Psychological Capital (Psycap) in Nigeria: Adaptation of Luthan's Postive Psychological Capital Questionnaire (Pcq-24) for Nigerian Samples

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Abstract

Positive psychological capital (psycap) as personal resources has been linked with favorable organizational outcomes such as employees' job performance, creativity and entrepreneurship, decreased workplace absence, organizational commitment, job satisfaction, organizational citizenship behavior etc. Given the utility of the psycap, there is therefore the need to properly examine its psychometric properties in order to have confidence in using it for assessment in developing nations like Nigeria. The present study therefore focused on adapting the Psychological Capital Questionnaire 24 (PCQ-24) developed in USA by Luthans, Youssef and Avolio (2007) to measure positive psychological capital for Nigerian samples. Currently there is paucity of research on the psychometric properties of the PCQ-24 especially in non-Western societies like Nigeria. In order to maximize the utility of the positive psychological capital especially in non-Western societies like Nigeria, the adaptation of the PCQ-24 which measures the construct is necessary. Employees from two occupational groups in Nigeria completed the survey questionnaire (total N = 205). Exploring the psychometric properties of the scale shows that the internal consistency of the subscales and the composite scale were sufficiently high (α = .85). Also, the results of factor analysis confirmed the original four-factor model which indicates that the scores are best represented by the four factors while the confirmatory factor analysis shows an acceptable CFI/NNFI and RMSEA Index. The results in general, suggest that the PCQ-24 is a reliable and valid instrument; and therefore a good measure of psychological capital in Nigeria.

Keywords: Psychological capital, positive psychological capital questionnaire, Nigeria.

Introduction

In the recent time, there has been an increased attention towards positive psychology (PP) and positive organizational behavior (POB) (Ugwu & Okojie, 2016). The emphasis of PP and POB is on what is good with people, human potentials, and worthwhile life and productivity instead of sicknesses and diseases and the healing of pathologies and mental illnesses which dominated in the past (Nafei, 2015). POB therefore focuses on employees' positive capacities and strengths that can be measured, learned and effectively managed for organizational effectiveness. According to Luthans (2002, p.59) POB can be regarded as "the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement" in today's workplace. Emphasis of organizational research therefore shifted from identifying poor performers and pathological organizational issues to studying how to optimize the performance of both individuals and organizations (Seligman & Csikzentmihalyi, 2000). However, despite the paradigm shift, the emphasis on positive psychology is

regarded as a supplement to the traditional focus of psychology on disease model rather than replacement (Seligman, 1998). However, the positive turn is fundamental for occupational health psychology (OHP) which now tries to apply psychology in work settings for the improvement of work life, protection and safety of workers, and the promotion of healthy workforce for effective job performance. According to Luthans (2002); Luthans and Youssef (2007), this recent trend to concentrate on optimal functioning also aroused attention in organizational psychology.

Applying positive psychology to workplace, the interest has been on advancing knowledge of employees' state-like capacities such as hope, optimism, resilience, and self-efficacy which contributes to optimal functioning of organizations. This trend towards positive psychology has led to the emergence of the concept of positive psychological capital (psycap) coined by Luthans, Luthans and Luthans (2004). The construct of positive psychological capital (psycap) consists of four dimensions: hope, optimism, self-efficacy and resilience. The construct measures positive psychological aspects of individuals and focuses on the strengths rather than the weaknesses (Luthans et al., 2004). Psycap has continued to attract attentions from researchers within the scientific community. Currently, research in the area of POB has evolved into examining a higher order factor of psycap comprising the four dimensions: hope, optimism, self-efficacy and resilience. Drawing from Conservation of Resources theory (Hobfoll, 2002), psychological capital has been both theoretically (Luthans et al., 2007) and empirically (Luthans et al., 2007) supported as a higher-order factor, whereas each of the four components are best understood as indicators of a single latent factor. The objective of the present study is therefore to explore the psychometric properties of Luthans et al (2007) positive Psychological Capital Questionnaire 24 (PCQ-24) which measure the four domains (hope, self-efficacy, resilience, and optimism) of psychological capital using Nigerian samples.

This study is pertinent because psychological capital has been shown to influence a number of workplace outcomes such as job performance (Luthans et al., 2007; Luthans, Avolio, Walumbwa & Li, 2005), creativity and entrepreneurship; decrease in workplace absence; increase in employees' performance, organizational commitment, job satisfaction, and organizational citizenship behaviour (Luthans et al., 2010); stress (e.g. Avey, Luthans & Jensen, 2009); burnout (Cheung, Tang & Tang, 2011; Laschinger & Grau, 2012; Wang, Chang, Fu & Wang, 2012) and well-being (Culberson, Fullagar & Mills, 2010). Given the utility of psychological capital as personal resources which exert significant impacts on various workplace and other health-related outcomes, there is therefore the need to properly examine the psychometric properties of the instrument so as to have confidence in using it for assessment in industry and organization especially in developing African context like Nigerian. Even though it is not unusual to use such foreign developed psychological test elsewhere like Nigeria, the adaptability of the test should be substantiated by examining the psychometric properties of the instrument when planned to be used in other culture the test was not originally developed for. This is therefore to guarantee that the test is not culturally biased. Thus, since the instrument was developed in Western cultural background, there is the need for its adaptability to a culturally diverse and non-Western context like Nigeria before valid inferences can be confidently drawn from the measure. Currently there is paucity of research reporting on the validity and reliability of the PCQ-24 especially in non-Western societies like Nigeria. Thus, the dearth of research of the psychometric properties of PCQ-24 in the non-western context like Nigeria informed this study. And in order to study and maximize the utility of positive psychological capital in Nigeria, the adaptation of the PCQ-24 which measures the construct should be the first step.

Conceptualization of Psychological Capital (Psycap)

Luthans and colleagues (2004) conceptualized the concept of psychological capital (psycap) as consisting of four components which includes hope, self-efficacy, resilience and optimism, measuring sustained competitive advantage within an individual. Relying on POB movement, it measures positive psychological aspects of an individual and focuses on the strengths rather than the weaknesses (Luthans et al., 2004). According to Luthans and colleagues (2007), psychological capital as personal resources which contribute to individual and organizational productivity can be measured, developed, and effectively managed for performance improvement in today's workplace. In relation to the traditional (financial, structural/physical, technological), human (explicit and tacit knowledge), and social capital (networks, norms/values, and trust); positive psychological capital also contains some basic elements of being positive, unique, measurable, developable, and performance-related (Luthans & Youssef, 2004).

2

Avolio and Luthans (2006) refer to positive capacities as state-like constructs which suggest that it can be developed (e.g. trained) over time, as opposed to trait-like constructs which are less amenable, relatively enduring and more resistant to change.

According to Avolio and Luthans (2006), psychological capital can be described as who one is, what one can become in terms of positive development which is different from human capital (what one knows), social capital (who one knows), and financial capital (what one has). Specifically, it is defined as "an individual's positive psychological state of development characterized by having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; making a positive attribution (optimism) about succeeding now and in the future; persevering towards goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and when beset by problems and adversity, sustaining and bouncing back and even beyond (resilience) to attain success" (Luthans, Youssef & Avolio, 2007, p. 3). This therefore describes an individual who has a sense of confidence in life, positive outlook, success-oriented and resilient.

Hope is described as motivational in nature whereby two elements, agency (goal-directed determination) and pathways (planning to achieve those goals) interact (Snyder, 2000). Agency refers to the motivation or willpower to pursue and accomplish a specific task or goal while pathway is the means to achieve the goal or task. Thus, to possess hope, the individual must have both the will to succeed in a given task as well as the viable means or way to accomplish the task. Hope facilitates the effort to overcome barriers in the process of attaining a goal with the strength of motivation (Synder et al., 1991).

Optimism entails having positive expectations about the future (Peterson et al., 2011). According to Synder et al (1991) optimism can be regarded as generalized expectations which make an individual to hope for the best and maintain persistence to achieve the target. Optimists expect good things happen to them (Carver & Scheier, 2002) and explain positive events as internal (something about themselves), stable (persists or recurs over time) and global (affects many situations) and also vice versa for negative events (Peterson et al., 1982; Oettingen, 1995). Thus, optimism can be regarded a global positive expectation of success.

Self-efficacy is task or domain specific and the employee's conviction that he can perform the task successfully (Stajkovic & Luthans, 1998). In other words, it is the individual's belief about him or her capacities or resources to successfully carry out a specific task in a given context. Self-efficacy enables one to muster the resources which enable one to take the necessary actions to complete a specific task (Qingshan & Xuansheng, 2014). Individuals who score high on self-efficacy pursue seemingly challenging tasks, and fashion out complex means to overcome huddles (Keleş, 2011). They tend to persevere and become success-oriented in difficult moments (Shahnawaz & Jafri, 2009). Luthans and colleagues (2006) suggest that the four mechanisms to improve self-efficacy include task mastery, modeling (vicarious learning), social persuasion (positive feedback), and physiological/psychological arousal.

Resilience which is the fourth dimension of positive psychological capital has to do with positive adaptation or ability to cope in the face of serious threats to adaptation or development (Masten, 2001; Masten & Reed, 2002). It is defined as "a class of phenomena characterized by good outcomes in spite of serious threats to adaptation or development" (Masten, 2001, p. 228). Adapting resilience it to workplace, it is defined as "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). People who are resilient have restraint in facing with harsh realities, and attribute meanings to terrible times and tend to have the resources to cope not only with adverse events but also with extreme positive events as well. According to Coutu (2002), they have an ability to adapt the conditions and content with what they have; and possess the common profiles to have staunch acceptance of reality, deep belief often buttressed by strongly held values that life is meaningful, and uncanny ability to improvise and adapt to significant changes (Meng et al, 2011).

Psychological Capital Questionnaire (Pcq-24)

The importance of psychological capital construct to both employees and organizations made Luthans and colleagues (2007) to develop the Psychological Capital Questionnaire 24 (PCQ-24), an instrument measuring the construct. PCQ-24 was

originally developed in USA and has been psychometrically evaluated in many western countries including Canada (Laschinger & Grau, 2012), United Kingdom (Nigah, Davis & Hurrell, 2012) and Portugal (Rego, Sousa, Marques & Cunda, 2012). Despite the global recognition and acceptance of the potency of the PCQ-24 structure and its psychometric values, the utility of the scale has not been satisfactorily ascertained in developing countries like Nigeria. Gorgens-Ekermans and Herbert (2013) report that the only published work concerning the psychometric properties of the PCQ-24 found in non-Western countries is the work of Du Plessis and Barkhuizen (2011) in South Africa. The study, however, employed only White male samples and the results of exploratory factor analysis (EFA) showed that the PCQ-24 is made up of three-factor structure in which self-efficacy and hope emerged as one dimension (Gorgens-Ekermans & Herbert, 2013). According to the authors, the results could not be well interpreted as a result multiple item cross-loading as most of the original items failed to load on the expected dimensions they were intended to load (Gorgens-Ekermans & Herbert, 2013). Thus, the dearth of research on the psychometric properties of the PCQ-24 in non-Western countries like Nigerian informed the necessity for this study.

Pcq-24 Development and Initial Validation

Luthans and colleagues (2007) argue that psycap was based on sound theoretical frameworks as it was drawn from Bandura's (1986) social cognitive theory, Snyder's (2000) theory of hope, Scheier and Carver's (1985) conceptualization of optimism, and Masten's (2001) idea of resilience. According to Luthans and colleagues (2007) the four scales that were included in the development phase of the instrument were selected based on evidence of sound reliability and validity, clear relevance to the workplace and being measures of state-like constructs (Gorgens-Ekermans & Herbert, 2013). Thus, the items of the PCQ 24 were pooled from the four scales of hope, resilience, optimism, and self-efficacy to form the instrument (Luthans et al., 2007). However, in the process developing the PCQ-24 all four constructs were weighted equally so as to enhance the selection of the best six items from every measure. Also, face and content validity of the selected items were examined to ascertain their state-like nature and relevance to organization. Luthans and colleagues (2007) report the internal consistency of the PCQ-24 as ranging from 0.72 to 0.80, 0.66 to 0.72, 0.75 to 0.85 and 0.69 to 0.79 for hope, resilience, self-efficacy and optimism respectively. The results of confirmatory factor analyses (CFAs) indicated that the construct is better represented as higher order factor structure for the overall psycap as measured by Root Mean Square Error of Approximation (RMSEA) of 0.046; Comparative Fit Index (CFI) of 0.93, Standardized Root Mean Residual (SRMR) of 0.051) (Luthans et al., 2007) indicates that the construct is better represented as a higher-order factor model than the multiple three-factor models.

Statement of The Problems

The psychometric properties of the PCQ-24 have been assessed by different researchers and in diverse countries since its initial development. The problem is that while PCQ-24 has been studied in many developed countries, there has not been much evidence of the investigation of its structural validity and reliability in developing nations like Nigeria. Also, it has been demonstrated that the psychometric properties of PCQ-24 are not consistent across countries with those reported by Luthans and colleagues (2007). This is problematic because interest in the scale as well as its functional utility in the workplace has continued to grow. A well-established evidence of psychometric properties i.e. the validity and reliability of foreign-based test such as PCQ 24 Should be obtained before adapting it to a different and local environment like Nigeria. Given that Nigeria is an emerging economy and the promise the construct holds to predict various positive workplace outcomes and workplace intervention strategies, a Nigerian validation study is needed.

Research Questions

The present study tried to provide answers to the following research questions:

1. What are the internal consistency reliability estimates of the PCQ-24 dimensions?
2. What are the underlying factor structures of the PCQ-24 items in a Nigerian sample?
3. Will the instrument show good fit indices as measured by confirmatory factor analysis?

Method

Participants and procedure

Participants for the study were drawn from across two occupational groups: a production company and banking sector in Nnewi, South-East Nigeria. A total of 205 employees from the two occupational groups completed the questionnaire and their ages ranged from 22 to 53 years (Mean age = 33.5, SD = 8.6). Other demographic information collected from the participants includes gender, marital status, education, employment status, job tenure, and organizational tenure. Table 1 shows the demographic characteristics of the participants.

Table 1: Demographic characteristics of participants

Variables	Levels	No.	(%)
Age	Young	115	(56.10%)
	Old	90	(43.90%)
Gender	Male	135	(65.85%)
	Female	70	(34.15%)
Marital status	Married	157	(76.59%)
	Single	48	(23.41%)
Education	Secondary	58	(28.29%)
	Tertiary	147	(71.71%)
Organizational tenure	Short tenure	128	(62.44%)
	Long tenure	77	(37.56%)
Job tenure	Short tenure	146	(71.22%)
	Long tenure	59	(28.78%)

In the process of adapting the PCQ-24 for Nigerian samples, a copy of the questionnaire form was first presented to six experts; three to psychologists and three to managers of companies for assessment of face and content validity. The experts included three Industrial/organizational (I/O) Psychologists, two banks regional heads of Human Resource (HR) Units and one from a production company. They were asked to rate each of the items on the basis of how they feel or think it measures the attributes in question characterizing psychological capital as was operationally defined. They also ascertained the clarity of the items. However, the experts rated each item on a three point scale of relevant (R), not relevant (NR), and relevant but poorly designed (RPD) using Lawshe (1975) minimum values of content validity ratio per item at P = .05. According to Lawshe (1975), a score of .99 and above is an acceptable rule of thumb for the assessors' agreement for accepting an item. All the 24 items were retained as they reached the acceptable parameter based on the agreement of the experts. This suggested that there was unanimous agreement among the experts that all the items have face and content validity. A total of 245 employees responded to the survey questionnaire in their respective places of work, but out of this number, only 215 copies were correctly filled and returned, representing a response rate of 87.76%. Also, out of this number, 10 (4.65%) copies were found not usable and only 205 (95.35%) copies were subjected to analyses.

Instrument

The measure for this study was Psychological Capital Questionnaire 24 (PCQ-24) developed by Luthans et al (2007). The items of the PCQ-24 are grouped into four subscales of hope, optimism, self-efficacy and resilience which reflect the underlying dimensions

of individuals' psychological resources. All the four subscales contain six items each scored on a 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Statistical Analysis

The statistical analyses of the present study were conducted with the aid of Statistical Package for Social Sciences (SPSS) version 16.00 and LISREL 8.80 (Joreskog & Sorbom, 2007). Prior to the analysis, the scales were well scored according to specifications. The mean score of the four subscales was the bases for interpreting the scores of the respondents. This was achieved by adding the scores on the particular scale or subscale and dividing the sum by the number of items of the scale or subscale. Hence, the PCQ-24 yields four subscales and/or a total score that range between 1 and 5 that totals 120 for the full scale version.

Construct validity: Usually, the first step to validate an instrument is to determine the internal validity of the instrument. This was done using Cronbach's coefficient alpha reliability estimate which has a general accepted benchmark value of .70 (Garson, 2005; Lewicki & Hill, 2006; Schmitt, 1996).

Confirmatory factor analyses (CFAs) were conducted using LISREL 8.80 (Joreskog & Sorbom, 2007). Detailed description of the procedure of CFA using LIREL can be seen in Byrne (1998); Harrington (2009); and Kelloway (1998). Also, consistent with the work of Batinic, Wolff and Haupt (2007), the goodness of fit statistics were obtained using Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), Non-Normed Fit Index (NNFI) and Incremental Fit Index (IFI). The X^2 test was also used to test the fitness of the model.

RMSEA values less than .05 is an indication of goodness of fit and values as high as .08 indicates acceptable errors of approximation (Hu & Bentler, 1998). The CFI/NNFI and IFI vary in a continuum of 0 to 1 whereby values greater than .90 and .95 indicate an acceptable and excellent fit of the data (Bentler, 1990). However, a value of .90 and above can be considered as acceptable fit (Harrington, 2009).

Results

3.1. Internal Consistency

The estimates of Cronbach's coefficient alpha(s) for the instrument and subscales yielded an acceptable minimum reliability of at least .70 and above (**see table 3.1**).

Table 3.1: The Cronbach's coefficient alpha(s) for PCQ-24

FACTORS	Hope	Optimism	Resilience	Self-efficacy
Subscale α for PCQ-24	.72	.78	.75	.77
Composite α for PCQ-24 = .85				

Note: α = Cronbach's coefficient alpha

3.2. Confirmatory Factor Analysis (CFA)

The CFA model explored the ability of the four factors to explain the relationship among the 24 items. The model with 24 items representing the factors of individuals' psychological capital indicated a good fit to the data (CFI = .93, NNFI = .91, IFI = .91, RMSEA = .06 and X^2 = 962.05, df = 569, p = 0.0). The solution was adequate and the factor structure well specified with the entire factor loading being positively significant (> .30) and ranging from .35 to .75 (**see table 3.2**). The correlations among the four

6

factors were relatively low to moderate (rs = .35 to .60), indicating that the factors were clearly distinguishable from one another (**see table 3.3**).

In sum, there was support for the four factor model in Nigerian sample based on the findings: (a) evidence of good internal consistency with an acceptable minimum reliability of .70 and above; (b) good factor loading for the model (.50 and above for each item loading on the respective factor); (c) reasonably low to moderate correlation among the four factors (< .70); and (d) reasonable model fit (i.e. CFI =.93, NNFI = .91, IFI = .91).

Table 3.2: Summary of the Item – factor loading

Items	HOPE	Items	OPTMS	Items	RESIL	SLFCY	Items
HOPE 2	.42	OPTMS 7	.50	RESIL 3	.55	SEFCY 1	.48
HOPE 6	.71	OPTMS 9	.35	RESIL 4	.38	SEFCY 5	.53
HOPE 11	.75	OPTMS 14	.65	RESIL 10	.48	SEFCY 8	.70
HOPE 15	.68	OPTMS 16	.68	RESIL 12	.60	SEFCY 17	.68
HOPE 20	.49	OPTMS 19	.62	RESIL 13	.65	SEFCY 18	.65
HOPE 24	.45	OPTMS 22	.70	RESIL 21	.60	SEFCY 23	.67

Note: HOPE = Hope; OPTMS = Optimism; RESIL = Resilience; SLFCY = Self-efficacy

Table 3.3: Inter-correlation of the four factors of Psychological Capital Questionnaire (PCQ-24)

	1	2	3	4
1. Hope	1.00			
2. Optms	.60**	1.00		
3. Resil	.50**	.46*	1.00	
4. Slfcy	.35*	.53**	.48*	1.00

Note: * = P < .05; ** = P < .01; HOPE = Hope; Optms = Optimism; Resil = Resilience; Slfcy = Self-efficacy

Discussion and conclusion

The current study indicates that the PCQ-24 is an adequate measure of psychological capital that can be used in the Nigerian context as the PCQ 24 exhibited quite satisfactory psychometric properties:

1. The four subscales are internally consistent as demonstrated by Cronbach's coefficient alpha which reached acceptable alpha(s);
2. The factor structure were well defined showing that the factors were clearly distinguishable from one another; and
3. The CFA using the CFI/NNFI, RMSEA and chi-x^2 indices to assess the factor structure confirmed the four-factor structure.

Thus, the researchers hope that the adaptation of this instrument will awaken interest for further studies as well as theorizing on psychological capital in Nigeria. Also, it will serve as a tool for managers and organizational practitioners to select and place employees since it is concerned with positive organizational behavior.

Limitations of the study

The present study focused only on two occupational groups thereby raising the issue of generalization. As such, there is the need to extend the study to other occupational groups so as to confidently make extrapolation to other occupational groups. Also, the sample size for the present study was small and may give rise to sampling error. There is therefore the need to enlarge the sample size in future research to overcome this limitation. Furthermore, even though the current study confirmed a four-factor structure of PCQ-24,

the issue remains whether this four-factor structure will remain stable over time. Future research should therefore try embarking on longitudinal study to confirm the factor structure in Nigerian sample.

Conclusion

Luthan et al (2007) psychological capital questionnaire (PCQ-24) has undoubtedly demonstrated robust psychometric properties in Nigeria. The researcher therefore contends that it is a useful instrument necessary for today's organization in Nigeria.

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