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INFLUENCE OF PSYCHOLOGICAL CAPITAL ON KNOWLEDGE SHARING BEHAVIOUR IN RESEARCH FELLOWS OF PUBLIC SECTOR UNIVERSITIES

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ABSTRACT

Knowledge sharing in the universities is a crucial practice. The Universities are the 'knowledge chambers' for researchers in which psychological capital contributes positively to the academic performance of graduate students. This is confirmed by the literature that there is a positive and significant relationship between psychological empowerment and knowledge sharing. The fundamental aim of this study is to determine the influence of Psychological Capital (PsyCap) on Knowledge Sharing Behavior (KSB) in public-sector Universities. Data were collected from research fellows registered in varied MS/MPhil and PhD programs in three public sector universities. The researcher employed Structural Equation Model (SEM) to test the hypothesized model that demonstrates the connection between four PsyCap traits and KSB. Results show that PsyCap efficacy and PsyCap hope, PsyCap resilience, and PsyCap optimism are associated with the knowledge sharing behavior of the research-fellows in the context of the public-sector universities. The paper's findings imply that the research fellows should keep updated about essential research projects information through personal discussion while analyzing a long-term problem to find a solution.

Keywords: *Psychological Capital, Knowledge Sharing Behavior, Public Sector Universities, Structural Equation Model.*

INTRODUCTION

In a knowledge economy; globalization and increasing competition have complicated the situation for an organization, to get a potential competitive advantage over other similar organizations. Most organizations are utilizing various resources to face this challenge. The deployment of human capital as a resource and considering this as an asset has received much of the

organizational concentration in recent years. In this connection, the disposition of four PsyCap dimensions, i.e., self-efficacy/confidence, optimism, hope, and resiliency are being consumed to meet the current and future challenges.

In the field of positive psychology, PsyCap is one of the emerging concepts which is contended in developing lives of the people (Seligman, 1998). More specifically, PsyCap is a positive psychological development of individuals in organizations and is characterized by four constructs such as, 'hope,' 'efficacy,' 'resilience,' and 'optimism' (Kersting, 2003). The hope represents perseverance to achieve goals with patience, efficacy and controls the confidence level to take necessary actions to achieve a challenging task, resilience is used to sustain efforts on the repeated trail, and optimism positively contributes in the present and future achievements (Luthans, Youssef, & Avolio, 2007). In an organizational context, the PsyCap is established through investing in 'psychic resources' that enhance the chances of the likelihood of positive results.

To be competitive, knowledge sharing is a powerful tool, and it is one of the vital processes of knowledge management. Literature indicates a positive (significant) relationship between psychological empowerment and knowledge sharing (Amiri, Pourkiani, & Pourrashidi, 2014). Also, the positive effect of PsyCap has been noted on innovative performance of employees with a mediating role of knowledge sharing. Empirically, it has been found that synergy is created with knowledge sharing and utilization through various channels among external and internal employees of organizations (Qiu, Yan, & Lv, 2015). Although the employees' willingness to knowledge sharing is linked with psychological capital, knowledge sharing is directly and positively influenced by human behaviour as relationship between all aspects of PsyCap (i.e., hope, efficacy, resilience, optimism) and the knowledge sharing has found to be highly correlated (Ghazinour, Sharafi, Mahabadi, Forouhar, & Riahi, 2014). Knowledge sharing in educational institutions is crucial. The Universities are the 'knowledge chambers' for researchers in which psychological capital contributes positively to the academic performance of graduate students. Therefore, this study investigates the PsyCap on knowledge sharing behavior in public sector universities.

RESEARCH OBJECTIVES

The objective of this study is to investigate the influence of psychological capital traits on knowledge sharing behavior in research fellows of public sector universities. Although the related literature supports the relationship between PsyCap and knowledge sharing, the available evidence is limited regarding the psychological matters that can lead knowledge sharing

behavior. Following this line, the PsyCap positively influences the academic performance of students and their knowledge sharing behavior (Riolli, Savicki, & Richards, 2012; Shoemaker, 2014).

LITERATURE REVIEW

Psychological Capital (PsyCap)

In the literature, the PsyCap has been defined as the positive psychological state of development in individuals, and it is the growth in knowledge, skills, technical abilities, and experience (Luthans, Youssef, & Avolio, 2007). Apart from traditional capital, e.g., financial, technological and physical, organizations are focusing on PsyCap to achieve competitive advantage.

Recently, PsyCap has been considered in the literature of organizational behaviour and it is termed as a "process of positive subjective experience, positive institutions, and positive individual traits, which promises to increase the quality of life and prevent the pathologies that arise when life is fruitless and worthless" (Seligman & Csikszentmihalyi, 2000). In other words, positive psychology is a science of 'human psychology' in a positive direction (Luthans & Youssef, 2004). However, the 'positive organizational behavior' (POB) defined as the "study and application of positively oriented human resource strengths and psychological capabilities which can be measured, developed, and effectively managed for performance improvements in a working environment" (Luthans, 2002, p.59). Empirically, the relationship of PsyCap is found positive with job satisfaction, organizational commitment, organizational citizenship behavior, job enthusiasm, and job performance. However, the employee's intention to leave the organization, workplace absenteeism, counterproductive behavior, and pessimism is found negatively correlated with PsyCap dimensions (Sridevi & Srinivasan, 2012). More specifically, the PsyCap has a positive influence on the people's perception due to the positive impact on the organizations, as it has been studied thoroughly by researchers (Ghazinour, Sharafi, Mahabadi, Forouhar, & Riahi, 2014).

The literature characterizes the PsyCap through four dimensions namely: self-efficacy, hope, optimism, and resilience (Avey, Reichard, Luthans, & Mhatre, 2011; Jafri, 2012; Luthans, Youssef, & Avolio, 2007). **Self-efficacy** is the ability of an individual to use his strengths to achieve challenges. It can be best described as the motivation to choose and welcome challenges and use of strengths and skills for the achievement

of those challenges (Luthans, Youssef, & Avolio, 2007). For example, it inculcates energy and encouragement with the proper investment of the time and hard work to achieve desired outcomes instead of obstacles pulling someone to give up. This can be developed when an individual overcomes fear and resistance to change. Self-efficacy beliefs are multi-dimensional instead of single disposition that differs in different modes of working (Zimmerman, 2000). The second PsyCap dimension **hope** refers to the state where prevailing beliefs are expected to be accomplished (Snyder, Irwing, & Anderson, 1991). For instance, people having high hope usually find alternative ways to overwhelm obstacles as they tend to be obstinate to attain goals. However, the individuals with less hope are usually less obstinate towards goals, and they fail to find alternatives and fail to achieve objectives (Peterson, & Luthans, 2003).

The third PsyCap dimension is **optimism**. In positive psychology, optimism mainly refers to an explanatory method and the way in which people habitually unfold events in their own lives (Seligman, 1998). In this way, Seligman (1998), has connected the thought of optimism to attribution theory. According to this, individuals are optimistic when they attribute the problems they have handled in their own lives to be specific, temporary, and because of external reasons as opposed to those who think the problems negatively and point them to being pervasive, permanent, and internal. As a PsyCap attribute, optimism refers to positive thinking for attaining goals. Optimistic peoples are always getting credit for success because of their anticipations and expectations to become successful in the future (Luthans, Youssef, & Avolio, 2007). Further, optimism is an explanatory style that contributes positively to the personal, permanent and pervasive causes and interprets adverse events regarding external and temporary, situation (Seligman, 1998). The positive PsyCap potentially affect employees' behavior through positive emotional and passionate arousal to enhance employee commitment, motivation, and performance.

However, the **resilience** is an individual's ability, i.e., psychological strength to handle the failure and its implications along with survival to success. This particular word 'resilient' has been derived from the Latin word "resilient" which means to leap. In other words, there are quite a few individuals with this kind of strength called resilience (Masten, 2001). Individuals who possess resilience typically be characterized by diverse qualities chiefly: i) they are accepting reality with deep belief; ii) they held to warrant something; iii) they have the capability to improve and adopt

significant changes; iv) along with ability to overwhelmed and adopt more resourceful way when facing variety and scarcity of resource shortage and other challenges in daily operations (Masten, Cutuli, Herbers, & Reed, 2009). The individuals with the resilience tend to be more flexible and cooperative. Resiliency comes from everyday life experiences, it is magic of ordinary, normative human potential/resources in the minds, brains, and bodies of individuals, in their families and relationships, and in their communities, further, it could not come from rare and unique qualities (Benard, 2004).

Knowledge Sharing Behaviour (KSB)

Knowledge is awareness of something. Defining knowledge as the information, understanding, or skill that one gets from education or experience (Merriam Webster, 2015), which means knowledge is whatever we know about anything and we have learned in our life from education and experience. It is also condemned that knowledge sharing is unnatural because people hide their knowledge due to its value and importance. Furthermore, the individual's attitude of knowledge sharing is influenced positively by expected associations and expected contribution, while it is negatively influenced by expected rewards. However, the economic exchange theory supports that rewards motivate individuals (Bock, & Kim, 2001). Arguably, the effect of incentives sufficiency dominates the knowledge sharing, regardless of monetary incentives. Also, the monetary incentives influence more as compared to recognition based incentives among peers (Wolfe & Loraas, 2008). The style of leadership along with knowledge sharing also plays a vital role in an individual's performance, such as the transformational leaders have a positive influence in comparison to transactional leaders who have negative influence on performance, but the indirect and the positive effect of knowledge sharing along with leadership styles have resulted in increased performance, the findings suggest that knowledge sharing is positively related to both leadership style, i.e., transformational and transactional while the laissez-fair leadership has no effect on knowledge sharing activities (Tombul, 2011).

CONCEPTUAL FRAMEWORK

The Influence of Psychological Capital on Knowledge Sharing Behaviour (PsyCap ® KSB)

The PsyCap creates a state of responsibility for a particular target in the organization. It is described as a state in which an individual feel as though the target of ownership. More specifically, it represents a bond between individuals and the organization, because individuals feel possessiveness

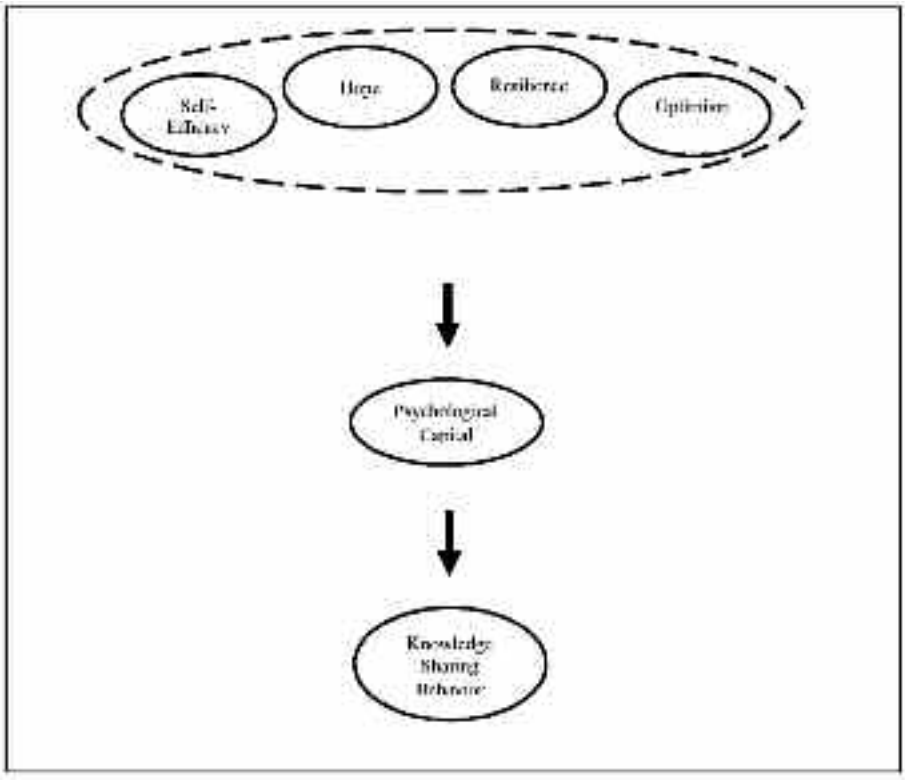
towards the target of ownership instead no legal claim exists, because of this individual have emotions of "our organization" (Vandewalle, Van Dyne, & Kostova, 1995). In this connection, the PsyCap has a positive influence on the individual's mind as demonstrated during training with psychological capital interventions (Luthans, Avey, Avolio, & Peterson, 2010). The results support that little intervention not only sustains the psychological development but also pay for improvements in job performance of an individual. For instance, the PsyCap positively influence the learning of an individual and indeed results in the increased output.

The conceptual framework of PsyCap and knowledge sharing behavior is shown in Figure 1. It illustrates the relationship between the dependent variable knowledge sharing behavior and independent variable PsyCap. The PsyCap is further bifurcated into four sub-variables namely: efficacy, hope, resilience, and optimism. In previous studies, relationship between PsyCap and positive psychology (Larson, Norman, Hughes, & Avey, 2013), relationship of psychological contract and knowledge sharing (Abdullah, Hamzah, Arshad, Isa, & Ghani, 2011), and role of PsyCap and knowledge sharing in an organizational context (Ghazinour, Sharafi, Mahabadi, Forouhar, & Riahi, 2014) has been studied with variables of positive psychology, knowledge sharing and PsyCap respectively. In particular, a human has been considered as a leading source of knowledge sharing, considering this, we measure the relationship between PsyCap and knowledge sharing behavior.

The direction of the relationship has been considered in an educational context, particularly research education because it will help us to create stronger relationships after evaluation of existing relationship amongst the research fellows. The direct relationship between the dependent variable and the independent variable has shown by an arrow, and the relationship of sub-variables has also been studied individually with knowledge sharing behavior. By considering the above-cited studies, the researcher has designed a framework for the evaluation of the relationship between both variables and sub-variables. For example, the positive relationship exists with variables as studied in previous researches in a different context and with different dependent or independent variable such as the relationship between PsyCap and positive psychology, the relationship between psychological contract and knowledge sharing, the relationship of PsyCap and knowledge sharing within an organizational context, and so forth. Therefore, the first and foremost research hypothesis can be drawn as:

H1: PsyCap has a significant influence on knowledge sharing behavior.

Figure 1. Conceptual Framework based on the Influence of PsyCap on Knowledge Sharing Behavior



The Influence of Self-efficacy on Knowledge Sharing Behaviour (EFC ® KSB)

In the educational career, the domain of self-efficacy not only satisfies the educational requirements and occupational roles, but also expand an interest of individuals to prepare themselves for challenging educational and occupational career (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001). Additionally, past researches from two decades have validated the self-efficacy as a predictor of students learning and motivation (Zimmerman, 2000). This implies that the student's self-belief about the academic capabilities plays an essential role in their motivation to achieve. As discussed in the literature, self-efficacy is self-confidence, the ability of an individual to achieve. The positive and significant correlation between self-efficacy and knowledge sharing has been observed along with the predictive power effect of efficacy on knowledge sharing in regression analysis (Ghazinour, Sharafi, Mahabadi, Forouhar, & Riahi, 2014). Also, knowledge sharing is enhanced by self-efficacy (Endres, Endres, Chowdhury, & Alam, 2007). Moreover, positive, and significant relationship has been observed

between efficacy and innovation because of knowledge sharing (Ziyae, Mobaraki, & Saeediyoun, 2015). The knowledge 'self-efficacy' found significantly associated with knowledge sharing intentions and attitudes in organizations (Lin, 2007). Therefore, the second research hypothesis can be drawn as:

H2: Efficacy has a significant influence on knowledge sharing behavior.

The Influence of Hope on Knowledge Sharing Behaviour (HOP ® KSB)

The hope discussed in the literature as an individual's willpower to achieve the goals. The study results declare confident, significant, and direct relationship of hope and knowledge sharing within the organization (Ghazinour, Sharafi, Mahabadi, Forouhar, & Riahi, 2014). The literature further supports the significant connection between hope and knowledge sharing (Ziyae, Mobaraki, & Saeediyoun, 2015). The evidence is also realized that people share knowledge because they hope for recognition and appreciation of their knowledge (Hendriks, 1999). Thus, the third research hypothesis can be drawn as:

H3: Hope has a significant effect on knowledge sharing behavior.

The Influence of Resilience on Knowledge Sharing Behaviour (RES ® KSB)

Referring the previous discussion on resilience, it has been observed that a steadfast individual is not defeated by failures. The positive effect of resilience has been observed with innovative knowledge sharing in innovation perspective (Ziyae, Mobaraki, & Saeediyoun, 2015). In the literature, direct and significant correlation was found between resilience (flexibility) and knowledge sharing. For instance, it appeared that the resilience has the most predictive power of knowledge sharing (Ghazinour, et.al., 2014). Therefore, the fourth research hypothesis can be drawn as:

H4: Resilience has a significant influence on knowledge sharing behavior.

The Influence of Optimism on Knowledge Sharing Behaviour (OPM ® KSB)

Following the supporting literature, individuals are optimistic when they attribute the problems they hold in their own lives. A positive and significant relationship has been evaluated between optimism and knowledge sharing for innovation (Ziyae, Mobaraki, & Saeediyoun, 2015). Also, a significant, direct, and positive relationship has been found between optimism and knowledge sharing within organizational boundaries (Ghazinour, et.al., 2014). Therefore, the fifth research hypothesis can be drawn as:

H5: Optimism has a significant influence on knowledge sharing behavior.

RESEARCH METHODOLOGY

The underlying aim of this study is to determine the causal influence of psychological capital on knowledge sharing behavior. For this purpose, the structural equation model (SEM) technique was used for the hypothesis testing that shows a connection between four psychological capital traits and knowledge sharing behavior. The researcher used the educational intuitions as a platform for data collection. Although the surrounding literature provides support regarding the relationship between PsyCap and knowledge sharing, the available evidence is limited and few in numbers. For example, PsyCap has contributed positively to the academic performance of graduate students (Riolli, Savicki, & Richards, 2012), and knowledge sharing behavior with motivation due to rewards (Shoemaker, 2014). Therefore, following the previous study on psychological contract and knowledge sharing behavior conducted in the educational institutions, for challenges in quality improvements of public educational institutions, this particular study considered PsyCap and knowledge sharing behavior in public sector universities (Abdullah, Hamzah, Arshad, Isa, & Ghani, 2011). The final data was collected through an electronic and self-administered questionnaire survey of 213 research fellow students enrolled across the MS/M.Phil. Moreover, PhD degree programs in three public sector universities. The respondents were selected on the basis of Cochran formula and through random sampling technique.

The questionnaire survey was based on a previously established scale of PsyCap and knowledge sharing behavior theories. In total, the questionnaire survey contained 32 items. The PsyCap scale was based on the empirically validated scale by Luthans, Youssef, and Avolio (2007), while; the questionnaire on knowledge sharing behavior was borrowed from Yi (2009), to collect primary data of this study. Specifically, the items within both scales were administered and adjusted as per the need of the research in educational institutions and the profile of the respondents. For instance, an initial pilot study feedback of 27 respondents who enrolled across the MS/M.Phil. and PhD degree programs in the public-sector universities was integrated into the final survey to improve the survey's face and content validity, length, and layout. Additionally, the research has lagged the advice of Podsakoff, MacKenzie, Lee, and Podsakoff, (2003) for lessening the 'common-method bias by guaranteeing the respondents' vis-à-vis the confidentiality of their answers.

DATA ANALYSIS

Respondents Profile

The data provided in Table 1 represents the personal and categorical information of the respondents. The survey consists of total 213 respondents

from three public universities. The descriptive statistics results show that out of 213 respondents, 75.5% were male respondents and 24.4% were female respondents. According to the results, the completed surveys were obtained from 80.2% MS/MPhil research students and 19.7% PhD research students. The age of 52.5% respondents was between 25-35 years, 33.8% respondents belong to 36-45 age group. However, the age of remaining 13.6% respondents was 46-55 year. Also, the 21.1% respondents were currently enrolled in the first year of their research degree, the 45.8% were in the second year, 15.4% were in the third year, and 9.3% were in the fourth year. As shown in Table 1. a total of 213 respondents currently relate to fourteen different areas of specializations namely the energy & environment, computer science, marketing, and finance, etc.

Table 1. Personal and Categorical Information

Category	Profile	Total Number	(%)
Gender	Male	161	75.5
	Female	52	24.4
	25 - 35	112	52.5
Age	36 - 45	72	33.8
	46 – 55	29	13.6
Educational Level	MS / MPhil	171	80.2
	PhD	42	19.7
	1	45	21.1
	2	106	45.8
Year of Enrolment in the Research Degree	3	33	15.4
	4	20	9.3
	5 or above	9	4.2
	Energy & Environment	6	2.8
	Computer Science	31	14.5
	Communication & English	6	2.8
	Mathematics	4	1.8
	Mechanical Engineering	12	5.6
	Electrical Engineering	6	2.8
Area of Specialization	Marketing	39	18.3
	Finance	19	8.9
	Control System	1	0.4
	Civil Engineering	13	6.1
	Management	34	15.9
	Geography	2	0.9
	Human Resource	36	16.9
	Chemistry	4	1.8

Reliability and Validity Analysis

To measure the internal consistency of the measure, three widely used techniques: i) Cronbach's Alpha (a); ii) Composite Reliability (CR) and iii) Average Variance Extracted (AVE) were employed. The results illustrated in Table 3 presented the three internally consistent reliability results. For example, the Cronbach's Alpha was calculated using standardized item scores. All latent variables had Alpha scores above the standard threshold of 0.70 except for the resilience and optimism which have alpha values of 0.69 and 0.66 respectively (Nunnally & Bernstein, 1994).

Table 2. Results Based on Descriptive Analysis

Dimension	Frequency	Minimum	Maximum	Mean	Standard Deviation
Efficacy	213	1.67	6.00	4.4	0.9
Hope	213	1.17	6.00	4.7	0.9
Resilience	213	1.50	6.00	5.1	1.1
Optimism	213	1.50	6.00	4.7	2.2
Knowledge Sharing Behaviour	213	1.63	6.00	4.74	1.19

In addition, Table 2 also include the descriptive statistics of the responses such as mean and standard deviation of the variables used in this study. For example, in a case of optimism, the score of the mean value is 4.7, and the standard deviation is 1.19. Further, Table 2 shows the minimum and maximum criterion scores of the indicators by individuals' scores of a particular indicator. The composite reliability test indicates the adequacy of the latent variables. In case of this study, the composite reliability (CR) statistics of each latent variable were calculated with a sum of variance of the error terms of variables and squared sum of individual standardized loading divided by squaring sum of standardized loading (Fornell, & Larcker, 1981). As shown in Table 3, the CR values are more significant than the suggested benchmark of 0.70 that indicates the adequacy of the latent variables used in this study.

Table 3. Results of Cronbach Alpha, Composite Reliability, Average Variance Extracted (AVE)

Dimensions	Cronbach - a	Composite Reliability (CR)	Average Variance Extracted (AVE)
Threshold Limit	**≥ 0.7**	**≥ 0.7**	**≥ 0.5**
Efficacy	0.78	0.82	0.63
Hope	0.83	0.84	0.68
Resilience	0.85	0.87	0.71

Optimism	0.76	0.85	0.68
Knowledge Sharing Behaviour	0.88	0.87	0.73

Furthermore, the average variance extracted (AVE) was also calculated. AVE measures the variance retained by amount with latent construct relative to variance remaining from measurement error. It is calculated by the sum of squared individual standardized loadings divided by the sum of variance of error terms and squared sum of individually standardized loadings. Statistically, the AVE value higher than 0.50 indicates the adequate convergent validity, and this result shows that the latent variables capture the significant portion of available variance (Fornell & Larcker, 1981). The results summarized in Table 3 indicate the satisfactory convergent validity by all latent variables.

Table 4. Results of the Pearson Correlation Coefficients (r)

Dimension	Frequency	Correlation Coefficient (r)	Sig Level
PsyCap and KSB	213	0.543	0.001
EFC and KSB	213	0.433	0.000
HOP and KSB	213	0.520	0.003
RES and KSB	213	0.551	0.000
OPM and KSB	213	0.465	0.002

Table 5. Hypothesis Testing Results based on H1, H2 . . . . H5

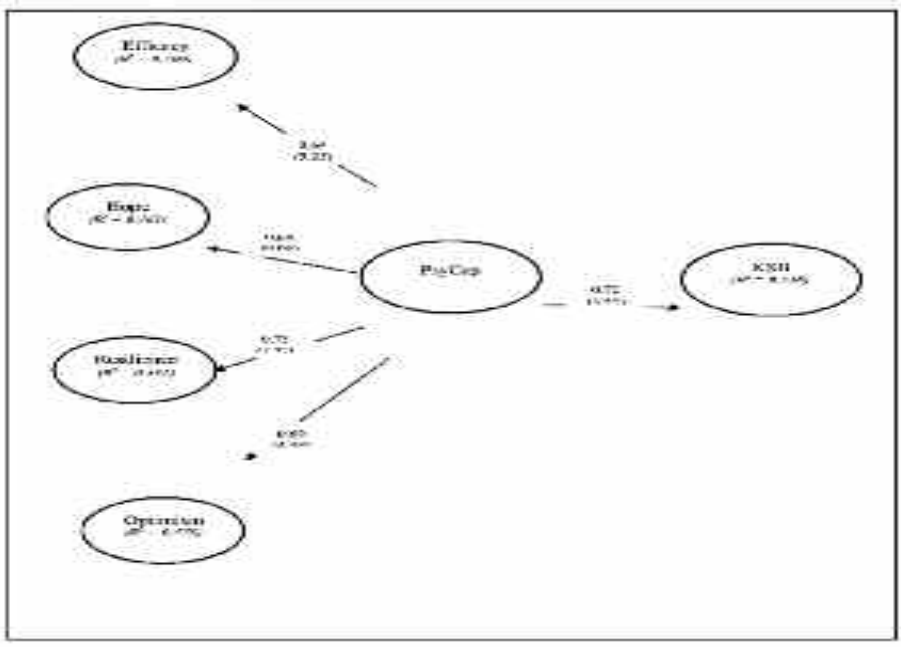
Hypothesis	Path	*g	**t-value	***p-value	Result
H1	KSB ¬ PsyCap	0.72	3.55	0.02	Supported
H2	KSB ¬ EFC	0.77	11.437	0.01	
H3	KSB ¬ HOP	0.69	8.964	0.03	
H4	KSB ¬ RES	0.79	10.543	0.004	
H5	KSB ¬ OPM	0.82	7.862	0.01	

* Gamma (g) ** $t \geq 1.96$ *** $p \leq 0.05$

The Structural Equation Model (SEM)

The Structural Equation Model (SEM) analysis was performed by IBM-SPSS AMOS. The AMOS facilitates researchers to identify, evaluate, and represent hypothesized relations between variables through the graphical and non-graphical paths in the model. SEM considered as a linear, cross-sectional statistical analysis method yield model fit with normally distributed data. The path analysis and regression in this study are distinctive features of the SEM analysis, and it is feasible that we can use it with least sample size for measurement scale and residual distribution (Hair, Sarstedt, Ringle, & Mena, 2012).

Figure 2. Measurement Model Results based on Main Hypothesis H1



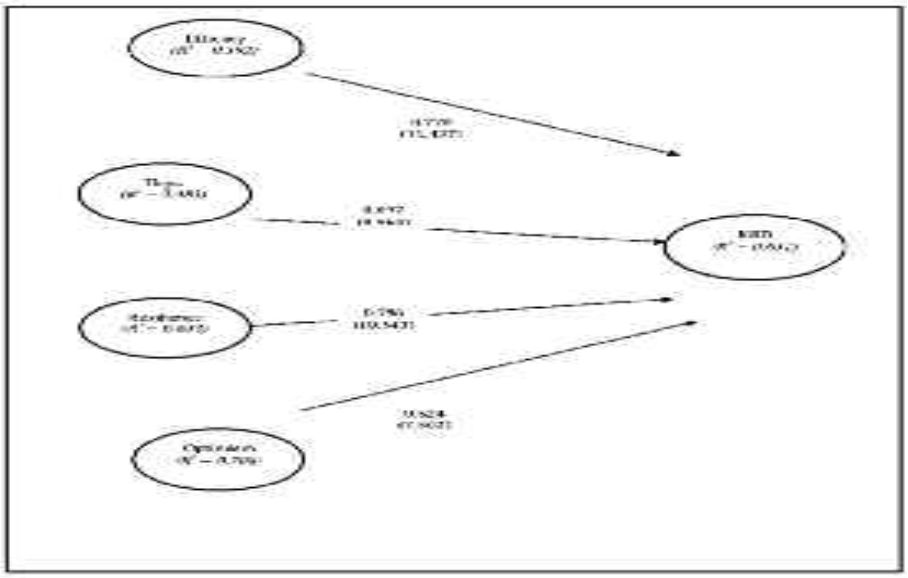
Fit Indices Result: **c**2 = 324, **c**2 / df = 1.59, CFI = 0.91, TLI = 0.94, IFI = 0.91, NFI = 0.90, RMSEA = 0.074

Measurement Model Results

In this study, a total of six latent variables and 32 individualized items were consumed to construct the hypothesized model. Figure 1 represents the measurement model results based on the main research hypothesis H1. According to the result, the structural relationship between PsyCap and knowledge sharing behavior is significant at p-value < 0.05. The chi-square (c2) value provided a good fit so that the H0 could not be accepted. The influence of PsyCap on knowledge sharing behaviour i.e. KSB ¬ PsyCap: g = 0.72, t = 3.55, p-value = 0.02 found to be significant. These results, however, entails that the PsyCap had a significant impact on knowledge sharing behavior.

To assess the model fit, various indices such as, chi-square (c2), CFI (comparative fit index), TLI (Tucker–Lewis index), IFI (incremental fit index), NFI (normed fit index), and RMSEA (root-mean-square error of approximation) were used. The measurement portion indicates that the c2 = 324, c2 / df = 324 / 201 = 1.61, CFI = 0.91, TLI = 0.94, IFI = 0.91, NFI = 0.90, RMSEA = 0.074 are better than the recommended threshold edges i.e. c2 = as low as possible, c2 / df 2 ≤ 1, GFI ≥ 0.90, RMSEA ≤ 0.08, NFI ≥ 0.90, and CFI ≥ 0.90.

Figure 3. Measurement Model Results based on Hypothesis H1, H2, H3, H4 and H5



Fit Indices Result: c2 = 272, c2 / df = 1.59, CFI = 0.91, TLI = 0.92, IFI = 0.95, NFI = 0.88, RMSEA = 0.083

Hypothesis Testing Results

To establish the hypothesized relationship (i.e., H2, H3 …. H5) between variables and to examine the overall model fitness of the recommended conceptual model (see Figure 1), 'multivariate analysis' method, particularly the 'path analysis' was utilized. According to the result, the structural relationship between four PsyCap factors and knowledge sharing behavior is significant at p-value < 0.05. The chi-square (c2) value provided a good fit so that the H0 could not be accepted. The influence of four PsyCap factors on knowledge sharing behaviour (EFC ¬ PsyCap: g = 0.770, t = 11.437, p-value = 0.01); (HOP ¬ PsyCap: g = 0.697, t = 8.964, p-value = 0.03); (RES ¬ PsyCap: g = 0.796, t = 10.543, p-value = 0.004) and (OPM ¬ PsyCap: g = 0.824, t = 7.862, p-value = 0.02) found to be significant. These results, however, entail that the hypothesized relationship between efficacy, hope, resilience, and optimism have a significant impact on knowledge sharing behavior. The positive and significant result, however, implies that that psychological capital and its dimensions increase due to the knowledge sharing behavior in the research fellows of various public-sector universities. For analyzing

the model fit, a total of six indices used in the structural model. The SEM result indicates that the c2 = 272, c2 / df = 272/179 = 1.59, CFI = 0.91, TLI = 0.92, IFI = 0.95, NFI = 0.88, and RMSEA = 0.068 represents a better fit than the recommended threshold edges.

DISCUSSION AND CONCLUSION

The purpose of this study is to explain the relationship between PsyCap and knowledge sharing behavior from the perspective of intangible capital. Regarding four psychological capital indexes (i.e., self-efficacy, hope, resilience, optimism) and knowledge sharing behavior. The empirical relationship between PsyCap and knowledge sharing behavior found to be positive and significant. It is clear from hypothesis testing during structural equation model (SEM) results that the significance (i.e., ≤ .000) level is less than the error level. Thus all suggested hypothesis can be accepted. Further, on the confidence level of 95% and above, hypothesis H1, H2, H3, H4, and H5 are accepted. Even though, in the initial finding of correlation, a robust positive correlation is observed among all variables. These results are also supported by the previous literature. For example, it has been noted that there is an existence of a significant relationship between PsyCap (human factors) and knowledge sharing behavior (Ghazinour, Sharafi, Mahabadi, Forouhar, & Riahi, 2014). Similar evidences found that employees with self-efficacy and optimism are more willing to share their knowledge and expertise with others. Even it is also found that employees with more PsyCap are more willing to share their integrated knowledge and expertise (Qiu, Yan, & Lv, 2015). From the perspective of innovation, the effect of PsyCap factors were found positive and significant, the overall combined and synergetic effect of PsyCap factors were positive and significant on innovation (Ziyae, Mobaraki, & Saeediyoun, 2015).

The analysis of this study found, an overall positive and significant effect of PsyCap on knowledge sharing behavior. Referring result of each factor individually on knowledge sharing behaviour, we found that the effect of self-efficacy is significant (0.01) and positive (0.433) on knowledge sharing, effect of hope is significant (0.03) and positive (0.520) on knowledge sharing, effect of resilience is significant (0.004) and positive (0.551) on knowledge sharing and effect of optimism is significant (0.01) and (0.465) on knowledge sharing.

This intangible capital (PsyCap) has a positive role in research enhancement because if there is enough mental development of research fellows, the knowledge sharing will efficiently and positively be

contributed. Thus, more the PsyCap more will exist due to the knowledge sharing behavior in the organizations and institutes.

The hypothesis testing result of the relationship between self-efficacy and knowledge sharing behavior further envisaged that the confident researchers are always showing a willingness to analyze the long-term problem and find a solution for other research fellows, and feel no hesitation to contribute in discussions on research work. From the results derived from the hypothesis H2 (i.e., optimism has a significant influence on knowledge sharing behavior), it can be concluded that hopeful researchers are willing to search alternative ways for goal achievement. This finding gets support from Seligman (1998), that the PsyCap hope is a personal property based on personal resources to develop the individual's achievement in the workplace.

The result generated during SEM analysis further indicated that the respondents usually manage difficulties and handle many different things at a time during research work. This finding is, however, same as the findings which indicate that the resilience has the more predictive power of knowledge sharing in managing stressful things (Ghazinour, Sharafi, Mahabadi, Forouhar, & Riahi, 2014). However, the hypothesis testing result on the relationship between optimism and knowledge sharing behavior show the optimism on what will happen, usually help researcher on important research project information through personal discussion with other research fellows.

LIMITATIONS OF THE STUDY

Apart from the time and resources, data collection from three public sector universities located in one province, is, however, a significant limitation of this study. The use of convenience (non-probability) sampling for easy access to the survey also upturns the potential limitation that can be circumvented in future studies.

FUTURE RECOMMENDATIONS

The influence of PsyCap on knowledge sharing behavior with the moderating effect of motivation can be observed in future. Though the relationship of PsyCap and knowledge sharing behavior can be researched with work distribution as mediating or intervening variable. The relationship of PsyCap and knowledge sharing behavior can also be applied in any other context, such as employees, students, and innovation.

REFERENCES

Abdullah, N. L., Hamzah, N., Arshad, R., Isa, R. M., & Ghani, R. A. (2011). Psychological Contract and Knowledge Sharing Among Academicians: Mediating Role of Relational Social Capital. *International Business Research*, 4(4), 231.

Amiri, A., Pourkiani, M., & Pourrashidi, R. (2014). Elucidating the Relationship between Knowledge Sharing and Employee's Psychological Empowerment in Executive Organizations. *International Journal of Modern Management and Foresight*, *1*(4), 121-132.

Avey, J. B., Reichard, R. J., Luthans, F., & Mhatre, K. H. (2011). Meta□Analysis of the Impact of Positive Psychological Capital on Employee Attitudes, Behaviors, and Performance. *Human Resource Development Quarterly*, 22(2), 127-152.

Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (2001). Self-efficacy Beliefs as Shapers of Children's Aspirations and Career Trajectories. *Child Development*, 72(1), 187-206.

Benard, B. (2004). *Resiliency: What We Have Learned.* San Francisco, CA: WestEd. p.148.

Bock, G. W., & Kim, Y. G. (2001). Breaking the Myths of Rewards: An Exploratory Study of Attitudes about Knowledge Sharing. *Pacis 2001 proceedings*, 78.

Endres, L.M., Endres, S. P., Chowdhury, S. K., & Alam, I. (2007). Tacit Knowledge Sharing, Self-Efficacy Theory, and Application to the Open Source Community. *Journal of Knowledge Management,* 11(3), 92-103.

Fornell, C., & Larcker, D. F. (1981). Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *Journal of Marketing Research*, 18(3), 382-388.

Ghazinour, S., Sharafi, A., Mahabadi, M., Forouhar, M., & Riahi, S. (2014). Explain the Role of Psychological Capital in Knowledge Sharing of an Organization. *International Journal of Management Academy,* 2(1), 51-57.

Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An Assessment of the Use of Partial Least Squares Structural

Equation Modelling in Marketing Research. *Journal of the Academy of Marketing Science*, 40(3), 414-433.

Hendriks, P. (1999). Why Share Knowledge? The Influence of ICT on the Motivation for Knowledge Sharing. *Knowledge and Process Management,* 6(2), 91.

Jafri, M. H. (2012). Psychological Capital and Innovative Behaviour: An Empirical Study on Apparel Fashion Industry. *Journal of Contemporary Management Research*, 6(1), 42.

Kersting, K. (2003). Turning Happiness into Economic Power. *Monitor on Psychology*, 34(11), 26.

Larson, M. D., Norman, S. M., Hughes, L. W., & Avey, J. B. (2013). Psychological Capital: A New Lens for Understanding Employee Fit and Attitudes. *International Journal of Leadership Studies,* 8(1), 28-43.

Lin, H. F. (2007). Effects of Extrinsic and Intrinsic Motivation on Employee Knowledge Sharing Intentions. *Journal of Information Science*, 33(2), 135-149.

Luthans, F., Youssef, C. M., & Avolio, B. J. (2007). *Psychological capital: Developing the human competitive edge* (p. 3). Oxford: Oxford University Press.

Luthans, F. (2002). The Need for and Meaning of Positive Organizational Behavior. *Journal of Organizational Behavior*, *23*(6), 695-706.

Luthans, F., & Youssef, C. M. (2004). Human, Social, and Now Positive Psychological Capital Management: Investing in People for Competitive Advantage. *Organizational Dynamics*, *33*(2), 143-160.

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.

Masten, A. S., Cutuli, J. J., Herbers, J. E., & Reed, M. G. (2009). '*12 Resilience in Development'*. In S. J. Lopez & C.R. Snyder (Ed.), *Oxford Handbook of Positive Psychology*, NY: Oxford University Press. p.117.

Masten, A. S. (2001). Ordinary Magic: Resilience Processes in

Development. *American Psychologist*, 56(3), 227.

Merriam Webster. (2015). *Definition of KNOWLEDGE*. Retrieved from http://www.merriam-webster.com/dictionary/knowledge

Nunnally, J. C., & Bernstein, I. H. (1994). The Assessment of Reliability. *Psychometric Theory*, *3*(1), 248-292.

Peterson, S. J., & Luthans, F. (2003). The Positive Impact and Development of Hopeful Leaders. *Leadership & Organization Development Journal*, 24(1), 26-31.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common Method Biases in Behavioural Research: A Critical Review of the Literature and Recommended Remedies. *Journal of Applied Psychology*, 88(5), 879.

Qiu, X., Yan, X., & Lv, Y. (2015). The Effect of Psychological Capital and Knowledge Sharing on Innovation Performance for Professional Technical Employees. *Journal of Service Science and Management*, *8*(04), 545.http://dx.doi.org/10.4236/jssm.2015.84055

Riolli, L., Savicki, V., & Richards, J. (2012). Psychological Capital as a Buffer to Student Stress. *Psychology*, 3(12), 1202. http://dx.doi.org/10.4236/psych.2012.312A178

Seligman, M.E.P. (1998). *Learned Optimism*. New York: Pocket Books.

Seligman, M. E., & Csikszentmihalyi, M. (2000). Positive Psychology: Special issue. *American Psychologist*, 55(1), 5-14.

Shoemaker, N. (2014). Can Universities Encourage Students' Continued Motivation for Knowledge Sharing and How Can This Help Organizations? *Journal of College Teaching & Learning (Online)*, 11(3), 99.

Snyder, C. R., Irving, L., & Anderson, J. R. (1991). 'Hope and Health: Measuring the Will and the Ways.' In C.R. Snyder, & D.R. Forsyth (Ed.), *Handbook of Social and Clinical Psychology*. The Health Perspective (pp. 285-305). Elmsford, NY: Pergamon Press.

Sridevi, G., & Srinivasan, P. T. (2012). Psychological Capital: A Review

of Evolving Literature. *Journal of Colombo Business*, 3(1), 9-75.

Tombul, F. (2011). The Impact of Leadership Styles and Knowledge Sharing on Police Officers Willingness to Exert Extra Effort to Provide Better Security: A Study in the Riot Union of Turkish National Police. Dissertation prepared for the degree of Doctor of Philosophy submitted at the University of North Texas. p.2. Retrieved from https://digital.library.unt.edu/ark:/67531/metadc84290/m1/1/

Vandewalle, D., Van Dyne, L., & Kostova, T. (1995). Psychological Ownership: An Empirical Examination of Its Consequences. *Group & Organization Management*, 20(2), 210-226.

Wolfe, C., & Loraas, T. (2008). Knowledge Sharing: The Effect of Incentives, Environment, And Person: *Journal of Information System,* 22(2), 554-555.

Yi, J. (2009). A Measure of Knowledge Sharing Behavior: Scale Development and Validation. *Knowledge Management Research & Practice*, 7(1), 65-81.

Ziyae, B., Mobaraki, M. H., & Saeediyoun, M. (2015). The Effect of Psychological Capital on Innovation in Information Technology. *Journal of Global Entrepreneurship Research,* 5(1), 1-12.

Zimmerman, B. J. (2000). Self-efficacy: An Essential Motive to Learn. *Contemporary Educational Psychology*, 25(1), 82-91.