D., Thompson, R., & Higgins, C. (1995). The Partial Least Squares (PLS) Approach to Causal Modeling: Personal Computer Adoption and Use an Illustration, *Technology Studies*, 2(2), 285-309.
- Barrick, M. R., Mount, M. K., & Judge, T. A. (2001). Personality and performance at the beginning of the new millennium: What do we know and where do we go next?. *International Journal of Selection and Assessment*, 9(1-2), 9-30.
- Becker, J.-M., Rai, A., Ringle, C. M., & Völckner, F. (2013). Discovering Unobserved Heterogeneity in Structural Equation Models to Avert Validity Threats. *MIS Quarterly*, 37(3), 665-694.
- Bentler, P. M. (1992). On the fit of models to covariances and methodology to the bulletin. *Psychological Bulletin*, 112, 400-404.
- Biswas, S., Bhatnagar, J. (2013), Mediator analysis of employee engagement: role of perceived organisational support, P-O fit, organizational commitment and job satisfaction, *Vikalpa: The Journal for Decision Makers*, 38(1), 27-40.
- Bourdieu, P. (1986). The forms of capital. In: Richardson JE (ed.) *Handbook of Theory of Research for the Sociology of Education*. New York: Greenwood Press.
- 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.
- Choi, Y. and Lee, D. (2014). Psychological capital, Big Five traits, and employee outcomes. *Journal of Managerial Psychology*, 29(2), 122-140. [DOI 10.1108/JMP-06-2012-0193](https://doi.org/10.1108/JMP-06-2012-0193)
- Davey, A., & Savla, J. (2010). *Statistical power analysis with missing data: A structural equation modelling approach*. New York: Routledge Taylor and Francis Group.
- De Clercq, D., Bouckennooghe, D., Raja, U., & Matsyborska, G. (2014). Servant Leadership and Work Engagement: The Contingency Effects of Leader-Follower Social Capital. *Human Resource Development Quarterly*, 25(2), 183- 212.
- Diamantopoulos, A. & Siguaw, J.A. (2000). *Introducing LISREL*, Sage Publications.
- Firouzbakht, M., Tirgar, A., Ebadi, A., Nia, H. S., Oksanen, T., Kouvonen, A., and Riahi, M. E. (2018). Psychometric properties of Persian version of the short-form workplace social capital questionnaire for female health workers. *International Journal of Occupational Environmental Medicine*, 9, 184-193. doi: 10.15171/ijoem.2018.1264
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39-50. <https://doi.org/10.2307/3151312>
- Frank, F.D., Finnegan, R. P., & Taylor, C. R. (2004). The race for talent: retaining and engaging workers in the 21st century. *Human Resource Planning*, 27(3), 12-25.
- Fredrickson, B. (2009). *Positivity: Groundbreaking research reveals how to embrace the hidden strength of positive emotions, overcome negativity, and thrive*. Crown Publishers/Random House.
- Fujita, S., Kawakami, N., Ando, E., Inoue, A., Tsuno, K., Kurioka, S. & Kawachi, I. (2016). The association of workplace social capital with work engagement of employees in health care settings: A multilevel cross-sectional analysis. *Journal of Occupational and Environmental Medicine*, 58, 265-271.
- Gan, T., & Gan, Y. (2014). Sequential development among dimensions of job burnout and engagement among IT employees. *Stress and Health*, 30(2), 122-133.
- Gefen, D., Karahanna, E. and Straub, D.W. (2003) Trust and TAM in Online Shopping An Integrated Model. *MIS Quarterly*, 27, 51-90.
- Grover, S. L., Teo, S. T., Pick, D., Roche, M., & Newton, C. J. (2018). Psychological capital as a personal resource in the JD-R model. *Personnel Review*, 47, 968-984. <https://doi.org/10.1108/PR-08-2016-0213>
- Hair Jr, J. F., Hult, G. T. M., Ringle, C., and Sarstedt, M. (2016). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage publications.
- Hair, Jr., J. F., Black, W. C., Babin, B. J., and Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Upper saddle River, New Jersey: Prentice Hall.
- Hakanen, J. J. and Schaufeli, W. B. (2012) Do Burnout and Work Engagement Predict Depressive Symptoms and Life Satisfaction? A Three-Wave Seven-Year Prospective Study. *Journal of Affective Disorders*, 141, 415-424. <https://doi.org/10.1016/j.jad.2012.02.043>
- Harter, J. K., Schmidt, F. L., & Keyes, C. L. (2003). Wellbeing in the workplace and its relationship to business outcomes: A review of the Gallup studies. *Flourishing: Positive psychology and the life well-lived*, 2, 205-224.
- Hoffman, B. J., & Woehr, D. J. (2006). A quantitative review of the relationship between person- organization fit and behavioral outcomes. *Journal of Vocational Behavior*, 68(3), 389-399.

- Hu, L. T., & Bentler, P. M. (1999). Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria versus New Alternatives. *Structural Equation Modeling*, 6, 1-55. <http://dx.doi.org/10.1080/10705519909540118>
- Hulland, J. (1999). Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic Management Journal*, 20, 195-204.
- Igolkina, A. A., & Meshcheryakov, G. (2020). semopy: A Python Package for Structural Equation Modeling. *Structural Equation Modelling: A Multidisciplinary Journal*. 1–15.
- Jorge Correia de Sousa, M., & van Dierendonck, D. (2014). Servant leadership and engagement in a merge process under high uncertainty. *Journal of Organizational Change Management*, 27(6), 877-899.
- Jose, G., & Mampilly, S. R. (2014). Psychological Empowerment as a Predictor of Employee Engagement: An Empirical Attestation, *Global Business Review*, 15(1), 93-104.
- Kahn, W. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, 33, 692–724.
- Kaiser, H.F. (1970) A second generation little jiffy. *Psychometrika*, 35, 401-415.
- Karatepe, O. M. (2013). High-performance work practices and hotel employee performance: The mediation of work engagement. *International Journal of Hospitality Management*, 32, 132-140.
- Karrasch, A.I. (2003). Antecedents and consequences of organizational commitment. *Military Psychology*, 15(3), 225-36.
- Kawachi, I., Kennedy, B. P., and Glass, R. (1999). Social capital and self-rated health: a contextual analysis. *American Journal of Public Health*, 89, 1187-1193.
- Kim, H. J., Shin, K. H., & Swanger, N. (2009). Burnout and engagement: A comparative analysis using the Big Five personality dimensions. *International Journal of Hospitality Management*, 28(1), 96-104.
- Knight, C., Patterson, M., & Dawson, J. (2017). Building work engagement: A systematic review and meta-analysis investigating the effectiveness of work engagement interventions. *Journal of Organizational Behavior*, 38(6), 792–812.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607–610.
- Lin, N. (2001). *Social Capital: A Theory of Social Structure and Action*. Cambridge: Cambridge University Press.
- Lleras, C. (2005) Path analysis. *Encyclopedia of Social Measurement*, 3, 25-30.
- Lu, J. 2014. Are personal innovativeness and social influence critical to continue with mobile commerce? *Internet Research*, 24 (2), 134–59. doi:10.1108/intr-05-2012-0100.
- May, D. R., Gilson, R. L., & Harter, L. M. (2004). The psychological conditions of meaningfulness, safety, and availability and the engagement of the human spirit at work. *Journal of Occupational Psychology*, 77, 11-37.
- Naidoo, V., Abarantyne, I., & Rugimbana, R. (2019). The impact of psychological contracts on employee engagement at a university of technology. *SA Journal of Human Resource Management*, 17(0), a1039. <https://doi.org/10.4102/sajhrm.v17i0.1039>
- Norman, S.M., Avey, J.B., Nimnicht, J.L., & Pigeon, N. G. (2010). The interactive effects of psychological capital and organizational identity on employee organizational citizenship and deviance behaviors, *Journal of Leadership and Organizational Studies*, 17(4), 380-391
- Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory*. New York: McGraw-Hill.
- Oksanen, T., Kouvonen, A., Vahtera, J., Virtanen, M., & Kivimäki, M. (2010). Prospective study of workplace social capital and depression: are vertical and horizontal components equally important?. *Journal of Epidemiology & Community Health*, 64(8), 684-689.
- Putnam, R. D. (2000). *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon and Schuster.
- Resick, C. J., Baltés, B. B., & Shantz, C. W. (2007). Person-organization fit and work-related attitudes and decisions: Examining interactive effects with job fit and conscientiousness. *Journal of Applied Psychology*, 92, 1446-1455.
- Richman, A. (2006). Everyone wants an engaged workforce how can you create it? *Workspan*, 49, 36-39.
- Robinson, D., Perryman, S. and Hayday, S. (2004), *The Drivers of Employee Engagement*, Institute for Employment Studies, Brighton.
- Saks, A. M. (2006). Antecedents and consequences of employee engagement, *Journal of Managerial Psychology*, 21(7), 600-619. DOI 10.1108/02683940610690169
- Sandhya, S. & Sulphey, M. M. (2020). Influence of Empowerment, Psychological Contract and Employee engagement on Voluntary Turnover Intentions, *International Journal of Productivity and Performance Management*, <https://doi.org/10.1108/IJPPM-04-2019-0189>
- Sarti, D. (2014). Job Resources as Antecedents of Engagement at Work: Evidence from a Long-Term Care Setting. *Human Resource Development Quarterly*, 25(2), 213-237.
- Sato, Y. (2013). Social capital, *Sociopedia.isa*, 1-10. DOI: 10.1177/205684601374
- Sawang, S. (2012). Is there an inverted U-shaped relationship between job demands and work engagement: The moderating role of social support? *International Journal of Manpower*, 33(2), 178-186.
- Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior*, 25(3), 293–315. <https://doi.org/10.1002/job.248>
- Schaufeli, W.B., Salanova, M., Gonzalez-Roma, V. and Bakker, A.B. (2002), The measurement of engagement and burnout: a two sample confirmatory factor analytic approach, *Journal of Happiness Studies*, 3, 71-92.

- Shantz, A., Alfes, K., & Latham, G. P. (2014). The Buffering Effect of Perceived Organizational Support on the Relationship Between Work Engagement and Behavioral Outcomes. *Human Resource Management*, 55(1), 25-38. <https://doi.org/10.1002/hrm.21653>
- Shuck, B., & Wollard, K. (2010). Employee engagement and HRD: A seminal review of the foundations. *Human Resource Development Review*, 9(1), 89-110.
- Shuck, B., Reio Jr, T. G., & Rocco, T. S. (2011). Employee engagement: An examination of antecedent and outcome variables. *Human resource Development International*, 14(4), 427-445.
- Simons, J.C., & Buitendach, J.H. (2013). Psychological capital, work engagement and organisational commitment amongst call centre employees in South Africa. *SA Journal of Industrial Psychology*, 39(2), 1-12. <http://dx.doi.org/10.4102/sajip.v39i2.1071>
- Slåtten, T., & Mehmetoglu, M. (2011). Antecedents and effects of engaged frontline employees: A study from the hospitality industry. *Managing Service Quality*, 21(1), 88–107. <https://doi.org/10.1108/09604521111100261>
- Slattery, J. P., Selvarajan, T. T., Anderson, J. E., & Sardessai, R. (2010). Relationship between job characteristics and attitudes: A study of temporary employees. *Journal of Applied Social Psychology*, 40(6), 1539-1565.
- Snyder, C.R., Harris, C., Anderson, J.R., Holleran, S.A., Irving, L.M., Sigmon, S.T. et al. (1991), The will and the ways: development and validation of an individual-differences measure of hope, *Journal of Personality and Social Psychology*, 60, 570-585.
- Stajkovic, A. D. (2006). Development of a core confidence-higher order construct. *Journal of Applied Psychology*, 91(6), 1208–1224. <https://doi.org/10.1037/0021-9010.91.6.1208>
- Sulphey, M. M. & Salim, A. (2020). Development of a Tool to Measure Social Entrepreneurial Orientation, *Journal of Entrepreneurship in Emerging Economies*, <https://doi.org/10.1108/JEEE-07-2019-0099>
- Sulphey, M.M. (2020). Construction and validation of Workplace Identity Scale (WIS). *Economics and Sociology*, 13(2), 53-69. <https://doi.org/10.14254/2071-789X.2020/13-2/4>
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Allyn & Bacon/Pearson Education.
- Walumbwa, F.O., Peterson, S. J., Avolio, B. J. & Hartnell, C.A. (2010). An Investigation of the Relationships Among Leader and Follower Psychological Capital, Service Climate, and Job Performance. *Personnel Psychology*, 63(4), 937-963.
- Welbourne, T. M. (2007), Employee engagement: Beyond the fad and into the executive suite, *Executive Forum*, Spring, 45-51.
- Woods, S. A., & Sofat, J. A. (2013). Personality and engagement at work: the mediating role of psychological meaningfulness. *Journal of Applied Social Psychology*, 43(11), 2203-2210.
- Xu, J., & Thomas, H. C. (2011). How can leaders achieve high employee engagement? *Leadership & Organization Development Journal*, 32(4), 399-416. doi:<http://dx.doi.org/10.1108/01437731111134661>
- Ye, J., Marinova, D., & Singh, J. (2007). Strategic change implementation and performance loss in the front lines. *Journal of Marketing*, 71(4), 156-171.
- Zhang, T., C. Avery, G., Bergsteiner, H., & More, E. (2014). Do follower characteristics moderate leadership and employee engagement? *Journal of Global Responsibility*, 5(2), 269-288.



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