Chapter 6
A Psychological Career Resources Framework for Contemporary Career Development

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Abstract In a complex, boundaryless and continually changing work world, people increasingly focus on their subjective careers as a framework for their career growth and development (Converse et al., J Vocat Behav 80:148–159, 2012; Khapova et al., Handbook of Career Studies, pp. 114–130, 2007. The subjective career represents an internally-driven self-regulated psychological state of vocational development that influences the individual's capability to effectively cope with, adapt to, and succeed in a particular work setting or occupational role, and deal effectively with career transitions (Converse et al., J Vocat Behav 80:148–159, 2012; Khapova et al., Handbook of Career Studies, pp. 114–130, 2007; Savickas and Porfeli, J Vocat Behav 80:661–673, 2012). The psychological state of development is a consequence of individuals' psycho-social meta-capacities (Coetzee, South African J Ind Psychol 34(2):32–41, 2008; Savickas and Porfeli, J Vocat Behav 80:661–673, 2012; Weigl et al., J Vocat Behav 77:140–153, 2010) which comprise their psychological capital and social resources and strengths (Avey et al., Human Resour Dev Q 22(2):127–152, 2011). People's psycho-social resources (meta-capacities) have been related to key self-evaluations and agentic processes that enable them to control and influence their environment (Hobfoll et al., J Personal Soc Psychol 84:632–643, 2003; Rottinghaus et al., J Career Assess 20(2):123–139, 2012), successfully cope with job demands, attain goals, achieve personal growth and development (Demerouti et al., J Appl Psychol 86:499–512, 2001) and solve the unfamiliar, complex and ill-defined problems presented by current and anticipated developmental vocational tasks, and transitions and traumas in occupational roles (Savickas and Porfeli, J Vocat Behav 80:661–673, 2012). This chapter proposes a psychological career resources (career meta-capacities) framework relevant to the 21st century occupational world and reports research findings on the development and validation of a quantitative measure of psychological career resources that can be applied in the contemporary career counseling context.

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Career Meta-capacities

Career meta-capacities denote psycho-social capabilities such as behavioral and career adaptability (Coetzee 2008; Lips-Wiersma and Hall 2007; Rottinghaus et al. 2012; Savickas and Porfeli 2012), resiliency and optimism (Hobfoll et al. 2003; Luthans et al. 2007; Rottinghaus et al. 2012; Vuori et al. 2012), identity awareness (Flores 2008; Valcour and Ladge 2008), sense of purpose and calling (Domene 2012; Weiss et al. 2004), self-esteem, self-efficacy and emotional intelligence (Bezuidenhout 2011; Bowling et al. 2010; Di Fabio and Kenny 2011; Hobfoll and Schumm 2009). Acting as key transactional resources between the inner (psychological) and outer (social) worlds of a person (Savickas and Porfeli 2012), these meta-capacities enable people to be self-directed learners and proactive agents in the construction and design of their careers and employability in the contemporary turbulent occupational world (Bezuidenhout 2011; Briscoe and Hall 1999; Coetzee 2008; Ferreira 2012; Hall and Chandler 2005; Potgieter 2012; Vuori et al. 2012).

A strong reservoir of psychological resources facilitate the acquisition, enrichment and use of other resources, which, in turn, positively influence psychological development, personal resilience, and growth (Hobfoll 2002), and promote general employability and occupational expertise (Bezuidenhout 2011; Briscoe and Hall 1999; Hall and Chandler 2005). Rottinghaus et al. (2012) posit that career practitioners need to reason about and focus on the coping skills, attitudes and resources clients need to increase their agency and adjustment or adaptation to the turbulent circumstances affecting their careers and work lives. Overall, in line with the tenets underpinning the theory of Carol Ryff (1989) and the perspective of Diener et al. (2010) on human flourishing and well-being, it can be suggested that the presence of well-developed career meta-capacities or psycho-social resources may facilitate career wellbeing and career agency, that is, help individuals to flourish in their career development and career-life self-design in the post-modern career development context.

Although various career assessment instruments are available to assess aspects of individuals' career meta-capacities, for example: the Career Adapt-Abilities Scale (Savickas and Porfeli 2012), Career Orientations Inventory (Schein 1990); Employability Attributes Scale (Bezuidenhout 2011), and the Flourishing Scale (Diener et al. 2010), an overarching framework for assessing individuals' career meta-capacities seems to be lacking. The next section reports on the theoretical development and psychometric properties of the Psychological Career Resources Inventory (PCRI) developed by Coetzee (2007, 2008) as a career meta-capacities framework that can be used in the contemporary career development context. Overall, research

provides evidence that high PCRI scores relate positively to individuals' career anchors (Coetzee and Schreuder 2009; Kuok 2011); subjective work experiences, that is, life satisfaction, job/career satisfaction, and work meaningfulness (Coetzee and Bergh 2009); coping resources (Coetzee and Esterhuizen 2010); work engagement (Venter 2012; Tladinyane 2012); organizational commitment (Ferreira et al. 2010; Tladinyane 2012); job embeddedness (Ferreira 2012); and psycho-social employability attributes such as openness to change, career resiliency, career self-management drive, self-efficacy, proactivity, and emotional literacy (Symington 2012).

Theoretical Basis for the Development of the Psychological Career Resources Inventory

Psychological career resources are regarded as individuals' inherent psycho-social resources or meta-capacities which enable them to adapt to changing or uncertain career circumstances and to shape and select environments in order to attain success within a particular socio-cultural context (Coetzee 2008). A well-developed psychological career resources profile leads to self-empowering, pro-active career action and behavior that promote career agency and general employability (Bezuidenhout 2011; Symington 2012), career coping (Coetzee and Esterhuizen 2010) and positive subjective work experiences (Coetzee and Bergh 2009).

The theoretical tenets underpinning Coetzee's (2008) psychological career resources framework are based on Young et al.'s (2005) contextual action theory of career development. In a post-modern context, contextual action theory views the career as an action system. Being intentional and goal-directed, career-related action is constructed socially through discussions and interactions in a particular systems context. The career action system is self-designing in the sense that it contains the resources and willingness (intentionality) to continually learn and explore, and the innate capability to review personal experiences regularly including the capability to review the way of reviewing (Khapova et al. 2007). Residing within a particular socio-cultural or employment context (i.e. organization)—also regarded as a self-designing system continually in flux—the individual pursues the continual redesign of internal agentic processes rather than outcomes, capacities and intentions for continued employability rather than titles, psychological fulfilment and wellbeing rather than advancement, and roles (personal vocational identity) rather than a position (Khapova et al. 2007; Savickas 2010). The assumption of self-designing is that people are better at creating new approaches to their careers and lives if they perform within relatively underspecified conditions. Self-designing by individuals and organizations has become necessary for survival in fast-changing and unpredictable environments (Khapova et al. 2007).

Contextual action theory (Young et al. 2005) posits that individuals make sense of their careers through the career-related action—social environment interaction. The career action is viewed from three perspectives: manifest behavior, conscious cognitions (including thoughts and feelings), and social meaning (the meaning of

the action to the self and to others). Career counselling is seen as a project where counsellor and client are involved in joint action, particularly in settings where career action occurs (for example, the workplace). Language and narrative are used to help clients make sense of life's events (Kidd 2007).

Helping clients to gain deeper insight into and self-awareness of their psychological career resources profile, and how their psychological career resources influence their subjective work experiences, career agency and career construction capability, forms part of the career language and narrative (Schreuder and Coetzee 2011). In line with the reasoning of Adler (1956), Coetzee (2008) posits that individuals' psychological career resources profile reflects their dominant career consciousness. The career consciousness denotes people's conscious, career-related cognitions (that is, perceptions, awareness and self-evaluations) of their career preferences and values, and their career-related meta-capacities (career enablers, career drivers and career harmonizers) that are understood and regarded by them as being helpful in realizing their career action project goals and achieving career success in a particular socio-cultural environment.

The Psychological Career Resources Inventory (PCRI) was developed to make an instrument available that could complement the diagnostic process in a joint career action setting as postulated by contextual action theory. Many aspects of the PCRI relate to Bandura's (2006) notion of personal agency, that is, the capability to take charge of one's own career development by intentionally pursuing relevant educational goals and adapting to changing skills requirements and life role demands (Rottinghaus et al. 2012). Psychological career resources (Coetzee 2008) relate to agentic attributes and processes (Bandura 2006) that individuals employ to successfully navigate their way through the complexities, challenges, and hazards of the contemporary work world. According to Bandura (2006, p. 168), people have to learn how to make sound judgments about their capabilities, anticipate the probable effects of different events and courses of action, size up socio-cultural opportunities and constraints, and regulate their behavior accordingly.

The PCRI is a self-rated measure developed to measure an individual's self-perceived strengths in terms of five key psychological career resources facets and how these manifest in a particular socio-cultural context that demands career action and agentic processes. The five psychological career resources facets measured by the PCRI are as follows: (1) career preferences and (2) career values; (3) skills that enable effective and proactive career planning/self-design, reinvention and development (career enablers); (4) intrinsic career motivations that drive individuals' career actions and intentionalities (career drivers); and (5) psycho-social career meta-capacities that facilitate resiliency and adaptability within individuals' unique social-cultural contexts (career harmonizers; Coetzee 2008).

Career Preferences and Values

Coetzee's (2008) view of career preferences and values is based on Schein's (1990) theory of the career self-concept. People's career preferences and values comprise their unique views about the paths their careers should follow and guide their career decisions (Coetzee 2008; Schein 1990). Coetzee (2008) identifies four career preferences in terms of the psychological career resources framework, namely: stability/expertise (need for occupations or jobs that offer stability, predictability and the opportunity to develop one's expertise in a particular field), managerial (need for upward mobility to positions of successively greater responsibility), creativity/variety (need for a career that allows one to work on a variety of different tasks which require one to use and develop a wide range of skills, abilities and knowledge in innovative and creative ways) and autonomy/independence (need for autonomous functioning and freedom from external interruptions). Research by Coetzee (2007) suggests that the managerial and autonomy/independence career preferences are positively associated with the need for authority and influence as a dominant career value. The stability/expertise and creativity/variety career preferences appear to be positively associated with individuals' needs for further growth and development as a dominant career value.

Career preferences and career values are regarded as the enduring cognitive or conceptual structures underlying people's thoughts about their careers and which define the meaning of a career to them (Coetzee 2008; Driver 1982; Kim 2005). In line with Super's (1995) view, it is posited that the career preferences differ from individuals' career values in that the career preferences are the activities (career action) undertaken by people to attain their career values and thus satisfy the needs underpinning their career preferences. The essence of a value is the motivational goal it expresses (Schwartz 1992; Woehr et. al 2013).

As career meta-capacities, having a clear sense of one's career preferences (interests and needs) and what one values is vital to help one make effective career decisions and experience subjective and objective career success (Schein 1990; Valcour and Ladge 2008). Individuals with well-differentiated career preferences and values tend to have higher levels of subjective career well-being (Coetzee and Schreuder 2012); career adaptability and job embeddedness (Ferreira 2012) and devote more resources (time, energy, attention) to their jobs, occupations and careers (Tladinyane 2012), thereby increasing their chances of objective career success.

Career Enablers

Based on Sternberg's (2003) theory of successful intelligence in career choice and development, Coetzee (2008) view people's career enablers as essential transferable skills that help them to succeed in their careers in a particular socio-cultural context. According to Sternberg (2003), people use and capitalize on the strengths of their analytical, creative and practical abilities to select and achieve life goals and adapt to, shape and select environments congruent to their career needs and interests.

Coetzee (2008) differentiates between people's practical and creative skills and their self-management and interpersonal relations skills. Practical intelligence and creative intelligence are required to implement career options and to make them work in innovative and creative ways (Sternberg 2003). Research by Coetzee and Schreuder (2012) shows that people with strong practical/creative skills tend to perceive their work as meaningful.

Building on Gardner's (1983) notion of personal intelligence, Coetzee (2008) refers to self/other skills as intrapersonal intelligence (the ability to understand one's feelings and motivations and exerting self-discipline in one's interactions) and interpersonal intelligence (the ability to understand, honor, empathize and interact effectively with others). Gardner (1983) posits that the development of self-other intelligence is important as individuals function within a social context. In agreement with Young et al.'s (2005) contextual action theory, studies by Phillips et al. (2001) and Higgins (2001) also showed that career decision making takes place in a social-relational context. Ferreira (2012) found the career enablers to be positively related to individuals' job embeddedness which involves their links and sense of belonging to others in the organization. Research by Tladinyane (2012) further shows that people's commitment to and involvement in their careers, occupations and organizations are significantly enhanced by strong career enablers.

Career Drivers

The career drivers comprise people's intrinsic motivations for their career actions and intentionality. Individuals' career action motivations are reflected in their career purpose (a sense of having a career calling and a higher purpose of being of service to the broader society), career directedness (a sense of clarity about future career directions and goals, where and how to find support for achieving one's career goals or finding/creating/designing new job/employment opportunities), and career venturing (the willingness and intentionality to take risks in finding/creating/designing and experimenting with new career opportunities) (Coetzee 2008). Whilst the career enablers help individuals to open up to new potentialities and make sense of their lives, the career drivers constitute the motivation and drive to give their life identity, to help express, create or define who they are in the career construction/design process.

Coetzee's (2008) notion of career drivers stems from the basic premise of self-determination theory (Deci and Ryan 1985, 2000; Gagne and Deci 2005; Ryan and Deci 2000) that optimally individuals motivate themselves to achieve intrinsic goals. Internalized goals are appraised in terms of autonomous motivation, i.e. the pursuit of goals because of intrinsic motivation or identity congruence (Sheldon 2002). Autonomous motivation has been linked to higher levels of sustained effort in achieving goals and higher levels of effectiveness in the effort (Sheldon 2002). In line with research conducted by Salmela-Aro et al. (2012), the career drivers can be seen as intrinsic motivators in a process whereby individuals adjust to their working environment, make plans, set personal goals, strive to improve their future and evaluate

their potential and efficacy in the contemporary uncertain and changing working life. According to Weiss et al. (2004), people's sense of purpose and career directedness is expressed through the use of their strengths and aptitudes (career enablers). Individuals are drawn to enact their careers using abilities which represent their genius. The career drivers energize people and motivate them towards experimenting with new or alternative career and employment possibilities that are based on their viewpoints of the possible selves they could become or the possible working roles they could experience (Coetzee 2008; Schreuder and Coetzee 2011). Tladinyane (2012) found that people's commitment to and involvement in their careers, occupations and organizations are significantly enhanced by strong career drivers. A study by Coetzee and Schreuder (2012) indicated people's career drivers as significant predictors of their job and career satisfaction and perceiving their work as meaningful.

Career Harmonizers

Coetzee's (2008) notion of career harmonizers is anchored in Ryff's (1989) and Diener et al.'s (2010) theories of human flourishing (psychological wellbeing) which capture the individual's self-perceived success in important areas such as self-esteem, positive relations with others, autonomy, personal growth, purpose, environmental mastery, and optimism. Coetzee (2008) describes the career harmonizers as important agentic processes that individuals employ to affect their psychological state of well-being. The career harmonizers comprise people's self-evaluations in terms of the following:

- *Self-esteem*: self-evaluation in terms of being capable, worthy, significant and effective in comparison to other members of the social group;
- *Behavioral adaptability*: the capacity to engage autonomously, proactively and courageously in the career action process, deal positively with setbacks, initiate effort and achieve psychological success;
- *Emotional literacy*: the ability to accept and express a range of emotional responses which facilitate career adaptive behaviors in the career construction/design process; and
- *Social connectivity*: the ability to connect with others, and establish and maintain mutually satisfying and supporting relationships in the pursuit of career goals.

Coetzee (2008) posits that these psychological attributes act as promoters of flexibility, resilience, and as controls by keeping the career drivers in balance so that people do not go overboard (or burn themselves out) in the process of constructing, designing, pursuing and reinventing their careers. In line with self-determination theory (Ryan and Deci 2000), the fulfillment of the psychological needs underpinning individuals' intrinsic motivations (i.e. need for competence, relatedness, and autonomy) contributes to human flourishing. A study by Coetzee and Schreuder (2012) indicated people's career harmonizers as significant predictors of their life satisfaction, job and career satisfaction, sense of happiness and perceiving their work as

meaningful. Ferreira (2012) found the career harmonizers to be positively related to individuals' job embedded-fit and -links (sense of belonging) in the organization.

According to Coetzee (2008), the various facets of an individual's psychological career resources repertoire need to be well-developed to enable optimal vocational development and agency in the career action (self-design) system. Underdeveloped facets hinder the optimal functioning of other facets and negatively influence the potentiality for self-empowering career action and agency. Clearly differentiated career preferences and values and strong self-evaluations in terms of the career enablers, career drivers and career harmonizers are indicative of an intrinsically motivated self-regulatory capacity driven by a crystallized self-awareness of the strengths of the repertoire of psycho-social career meta-capacities in successfully constructing and designing the life-career.

Study 1: Scale Development

Method

Based on the theoretical framework and operational definitions developed by Coetzee (2008), the researcher generated 70 items reflecting the various psychological career resources constructs outlined in the fifteen theoretical sub-dimensions identified by Coetzee (2008). The psychological career resources construct was presented as a multidimensional construct reflected in five latent dimensions: career preferences, career values, career drivers, career enablers and career harmonizers. Each of these latent factors possesses an a priori, and unique, set of sub-dimensions, each with its own set of items as indicators. Overall, the psychological career resources construct was presented to reflect fifteen second order factors, clustered into five higher order factors.

A content analysis was conducted involving five subject matter experts (two industrial psychologists and three academics in the industrial and organizational psychology field) to ensure that the items reflected the fifteen theoretical sub-dimensions. The subject matter experts reviewed a list of definitions corresponding to the component dimensions of psychological career resources. An iterative process was used to refine the definitions and to more accurately capture the conceptual intent of each dimension of psychological career resources. Inter-rater reliabilities between the five evaluators were 0.97 to 0.99. The content analysis provided preliminary support for the content validity for a measure of psychological career resources. A total of 6 items were removed due to redundancies which resulted in a 64-item pool for the research questionnaire (see Table 6.6 in the Appendix). Next, an independent quantitative study was conducted to further establish construct validity of the PCRI measure.

A cross-sectional survey was used to collect the data. Participants responded to the questionnaire by indicating the extent to which they agreed or disagreed with each statement using a 6-point Likert-type scale, ranging from 1 (*strongly disagree*) to 6 (*strongly agree*).

Participants

The participants were a random sample of students who were registered across various fields of studies at a higher distance education institution for a particular year. The total sample of 2 997 students constituted 58 % females and 42 % males. Blacks represented 67 % and whites 33 % of the sample. The sample was represented by mostly single (52 %) and married (42 %) participants in the early adulthood life stage (25–40 years) (82 %). The mean age of participants was 32, which implies well-established internal career preferences and values (Schein 1990).

The sample had a relatively high educational level, with 84 % having attained a Grade 12 qualification, diploma and undergraduate higher education qualification. The sample represented participants in full-time employment (80 %), who occupied relatively high-level positions at senior and middle management level (18 %) and middle- and first-level supervisory level (54 %) in the service industry (81 %) with occupational expertise predominantly in the financial (21 %), education (11 %), human resource management (9 %), protective services (9 %), and health care (8 %) fields.

Permission to conduct the research was granted by the management and research ethics committee of the higher education institution. The PCRI questionnaire included a covering letter inviting subjects to participate in the study and assuring them that their individual responses would remain confidential and that the results would be used for research purposes only.

Results

The 64 items were subjected to a principal axis factor analysis with varimax rotation after evaluating the Kaiser-Meyer-Olkin measure of sampling adequacy (0.89) and Bartlett's test of sphericity (approximate chi-square $= 10{,}730.949$; $df = 2016$; $p = 0.000$) values. Examination of the scree plot and factor interpretability revealed the presence of fifteen plausible factors. As shown in Table 6.6 (*see the Appendix*), factors with item-factor loadings of ≥ 0.30 were retained, revealing a fifteen-factor solution fitting the theoretical model proposed by Coetzee (2008). All 64 items were retained. Cronbach's Alpha internal consistency coefficients ranged between 0.65 and 0.90 (see Table 6.1). Inter-subscale (bivariate) correlations (see Table 6.2) ranged between 0.10 and 0.58 ($p \leq 0.001$), suggesting acceptable construct and discriminant validity (Tabachnick and Fidell 2007) of the Psychological Career Resources Inventory (PCRI) subscales.

Confirmatory factor analysis (CFA) showed that the data for the PCRI fit the baseline measurement model well, indicating construct validity. The fit indices were RMSEA $= 0.05$, SRMR $= 0.05$ and CFI $= 0.97$ (good fit), which is in line with established joint fit criteria (Hu and Bentler 1999; Kline 2005). All the item loadings were moderate to strong ($> 0.58 - > 1.60$) indicators of the fifteen second-order constructs of the PCRI, which are, in turn, strong indicators of the overall psychological career resources construct, and thus its convergent validity properties.

Table 6.1 Means, standard deviations, and internal-consistency reliability estimates for the Psychological Career Resources Inventory in the development and validation samples

Subscale	Number of items	Development sample ($n = 2,997$)			Validation sample 1 ($n = 318$)		
		M	SD	Cronbach's alpha	M	SD	Cronbach's alpha
Stability/expertise (CP)	5	3.52	0.48	0.73	5.30	0.64	0.67
Managerial (CP)	4	2.84	0.77	0.75	4.48	1.16	0.85
Variety/creativity (CP)	4	3.17	0.72	0.70	5.05	0.85	0.83
Independence/autonomy (CP)	4	2.81	0.70	0.62	4.74	0.91	0.70
Subscale overall (CP)	17	3.09	0.67	0.84	4.89	0.89	0.88
Growth/development (CV)	3	3.58	0.46	0.74	5.49	0.66	0.71
Authority/influence (CV)	3	2.84	0.71	0.61	4.97	0.86	0.65
Subscale overall (CV)	6	3.21	0.59	0.74	5.23	0.76	0.75
Practical/creative skills (CE)	4	3.28	0.79	0.68	4.63	0.91	0.76
Self/other skills (CE)	4	3.4	0.53	0.62	4.93	0.79	0.78
Subscale overall (CE)	8	3.34	0.66	0.71	4.78	0.85	0.86
Career purpose (CD)	5	3.62	0.41	0.66	5.34	0.72	0.78
Career directedness (CD)	3	3.01	0.68	0.63	4.68	0.86	0.72
Career venturing (CD)	3	2.92	0.85	0.71	4.76	0.94	0.68
Subscale overall (CD)	11	3.18	0.65	0.78	4.93	0.84	0.83
Self-esteem (CH)	6	3.30	0.51	0.77	5.09	0.81	0.77
Behavioral adaptability (CH)	6	3.22	0.54	0.73	4.92	0.79	0.83
Emotional literacy (CH)	5	3.05	0.60	0.70	4.52	0.96	0.76
Social connectivity (CH)	5	3.33	0.55	0.66	5.04	0.76	0.77
Subscale overall (CH)	22	3.23	0.55	0.88	4.89	0.83	0.90

Total PCRI items = 64

CP career preference, *CV* career value, *CD* career driver, *CE* career enabler, *CH* career harmonizer

Table 6.2 Bivariate correlations between the Psychological Career Resources Inventory subscales in the development and validation samples

	Career preferences				Career values		Career enablers		Career drivers			Career harmonizers			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Stability/expertise (CP)	–	0.49	0.30	0.25	0.50	0.45	0.19	0.26	0.35	0.19	0.14	0.24	0.17	0.13	0.25
2 Managerial (CP)	0.49	–	0.20	0.24	0.29	0.61	n/s	n/s	n/s	n/s	n/s	0.11	0.05	0.07	0.10
3 Variety/creativity (CP)	0.47	0.34	–	0.55	0.43	0.32	0.53	0.39	0.37	0.35	0.45	0.34	0.37	0.20	0.24
4 Independence/autonomy (CP)	0.35	0.44	0.41	–	0.38	0.44	0.55	0.34	0.27	0.23	0.37	0.31	0.26	0.22	0.20
5 Growth/development (CV)	0.51	0.33	0.46	0.31	–	0.48	0.40	0.54	0.57	0.37	0.31	0.37	0.36	0.29	0.40
6 Authority/influence (CV)	0.32	0.59	0.35	0.53	0.41	–	0.33	0.28	0.22	0.12	0.11	0.22	0.27	0.19	0.23
7 Practical/Creative skills (CE)	0.19	0.18	0.29	0.21	0.34	0.24	–	0.67	0.40	0.43	0.39	0.36	0.46	0.25	0.32
8 Self/other skills (CE)	0.27	0.19	0.25	0.14	0.45	0.20	0.35	–	0.63	0.47	0.42	0.43	0.55	0.38	0.51
9 Career purpose (CD)	0.41	0.24	0.28	0.15	0.52	0.22	0.26	0.58	–	0.50	0.41	0.50	0.46	0.30	0.45
10 Career directedness (CD)	0.28	0.23	0.24	0.15	0.34	0.22	0.30	0.34	0.52	–	0.50	0.43	0.47	0.28	0.35
11 Career venturing (CD)	0.23	0.24	0.36	0.34	0.33	0.27	0.27	0.33	0.41	0.38	–	0.50	0.50	0.26	0.39
12 Self-esteem (CH)	0.31	0.26	0.23	0.17	0.39	0.23	0.31	0.51	0.54	0.42	0.34	–	0.50	0.38	0.46
13 Behavioral adaptability (CH)	0.20	0.14	0.26	0.15	0.32	0.18	0.29	0.47	0.42	0.38	0.32	0.58	–	0.54	0.55
14 Emotional literacy (CH)	0.17	0.14	0.15	0.12	0.29	0.19	0.22	0.38	0.34	0.32	0.23	0.47	0.45	–	0.59
15 Social connectivity (CH)	0.21	0.16	0.19	0.10	0.32	0.16	0.25	0.51	0.46	0.35	0.29	0.58	0.51	0.46	–

Correlations below the diagonal represent the development sample ($N = 2.997$); correlations above the diagonal represent the validation sample 1 ($N = 318$). The managerial (CP) variable did not correlate significantly with the career enabler and career driver variables in the validation sample 1. All other correlations for both the development and validation samples are all significant at $p \leq 0.05$

n/s not significant

Study 2: PCRI Validation

Method

Participants

A non-probability purposive sample of employed adults ($N = 318$) at managerial and staff levels in the field of industrial and organizational psychology participated in the study. Overall, the majority of the participants were blacks (76 %) and females (76 %) in the early adulthood life stage and establishment phase of their careers (84 % = 26–40 years). The participants occupied staff level (57 %) and managerial level (43 %) positions in the South African services industry. Participants responded to the PCRI questionnaire items by indicating the extent to which they agreed or disagreed with each statement using a 6-point Likert-type scale, ranging from 1 (*strongly disagree*) to 6 (*strongly agree*).

Permission to conduct the research was granted by the management and research ethics committee of the higher education institution. The PCRI questionnaire included a covering letter inviting subjects to participate in the study and assuring them that their individual responses would remain confidential and that the results would be used for research purposes only.

Results

Unidimensionality, Construct Validity and Reliability of the PCRI

To establish the usefulness of the PCRI, a Rasch analysis was performed. The Rasch analysis evaluated the unidimensionality of the PCRI by calculating the infit and outfit chi-square statistics to gain an indication of how well the items measure the underlying constructs. The results of the Rasch analysis further confirmed the reliability and construct validity of the PCRI. In terms of internal consistency reliability, Table 6.3 show that all the PCRI dimensions obtained Cronbach's Alpha coefficients (internal consistency reliabilities) close to.65 and higher than the guideline of 0.70 (Hair et al. 2010). Inter-subscale correlations (see Table 6.2) ranged between 0.05 and 0.61 ($p \leq 0.05$), suggesting acceptable construct validity (Tabachnick and Fidell 2007) of the PCRI. The managerial career preference variable did not correlate significantly with the career enabler and career driver variables.

Overall, the Rasch findings suggest that the PCRI could be regarded as a reliable and useful instrument in the career development context. Table 6.3 shows that the person and item separation indices for all the dimensions are in line with the guideline (≥ 2.00) (Bond and Fox 2007; Fox and Jones 1998), indicating that the items of the sub-dimensions differentiate well among the measured variables and that the PCRI item placement could probably be replicated in other samples with confidence.

Table 6.3 Rasch analysis: Psychological Career Resources Inventory person and item statistics of validation sample 1

Dimension	Average measure (SD)	MNSQ infit (SD)	MNSQ outfit (SD)	Separation	Reliability	α
Stability/expertise (CP)						0.67
Person	2.40 (1.36)	0.99 (0.70)	1.00 (0.79)	0.86	0.42	
Item	0.00 (0.47)	0.99 (0.13)	1.00 (0.10)	5.46	0.97	
Managerial (CP)						0.85
Person	1.56 (1.90)	0.97 (0.99)	0.95 (0.97)	2.01	0.80	
Item	0.00 (0.40)	1.00 (0.06)	0.95 (0.08)	5.35	0.97	
Variety/creativity (CP)						0.83
Person	3.03 (2.04)	1.01 (0.99)	1.01 (0.97)	1.71	0.74	
Item	0.00 (0.46)	0.99 (0.17)	1.00 (0.15)	4.83	0.96	
Independence/autonomy (CP)						0.70
Person	1.53 (1.42)	0.99 (0.90)	0.97 (0.89)	1.31	0.63	
Item	0.00 (0.27)	0.99 (0.14)	0.97 (0.12)	3.87	0.94	
Scale overall (CP)						0.88
Person	1.28 (0.89)	1.04 (0.58)	1.04 (0.59)	2.04	0.81	
Item	0.00 (0.43)	0.99 (0.16)	1.04 (0.16)	6.98	0.98	
Growth/development (CV)						0.71
Person	3.71 (1.76)	0.99 (1.06)	0.95 (1.03)	0.78	0.38	
Item	0.00 (0.63)	1.02 (0.24)	0.95 (0.22)	5.19	0.96	
Authority/influence (CV)						0.65
Person	2.75 (1.98)	0.90 (1.00)	1.13 (1.63)	1.36	0.65	
Item	0.00 (1.33)	0.99 (0.23)	1.14 (0.46)	14.08	0.99	
Scale overall (CV)						0.75
Person	2.56 (1.49)	1.00 (0.84)	1.00 (1.00)	1.36	0.65	
Item	0.00 (0.88)	0.98 (0.24)	1.00 (0.23)	9.92	0.99	
Practical/creative skills (CE)						0.76
Person	1.61 (1.59)	1.00 (0.97)	1.00 (0.97)	1.66	0.73	
Item	0.00 (0.07)	1.00 (0.22)	1.00 (0.22)	0.00	0.00	
Self/other skills (CE)						0.78
Person	2.00 (1.53)	1.00 (0.87)	1.00 (0.88)	1.52	0.70	
Item	0.00 (0.29)	1.00 (0.26)	1.00 (0.27)	3.70	0.93	
Scale overall (CE)						0.86

Table 6.3 (continued)

Dimension	Average measure (SD)	MNSQ infit (SD)	MNSQ outfit (SD)	Separation	Reliability	α
Person	1.58 (1.30)	1.01 (0.75)	1.02 (0.76)	2.03	0.81	
Item	0.00 (0.29)	1.00 (0.30)	1.02 (0.33)	4.13	0.94	
Career purpose (CD)						0.78
Person	2.78 (1.70)	0.98 (0.95)	0.97 (0.93)	1.01	0.51	
Item	0.00 (0.26)	1.01 (0.17)	0.97 (0.13)	2.59	0.87	
Career directedness (CD)						0.72
Person	1.87 (1.62)	0.94 (0.85)	1.05 (1.12)	1.28	0.70	
Item	0.00 (1.02)	1.02 (0.29)	1.05 (0.34)	11.99	0.99	
Career venturing (CD)						0.68
Person	2.32 (1.97)	0.89 (1.22)	1.10 (1.69)	1.51	0.69	
Item	0.00 (1.21)	1.09 (0.60)	1.14 (0.69)	13.95	0.99	
Scale overall (CD)						0.83
Person	1.71 (1.18)	1.04 (0.73)	1.06 (0.87)	1.77	0.81	
Item	0.00 (0.71)	1.03 (0.17)	1.06 (0.16)	9.96	0.99	
Self-esteem (CH)						0.77
Person	2.12 (1.57)	0.99 (0.81)	0.98 (0.81)	1.26	0.61	
Item	0.00 (0.37)	1.00 (0.13)	0.98 (0.12)	4.84	0.96	
Behavioral adaptability (CH)						0.83
Person	2.06 (1.71)	0.99 (0.83)	0.99 (0.83)	1.78	0.76	
Item	0.00 (0.35)	1.00 (0.26)	0.99 (0.23)	4.14	0.95	
Emotional literacy (CH)						0.76
Person	1.12 (1.34)	1.00 (0.84)	1.01 (0.85)	1.58	0.71	
Item	0.00 (0.13)	1.01 (0.23)	1.01 (0.26)	1.89	0.78	
Social connectivity (CH)						0.77
Person	2.60 (1.91)	1.00 (1.12)	1.00 (1.13)	1.48	0.69	
Item	0.00 (0.24)	1.00 (0.26)	1.00 (0.24)	2.53	0.86	
Scale overall (CH)						0.90
Person	1.31 (1.07)	1.06 (0.63)	1.04 (0.62)	2.58	0.87	
Item	0.00 (0.33)	1.00 (0.24)	1.04 (0.27)	5.18	0.96	

$N = 318$; *MNSQ* mean square

Table 6.4 Average variance extracted estimates for each higher order PCRI factor vs the squared interconstruct correlations (SIC) associated with the relevant higher order factor (validation sample 1)

		SIC				
	AVE	CP	CV	CE	CD	CH
CP	0.58	1.00	1.10	0.36	0.41	0.24
CV	0.70	1.10	1.00	0.45	0.41	0.36
CE	0.83	0.36	0.45	1.00	0.68	0.53
CD	0.70	0.41	0.41	0.68	1.00	0.71
CH	0.71	0.24	0.36	0.53	0.71	1.00

$n = 318$; *CP* career preferences, *CV* career values, *CE* career enablers, *CD* career drivers, *CH* career harmonizers, *AVE* average variance extracted, *SIC* squared interconstruct correlations

The fit statistics (shown in Table 6.3) further confirm the unidimensionality and validity of the PCRI. The average outfit mean squares are in line with the guidelines of Wilson (2005) which suggest $\geq 0.75 \leq 1.33$ as indicating overall satisfactory model fit. Table 6.3 shows that the infit and outfit chi-square statistics for the person and item measures are equal to or close to 1.00 as suggested by Cervellione et al. (2009), confirming the construct validity and reliability of the PCRI subscale items and the PCRI as a measure of the psychological career resources construct. In agreement with the guidelines provided by Bond and Fox (2007), no item underfits (fit statistics ≤ 0.70) or person underfits (fit statistics ≥ 1.30) were detected. The item infit and outfit statistics were all ≤ 2.00 (Bond and Fox 2007) which indicates that useful and logical information was obtained from the participants and that participants in other settings will most probably provide the same answers. The person infit and outfit statistics indicate that the individual respondents responded to the items in a consistent manner.

Discriminant Validity

The magnitude of the intercorrelations shown in Table 6.2 suggests that the items defining the fifteen subdimensions of the PCRI do not possess excessive overlapping item content, suggesting discriminant validity among the PCRI subdimensions. However, to establish the intra-dimensional discriminant validity of the PCRI, the average variance extracted (AVE) estimates were compared with the squared interconstruct correlations (SIC) associated with each of the five higher order PCRI factors.

The results shown in Table 6.4 show that the AVE values are mostly larger than or close to the SIC values, providing supportive evidence for the intra-dimensional discriminant validity of the PCRI higher order factors. Dimensions that do not seem to show acceptable discriminant validity are the career preferences versus the career values constructs. The bivariate correlations (see Table 6.2) indicated relative strong correlations between the managerial career preference and the authority/influence career value ($r = 0.61$) and the stability/expertise career preference and the growth/development value ($r = 0.50$) suggesting thus overlapping item content.
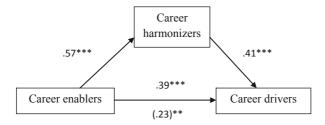
Fig. 6.1 Mediator model examining the direct and indirect relation of the career enablers and career drivers and the mediation effect of the career harmonizers. Values in parentheses represent the indirect effect of the career enablers via the career harmonizers (mediator) on the career drivers. All path coefficients are significant at $p \leq 0.01$. The standardized regression weights (path coefficients) are a bias-corrected bootstrap approximation at the 95 % corrected confidence interval (two-sided). $n = 318$

Mediating Effects of the Career Harmonizers

A simple mediation model with the bootstrapping approach, as described by Preacher and Hayes (2008), was calculated to examine Coetzee's (2008) proposition that the career harmonizers act as promoters of flexibility and resiliency, and as controls to keep the career drivers in balance so that people do not go overboard (or burn themselves out) in the process of pursuing and reinventing their careers. The career enablers are seen as the practical and creative skills, and the self-management and interpersonal relations skills people use to plan, pursue, manage or reinvent their career development in a particular socio-cultural context (Coetzee 2008; Schreuder and Coetzee 2011). Recognizing that the cross-sectional nature of the research design does not allow for casual inferences from the data analyses (Wu and Zumbo 2008), the focus was on correlational inferences to identify the extent to which the mediator variable (the career harmonizer construct) accounted for the direct and indirect relationship between the independent variable (the career enablers construct) and the dependent variable (career drivers construct). The magnitude of the direct and indirect effects (standardized path coefficients) between the variables was therefore examined (see Fig. 6.1). To establish the unique effect of the mediator (career harmonizers) on the dependent variable (career drivers), the analyses controlled for the independent variable (the career enablers construct) and for gender and age.

   As shown in Fig. 6.1, the relation between the career enablers and the career drivers was significantly mediated by the career harmonizers ($p \leq 0.001$). The career harmonizers variable turned to zero in the equation. The career drivers variable related positively to the career enablers and career harmonizer variables. The career enablers had a significant direct effect on the career harmonizers (0.57; $p = 0.001$) and the career drivers (0.39; $p \leq 0.001$). Overall, the results suggest that high scores on the career enablers increased the scores on the career harmonizers. In turn, high scores on the career harmonizers significantly increased the scores on the career drivers. The unique direct effects of the career harmonizers (0.41; $p = 0.001$) on the career drivers were large in magnitude. Bootstrapping results showed that the career enablers had also a significant indirect effect on the career drivers as mediated through the career

harmonizers. The confidence intervals for each indirect pathway excluded zero, thus providing significant support for the indirect effects between the career enablers and the career drivers as mediated by the career harmonizers ($SE = 0.23$; $CI = 0.29$ to 0.49; $p = 0.01$). However, as shown in parentheses in Fig. 6.1, the strength of the relation of the career enablers to the career drivers was substantially reduced after accounting for the mediating effect of the career harmonizers. The results thus provide supportive evidence for Coetzee's (2008) proposition about the balancing effect of the career harmonizers on the career drivers.

Study 3: PCRI Validation

Method

Participants

A non-probability purposive sample of employed adults ($N = 358$) at managerial and staff levels employed in a human resource capacity in the economic and management sectors participated in the study. Overall, the majority of the participants were blacks (84 %) and females (76 %) in the early adulthood life stage and establishment phase of their careers (84 % = 26–40 years). The participants occupied staff level (53 %) and managerial level (47 %) positions in the South African services industry. Participants responded to the PCRI questionnaire items by indicating the extent to which they agreed or disagreed with each statement using a 6-point Likert-type scale, ranging from 1 (*strongly disagree*) to 6 (*strongly agree*).

Permission to conduct the research was granted by the management and research ethics committee of the higher education institution. The PCRI questionnaire included a covering letter inviting subjects to participate in the study and assuring them that their individual responses would remain confidential and that the results would be used for research purposes only.

Results

Inter-subscale (bivariate) correlations (see Table 6.5) ranged between 0.14 and 0.51 ($p \leq 0.01$), confirming acceptable construct and discriminant validity (Tabachnick and Fidell 2007) of the Psychological Career Resources Inventory (PCRI) subscales.

Confirmatory factor analysis (CFA) showed that the data for the PCRI fit the baseline measurement model well, indicating construct validity. The fit indices were $RMSEA = 0.07$, $SRMR = 0.05$ and $CFI = 0.92$ (good fit), which is in line with established joint fit criteria (Hu and Bentler 1999; Kline 2005). All the item loadings were moderate to strong ($> 0.58 - > 1.04$) indicators of the fifteen second-order constructs of the PCRI, which are, in turn, strong indicators of the overall psychological career resources construct, and thus its convergent validity properties.

Table 6.5 Internal consistency reliability and bivariate correlations between the Psychological Career Resources Inventory subscales in validation sample 2

	α	Career preferences				Career values		Career enablers		Career drivers			Career harmonizers			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Stability/expertise (CP)	0.69	–														
2 Managerial (CP)	0.69	0.39	–													
3 Variety/creativity (CP)	0.76	0.42	0.44	–												
4 Independence/Autonomy (CP)	0.76	0.24	0.37	0.45	–											
5 Growth/development (CV)	0.76	0.45	0.35	0.46	0.31	–										
6 Authority/influence (CV)	0.61	0.23	0.37	0.35	0.43	0.29	–									
7 Practical/creative skills (CE)	0.82	0.30	0.34	0.46	0.30	0.42	0.42	–								
8 Self/other skills (CE)	0.70	0.34	0.26	0.36	0.19	0.45	0.22	0.58	–							
9 Career purpose (CD)	0.80	0.42	0.38	0.46	0.23	0.61	0.26	0.49	0.57	–						
10 Career directedness (CD)	0.74	0.27	0.33	0.33	0.30	0.31	0.28	0.45	0.43	0.48	–					
11 Career venturing (CD)	0.87	0.16	0.21	0.26	0.23	0.22	0.25	0.27	0.27	0.28	0.34	–				
12 Self-esteem (CH)	0.84	0.27	0.29	0.30	0.19	0.39	0.17	0.40	0.43	0.53	0.41	0.35	–			
13 Behavioral adaptability (CH)	0.77	0.30	0.24	0.36	0.22	0.41	0.25	0.42	0.42	0.51	0.37	0.31	0.44	–		
14 Emotional literacy (CH)	0.79	0.27	0.21	0.27	0.21	0.34	0.18	0.32	0.28	0.35	0.29	0.22	0.37	0.54	–	
15 Social connectivity (CH)	0.79	0.24	0.18	0.24	0.14	0.31	0.19	0.27	0.36	0.43	0.29	0.19	0.48	0.50	0.49	–

$N = 358$; correlations are all significant at $p \leq 0.01$

Discussion

Overall, the results suggest that psychological career resources could be represented by the fifteen-factor model postulated by Coetzee (2008). The results further confirmed the measurement accuracy, validity and usefulness of the PCRI as a multidimensional measure of individuals' psychological career resources. Research by Coetzee and Esterhuizen (2010), Ferreira (2012), Symington (2012) and Venter (2012) further confirmed the internal-consistency reliability and construct validity of the 15-factor PCRI. Moreover, research (Coetzee and Esterhuizen 2010; Coetzee and Schreuder 2009; Ferreira 2012; Ferreira et al. 2010; Symington 2012; Venter 2012) provides supportive evidence of the predictive (nomological) validity of the PCRI constructs. Overall, the internal consistency reliabilities confirm the usefulness of the PCRI as a research and career assessment instrument. The validation sample 1 (study 2) results indicated a measure of overlap between the career values and preferences which may suggest that the PCRI does not differentiate well between these two constructs as posited by Super (1995). However, the confirmatory factor analyses of the validation sample 2 (study 3) did not indicate overlapping items and rather confirmed the convergent and discriminant validity of the PCRI subscales.

The results also provided supportive evidence for Coetzee's (2008) proposition about the balancing effect of the career harmonizers on the career drivers. The substantive mediating effect of the career harmonizers in the career enabler-career driver relation in study 2, suggests their importance in helping individuals to flourish in their career action project, career construction and development. Strengthened by the career enablers (practical/creative and self/other skills), the career harmonizers appear to act as important agentic processes that, in turn, enhance individuals' career drivers (career action motivators). Research (Coetzee and Esterhuizen 2010) showed that strong career drivers promote health-promoting behaviors that lead to an increase in the individual's physical and emotional well-being and an optimistic attitude toward the self and one's life in general. The career drivers relate to having a sense of calling or higher purpose and goal-directed intentionality towards one's career development (Coetzee 2008) which are important psycho-social capabilities for the career self-designing process. Symington (2012) found the career enablers and career harmonizers to positively predict individuals' career resilience. Coetzee and Esterhuizen (2010) found positive self-esteem to be related to people's optimism about life in general. Research by Symington (2012) shows the career enablers and career drivers to positively predict individuals' career self-management drive. The career enablers and career preferences positively predict individuals' openness to change and proactivity while the career preferences and career values appear to be strong predictors of individuals' generalized self-efficacy (Symington 2012).

Future Directions for Research on the Psychological Career Resources Inventory

Future research could focus on further refinement and purification of the PCRI. The stability of the structure of the PCRI needs to be more fully tested by replicating studies using other diverse samples and applying group confirmatory factor analysis to assess the structural equivalence of the PCRI for gender, race, and age groups for example. It is also important to show the convergence of the PCRI with other measures of career meta-capacities and related concepts like career maturity, career adaptability, psycho-social employability, hardiness, and flourishing. The use of self-report measures may also pose threats to the reliability of data and hence the validity of inferences due to the influence of social desirability and poor self-insight. The Rasch analyses in the validation sample addressed the concerns about social desirability. To deal with the issue of poor self-insight, career practitioners need to verify the PCRI results of clients in a career counseling session.

Practical Implications for Career Counseling and Guidance

Considering the relevance of the constructs measured by the PCRI to the contemporary career development context, the theoretical psychological career resources framework (Coetzee 2008) and the PCRI can be regarded as useful career counselling tools to deepen client self-awareness and self-insight. Within the context of contextual action theory (Young et al. 2005), the PCRI is intended to be used as an assessment tool that facilitates client self-understanding and exploration, rather than to make predictions or recommendations. In addition, the information produced from the assessment is seen as something to be shared in a joint action project between the client and the career practitioner. Clients should be encouraged to express their feelings about the usefulness and accuracy of the psychological career resources profile that emerged from the PCRI assessment. A discussion of the client's strengths and areas that appear to be underdeveloped and that need further enrichment provides a mechanism for helping clients to make sense of their subjective experiences of career satisfaction or dissatisfaction and to facilitate agency, adaptability and career action. As suggested by McMahon and Watson (2012), the goal of career assessment is to promote career exploration and self-exploration; "it is less about the instrument used and more about the process in which it is used" (p. 441).

The PCRI may be a useful instrument that could be combined with qualitative postmodern narrative career counseling approaches. McMahon and Watson (2012) suggest, for example, an integrative structured interview process using story crafting questions to integrate narrative career counseling with a quantitative career assessment process. Using story crafting questions to guide self-exploration, the PCRI profile results could be used to form the basis for an interactive process between the career practitioner and client. This approach would provide an open way to the career practitioner to focus on how the client sees the world and deal with the diverse

cultural attitudes and traditions regarding work and career by valuing the uniqueness of individual narratives (Sharf 2010, p. 345). Kidd (2007, p. 106) states that quantitative assessment techniques complement postmodern narrative approaches by helping clients not only to organize their knowledge of themselves and their situation, but also gain better self-understanding.

Clients can be guided to reflect on their PCRI profile and how they can improve their subjective experiences of work and career success by developing and capitalizing on the strengths of their psychological career resources. They can also be guided to reflect on how their psychological career resources influenced their career identity and self-concept and their capability to deal with challenging career experiences. While the career construction, deconstruction and co-construction process suggested by Savickas (2010) may help clients to gain self-clarity and direct new action, knowledge of their psychological career resources strengths may instill the courage and fortitude to actively engage in the career self-designing and action process. Clients engage the world by action, action prompts further self-making, identity shaping, and career constructing (Savickas 2010). The client's psychological career resources profile reflects the psychological self and its career-related meta-capacities. These capacities act as the inner compass for assuring individuals' wellbeing and the resources that allow them to discover their potentiality for career success in turbulent contexts. Knowledge of the strengths of one's psychological career resources instill the motivation and confidence in one's efficacy to deal effectively and creatively with new choices and challenges and to move one's career narrative in a new inspiring direction.

Chapter Summary

This chapter reflected on the importance of psycho-social career meta-capacities in contemporary career development. The development and validation of the PCRI as a measure of the multidimensional psychological career resources framework developed by Coetzee (2008) was reported. Future research directions of the refinement of the PCRI were recommended. The practical use of the PCRI in the postmodern career counseling context was discussed. Overall, it can be concluded that the psychological career resources (career meta-capacities) framework presented in this chapter may be useful to guide clients toward career wellbeing and psychological success in the 21st century work world.

Appendix

Table 6.6 Psychological Career Resources Inventory (PCRI) Exploratory Factor Analyses eigenvalues, factor loadings and communalities (development sample)

Factor/Item	Loadings														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Factor 1: Career preference—Stability/expertise															
I would prefer a career in which I could develop my skills and knowledge in depth	0.71														
I will feel successful in my career only if I can develop my specialist skills to a very high level of competence and expertise	0.47														
I would prefer a career that requires me to have special knowledge and skills to perform well	0.46														
I prefer to have a career that will give me a sense of security and stability	0.43														
I prefer a career where I could stay in my chosen field and move up to higher levels of authority and responsibility	0.38														
Factor 2: Career preference—Managerial															
I will feel successful in my career only if I become a senior manager in some organisation		0.63													
I would like to achieve a high level managerial position in an organisation		0.59													
I will feel satisfied in my career when I have the authority to make important decisions		0.57													
I would like to have people reporting directly to me		0.53													
Factor 3: Career preference—Variety/creativity															
I would prefer a career that offers me much variety and a constant flow of new and unexpected things to do			0.68												
I would prefer a career that allow me to be creative and to work on job tasks that no one else in the group or organisation has worked on before			0.61												
I would like a career that allows me to work on a variety of challenging tasks that will require me to use a wide range of skills and knowledge			0.52												
I like opportunities to invent new ideas or things			0.60												

Table 6.6 (continued)

Factor/Item	Loadings														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Factor 4: Career preference—Independence/autonomy															
I would prefer a career in which I have the independence to pick and choose my job tasks and projects and to get things done wherever and whenever I choose				0.67											
I prefer the freedom to make my own decisions, set my own schedule and hours, and establish my own priorities				0.65											
I will be most fulfilled in my career when I have been able to build something that is entirely the result of my own ideas and efforts				0.34											
I prefer a career where I would be able to move out of it into new and very different jobs whenever I feel the need to move on to something new				.31											
Factor 5: Career value—Growth/development															
I like to engage in further growth and learning opportunities					0.67										
I like to get involved in projects and tasks which help me to develop new knowledge and skills					0.66										
I like to be knowledgeable and skilled in what I do					0.44										
Factor 6: Career value—Authority/influence															
I like to have influence and authority over others						0.71									
I like to have the power to make important things happen						0.53									
I like opportunities to do important things without being constrained by rules and boundaries						0.44									
Factor 7: Career enabler—Practical/creative skills															
I am good at using my mind to visualize something that I want to create							0.63								
I am good at researching the information and ideas I need to obtain my goals							0.61								
I am good at putting my ideas into practical plans and making it work for me							0.52								
I am good at analysing situations and data to create new solutions							0.50								
Factor 8: Career enabler—Self/other skills															
I can discipline myself to keep my composure and get the most out of myself								0.62							
I make the most of my good qualities to achieve success in what I do								0.53							

Table 6.6 (continued)

Factor/Item	Loadings														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
I am good at working with people and helping them identify and overcome problems								0.53							
I like to help others grow and develop								0.43							
Factor 9: Career driver—Career purpose															
I am deeply aware of my and others' spiritual side, that we all have a life purpose and that all life forms are sacred									0.43						
I trust in the purpose of my life, that there is a reason for my being here in this world									0.55						
I have a strong desire to fulfill my dreams for the career I choose to pursue									0.44						
I prefer a career which allow me to contribute to the greater good of others									0.42						
I prefer to give my best in any job task or anything I am responsible for									0.41						
Factor 10: Career driver—Career directedness															
I am clear about what I would like to become career wise										0.56					
I know where and how to find the help and support I need to achieve my career goals										0.56					
It is easy for me to make up my mind about how and where to find a new job opportunity										0.54					
Factor 11: Career driver—Career venturing															
I am willing to explore new career opportunities											0.80				
I am willing to take the risk to go out and test new career experiences											0.63				
I prefer having the option to change my current occupation or career whenever I desire so											0.54				
Factor 12: Career harmonizer—Self-esteem															
I feel confident in my ability to achieve my goals												0.54			
I like myself and generally see myself as lovable												0.46			
I accept compliments easily												0.47			

Table 6.6 (continued)

Factor/Item	Loadings														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
I am in good physical shape and have plenty of energy												0.44			
I feel as worthwhile as anyone else												0.44			
I am optimistic about my future												0.39			
Factor 13: Career harmonizer—Behavioral adaptability															
I have the courage to deal with things and situations that I am afraid of													0.75		
I have the courage to handle my misfortunes and failures													0.74		
I can laugh at myself when I make a mistake													0.38		
It is easy for me to adapt to new things and situations in my life													0.36		
My values and beliefs help me to meet daily challenges													0.36		
I accept the mysteries of life and death													0.32		
Factor 14: Career harmonizer—Emotional literacy															
I express my feelings and/or needs to my close friends														0.54	
I can show when I am sad or angry														0.54	
I find it easy to express my feelings and/or needs clearly and directly														0.51	
I admit when I am afraid of something														0.51	
I can identify my emotions														0.48	
Factor 15: Career harmonizer—Social connectivity															
Other people like me															0.60
I get along well with others															0.55
I show others that I care about them															0.39
I find it easy to connect with others															0.36
I find it easy to ask others for or accept their help or support															0.38
Eigen values	5.04	1.71	1.43	1.08	3.04	1.21	2.68	1.29	3.53	1.22	1.07	6.36	1.54	1.40	1.05
Percent common variance	12.63	10.44	9.63	8.66	23.64	14.66	17.59	15.65	14.87	13.98	12.83	11.17	10.88	8.51	7.81

Loadings of development sample. Boldface values identify the strongest item-factor loading for each item $N = 2{,}997$

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