ASSESSING THE TEST-RETEST RELIABILITY OF CAREER PATH APPRECIATION AS A MEASURE OF CURRENT AND POTENTIAL WORK DECISION-MAKING CAPABILITY

Presented at the 16th Annual SIOPSA Conference, 26-28 July 2014, CSIR International Convention Centre, Pretoria

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RESEARCH OBJECTIVE

The objective of the study reported on was to assess the test retest reliability of the Career Path Appreciation (CPA) procedure in assessing current and potential level of growth in work decision-making capability. The study also further explored whether people of different genders and race groups differed significantly in terms of their current and potential level of work decision-making capability at their first and second CPA assessments.

DESCRIPTION OF STUDY

The Employment Equity Act (EEA) of 1998 states that the use of selection instruments is prohibited unless the user can demonstrate that the instrument used is valid, reliable and fair (Nzama, De Beer, & Visser, 2008). Research on gender and race groups in terms of CPA is inconclusive (Kitching, 2005). By investigating whether gender and race groups differ in terms of their level of work decision-making capability will therefore further contribute to the research literature on the CPA measure. Scholars and practitioners in the field of industrial psychology could therefore benefit from continued follow-up research regarding the reliability of CPA, and in particular its application in terms of race and gender groups in the South African employment equity context (Mauer, 2008).

RESEARCH DESIGN

The research design is an ex post facto correlational design using longitudinal data of a non-probability purposive sample (N = 527) within the Bioss SA database. The study is original in that it is the first to provide information on the participants’ current and potential level of work decision-making capability (as assessed by the CPA procedure at a certain point of their careers) with their level of current and potential work decision-making capability four years later. This research approach enabled the researchers to assess the test-retest reliability of the CPA procedure in assessing work decision-making capability.

RESEARCH METHODOLOGY

Research participants

The sample was a non-probability purposive sample of 527 participants whose CPA data was archived on the Bioss SA Genie database. Of the participants, 46% were white, 44% black, 7% Asian and 3% coloured. The sample comprised predominantly males (84%). The participants occupied skilled (53%) and managerial (47%) level positions at the time of their CPA assessments. In terms of chronological age, the participants were between the ages of 28 and 40 years (mean age = 37.76; SD = 6.88) at their first CPA assessment and between 32 and 44 years (mean age = 33.84; SD = 6.48) at their first CPA assessment. The skewness and kurtosis further indicated a normal distribution of age at the first and second CPA assessments. In terms of gender, 53% of the participants were men and 47% women.

Measuring instrument

Level of current and potential future work decision-making capability was measured by means of the well-researched CPA procedure developed by Stamp (Percival et al., 2003; Stamp, 1988: 1989). Although the CPA assesses three aspects of career pathing, namely current level of capability, potential level of capability, and work style, the present research focused on the capability and mode aspects of the CPA procedure. The CPA procedure constitutes a complex one-to-one semi-structured interview lasting approximately two to four hours that links the scope of a person’s capacity to exercise judgement with the organisational requirement to do work at a particular level of complexity (Lewis, 1993).

The CPA procedure is conducted by a highly trained practitioner, and standardised scoring procedures are used (Ashton & Kruger, 2008; Lewis, 1993). CPA scores are derived from a very complex scoring process where the scorer (trained practitioner) makes judgements concerning level of capability based on both the form and the substance of the subject’s performance in a number of tasks (Lewis, 1993).

Reliability and validity

Research indicates acceptable levels of inter-rater reliability with correlation coefficients ranging between .71 and .95 (Kitching, 2005; Mauer, 2005). Inter-rater mean absolute agreements range between 90 to 100 per cent (Kitching, 2005). Research also provides evidence of the face validity, predictive validity, content validity as well as the construct validity of the CPA procedure (Mauer, 2000). Research by Kitching (2005) confirmed the measurement outcome equivalence of the CPA procedure for groups of diverse cultural backgrounds in the South African context.

Research procedure and ethical considerations

The participants’ data was extracted from the Bioss SA Genie database, which houses the data of the entire population of CPAs that have been completed internationally, for the following variables: date of birth, dates of the first and second CPA assessments, chronological age at the first and second CPA assessments, current level of work decision-making capability scores at the first and second CPA assessments, mode (potential future level of work decision-making capability) scores at the first and second CPA assessments, practitioner at the first and second CPA assessments, job category at the first and second CPA assessments, and race and gender. Only participants with two CPA assessment scores obtained at different times by different practitioners were used to achieve the objective of the study. In the study, the notation CPA 1 represents the first CPA assessment of a participant conducted by a particular practitioner, and CPA 2 represents the second CPA assessment conducted at a later date (approximately four years later) by a different practitioner.

In terms of ethical considerations, permission to use the archival data for research purposes was obtained from Bioss SA. Ethical clearance was obtained from the research institution. The participants signed a consent form that granted Bioss SA permission to enter the data onto the Genie database, and to use the data (anonymously) for research purposes. Confidentiality was maintained by the researchers.

Research participants: Race

Research participants: Gender

Research participants: Mean age at the time of the first and second CPA assessment.
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Statistical analysis
SPSS (SPSS Inc., 2012) was used to analyse the data. The statistical analyses involved descriptive statistics and Pearson product-moment correlations in order to assess the correlations between the participants’ first CPA assessment and second CPA assessment scores. In the research reported on, two waves of data were used, namely the scores obtained from the CPA procedure applied at two different points in time by different practitioners in order to assess the test–retest reliability of the CPA procedure. The time interval between the two CPA assessments was approximately four years and fell within a specific CPA growth curve (Jacques, 1998), which warranted test–retest reliability. One-way ANOVAs were performed in order to test for significant mean differences between the gender and race groups for both CPA assessments. In order to counter the probability of a type 1 error, the significance value was set at the 95% confidence interval level (p ≤ .05).

FINDINGS AND DISCUSSION

Correlations
Table 1 shows that in terms of the first CPA assessment, the participants’ current level of work decision-making capability (CLC-CPA1) scores correlated significantly and positively (r = .83; p ≤ .001; large practical effect) with their predicted potential level of work decision-making capability (mode – CPA1) scores. Similarly, in terms of the second CPA assessment, the participants’ current level of work decision-making capability (CLC-CPA2) scores correlated significantly and positively (r = .83; p ≤ .001; large practical effect) with their predicted potential level of work decision-making capability (mode – CPA2) scores. The participants’ first CPA assessment’s current level of work decision-making capability (CLC-CPA1) scores also correlated significantly and positively (r = .67; p ≤ .001; large practical effect) with their second CPA assessment’s current level of work decision-making capability (CLC-CPA2) scores. Their current level of work decision-making capability (CLC-CPA1) scores also correlated significantly and positively (r = .48; p ≤ .001; moderate practical effect) with their predicted potential level of work decision-making capability (mode – CPA2) scores. Similarly, the participants’ second CPA assessment scores for their current level of work decision-making capability (CLC-CPA2) also correlated significantly and positively (r = .48; p ≤ .001; moderate practical effect) with the predicted potential level of work decision-making capability scores they obtained in their first CPA assessment (mode – CPA1). The scores obtained for the participants’ first CPA assessment’s predicted potential level of work decision-making capability (mode – CPA1) also correlated positively and significantly (r = .59; p ≤ .001; large practical effect) with the scores obtained for their second CPA assessment’s predicted potential level of work decision-making capability (mode – CPA2).

Table 3 shows that similar to the gender groups, the race groups differed significantly only in terms of the scores obtained for their current level of work decision-making capability for both CPA assessments. The white participants obtained significantly higher mean scores (CPA1 mean = 3.64; CPA2 mean = 3.72) than the other race groups for their current level of work decision-making capability at both their first CPA (F(2,1519) = 3.03; p = .01) and second CPA (F(2,1519) = 4.30; p = .002) assessments.

PRACTICAL IMPLICATIONS
The test–retest reliability of the CPA procedure confirms its usefulness in organisational and especially the South African employment equity context. The CPA procedure can be used with confidence as an assessment tool in the selection, mentoring and development of high-potential managerial and professional talent. A CPA assessment might inform employees’ current and future career development within the organisation and help to ensure a continued match between individual decision-making capability and work complexity which, in turn, could influence organisational performance (Ashton & Kruger, 2010). Managers and industrial psychologists should also consider the work decision-making capabilities of gender and race groups and the factors that may potentially impede their current level of work capability. Increased organisational support in terms of facilitating individual potential decision-making capability in the case of diverse groups of employees is likely to result in an increase in both organisational and employee performance (Kitching, 2005; Kruger, 2013).

CONCLUSION
The present study makes an important contribution to assessment practice in the South African context. In light of the paucity of recent research on CPA, the value add of the present findings lies in the validation of the test–retest reliability of the CPA procedure when applied in the South African employment equity context. It is apparent from the findings that the CPA procedure can be used with confidence as a tool for assessing current and potential levels of work decision-making capability in the selection and development of managerial and professional talent in the South African context.