



Development of a Lexically & Psychometrically based Model of Personality

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ABSTRACT

Considering that the individual differences are explained by different words from one culture to another, Goldberg (1982) rightly remarked that the individual differences that are reflected in the daily transactions of persons eventually become encoded into their language. As far as assessment of personality in south Asia is concerned, usually the tools developed by western researchers are adopted, which proves counterproductive as no attention is paid to pragmatics and the related aspects of the language. When it comes to the state of J&K, the scenario is more pathetic as most of the people have not full command over even their native language. In this backdrop the present study was carried with the objective of development of a lexically & psychometrically based model of Personality. After application of proper methodological procedures, the results obtained are satisfactory in terms of the efficacy of the lexical approach for the assessment of various attributes of an individual. It is hoped that the study will serve as a small beginning for the researchers of Asia to further refine the concept of personality indigenously.

Keywords: *language, model, native, personality, researchers.*

I. INTRODUCTION

Exploration of personality traits by conceptualizing the same in terms of models has been a herculean task for researchers since times immemorial. No doubt the western researchers like McCrae & Costa (1992); Goldberg (1992); Saucier (1994); Martinez & John (1998) and John & Srivastava, (1999) have played a highly appreciable role, but the efficacy of the measures developed by them may need some revision when cultural and linguistic aspects of the respondents from a different context like Kashmir are taken into consideration. No such attempt has been made so far in the Asian part of the world as far as the authors' access to the literature is concerned. In this context the present study has adopted the lexical hypothesis to select the items for the development of an indigenous big five model of personality consisting of Openness, Conscientiousness, Extroversion, Agreeableness, and Neuroticism. Openness refers to how willing people are to make adjustments in notions and activities in accordance with new ideas or situations (Goldberg, 1993; McCrae, & John, 1992). People with high openness have wide interests, are imaginative, insightful, prefer variety and are intellectually curious (Costa, & McCrae, 1992). Conscientiousness personalities are organized and thorough, they plan ahead and are also reliable and dependable. As per Costa & McCrae (1992), individuals who are low on conscientious self-discipline are unable to motivate themselves to perform a task that they



would like to accomplish. Extraverts are characterized by a keen interest in other people and external events, and venturing forth with confidence into the unknown (Ewen, 1998). Agreeableness is an inclination to be pleasant and accommodating in social situations reflecting individual differences in concern for cooperation and social harmony (Graziano & Eisenberg 1997). Neuroticism which is sometimes reversed and measured as emotional stability is an enduring tendency to experience negative emotional states and such feelings such as anxiety, anger, guilt, and depressed mood (Matthews & Deary 1998). It is to be noted that the term "Big Five" was coined by Goldberg (1993) and was originally associated with studies of personality traits used in natural language. The Big Five factors are so universal that they show up when people are asked to describe themselves (Passini & Norman 1966).

II.METHOD

2.1 Procedure

The participants of the study included 350 human service professionals selected randomly from the three major organizations delivering the human service in Kashmir namely University of Kashmir, S.K.I.M.S. Hospital and the J&K Bank branches. Considering that many researchers in the field of linguistics like Lewis (2002) strongly emphasize the lexical approach by advocating that the emphasis should be paid on words, cluster of words or lexical chunks rather than grammar, the various items used in the present study to get a picture of personality were purely based on lexical hypothesis and later on the efficacy of these items in conceptualizing the personality was substantiated by psychometric testing. Overall 20 items which were formulated after an extensive review of two thousand four hundred thirteen items (2413) from international personality item pool (Goldberg, 1999) ;10 items from TIPI(Gosling,2003) and 240 items from NEO- PI-R(McCrae & Costa,1992).The research studies conducted by Mcrae & Costa(1992);Salgado(1997); Baumeister(2002); Bierman(2003); Segerstrom(2006) and Lussier & Achua(2013) were also consulted. While selecting the items, the researcher took the lexical hypothesis, content validity and the bandwidth of the items into consideration. However it is to be noted that after focusing on the appropriate lexicons, the same were framed as sentences. The items were then discussed with the respondents in order to check whether such words are of interest to them and whether the lexicon suits their day to day word transactions. Tough and unfamiliar words were replaced by alternative items based on various theoretical perspectives. As the development of factor analytic methods has revolutionized the research pertaining to the lexical domain by making it scientific, the same was incorporated in the present study to develop the big five model of the personality traits .It is to be noted that the items were measured on a seven point Likert scale with 1 = Strongly Disagree and 7= Strongly Agree, to provide wider scope for multivariate analysis.



Table 2.1. Showing sample items of the research instrument

<i>Dimension</i>	<i>Items</i>
Openness	I have active “imagination powers”
Conscientiousness:	I see myself as “reliable & responsible” person
Extraversion:	I see myself as cheerful, warm and high spirited person.
Agreeableness:	I try to be humble & helpful.
Emotional Stability:	I see myself as anxious, irritable and easily upset.

2.2. Data Analysis

As validation of a construct needs application of multivariate statistical techniques, the data was subject to screening, primarily, using SPSS (version 20). The screening included an examination of means, standard deviations, standard errors, skewness and kurtosis in order to ensure normality of the data. The removal of outliers was ensured subject to their impact on normality after which only 336 response sheets were deemed fit for subsequent analysis. This was followed by Confirmatory Factor Analysis procedure by making use of AMOS (Version 20).

III. RESULTS & DISCUSSION

Table 3.1 Descriptive Statistics for big five personality dimensions. (N=336)

Dimension	Mean	5% TM	ΔMean	SD	SE
Openness	5.70	5.73	0.03	0.79	0.04
Conscientiousness	6.01	6.08	0.07	0.90	0.04
Extraversion	5.48	5.52	0.04	0.94	0.05
Agreeableness	6.04	6.07	0.03	0.64	0.03
Emotional Stability	5.33	5.39	0.06	1.1	0.06

SD(Standard deviation);SE(Standard error); TM(Trimmed Mean).

The ΔMean(difference between mean and 5% trimmed mean) as seen from the table is not beyond the criteria of >0.20 suggested by Pallant(2007) suggesting the absence of outliers. Normality of the data was checked by visualization of the Q-Q plots. The values of standard deviation and standard error are also very small as compared to mean; thereby further improving the scope of data for subsequent analysis.

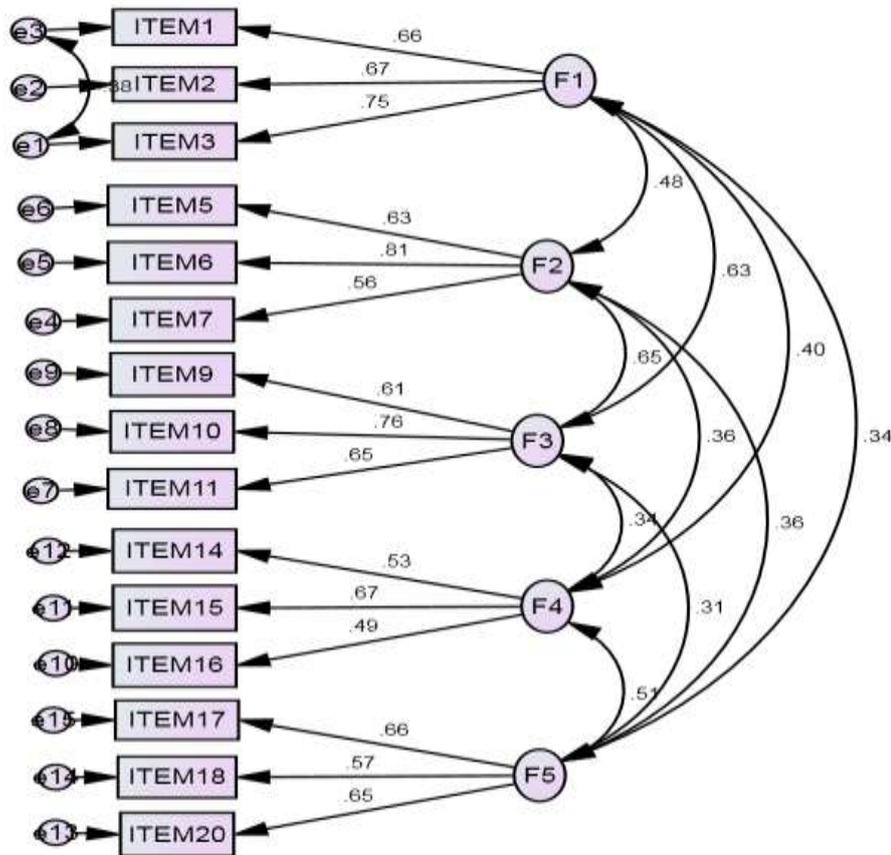


Table3.2 Item-total correlations of scale items.(Cronbach's Alpha= 0.81)

Item No.	Item-Total Correlation	Cronbach's Alpha if item deleted
1.	0.46	0.78
2	0.43	0.78
3	0.40	0.78
4	0.23	0.79
5	0.40	0.78
6	0.52	0.78
7	0.43	0.78
8	0.20	0.79
9	0.40	0.78
10	0.51	0.78
11	0.50	0.78
12	0.27	0.79
13	0.15	0.80
14	0.40	0.78
15	0.41	0.78
16	0.30	0.79
17	0.42	0.78
18	0.37	0.78
19	0.31	0.79
20	0.35	0.78

The Application of the mentioned criteria led to the deletion of five items (4,8,12,13 and 19) from further analysis. above table depicts the results of the reliability test that was applied to assess the degree of consistency among the multiple measurement of the variable. To ensure the same Pallant's criteria of calculating cronbach's alpha and item-total correlation was followed. According to Pallant (2007), a value of item-total correlation of less than 0.30 indicates that the variable is measuring something different from constructs that the variable is measuring as a whole.

Fig3.1. Measurement model of big five dimensions of personality.



The above figure represents the measurement model of big five personality dimensions (Openness, Conscientiousness, Extraversion, Agreeableness and Emotional Stability). The factor loadings depicted in the figure range from 0.49 to 0.81 and fall well within the Hair's criteria (2006) for convergent validity despite only three items per dimension.



Table 3.3. AMOS generated Model fit indices of big five personality model.

Index	Reported Value
Chi square	164.317
Chi square divided by degree of freedom(CMIN/df)	2.0
Goodness of fitness index (GFI)	0.94
Comparative fit index (CFI)	0.93
Root mean square error of approximation (RMSEA)	0.05

The model fit indices that were calculated by application of confirmatory factor analysis as highlighted in the table include the value of CMIN/DF= 2.0 falling well within the threshold of 1 to 3 mentioned by Carmines and McIver (1981); GFI = .94 & CFI = .93 are both higher than the cut-off value of 0.90 and RMSEA = .05 falls well within the threshold value of 0.06 as recommended by Hu and Bentler (1999).

IV. CONCLUSION

Research studies are testimony to the fact that the factor analytic methods have led to an increase in the frequency of research studies grounded in lexical hypothesis. The focus on basic personality factors as used in everyday language have become more and more popular and today it is one of the leading approaches in linguistics and allied fields. In this context, the present study was aimed at development of a personality trait model based on linguistic and psychometric principles. From the initial pool of 20 items, five items were dropped due to their poor reliability indices. Cronbach's alpha of the remaining 15 items was found equal to 0.81 which indicates high internal consistency of the items as per guidelines of Nunally(1978). A confirmatory factor analysis revealed a good model fit as the values of fit indices like CMIN/DF= 2.0; GFI = .94; CFI = .93 and RMSEA = .05 fall well within the threshold values. Besides this all the factor loadings were significant, thereby proving convergent validity of the instrument. It is hoped that this 15 item measure of personality will go a long run in the field of personality conceptualization and also significantly contribute towards the use of scientific methods in the field of linguistics. It is to be noted that the modified versions of this scale will be published soon and the second landmark towards this will be the searching of words from the Kashmiri Language which are synonymous with the items used in present study, as the same will help in conceptualization of personality in a more appropriate manner as far as the cultural and linguistic aspects of people residing in Kashmir are concerned.

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