

## **A Psycholexical Study of Personality Trait Structure of Hindi Speaking Indians**

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### **Abstract**

This study adopted a psycholexical approach to uncover the personality trait structure of Hindi speaking Indians. The endorsement for personality descriptive adjectives was obtained from young adults (n=240) using a Likert-type 5-point rating scale. The principal component analysis using varimax rotation revealed a six-factor structure comprised of (I) rajasic (passion and mobility), (II) sattvic (goodness and harmony), (III) tamasic (dullness and inertia), (IV) competence, (V) neuroticism, and (VI) extraversion. The six-factor structure of personality in Hindi language has broader psycholexical space than what is proposed in the “Big Five” personality theory.

The origins of contemporary psycholexical studies are found in the classic list of personality descriptive adjectives developed by Allport and Odbert (1936). The same list has been revised, modified and supplemented by researchers in subsequent studies (e.g. Cattell, 1943; Goldberg, 1981, 1982; Norman 1967; Tupes & Christal, 1961). In the course of a span of about seven decades researchers have reported varied factor solutions (e.g. five, six, eight and sixteen). The popular view tends to suggest that across the world personality converges on a five-dimensional space (see Goldberg, 1981; John, Nauman & Soto, 2008; McCrae & Costa, 1997). The dimensions of the five-factor structure largely conceptualize the psycholexical space of personality in the Euro-American languages (e.g., Caprara & Perugini, 1994; DeRaad, 1992; DeRaad & Szirmak, 1994; Saucier, Georgiades, Taousis & Goldberg, 2005; Szarota, 1996). The questionnaire measure of five factors, popularly known as the NEO-PI-R (Costa & McCrae, 1992), has also received wide attention and has been substantiated in different cultures including Chinese (e.g., McCrae, Costa, & Yik, 1996), French (McCrae, Costa, del Pilar, Rolland, & Parker, 1998), Greek (Tsaousis, 1999), and Russian (Martin, Oryol, Rukavishnikov, & Senin, 2000) cultures.

Nonetheless an inconsistent pattern in the emergence of a fifth factor tapping intellect/imagination/culture/integrity has also been noted (Caprara & Perugini, 1994; Peabody & De Raad, 2002; Szirmak & De Raad, 1994) questioning the assumed and projected universality of the five-factor structure (see Block, 1995). Studies conducted in non-Western cultures highlighting the significance of language in describing personality have received little attention (Church, 1987). Psycholexical investigation of person-descriptive adjectives in Filipino language has revealed a seven-factor structure (Church, Katigbak & Reyes, 1996). The extension of earlier studies has yielded ten factors (Imperio, Church, Katigbak & Reyes, 2008). These factors involving social and physical attributes are characteristically different from the Big- Five (Goldberg, 1981), HEXACO (Lee & Ashton, 2004), and ML7 (Saucier, 2003). There is growing evidence that personality may not share the same characteristics across cultures (Church & Katigbak, 1988; Markus & Kitayama, 1998; Misra & Gargen, 1993; Shweder, 1999).

This study explored the pattern of personality structure in a Hindi speaking Indian sample belonging to the South Asian Cultural context. Hindi is one of the most popular languages of India spoken in a large region of the country comprising eight States. It has a rich literary tradition. The majority of the National daily newspapers, television programs, cinemas, and scientific literature are prepared in this language. Hindi is taught up

to high school level in all the educational institutions of the country. It is one of the official languages of India. It belongs to the Indo-Aryan family of languages. The script of this language is *Devanagari* and the majority of the words of this language have been derived from Sanskrit.

## Method

### Sample

A sample of 240 young adults ( $M= 22.67$  years,  $SD= 2.71$ ) whose mother tongue was Hindi from north India participated in the study. Among them 141 were male (58.75%) and 99 were female (41.25%). The majority of the participants came from an urban middle class background.

### Measure and Procedure

A personality descriptive adjective checklist consisting of a list 295 adjectives (presented in Hindi and English together with a 5-point rating scale) was used. The adjectives were identified using a thesaurus of Hindi and a few contemporary Hindi novels. Initially, a total of 827 adjectives were selected using exclusion criteria such as (1) non-descriptive words of persons or behaviours (e.g. *nouns*); (2) complicated, unusual, outdated, and jargon terms (e.g. *rustic*); (3) role oriented words that did not have direct bearing on traits (e.g., *plumber*); (4) words denoting a group of individuals (e.g., *doctor*); and (5) words reflecting ideological overtone (e.g., *extremist*). The list of 827 adjectives was further screened using some additional exclusion criteria (1) physical features having no trait connotation (e.g., *tall*); (2) physical and mental health (e.g., *paralytic*, *depressive*); (3) power and status (e.g., *feudal*, *anarchist*), and (4) politics and religion (e.g., *Naxali*, *blasphemous*). Using these exclusion criteria a list of 465 adjectives was selected. Also, the list of 465 adjectives was given to a team to scrutinize each adjective on three criteria i.e. obscurity, ambiguity, and unfamiliarity (see De Raad, Perugini, Herbickova & Szarota, 1998). Only those adjectives on which the team had almost 80% agreement were considered for inclusion. Out of 465 adjectives only 357 adjectives could be retained. The 357 adjectives were rated on the criterion of “appropriateness” for personality description using a 3- point rating scale ranging from “least appropriate” to “most appropriate”. The adjectives with mean ratings from 2 to 2.5 were retained. Finally, a set of 295 personality descriptive adjectives were retained.

Considering the bilingual nature of Indians 295 adjectives were translated into English and again back translated into Hindi. They had 90% agreement on the translation of the adjectives. The adjectives which did not have an exact English equivalent were kept in Hindi. The adjectives were arranged alphabetically.

### Procedure

Participants were instructed to indicate to what extent they thought each of the adjectives described themselves on a 5-point rating scale ranging from “least descriptive” (1) to “most descriptive” (5). They took around two hours to give their response. In case the participants had any difficulty in understanding the adjectives, the meaning of those adjectives was explained to them.

## Results and Discussion

The data were factor analyzed following principal components analysis with varimax rotation. The scree plot of Eigen values revealed extraction of as many as six factors. The Eigen values for the first six factors were 31.47, 23.39, 16.73, 8.17, 7.14, and 5.44. While analyzing the factors only those adjectives whose loading was .40 or above were considered.

The six-factor solution explained 31.3% of the total variance. The highest loading factor had 48 adjectives with positive or negative loadings. It explained 8.63% of the variance. The positively loaded adjectives on this factor characterized a general tendency to be friendly, generous and judicious towards others. The adjectives with negative loadings indicated hypocritical, deceptive and cunning tendencies. They highlighted an opportunistic tendency to use others to serve one’s vested interests. This factor was termed as *rajasic*.

Factor II explained 6.33% of the variance and was termed as *sattvic* which is the characteristic of an individual who possesses the social and spiritual qualities or virtues. A total of 40 adjectives loaded on this factor which included well-behaved, impartial, virtuous, understanding etc.

Factor III explained 5.93% of the variance. It comprised 32 adjectives such as uncivilized, inconsiderate, arrogant, jealous and intolerant. The adjectives loading on this factor indicated for a socially undesirable tendency which is characterized as *tamasic*.

Factor IV explained 4.12% of the variance. It had 18 adjectives collectively representing self-confidence and dynamism aiming towards making progress. Hence this factor was labeled as *competence*. It had adjectives such as successful, talented, perseverant, disciplined, concentrated etc.

Factor V explained 3.37% of the variance. It comprised of a cluster of 12 adjectives implying emotional instability, anxiety, feeble-mindedness, withdrawal, and distractedness. This factor was named as *neuroticism*.

Factor VI explained 2.92% of the variance. It consisted of 10 adjectives like assertive, extrovert, fearless, courageous and diplomatic. Collectively they indicated *extraversion*.

The present findings indicate that personality in Hindi language can be described in a six-dimensional psycholexical space. However, the constituents of these dimensions present a different conceptualization of personality. Thus the findings of the present study may be examined in the light of a six-factor structure in English language (Ashton, Lee & Goldberg, 2004), an eight-factor structure in Dutch language (De Raad & Barelds, 2008), and a five-factor model of personality (Costa & McCrae, 1992).

The six-dimensional psycholexical space that emerged in the present study is constituted by the following factors (I) *rajasic*, (II) *sattvic*, (III) *tamasic*, (IV) competence, (V) neuroticism and (VI) extraversion. The adjectives that loaded positively on the *rajasic* factor indicate a tendency towards maintaining a modest and polite attitude towards others in order to be acceptable. On the other hand, the negatively loaded adjectives reveal a manipulative tendency with the desire to please others to gain benefit out of it. The individuals high on these attributes have a materialistic orientation, strong sense of gratification, and passion for seeking power and authority. *Rajasic guna* has been conceptualized in *Bhagavad-Gita* in terms of intense activity, desire for a sense of gratification, restlessness and craving for material objects, little interest in spiritual elevation, dissatisfaction with one's present position or state, greed, violence, an envious and cunning attitude and a materialistic orientation in life.

The *rajasic* factor shares a sizeable amount of similarity with other psycholexical studies. Some of the negative adjectives loaded on this factor (such as flatterer, deceptive, cunning, busy-body, and showy) share similarities with negatively loaded adjectives from the sixth factor named honesty-humility in the English language (Ashton, et al., 2004). These adjectives were cunning, unwise, crafty, tricky, sneaky and foxy. Also, some of the adjectives loading positively on this factor such as friendly, tender-minded, empathetic, and kind partly share the characteristics of tender-mindedness which is one of the facets of agreeableness in NEO-PI-R (Costa & McCrae, 1992).

The adjectives loaded on the *sattvic* factor share characteristics that are indicative of a generous, altruistic, and humane attitude with an element of self-regulation. This quality indicates a state in which an individual maintains balance across different domains of life. In *Bhagavad-Gita* the *sattvic* factor has been described by qualities such as truthfulness, gravity, dutifulness, detachment, discipline, mental balance, respectfulness and sense of control.

With regard to *the sattvic* factor vis-à-vis the factors of Western psycholexical studies it was observed that the positively loaded adjectives on the agreeableness factor in the six-factor solution (Ashton, et al., 2004) of the English language (e.g. patient, non-hostile, tolerant, non-explosive, good-tempered, undemanding, and gentle) are similar to the adjectives from the *sattvic* factor (such as tolerant, gentle, levelheaded, balanced and understanding) in this study. The adjectives belonging to the *sattvic* factor also resemble 'virtue' which is the first factor in an eight-factor structure of Dutch trait taxonomy (De Raad & Barelds, 2008). Virtue, in Dutch trait taxonomy, is characterized by the terms friendly, trustworthy, loyal, decent, sincere, good, honest, reliable, sympathetic, civilized and polite.

The attributes that loaded on the *tamasic* factor reflect a cynical and destructive tendency where the individual hardly enjoys good relations with others. Such individuals have less control than others have over negative emotions and they have low self esteem which finally leads to a self-destructive tendency.

Qualities such as anger, arrogance, depression, laziness, procrastination and a feeling of helplessness characterize a *tamasic* person as described in the *Bhagavad-Gita*. The adjectives constituting this factor partly share the characteristics of impulsiveness which is one of the facets of neuroticism in the NEO-PI-R (Costa & McCrae, 1992) and hedonism which is the sixth largest factor in the Dutch trait taxonomy (De Raad & Barelds, 2008) characterized by sensation-seeking, beast like behaviour, horniness, and impulsivity.

The adjectives loaded on *competence* characterize a pattern of self-efficacy with commitment and discipline. The shared pattern of these attributes points towards the application of intellect in the proper direction with energy and motivation for excellence. The adjectives partially resemble the adjectives from the conscientiousness factor that emerged in the six-factor solution in the English language (Ashton, et al., 2004). Competence is also one of the facets of conscientiousness in the NEO-PI-R (Costa & McCrae, 1992) with defining adjectives such as efficient, self-confident, thorough, resourceful, confused (negative loading), and intelligent. These adjectives indicate a person's intellectual potential. In the Dutch trait taxonomy (De Raad & Barelds, 2008) 'competence' has emerged as the second largest factor in an eight-factor solution.

The adjectives forming the neuroticism factor collectively define a negative affective state characterized by being anxious, perplexed, unsuccessful, and withdrawn. These adjectives share certain common characteristics with adjectives (such as emotional, fearful, weepy, sensitive, worrying, self-pitying, and over-nervous) that have negative loadings on the emotionality factor from the six-factor solution in the English language (Ashton, et al., 2004) and traits (such as anxious fearful, worrying, tense, and nervous) from the anxiety facet of the neuroticism dimension in the NEO-PI-R (Costa & McCrae, 1992).

Extraversion, as the sixth factor, is dissimilar to the factor found in Western psycholexical studies where it has emerged either as the first largest factor of the Big Five (Goldberg, 1981) or as the second largest factor in the six-factor solution (Ashton, et al., 2004). Extraversion in the English lexicon is described by adjectives, like talkative, bubbly, vocal, jolly and perky, which indicate a sociable tendency in the individual. On the contrary, extraversion is the sixth factor in the present study and is characterized by adjectives such as assertive, fearless, *jujharoo* (One who does not give up in spite of setbacks), flamboyant, hilarious and diplomatic. These adjectives indicate boldness and assertiveness to lead others, mixed with a humorous and diplomatic attitude.

The emergence of a six-factor structure comprising some indigenous dimensions (*rajasic*, *sattvic*, and *tamasic*) as well as some dimensions found in other languages (*competence*, *neuroticism*, *extraversion*) indicates a relatively larger psycholexical space in Hindi. The adjectives characterizing the first three largest factors share the conceptualization of *triguna* theory in the Indian context. This theory postulates a set of three primary qualities *sattva*, *rajas*, and *tamas*. They are roughly translated as luminosity, activity and inertia. The relative intensity and combination of *gunas* characterize stable individual differences. The dynamic nature of *gunas* make them partly like states and partly like traits. The term *triguna* at first appeared in the text of *Swethaswathara Upanishad* and thereafter in *Ayurveda* and other texts like the *Bhagavad Gita*. It has drawn the attention of many researchers interested in indigenous constructs (e.g. Marutham, Balodhi & Mishra, 1998; Mathew, 1995; Murthy & Kiran Kumar, 2007; Pathak, Bhat, & Sharma 1992; Wolf, 1998).

The findings also indicate a partial resemblance of the Hindi six-factor structure with the six-factor structure of the English language, eight-factor structure of the Dutch language and facets of some of the dimensions on the NEO-PI-R. However, the adjectives describing these six factors of Hindi language are also remarkably different from the characteristics of their counterparts in other languages. On the whole, the findings of the study indicate that these six factors are specific to the Indian-socio cultural context. It points towards the need for examining developmental changes in the factor structures as it is largely confined to description of the personality structure of young adults. It also indicates the possibility for developing an indigenous tool of personality assessment.

## References

- Allport, G. W., & Odbert, H.S. (1936). Trait-names: A psycho-lexical study. *Psychological Monographs*, 47 (1, Whole No. 211).
- Ashton, M. C., Lee, K., & Goldberg, L. R. (2004). A hierarchical analysis of 1,710 personality descriptive adjectives.

- Journal of Personality and Social Psychology*, 87, 707-721.
- Block, J. (1995). A contrarian view of the five-factor approach to personality description. *Psychological Bulletin*, 117, 187-215.
- Caprara, G. V., & Perugini, M. (1994). Personality described by adjectives: Generalizability of the Big Five to the Italian lexical context. *European Journal of Personality*, 8, 357-369.
- Cattell, R.B. (1943). The description of personality: Basic traits resolved into clusters. *Journal of Abnormal and Social Psychology*, 38, 476-506.
- Church, A. T. (1987). Personality research in a non-Western culture: The Philippines. *Psychological Bulletin*, 102, 272-292.
- Church, A. T., & Katigbak, M. S. (1988). The emic strategy in the identification and assessment of personality dimension in a non-western culture: Rational, steps, and a Philippine illustration. *Journal of Cross-Cultural Psychology*, 19, 140-163.
- Church, A. T., Katigbak, M. S., & Reyes, J. A. S. (1996). Toward a taxonomy of trait adjectives in Filipino: Comparing personality lexicons across cultures. *European Journal of Personality*, 10, 3-24.
- Costa, P.T., Jr., & McCrae, R.R. (1992). *NEO Personality Inventory-Revised (NEO-PI-R) and NEO Five-factor Inventory (NEO-FFI) professional manual*. Odessa, FL: Psychological Assessment Resources.
- De Raad, B. (1992). The replicability of the Big Five personality dimensions in three world classes of the Dutch language. *European Journal of Personality*, 6, 15-29.
- De Raad, B., & Szirmak, Z. (1994). The search for the "Big Five" in a non-Indo-European language: the Hungarian trait structure and its relationship to the EPQ and the PTS. *European Review of Applied Psychology*, 44, 17-24.
- De Raad, B., Perugini, M., Herbickova, M., & Szarota, P. (1998). Lingua Franca of personality: Taxonomies and structures based on the psycholexical approach. *Journal of Cross-Cultural Psychology*, 29, 212-232.
- De Raad, B. & Barelds, D. P. (2008). A new taxonomy of Dutch personality traits based on a comprehensive and unrestricted list of descriptors. *Journal of Personality and Social Psychology*, 94, 347-364.
- Goldberg, L.R. (1981). Language and individual differences: the search for universal personality lexicons. In L. Wheeler (Ed.), *Review of personality and social psychology* (Vol. 2, pp. 141-165). Beverly Hills, CA: Sage.
- Goldberg, L. R. (1982). From ace to zombie: Some explorations in the language of personality. In C.D. Spielberger & J.N. Butcher (Eds.), *Advances in personality assessment* (Vol. 1, pp. 203-234). Hillsdale, NJ: Erlbaum.
- Imperio, S. M., Church, A. T., Katigbak, M. S., & Reyes, J. A. (2008). Lexical studies of Filipino person descriptors: Adding personality-relevant social and physical attributes. *European Journal of Personality*, 22, 291-321.
- John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative big five trait taxonomy: History, measurement, and conceptual issues. In O.P. John, R.W. Robins, & L.A. Pervin (Eds.), *Handbook of Personality: Theory and Research* (pp. 114-158). New York: Guilford Press.
- Lee, K., & Ashton, M.C. (2004). Psychometric properties of the HEXACO Personality Inventory. *Multivariate Behavioral Research*, 39, 329-358.
- Markus, H. R., & Kitayama, S. (1998). The cultural psychology of personality. *Journal of Cross-Cultural Psychology*, 29, 63-87.
- Martin, T.A., Oryol, V.E., Rukavishnikov, A.A., & Senin, I.G. (2000). *Application of the Russian NEO-PI-R*. Paper presented at the XXVIth International Congress of Psychology, Stockholm, Sweden.
- Marutham, P., Balodhi, J.P., & Mishra, H. (1998). Sattva, Rajas, Tamas (SRT) Inventory. *NIMHANS Journal*, 15-19.
- Mathew, V.G. (1995). *Mathew IAS rating scale manual*. University of Kerala, Kerala.
- McCrae, R.R., & Costa, P.T., Jr. (1997). Personality trait structure as a human universal. *American Psychologist*, 52, 509-516.
- McCrae, R.R., Costa, P.T., Jr., & Yik, M.S.M. (1996). Universal aspects of Chinese personality structure. In M.H. Bond (Ed), *The handbook of Chinese psychology*. Hong Kong: Oxford University Press.
- McCrae, R.R., Costa, P.T., Jr., del Pilar, G.H., Rolland, J.P., & Parker, W.D. (1998). Cross-cultural assessment of the Five-Factor Model: The Revised NEO Personality Inventory. *Journal of Cross-Cultural Psychology*, 29, 171-188.
- Misra, G., & Gergen, K. J. (1993). On the place of culture in psychological science. *International Journal of Psychology*, 28, 225-243.
- Murthy, P. K., & Kumar, S. K. K. (2007). The concept of triguna: A critical analysis and synthesis. *Psychological Studies*, 52, 103-113.
- Norman, W.T. (1967). *2800 personality trait descriptors: Normative operating characteristics for a university population*. Ann Arbor: Department of Psychology, University of Michigan.
- Pathak, N.S., Bhatt, I.D., & Sharma, R. (1992). Manual for classifying personality on tridimensions of gunas- an Indian approach. *Indian Journal of Behaviour*, 16, 1-14.

- Peabody, D., & De Raad, B. (2002). The substantive nature of psycholexical personality factors: A comparison across languages. *Journal of Personality and Social Psychology*, 83, 983-997.
- Saucier, G. (2003). An alternative multi-language structure for personality attributes. *European Journal of Personality*, 17, 179-205.
- Saucier, G., Georgiades, S., Tsaousis, I., & Goldberg, L. R. (2005). The factor structure of Greek personality adjectives. *Journal of Personality and Social Psychology*, 88, 856-875.
- Shweder, R.A. (1999). Why cultural psychology? *Ethos*, 27, 62-73
- Szarota, P. (1996). Taxonomy of Polish personality descriptive adjectives of the highest frequency of use. *Polish Psychological Bulletin*, 27, 343-351.
- Szirmak, Z., & De Raad, B. (1994). Taxonomy and structure of Hungarian personality traits. *European Journal of Personality*, 8, 95-117.
- Tsaousis, I. (1999). The traits personality questionnaire (TPQue): A Greek measure for the five factor model. *Personality and Individual Differences*, 26, 271-283.
- Tupes, E.C., & Christal, R.E. (1961). *Recurrent personality factors based on trait ratings*. (Technical Report No. ASD-TR- 61-97). Lackland Air Force Base, TX: U.S. Air Force.
- Wolf, D.B. (1998). The Vedic personality inventory: A study of gunas. *Journal of Indian Psychology*, 16, 26-43.