

Personality Development Among Executives: A Career Stage Perspective

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ABSTRACT

Personality development has been viewed in several perspectives. Of early theorists, the perspectives of Freud, Erikson, and James represent the full spectrum on personality change, from very little (Freud) to potentially very much (Erikson). James proposed that personality develops to a point, and then is effectively 'set like plaster' by the age of thirty, which was later supported by the five-factor theorists. Contextualist perspectives predict plasticity: Change is complex and ongoing, owing to the many factors that can affect personality traits. This study was designed to test which perspective is appropriate for executives in Indian organizations. The research was conducted on 210 front-level Indian managers. The results reveal that the executives exhibited a gradual change in the scores on personality traits throughout their career stages (trial, establishment and maintenance stage). The mean differences in score for personality traits between trial stage and establishment stage were significant, although the mean difference between establishment stage and maintenance stage was found to be trivial.

Key words: personality development, career stage, plaster hypothesis, plasticity approach and front level Indian managers.

1. INTRODUCTION

Personality development has always been a key concern for researchers in personality. But whether personality traits change in a meaningful way during adulthood and when those changes takes place has always been a conflicting issue. Available research related to development in personality is based on three pioneer views proposed by luminaries of psychology. In his view, Freud (1923) stated that personality was fixed by the age of 5, at the completion of the Oedipal stage (phallic stage) of development. Later, Erikson (1950) proposed that development continued throughout the life span, with the most disorderly time occurring in adolescence. James (1890/1950), proposed that personality develops to a point, and then is effectively 'set like plaster' by the age of 30. Each of these theories has been influential in forming the ways that scientist and policy-makers view personality development, psychopathology, public policy and more fundamentally our worldviews with respect to human nature. Of early theorists, the perspectives of Freud, Erikson and James represent the full spectrum on personality change, from very little (Freud) to potentially very much (Erikson).

Personality

Personality traits are defined as the relatively enduring patterns of thoughts,

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feelings and behaviors that distinguish individuals from one another. Whether personality traits continue to develop in adulthood depends in part on how one defines “relatively enduring.” In the past, some researchers took that phrase to mean—and some empirical literature to indicate—that personality traits stopped changing in adulthood (McCrae & Costa, 1994). Since 1994 cross-sectional and longitudinal studies of personality-trait change in adulthood have forced a re-evaluation of the assumption that personality traits do not change in adulthood (e.g., Mroczek & Spiro, 2003; Roberts, Walton & Viechtbauer, 2006; Srivastava, John, Gosling & Potter, 2003).

Career Stage

Career theorists have proposed that under normal circumstances people will experience four career stages: trial/exploration, establishment, maintenance and disengagement. Although common age ranges are associated with each stage, a variety of career, personal and life factors combine to determine the exact time when an individual moves from one stage to the next.

Most of the studies on Super's career stages development model have operationalized these stages by age. For example, Gould (1979) and Slocum and Cron (1985) identified people as being in the trial stage if they are less than 30 years old, in the establishment stage if they are between 31 and 44, and in the maintenance stage if they are over 45. Other researchers have operationalized Super's stages by the job tenure - amount of time an individual has been in a job (Gould & Hawkins, 1978; Mount, 1984; Stumpf & Rabinowitz, 1981). These researchers operationalized the trial stage as less than 2 years on the job, the establishment stage as between 3 and 10 years on the job, and the maintenance stage as over 10 years on the job. Consistent with previous studies (e.g., Morrow & McElroy, 1987; Bedeian, Pizzolatto, Long & Griffeth, 1991) we used multiple indicators (age and organization tenure) to operationalize Super's career stages.

By combining the developmental perspective of personality and Super's career stage theory the present study aimed to examine whether executives score differently on personality traits in their different career stages.

Review of Literature and Development of the Hypotheses

According to the five-factor theory, personality traits are “insulated from the direct effects of the environment” (McCrae & Costa, 1999, p. 144) and are exclusively biological in origin. Regarding the change in personality traits the five-factor theory stated that: “Traits develop through childhood and reach mature form in adulthood; thereafter they are stable in cognitively intact individuals” (McCrae & Costa, 1999, p. 145). More specifically, traits are said to reach maturity by the age of 30 (e.g., Costa & McCrae, 1994; McCrae & Costa, 1999; McCrae et al., 2000). The predicted stability is expected to last throughout middle age; though in old age personality could change again, being disrupted by cognitive decline. A commonly used metaphor for this pattern of change, based on a passage from William James (1890/1950), is that personality becomes “set like plaster” by the age of 30 (see Costa & McCrae, 1994).

In its original formulation, the plaster hypothesis stated that changes in the

Big Five traits after the age of 30 were nonexistent or trivial (Costa & McCrae, 1994; McCrae & Costa, 1990, 1996). Later, the authors of the five-factor theory indicated that the plaster hypothesis is “ripe for minor revision” (McCrae & Costa, 1999, p. 145), as studies have shown changes in mean levels of personality traits after age 30 (e.g., McCrae et al., 1999, 2000; see also Roberts, Robins, Caspi & Trzesniewski, 2003). They interpret such changes as stemming from intrinsic biological maturation rather than social influences, and they still regard the plaster hypothesis as basically true: “From age 18 to age 30 there are declines in Neuroticism, Extraversion, and Openness to Experience, and increases in Agreeableness and Conscientiousness; after the age of 30 the same trends are found, although the rate of change seems to decrease” (McCrae et al., 2000, p. 183).

In contrast to a biological viewpoint, contextualist perspectives argue that traits are multiply determined, and that one important influence on traits is the individual’s social environment (Haan, Millsap & Hartka, 1986; Helson, Jones & Kwan, 2002). Contextualist perspectives thus predict plasticity: Change is complex and ongoing, owing to the many factors that can affect personality traits.

Cross-sectional and longitudinal research has converged on the findings that personality-trait development can and does occur in all age periods of adulthood, including old age. Specifically, cross-sectional research has shown that middle-aged individuals tend to score higher than young adults on agreeableness and conscientiousness and lower on extraversion, neuroticism and openness (Srivastava, et al., 2003). Moreover, within middle age, 60-year-old participants scored higher than 40-year-old participants on most dimensions (though it should be noted that these results may be confounded by cohort effects such as historical events or changes in cultural climate). Roberts and Mroczek (2008) also stated that personality traits continue to change, even in old age. One of the precepts of life-span orientation is that humans are open systems (e.g., Baltes & Nesselroade, 1973). That is, people retain the capacity to change at all ages. The changes in personality traits in middle and old age are by no means dramatic, but nonetheless they show that the life-span orientation applies to personality traits and that personality is not set like plaster at any point in the life course.

A recent literature review summarized previous studies of mean-level change on the Big Five (Roberts et al., 2003). In this review, Roberts et al. (2003) rationally categorized a wide variety of personality measures into the Big Five domains and summarized patterns of mean-level change that were consistent across studies. They concluded that, in general, Conscientiousness and Agreeableness tend to go up during adulthood, Neuroticism tends to go down, Openness shows mixed results across studies, and Extraversion shows no general pattern of change at the factor level. This basic pattern of findings has been reported in specific studies by researchers who argue that personality traits are affected by context (e.g., Helson et al., 2002; Helson & Kwan, 2000) as well as those who favor a strictly biological interpretation of traits (e.g., McCrae et al., 1999, 2000).

The recent findings motivate a new generation of questions concerning why personality traits change more in young adulthood than in other periods of the life course and what the implications of the mostly positive trend in personality-trait change might be. Of course, one of the realities of any sweeping generalization is that it does not apply to all people. Much of this research needs to be replicated in

non-Western cultures before firm conclusions are drawn (Roberts & Mroczek, 2008). The present study is an effort in this regard to examine whether personality traits changes throughout the life span among managers in an Indian cultural context, which is different from Western culture.

On the basis of Super's career stage conceptualization and available research on personality development the following hypotheses were proposed:

H1: Executives in their trial stage would score significantly differently on personality traits than the executives in the establishment and maintenance stages.

H2: The difference of mean scores of personality traits between trial stage and establishment stage would be greater than the differences of mean scores between establishment stage and maintenance stage.

2. METHOD

2.1 Sample

Participants in the study were 210 front level executives of public (N=102, 48.6%) and private (N=108, 51.4%) sector organizations. They were composed of 188 (89.5%) males and 22 (10.5%) females. Their job tenures with their organizations ranged from one (1) to thirty six (36) years with a mean tenure of 13.46 years (S.D = 10.30); while their ages ranged from 21-60 years with a mean age of 31.07 years (S.D = 10.75). The subjects were convinced to participate in the study and they were not paid for their participation.

2.2 Measures

Career Stages

Smart (1998) stated that age and tenure both are used as a measure of Super's career stage in previous studies. But this has often led to confusing and contradictory results. Therefore, in the present study, career stage was measured in term of both executives' age and organization tenure simultaneously to provide direct comparison between the two variables and avoid this previously identified limitation.

Executives' age was divided into three time-frame subgroups: (a) up to 30 years, (b) 31 to 44 years, (c) older than 45 years. Similar to previous operationalizations (Gould, 1979; Slocum & Cron, 1985; Cohen, 1993), the first subgroup represents the trial career stage, the second represents the establishment or settling-down stage, the third represents the maintenance stage.

Organizational tenure was divided into three subgroups: (a) less than 3 years, (b) 3 to 10 years, and (c) 11 years or more. Again, similar to previous operationalizations (Gould & Hawkins, 1978; Mount, 1984; Stumpf & Rabinowitz, 1981; Cohen, 1993), the first tenure subgroup represents the trial stage; the second, the establishment stage; and the third, the maintenance stage.

Personality

Personality traits were measured by the Hindi version of the NEO Five-Factor Inventory (NEO-FFI), originally developed by Costa and McCrae (1992). This inventory consists of sixty items (twelve items for each factor) and based on five-point Likert format (from “strongly agree” to “strongly disagree”).

The NEO-FFI was translated and validated into the Hindi language for use in the present research work. Item total correlation was performed to examine the validity of the item. Four items from neuroticism factor, five items from extraversion factor, and three items from agreeableness factor were excluded because of either low or negative items-total correlation. All twelve items of conscientiousness factor were retained; as they show satisfactory item total correlation. Items related to openness to change factor have not shown the satisfactory item total correlation so this factor was dropped in further analysis.

Reliability analysis was performed for the remaining items. In the present study, internal consistency reliability (Cronbach’s Alpha) was found to be 0.76 for neuroticism (8 items), 0.50 for extraversion (7 items), 0.65 for agreeableness (9 items) and 0.77 for conscientiousness factor (12 items).

2.3 Procedure

In order to assess personality traits, subjects completed the NEO-FFI (Hindi version). Participants were asked to take their own time to complete the questionnaire. Completion of the questionnaire typically took less than 20 min. Although participants completed the entire NEO-FFI, openness to change scales were not utilized in this article.

2.4 Statistical Procedure

The collected data was entered into the SPSS program and relevant analysis was performed to test the proposed hypothesis. The analysis included the use of descriptive, analysis of variation (ANOVA), as well as Tukey’s Honestly Significant Different test as a post- hoc test.

3 RESULTS

In order to determine whether executives score differently on personality traits in different career stages, a one way ANOVA was performed.

Table 1 presents the results of the one way ANOVA in which personality was used as the dependent variable and age categories were used as the independent variable. The results indicate that executive score significantly different on the four dimensions of personality (neuroticism, extraversion, agreeableness and conscientiousness) across three age categories ($P < .01$).

Table 1. Mean, standard deviation and F value for the dimensions of personality across Age categories

Personality	Age	N	Mean	Std. Deviation	F	P
Neuroticism	≤ 30	65	23.4154	6.03348	9.167	.000
	31-44	77	20.0130	5.28527		
	≥ 45	68	19.8824	4.93700		
Extraversion	≤ 30	65	24.9077	3.84758	6.188	.002
	31-44	77	26.7273	3.40525		
	≥ 45	68	26.7794	3.29108		
Agreeableness	≤ 30	65	29.9846	4.68872	23.612	.000
	31-44	77	34.2208	4.36380		
	≥ 45	68	34.6176	3.89806		
Conscientiousness	≤ 30	65	45.5692	6.66842	8.995	.000
	31-44	77	48.9351	5.86546		
	≥ 45	68	49.5735	4.95748		

However, as there were three age categories, Tukey's Honestly Significant Different test was undertaken as a post-hoc test to determine the precise nature of the differentiation. Pair-wise comparisons indicated that executives aged ≤ 30 years (mean=23.42) scored significantly higher on neuroticism than executives aged 31-44 years (mean=20.01, $P < .001$) and those ≥ 45 years (mean=19.88, $P < .001$). Although differences of mean scores of neuroticism between categories aged 31-44 years and those ≥ 45 years were not significant. Pair-wise comparison in cases of extraversion indicated that executives aged ≤ 30 years (mean=24.91) scored significantly lower than executives aged 31-44 years (mean=26.73, $P < .007$) and those ≥ 45 years (mean=26.78, $P < .007$). Although differences in mean scores of extraversion between categories aged 31-44 years and those ≥ 45 years were not significant. Similar results were found in the cases of agreeableness and conscientiousness (see Table-2).

Table 3 presents the results of one way ANOVA in which personality was used as a dependent variable and tenure categories were used as independent variables. The results indicate that executives scored significantly different on the four dimensions of personality (neuroticism, extraversion, agreeableness and conscientiousness) across three tenure categories ($P < .01$).

Similar to age categories, Tukey's Honestly Significant Different test was undertaken as a post-hoc test to determine the precise nature of the differentiation in cases of tenure categories. Pair-wise comparisons indicated that executive tenured ≤ 2 years (mean=24.58) had significantly higher scores on neuroticism than executives tenured 3-10 years (mean=21.42, $P < .017$) and those ≥ 11 years (mean=19.72, $P < .000$); whereas differences of mean score of neuroticism between tenure categories 3-10 years and ≥ 11 years was not significant. Pair-wise comparisons in cases of extraversion indicated that executives tenured ≤ 2 years (mean=24.27) had significantly lower scores than executives tenured 3-10 years (mean=26.19, $P < .029$) and ≥ 11 years (mean=26.75, $P < .001$) while differences in mean score of extraversion between tenured categories 3-10 years and ≥ 11 years

was not significant. Similar results were found in cases of conscientiousness. Pair-wise comparisons in cases of agreeableness indicate that the mean score of agreeableness in all the three tenured categories (≤ 2 years, 3-10 years and ≥ 11 years) were differing significantly (see the Table-4).

Table 2. Pair wise comparison of the four dimensions of personality across Age categories

Personality	Age		Mean Difference	Significant
	(I)	(J)	(I-J)	
Neuroticism	≤ 30	31-44	3.40240	.001
		≥ 45	3.53303	.001
	31-44	≤ 30	-3.40240	.001
		45-60	.13063	.989
	≥ 45	≤ 30	-3.53303	.001
		31-44	-.13063	.989
Extraversion	≤ 30	31-44	-1.81958	.007
		≥ 45	-1.87172	.007
	31-44	≤ 30	1.81958	.007
		45-60	-.05214	.996
	≥ 45	≤ 30	1.87172	.007
		31-44	.05214	.996
Agreeableness	≤ 30	31-44	-4.23616	.000
		≥ 45	-4.63303	.000
	31-44	≤ 30	4.23616	.000
		≥ 45	-.39687	.846
	≥ 45	≤ 30	4.63303	.000
		31-44	.39687	.846
Conscientiousness	≤ 30	31-44	-3.36583	.002
		≥ 45	-4.00430	.000
	31-44	≤ 30	3.36583	.002
		≥ 45	-.63846	.790
	≥ 45	≤ 30	4.00430	.000
		31-44	.63846	.790

Table 3. Mean, standard deviation and F value for the four dimensions of personality across Tenure categories

Personality	Tenure	N	Mean	SD	F ratio	P
Neuroticism	≤ 2	33	24.5758	6.25015	10.577	.000
	3-10	67	21.4179	5.44156		
	≥ 11	110	19.7182	5.07401		
Extraversion	≤ 2	33	24.2727	3.53794	6.296	.002
	3-10	67	26.1940	3.74667		
	≥ 11	110	26.7455	3.35222		
Agreeableness	≤ 2	33	28.8182	4.57202	26.641	.000
	3-10	67	32.2239	4.72203		
	≥ 11	110	34.8000	3.88079		
Conscientiousness	≤ 2	33	44.0303	6.36634	11.963	.000
	3-10	67	47.6716	6.63642		
	≥ 11	110	49.5818	4.99611		

Table 4. Pair wise comparison of the four dimensions of personality across Tenure categories

Personality	Tenure		Mean Difference (I-J)	Significant
	(I)	(J)		
Neuroticism	≤ 2	3-10	3.15785	.017
		> 11	4.85758	.000
	3-10	< 3	-3.15785	.017
		≥ 11	1.69973	.106
Extraversion	≥ 11	< 3	-4.85758	.000
		3-10	-1.69973	.106
	≤ 2	3-10	-1.92130	.029
		≥ 11	-2.47273	.001
Agreeableness	3-10	≤ 2	1.92130	.029
		≥ 11	-.55142	.569
	≥ 11	≤ 2	2.47273	.001
		3-10	.55142	.569
Conscientiousness	≤ 2	3-10	-3.40570	.001
		≥ 11	-5.98182	.000
	3-10	≤ 2	3.40570	.001
		≥ 11	-2.57612	.000
Conscientiousness	≥ 11	≤ 2	5.98182	.000
		3-10	2.57612	.000
	≤ 2	3-10	-3.64134	.010
		≥ 11	-5.55152	.000
Conscientiousness	3-10	≤ 2	3.64134	.010
		≥ 11	-1.91018	.086
	≥ 11	≤ 2	5.55152	.000
		3-10	1.91018	.086

4. DISCUSSION

The present study was aimed to test the plaster hypothesis of personality development proposed by James (1950). We have used career development perspective to test the plaster hypothesis among executives. The hard-plaster hypothesis asserts that there should be no age effects on any Big Five dimension after the age of 30; the soft-plaster hypothesis asserts that age effects after the age of 30 should be weaker. Career theorists have proposed that under normal circumstances, people experience four career stages: trial, establishment, maintenance and disengagement. Disengagement was not included in the study because this stage started from 60 years and in general 60 years is the age of retirement for executives in Indian organizations. Therefore only trial, establishment and maintenance stages were included in the study. The trial phase generally occurs early in the career, but may almost be considered a pre-career as the individual in this phase may be characterized as a beginner, exploring his/her individual interests and capabilities, who has not yet committed to the career. In the establishment stage an individual identifies with his career, grows in capability and there is a degree of stabilization. The maintenance stage is about consolidation rather than growth.

In present study, the above stated career stages were measured in terms of executives' age and their organizational tenure. The results of the study suggest that the mean score of the four dimensions of the personality were found to change significantly from trial stage to establishment stage. There was an indication of change in the means score of the four dimension of personality from establishment to maintenance stage also, though this change was trivial.

Executives show gradual decrement in neuroticism score throughout the career stage. This decrement was greater from trial stage to establishment stage than establishment stage to maintenance stage. On the other hand there was a gradual increment in scores on Extraversion, Agreeableness and Conscientiousness throughout the three career stages. It is obvious that this increment was larger from trial stage to establishment stage than establishment stage to maintenance stage.

This nature of the change in the mean score of the personality was supported by the characteristics of the career stage of the executives. In the establishment stage an individual identifies with his career, grows in capability and there is a degree of stabilization whereas the maintenance stage is about consolidation rather than growth. The change in the personality is similar to the feature of these career stages.

The evidence of our research does not by itself rule out strictly biological accounts of personality, though it does contradict the five-factor theory's brand of biologism. Could the changes found here result solely from intrinsic, genetically determined maturation? There is no denying that genes contribute to individual differences in Big Five trait levels (Loehlin, McCrae, Costa & John, 1998). However, longitudinal behavior genetic studies, which can examine both typical levels of traits and patterns of change in traits, have suggested that change in personality traits is at least as well explained by environments as by genes, and heritabilities of personality traits diminish from early to middle adulthood (Loehlin, 1992; McGue, Bacon & Lykken, 1993; Viken, Rose, Kaprio & Koskenvuo, 1994). Baltes (1997) referred to the "incomplete architecture of human ontogeny," by which he meant that the inheritance of biological evolution has provided the most structure for the earlier part of the life span, when people have not yet survived long enough to pass along their genes; as individuals get older, culture becomes a more important influence on how well they adapt to their environments. Along with Baltes (1997) and Srivastava, et al. (2003) we also believe that adult personality is characterized more by plasticity than by increasing calcification, and the mechanisms of personality change can be understood best by considering the life contexts that accompany change.

Several processes may link these personality and environmental changes to one another. In the case of Conscientiousness, for example, maturational changes may prompt individuals to seek out roles that fit their newly changed personalities. Conversely, new work responsibilities and relationship commitments resulting from adult social roles may require individuals to become more organized and responsible in order to meet the demands of their new situations. Or, both mechanisms may take place as part of a transactional system—personality changes may lead people to select and shape environments that further reinforce their

personalities (Caspi & Roberts, 1999).

Roberts et al. (2003), suggested that increasing Conscientiousness and Agreeableness and decreasing Neuroticism in adulthood may indicate increasing maturity—people becoming, on average, better adapted as they get older. Conscientious behavior was influenced by age, implying that with increasing age, the employee is more likely to internalize the rules and procedures governing task performance in the organization. Similar to Srivastava et al. (2003) the findings in our research also suggest that people continue to mature well into middle adulthood.

Limitations

The first limitation of the study is small sample size. The study was carried out on only 210 front level managers, which were relatively few compared to previous studies (see Srivastava, et al., 2003). The second limitation of this study is related to the measurement of the Career stage, in which career stage was measured by indirect methods (age and organizational tenure). The study was conducted only on front level managers; middle and top level executives were not included in the sample. Fewer participating female executives might affect the generalizations of the findings of the study.

Conclusions

In general, we found a lack of support for the plaster hypothesis, and considerable evidence that directly contradicted it. Mean levels of personality traits changed gradually throughout the career stages, which supported the plasticity hypothesis rather than plaster hypothesis.

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