

## **PSYCHOLOGICAL CORRELATES OF ENTREPRENEURIAL SUCCESS**

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*The study was undertaken with a view to investigate the psychological correlates of entrepreneurial success. The sample consisted of 100 entrepreneurs from Batala city of Punjab in India. The correlational analysis reveals that entrepreneurial success is positively associated with intelligence, achievement motivation, age, education, and experience. On the basis of principal component analysis of the data three basic dimensions of entrepreneurial success have been obtained, achievement motivation and intelligence, experience, and interpersonal skills.*

Human resources constitute the main strength of economic development of a nation. Interest in the entrepreneur can be traced back to the early nineteenth century. However, it is during the last three decades that the study of entrepreneurship has gained great importance, especially because it helps to promote economic growth and has higher potential for generating employment. Recently there has been a sudden spurt in the development of entrepreneurship in both the developed and some of the developing countries, where the government's policy is to encourage small scale industry. Various incentives are also advertised by these governments to attract large number of potential entrepreneurs.

An entrepreneur is a person who has the ability to see and evaluate business opportunities, to gather the necessary resources, to take advantage of them, and to initiate appropriate action to ensure success (Meredith, Nelson, & Neck, 1982). Entrepreneurs are, therefore, action-oriented and highly motivated individuals who take moderate risks to achieve their goals.

Research related with the emergence and development of entrepreneurship indicates that entrepreneurs possess certain distinct

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characteristics and qualities when measured on various personal traits and skills (Drucker, 1981; Hornaday & Bunker, 1970; Meredith et al., 1982; Pickle, 1964; Williams, 1980), and motivation (Hundal, 1971; Hundal & Singh, 1975; McClelland, 1971; McClelland & Winter, 1969).

Considerable research has been conducted on the psychological characteristics of the entrepreneurs in the West. However, in the developing society like India research in this area is quite limited and, thus, the need to explore the internal dynamics of the successful entrepreneur in this part of the world is also very important. The present study was, therefore, undertaken to investigate the psychological characteristics of the successful entrepreneurs with its main emphasis on personality characteristics, achievement motivation, risk-taking propensity, and creativity.

## METHOD

### Sample

The investigation was conducted on a sample of 100 industrial entrepreneurs from Batala city, district Gurdaspur, Punjab, India. The age of the sample ranged between 18 and 59 years with a mean and standard deviation of 35.24 and 12.76 years, respectively. These entrepreneurs mainly dealt with the production and distribution of lathe machines throughout India. Most of these entrepreneurs were not highly educated, they were generally under-graduates or below.

### Success Index

The critical variable of the study was entrepreneurial success. The success of the entrepreneur was assessed on the basis of his growth rate. The growth rate was obtained by computing the regression of the initial profit over the years of enterprise to obtain the predicted profit and then the percentage deviation of the empirically determined predicted profit was obtained as follows:

$$\text{Growth Rate} = \frac{\text{Present Profit} - \text{Predicted Profit}}{\text{Predicted Profit}} \times 100$$

Profit as an index of success has been used earlier too by Friedlander and Pickle (1968), and Child (1975).

### **Instruments**

The following tests were used as predictors:

- a) Sixteen Personality Factor Questionnaire: 16PF (Cattell, Eber, & Tatsuoka, 1970).
- b) A Quick Measure of Achievement Motivation: nAch Scale (Smith, 1973).
- c) A Measure of Risk-Taking Propensity (Wallach, Kogan, & Bem, 1962).
- d) Torrance Test of Creative Thinking: The figural tests, Form A (Torrance, 1966, 1971).
- e) The Adapted Hindi version of the 16 PF (Kapoor, 1965), the nAch-Scale and Risk-Taking Scale were also used. (The nAch scale and the measure of Risk-Taking Propensity were translated into Hindi and correlated with the original scales, correlation coefficients of .92 and .94 were obtained, respectively).

### **Procedure**

The tests were administered to each subject individually. Standard instructions as given in the respective manuals were followed while administering and scoring the tests.

## **RESULTS**

### **Reliability Coefficients**

The reliability coefficients of the 16PF were computed by the Kuder-Richardson method for the weighted items (K.R-Formula 20). The reliability coefficients ranged from .61 to .79 with a mean coefficient of .69. Reliabilities for the other tests were obtained by the test-retest method with a time gap of three weeks on a sub-sample of 20 subjects. The reliability coefficients ranged from .69 to .86.

## Correlational Analysis

The Pearson's Product Moment Correlations were computed for the raw scores on all the 26 variables. For 100 subjects correlations of .19 and .25 are significant at  $p < .05$  and  $p < .01$  levels, respectively. The notable findings from the intercorrelation matrix (Table 1) have been summarised as follows. [see, Table 1]

1. Entrepreneurial success is positively associated with factor B (Intelligence,  $r = .22$ ), achievement motivation ( $r = .23$ ), age ( $r = .42$ ), education ( $r = .41$ ), and experience ( $r = .36$ ).

These significant correlations reflect that a successful entrepreneur is intelligent, achievement oriented, better educated, and well experienced. Significant relationship between nAch and entrepreneurial success confirms McClelland's hypothesis that need for achievement promotes entrepreneurial success as well as supports the earlier findings of McClelland (1961), McClelland and Winter (1969), and Kaul (1990).

The significant positive association between education, age, experience, and success makes it obvious that experience along with education enhances entrepreneurial success.

2. Significant positive correlations have also been obtained between nAch and personality factors such as factors A( $r = .40$ ), B( $r = .38$ ), E( $r = .27$ ), F( $r = .21$ ), G( $r = .46$ ), H( $r = .36$ ), I( $r = .25$ ), Q( $r = .35$ ), which indicate that achievement oriented entrepreneurs possess a high super ego, are social, intelligent, assertive, enthusiastic, socially bold, and analytical. Although these significant correlations between nAch and personality characteristics, as well as nAch and divergent thinking, are not directly associated with success, however, they do reflect some of the thinking processes and behavioural characteristics of achievement oriented entrepreneurs.

3. Another interesting finding is the positive association between nAch and the three factors of divergent thinking, i.e., fluency ( $r = .36$ ), originality ( $r = .19$ ), and elaboration ( $r = .20$ ), which implies that achievement oriented entrepreneurs express fluency of ideas, produce new ideas, and have the ability to elaborate and redefine concepts. In short, achievement oriented entrepreneurs can also be creative.

Table 1

Correlation Matrix (N=100)

S.No.	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	20	21	22	23	24	25	26	
1.	Success Index																										
2.	A Reserved-Outgoing																										
3.	B Intelligence																										
4.	C Emotional-Stable																										
5.	E Submissive-Dominant																										
6.	F Sober-Enthusiastic																										
7.	G Expedient-Conscientious																										
8.	H Shy-Venturesome																										
9.	I Toughminded-Tenderminded																										
10.	L Trusting-Suspicious																										
11.	M Practical-Imaginative																										
12.	N Fortright-Shrewd																										
13.	O Placid-Apprehensive																										
14.	Q1 Conservative-Radical (Analytical)																										
15.	Q2 Group Dependent-Self Sufficient																										
16.	Q3 Self Conflict-Self Control																										
17.	Q4 Relaxed-Tense																										
18.	Fluency																										
19.	Flexibility																										
20.	Originality																										
21.	Elaboration																										
22.	Need Achievement																										
23.	Risk-taking																										
24.	Age																										
25.	Education																										
26.	Experience																										

Level of significance at .05 level = 0.19; Level of significance at .01 level = 0.25; Decimal points have been omitted.

## Factor Analysis

Factor analysis was finally used to get more insight into the structural relationships existing between the measures included in the study, specifically to identify the correlates of entrepreneurial success. The principal component method with unities in the diagonal were used for factor analysing the intercorrelation matrix. An *eigen-value* of 1.00 was taken as the cut off point for the number of factors to be extracted. Nine factors were extracted which account for 73.13% of the total variance. The obtained factor matrix was submitted to varimax rotation and all the variables having an absolute factor loading of .30 or greater were considered as significant. The rotated factor matrix is given in Table 2. [see, Table 2]

### *Factor I: Dynamic Competence*

This is a factor of dynamic personal competence as it has significant positive loadings on five of the primary factors of personality such as assertiveness, analytical thinking, sensitivity, intelligence, and imagination. These may be considered as important personality characteristics of entrepreneurs..

### *Factor II: Creative Thinking*

This is a factor on creativity. The tests showing significant loadings on this factor are flexibility, fluency, emotional stability, and confidence, which reveal that creativity is a function of emotional stability, and confidence. This in turn can be an important requisite for entrepreneurial growth and expansion.

### *Factor III: Commitment*

Factor III reveals the characteristics of a conscientious entrepreneur. The significant loadings on dominance, enthusiasm, conscientiousness, practicability, self-control, and need achievement suggest that entrepreneurs with a high sense of duty are generally dominant, enthusiastic with a desire to excel, they are well integrated and attentive to practical matters. McClelland (1987) is also of the view that along with the desire to excel the individual's commitment to work is also essential for good entrepreneurial performance.

Table 2  
 Varimax Rotated Factor Loadings (N= 100)

S.No.	V a r i a b l e s	F A C T O R S										IX	IX	IX	IX		
		I	II	III	IV	V	VI	VII	VIII	IX	X						
1.	Success Index	-16	-01	-02	51	01	-09	-30	03	53	67						
2.	Reserved-Outgoing	22	13	-01	-00	-09	04	-72	05	39	75						
3.	Intelligence	33	-02	-15	12	-09	03	-73	12	-01	70						
4.	Emotional-Stable	-44	75	16	-06	-11	00	-09	12	18	68						
5.	Submissive-Dominant	70	-23	36	09	00	16	-20	-13	10	77						
6.	Sober-Enthusiastic	03	01	80	-02	02	02	09	11	-29	10						
7.	Expedient-Conscientious	04	-05	88	04	01	-02	04	13	10	81						
8.	Shy-Venturesome	18	08	06	18	-11	-10	-29	69	08	66						
9.	Toughminded-Tenderminded	65	-16	-04	35	-20	-14	-12	07	20	76						
10.	Trusting-Suspicious	05	-57	06	-05	42	02	-04	22	28	63						
11.	Practical-Imaginative	32	-03	-39	-10	17	-01	-08	62	09	69						
12.	Forthright-Shrewd	26	13	-21	01	-13	-21	-16	40	60	74						
13.	Placid-Apprehensive	-11	-22	06	-16	78	07	06	-14	01	73						
14.	Conservative-Radical (Analytical)	68	10	07	-06	20	-12	-22	18	-02	62						
15.	Group Dependent-Self Sufficient	29	16	02	-15	70	02	16	08	-08	66						
16.	Self Conflict-Self Control	-23	06	48	-02	40	-21	38	37	-05	78						
17.	Relaxed-Tense	-04	06	-10	-01	81	12	00	-23	01	74						
18.	Fluency	03	55	21	10	-00	-53	-26	-03	-08	71						
19.	Flexibility	15	80	-07	18	-02	-01	08	-16	05	73						
20.	Originality	-03	20	11	08	-06	-86	-01	10	-09	82						
21.	Elaboration	21	13	11	14	-14	-84	06	-13	-03	84						
22.	Need Achievement	13	01	53	11	11	-16	-63	21	-10	80						
23.	Risk-taking	-16	16	23	-10	-28	32	19	-16	07	36						
24.	Age	-06	-06	-08	90	17	-01	-06	-13	00	87						
25.	Education	27	08	-08	55	-09	16	17	-05	-53	73						
26.	Experience	-08	-02	00	89	12	07	-12	-16	16	88						
	Percentage Contribution	8.86	8.22	9.49	9.62	9.32	8.07	8.13	6.28	5.14	73.13						

Decimal points have been omitted.

#### *Factor IV: Experience*

This factor has high loadings on variables which emphasise that experience in business and a moderate level of formal education can be a requisite for entrepreneurial success. Choudary (1980) reports that education, especially technical education, promotes entrepreneurial success.

#### *Factor V: Anxiety*

The significant loadings on factors O, L, Q2, Q3, and Q4 suggest that even individuals who are self-sufficient and well integrated, if suspicious, are also prone to anxiety.

#### *Factor VI: Divergent Thinking vs. Conservatism*

Factor VI primarily has high significant negative loadings on the three indices of divergent thinking, i.e., originality, elaboration, and fluency, and a positive loading on conservatism, which clearly indicates that conservatism hinders the process of creative thinking, in other words, it may be said that risk-taking propensity is positively associated with creative thinking.

#### *Factor VII: Intelligence and Achievement*

This factor is primarily characterised by significant loadings on intelligence, introversion, need achievement, and entrepreneurial success. The nature of the loadings on this factor primarily reveals that high intelligence, sociability, and a higher need to achieve are important correlates of entrepreneurial success and vice versa.

#### *Factor VIII: Spontaneity*

The significant loadings on this factor mainly denotes that entrepreneurs are socially bold, spontaneous, self-motivated, and worldly experienced persons. They are guided by inner directed interests and possess an analytical approach to situations.

#### *Factor IX: Interpersonal Skills*

This factor is identified as that of interpersonal skills. The significant positive loadings on shrewdness, warm-heartedness, and entrepreneurial success suggest that interpersonal relations are also essential for success. McClelland (1987) found interpersonal



relationships as a fundamental business resource for successful entrepreneurship. The significant negative loading on education indicates that higher education is not a prerequisite for success.

On the basis of the above analysis, it may be concluded that the structure of factors I, II, V, and VIII precisely define the personality characteristics of the entrepreneurs such as personal dynamic competence, conscientiousness, anxiety, and spontaneity. Factors II and VI briefly describe the process of creative thinking among entrepreneurs, and finally factors IV, VII, and IX reveal the factors promoting entrepreneurial success such as intelligence and achievement motivation, experience, and interpersonal skills.

McClelland (1987) in his appraisal of the successful entrepreneurs states that there are three groups of competencies that are more characteristic of successful entrepreneurs regardless of country and the type of business, first proactivity (initiative, assertiveness), second (achievement motivation syndrome), and third (commitment to work contract and importance of business relationships-interpersonal relationships). The above discussion to some extent is in agreement with McClelland's appraisal of the successful entrepreneur.

To conclude, the study mainly reflects that intelligence, achievement motivation, education, and interpersonal skills as business resource, can be important prerequisites of entrepreneurial success.

## REFERENCES

- Cattell, R. B., Eber H. W., & Tatsuoka, M. M. (1970). *Handbook for the Sixteen Personality Factor Questionnaire*. Illinois: Champaign.
- Child, J. (1975). Managerial and organisational factors associated with company performance. *Journal of Management Studies*, 12, 12-27.
- Choudary, K. V. R. (1980). Successful characteristics of rural entrepreneurship. *Sedme*, 7, 89-104.
- Drucker, P. F. (1981). Our entrepreneurial economy. *Harvard Business Review*, 1, 59-64.
- Friedlander, F., & Pickle, H. (1968). Components of effectiveness in small organisations. *Administrative Science Quarterly*, 13, 289-304.

- Hornaday, J., & Bunker, C. (1970). The nature of the entrepreneur. *Personnel Psychology*, 23, 45-54.
- Hundal, P. S. (1971). A study of entrepreneurial motivation: Comparing the fast and slow progressive small scale industrial entrepreneurs of Punjab. *Journal of Applied Psychology*, 55(4), 317-333.
- Hundal, P. S., & Singh, S. (1975). Motivational aspects of economic development. In J. W. Bery and W. J. Donner (Eds.), *Applied cross-cultural psychology*. Amsterdam: Swets and Zeitlinger.
- Kaul, M. (1990). Public enterprise management: Strategies for success. *Vikalpa*, 15, 3-13.
- Kapoor, S. D. (1965). Norms on the 16PF Test: Forms A and B(VKKJ: KA & KHA). *Indian Journal of Psychology*, 40 (1).
- McClelland, D. C. (1961). *The achieving society*. New York: Van Nostrand.
- McClelland, D. C. (1971). The achievement motive in economic growth. In P. Killy (Ed.) *Entrepreneurship and economic development*. New York: Free Press.
- McClelland, D. C. (1987). Characteristics of successful entrepreneurs. *The Journal of Creative Behaviour*, 21, 219-233.
- McClelland, D. C., & Winter, D. C. (1969). *Motivating economic achievement*. New York: Free Press.
- Meredith, G. G., Nelson, R. E., & Neck, P. A. (1982). *The practice of entrepreneurship*. Geneva: International Labour Office.
- Pickle, H. B. (1964). *Personality and success: An evaluation of personal characteristics of successful small business managers*. Washington, D. C.: US Small Business Administration.
- Smith, J. M. (1973). A quick measure of achievement motivation. *British Journal of Social and Clinical Psychology*, 12, 137-143.
- Torrance, E. P. (1966). Exploring the lists of the automation of guided, planned experiences in creative thinking. In J. S. Roucek (Ed.), *Programmed teaching*. New York: Philosophical Library.
- Torrance, E. P. (1971). *Long-range prediction studies and international applications of the Torrance Tests of Creative Thinking*. Paper presented at the XVIIth International Congress of Applied Psychology, Liege.: Belgium.

Wallach, M. A., Kogan, M., & Bem, D. J. (1962). Group influence on individual risk-taking. *Journal of Abnormal and Social Psychology*, 65, 75-86.

Williams, H. S. (1980). Entrepreneurs in the non-project world. *In Business*, 2(4).