Handprints of the Mind: Decoding Personality Traits and Handwritings

Mahesh Ramanna Gowda, Nikitha Harish\textsuperscript{1}, Arun Aslam\textsuperscript{2}, Mangala Padmanabiah\textsuperscript{2}, Radhika Magaji\textsuperscript{3}

ABSTRACT

Context: Handwriting analysis is a unique, specialized and emerging scientific process that has been carried out and applied for centuries now. However, its reliability and effectiveness as a method of assessing personality and behavior is not established and is still a debatable issue. The present paper aimed to examine the possibility of a correlation between clinical diagnosis and graphological analysis and to explore the key links between the underlying personality traits and its manifestations in handwriting among children. Aim: The aim was to study the possibility of a correlation between clinical diagnosis and graphological analysis. Objectives: To explore the key links between the underlying personality traits and its manifestations in handwriting among children. To study the possibility of using Graphotherapy as a remedial tool in aid of teaching/learning techniques and behavior modifications. Hypothesis: There are no significant and concrete differences between the psychodiagnostic assessment of personality through Children’s Personality Questionnaire (CPQ) and handwriting analysis. Materials and Methods: \(N = 60\), age group = 8-12 years. Tools: CPQ — a 16 personality factor scale and a semi-structured proforma. Simple random sampling technique was used. Results: The \(P\) values for the study sample were found to be greater than 0.05 at 5\% level of significance to all the 14 dimensions of personality hence going in line with the null hypothesis that states “there are no significant and concrete differences between the psychodiagnostic assessment of Personality through CPQ and handwriting analysis.” Graphologists were thoroughly trained to interpret on the same 14 dimensions of personality as that of CPQ, most samples were analyzed to have a “lying loop,” a trait, which might also be attributed to the difference found in Trait-H, further asserting the subjective limitations of most psychological tests.

Key words: Children’s Personality Questionnaire, clinical diagnosis, handwriting analysis, psychodiagnostic assessment of personality

INTRODUCTION

Handwriting analysis also known as graphology is a method of identifying the traits of an individual through his/her handwriting. It can essentially be used to identify physiological and psychological problems before they become too severe, and is an excellent tool to identify the presence of stress in an individual. Valuable insights into people’s characters can be gained allowing a better understanding of minds.\textsuperscript{[1,2]} Handwriting is typically unique regardless of style, format, spelling, and content. It helps in understanding personality traits through the strokes and patterns revealed by individual’s handwriting, revealing traits such as emotional and mental instability, which may eventually lead to a deviant or problematic behavior.\textsuperscript{[3]} The study of handwriting as a diagnostic tool has a
lengthy history in psychiatry. However, hitherto much of handwriting analysis is predominantly in English scripts.

The first book on the subject was written in 1662 by Camillo Baldo an Author and Professor of Medicine and Psychology at Bolonge University (Spain), accredited as the father of handwriting analysis. Handwriting analysis or graphology is classified as a subset of the study of psychology. Even conclusions about the value of graphology depend on subjective review, but the most comprehensive reviews of early studies especially that of Allport, Vernon and Sulner and of more recent work Fluckiger, et al. are for the most part favourable to handwriting as an index to personality.

Validated, reliable, and scientific tests that evaluate various aspects of individual personality have been studied through years; the Big Five, Minnesota Multiphasic Personality Inventory, Myers-Briggs have been efficiently used to categorize and label individual personalities. Projective techniques of assessing personality; Rorschach ink blot test, Thematic Apperception Test, picture tests have been found to be accurate with plausible results. However, graphology as a projective technique of assessment has not been much concentrated upon. A graphoanalysis by a professional graphoanalyst is supposedly as accurate as scientifically based tests of personality assessment.

The Children’s Personality Questionnaire (CPQ) measures 14 dimensions of personality as proposed by R. B. Cattell through its 140 forced-choice items. The test is limited between the age groups of 8-12 years (the critical years of personality development). The obtained scores on the questionnaire are converted to standard scores and percentile ranks as per gender norms and the 14 dimensions of personality are determined.

The most comprehensive work has been carried out by Allport and Vernon. Wolfson et al. uncovered the history of graphology and other subsequent studies. McNeil and Blum and several others have focused their attentions on experimental investigations rather than speculations in the field of graphology, but it is still difficult to draw conclusions since the methods used and the criterion variables investigated have been highly diversified.

**HYPOTHESIS OF THE STUDY**

There are no significant and concrete differences between the psychodiagnostic assessment of personality through CPQ and handwriting analysis.

**MATERIALS AND METHODS**

A pilot study was conducted on mental health professionals at our Tertiary Care Clinic, by assessing personality traits through the 16 personality factor questionnaire and comparing the obtained traits with that of handwriting analysis. Focused group discussions were carried out to focus of specific relationships between psychometric assessment and handwriting analysis. The current study was then initiated as a joint venture by Mental Health Professionals and Graphologists as there was a positive co-relation between the two analyses. Factor based assessments were considered to be a common ground for comparison of both methods.

After obtaining an informed consent from the caregivers, data were collected using a validated semi-structured proforma (designed and approved by 2 graphoanalysts, 2 consultant psychiatrists, 2 psychologists, 2 psychiatric social workers, and 2 special educators) from the study sample. Simple random sampling technique was employed:

1. Study group: 30 successive outpatients of our tertiary care clinic, aged between 8 and 12 years, diagnosed with psychiatric disorders of childhood (according to Diagnostic and Statistical Manual of Mental Disorders-IV TR) were taken as a random study sample. The population was predominated by learning disorders, attention deficit, and disruptive behavior disorders and elimination disorders. Mental retardation, (co-morbid) seizure disorders, and pervasive developmental disorders were excluded.

2. Control group: 30 students from nearby schools, matching the age and sex of the study group, who in opinion of the teachers and parents were academically and behaviorally well-functioning, were chosen.

A detailed clinical history, mental status examination and diagnostic evaluation were done on both the groups by a qualified psychiatric team. The CPQ was administered on both the populations. Handwriting samples were collected using a standard validated handwriting sample and norms given by graphologists who were blinded throughout the study. Both the analyses were interpreted and concluded on similar 14 dimensions of personality to have a homogenous interpretation. Appropriate statistical analysis was used to interpret the results and hypothesis tested.

**ANALYSIS OF RESULTS**

The sociodemographic factors such as age and gender were subjected to tests central tendency [Table 1].
The obtained CPQ data were scored (sten scores and percentile ranks) and possible 14 dimensions of personality determined. Gestalt method of macro analysis and trait stroke method of microanalysis were employed by the graphologists and the traits determined. Both the data were statistically compared using Pearson’s Chi-square test for Homogeneity [Table 2].

**DISCUSSION**

The Table 1 reveals that most study subjects were 12 years old, 21 (35.0%), and least were 8 years old, 8 (13.3%). Most of the study subjects were males, 35 of them and 25 were females. With reference to the Table 1, the $P$ values for the Control group, the study group and the total were found to be >0.05 at 5% level of significance to all the 14 dimensions of personality hence going in line with the null hypothesis that states “There are no significant and concrete differences between the psychodiagnostic assessment of personality through CPQ and handwriting analysis.” However, the $P$ value of the control group for Trait-H is 0.011, which is <0.05, at 5% level of significance, clearly disproving the hypothesis and concluding an evidence of a difference in Trait-H. Trait that signifies “social boldness,” based on the different methods of assessment. Though graphologists were thoroughly trained to interpret on the same 14 dimensions of personality as that of CPQ, most samples were analyzed to have a “lying loop,” a trait, which might also be attributed to the difference found in Trait-H, further asserting the subjective limitations of most psychological tests. The identified trait may be concluded to be a result of handwriting analysis which is more individualistic in approach than psychometric assessments based on percentile scores. Specific individual traits may be elicited through graphology as there are no limitations set as in the case of psychometry. In the light of the results, the researchers suggest that graphology may be a very effective projective tool for an assessment of a wide range of traits, especially in children to uncover undermined, and evolving traits that may play a very important role in accurate diagnosis. Another striking feature of handwriting analysis is its usage in remedial therapy which offers a positive modification in traits through corrective measures that may specifically be significant during the primary development stage of individuals. Other practical advantages may be the collection of handwriting samples from index patients which may not be a cumbersome procedure as a passage may be given to be copied either sitting in the out-patient waiting room or taken back home and brought in the next follow-up. Furthermore, handwriting analysis is always free from response bias as the subjects are not

**Table 1: Frequency table showing the age group and gender of the study participants**

| Variable     | Number | Percentage |
|--------------|--------|------------|
| Age (in years) |        |            |
| 8            | 8      | 13.3       |
| 9            | 9      | 15.0       |
| 10           | 15     | 25.0       |
| 11           | 7      | 11.7       |
| 12           | 21     | 35.0       |
| Gender       |        |            |
| Female       | 25     | 41.7       |
| Male         | 35     | 58.3       |

**Table 2: Level of significance of the 14 personality traits of assessment on CPQ**

| Trait | Nature | $\chi^2$ | df | $P$ at 5% level | Result          |
|-------|--------|----------|----|----------------|-----------------|
| A     | Control | 0.097    | 1  | 0.755          | No significant difference |
| Study | 0.081   | 1        | 0.776 | No significant difference |
| Total | 0.176   | 1        | 0.675 | No significant difference |
| B     | Control | 0.729    | 1  | 0.393          | No significant difference |
| Study | 0.337   | 1        | 0.562 | No significant difference |
| Total | 1.032   | 1        | 0.310 | No significant difference |
| C     | Control | 1.181    | 1  | 0.277          | No significant difference |
| Study | 0.000   | 1        | 1.000 | No significant difference |
| Total | 0.827   | 1        | 0.363 | No significant difference |
| D     | Control | 0.067    | 1  | 0.796          | No significant difference |
| Study | 2.385   | 1        | 0.123 | No significant difference |
| Total | 1.581   | 1        | 0.209 | No significant difference |
| E     | Control | 1.127    | 1  | 0.288          | No significant difference |
| Study | 1.127   | 1        | 0.288 | No significant difference |
| Total | 2.255   | 1        | 0.133 | No significant difference |
| F     | Control | 0.072    | 1  | 0.788          | No significant difference |
| Study | 0.622   | 1        | 0.430 | No significant difference |
| Total | 0.141   | 1        | 0.707 | No significant difference |
| G     | Control | 0.066    | 1  | 0.798          | No significant difference |
| Study | 2.536   | 1        | 0.111 | No significant difference |
| Total | 1.653   | 1        | 0.199 | No significant difference |
| H     | Control | 6.458    | 1  | 0.011          | Significant difference |
| Study | 1.060   | 1        | 0.303 | No significant difference |
| Total | 1.166   | 1        | 0.280 | No significant difference |
| I     | Control | 1.033    | 1  | 0.309          | No significant difference |
| Study | 0.065   | 1        | 0.799 | No significant difference |
| Total | 0.808   | 1        | 0.369 | No significant difference |
| J     | Control | 0.648    | 1  | 0.421          | No significant difference |
| Study | 0.067   | 1        | 0.796 | No significant difference |
| Total | 0.518   | 1        | 0.472 | No significant difference |
| N     | Control | 0.000    | 1  | 1.000          | No significant difference |
| Study | 0.265   | 1        | 0.607 | No significant difference |
| Total | 0.130   | 1        | 0.719 | No significant difference |
| O     | Control | 0.282    | 1  | 0.596          | No significant difference |
| Study | 2.818   | 1        | 0.093 | No significant difference |
| Total | 0.590   | 1        | 0.442 | No significant difference |
| Q3    | Control | 0.477    | 1  | 0.490          | No significant difference |
| Study | 0.097   | 1        | 0.755 | No significant difference |
| Total | 0.053   | 1        | 0.817 | No significant difference |
| Q4    | Control | 0.000    | 1  | 1.000          | No significant difference |
| Study | 0.265   | 1        | 0.607 | No significant difference |
| Total | 0.131   | 1        | 0.717 | No significant difference |

CPQ – Children’s personality questionnaire
forced to give “expected” responses as in the case of psychometric assessments.

**THE FUTURE WORK**

Handwriting is also called as brain writing. Changes in handwriting of an individual through graphotherapy can lead to adjustment toward positive thinking and can help a great deal to solve many psychological and emotional problems such as low self-esteem, lying tendencies, higher uncontrolled physical drives, etc. Failure to attain handwriting competency during the school-age years often has far-reaching negative effects on both academic success and self-esteems. This complex occupational task has many underlying component skills that may interfere with handwriting performance, factors that may be both intrinsic such as poor motor skills and extrinsic such as poorly stimulating environment.[18] The authors recommend the use of graphotherapy as a remedial tool in aid of teaching/learning techniques and behavior modifications, for its objectivity, cost, and time effectiveness. The present study makes a major contribution to the availability of scientific literature on the less focused area of personality assessment. The study calls for more research work and throws immense opportunities for further understanding to establish much more scientific basis.

**REFERENCES**

1. Brewer JF. Graphology. Complement Ther Nurs Midwifery 1999;5:6-14.
2. Rosenblum S. Diagnosis method and system based on handwriting analysis, Carmel-Haifa University Economic Corporation Ltd, Israel; 2011.
3. Fisher J, Maredia A, Nixon A, Williams N, Leet J. Identifying Personality Traits, and Especially Traits Resulting in Violent Behaviour through Automatic Handwriting Analysis, Proceedings of Student-Faculty Research Day, CSIS, Pace University, USA, May 4th, 2012.
4. Lewinson TS. Dynamic disturbances in the handwriting of psychotics. Am J Psychiatry 1940;97:102-35.
5. Privat S. Contribution of graphology in the diagnosis and prognosis of psychosis. Gas Pr Med 1965;72:2501-23.
6. Rosen BP. The Science of Handwriting Analysis: A Guide to Character and Personality. New York: Pennsylvania State University, Crown Publishers; 1965.
7. Lomonaco T, Harrison R, Klein F. Accuracy of matching TAT and graphological personality profiles, Perceptual and Motor Skills — Hunter College, City University of New York; 1973;36:703-6.
8. Sulner HF. Mental disorders: Their effects upon handwriting. Am Bar Assoc J 1959;45:931-4.
9. Cordón LA. Popular Psychology: An Encyclopedia. Westport, Connecticut: Greenwood Press; 2005. p. 201-4.
10. Piotrowski Z. The tomlins-horn picture arrangement test. J Nerv Ment Dis 1958;126:106.
11. Poizner A. Clinical Graphology: An Interpretive Manual for Mental Health Practitioners. Springfield, Illinois: Charles C Thomas Publishers; 2012.
12. Impara JC, Murphy LC, Flake BS. The Thirteenth Mental Measurements Yearbook. Lincoln, Nebraska: The Buros Institute of Mental Measurements at the University of Nebraska; 1998.
13. Keysar DJ, Sweetland BC, editors. Test Critiques. Vol. 1. Austin, Texas: PRO-ED Inc.; 1987.
14. Allport GW, Vernon PE. Studies in Expressive Movement. New York: MacMillan Company; 1933.
15. Wolfson R, Anderson HH, Anderson GL. An introduction to projective techniques. In: Graphology. New York: Prentice Hall; 1951. p. 416-56.
16. McNeil EB, Blum GS. Handwriting and psycho-sexual dimensions of personality projective. Techniques 1952; 16:476-84.
17. Fluckiger FA, Tripp CA, Weinberg GH. A review of experimental research in Graphology, 1933-1960. Percept Mot Skills 1961;12:67-90.
18. Feder KP, Majnemer A. Handwriting development, competency, and intervention. Dev Med Child Neurol 2007;49:312-7.

**How to cite this article:** Gowda MR, Harish N, Aslam A, Padmanabiah M, Magaji R. Handprints of the mind: Decoding personality traits and handwritings. Indian J Psychol Med 2015;37:409-12.

**Source of Support:** Nil, **Conflict of Interest:** None declared.