

## Eye Colour: A Physical Trait Correlates with Personality & Mental Health

Rupali Chandola<sup>1\*</sup>

### ABSTRACT

**Background:** Eyes are the window to the soul, eye is so closely linked neurologically to the brain that you might call it the only part of our brain you can see from the outside. It seems to hold vital clues to our brain function. Therefore the study was conducted to know the association between colour of eye relate with personality and mental health **Methods:** Study examined personality of 300 subjects selected purposively. The study was conducted on 143 were normal subjects (77male & 66 female) GHQ negative (score less than 3) subjects from the community formed the normal group for the study and 157 indoor & outdoor psychiatric patients (suffering with three type of disorder like schizophrenics, bipolar and conversion) (102 male & 55 female) admitted in Nirwan neuropsychiatric clinic Lucknow & Bareilly mental hospital, Bareilly U.P. India. Age ranging between 20-30, 40-50 & 60 and above served as participants. Sentence completion test (SCT) was administered on all the included subjects. **Result:** Light brown color of eyes male had high psychiatric morbidity (68.47%) then female. **Conclusion:** Colour of eye can be indicate the personality trait of human being black colour of eyes indicate negative traits of personality in female.

**Keywords:** SCT, Personality, Psychiatric patients, Eye colour.

We have all heard the clichéd expression that “eyes are the window to the soul,” We’ve all seen various personality tests that tell us a little about our fortune and personality like this one that says the door you choose reveals secrets about your soul, but our eyes are an actual physical part of us and can tell us even more. Scientists studied 428 subjects to see if their personalities were linked to the irises in their eye. They found that our eye color is affected by the same genes that form our frontal lobes, thus there are distinctly shared behaviors in people with similar irises. Dr. Anthony Fall one of Edinburgh University has studied the links between eyes and personality as well. “The eye is so closely linked neurologically to the brain that you might call it the only part of our brain you can see from the outside. It seems to hold vital clues to our brain function.”

<sup>1</sup> Department of Psychology, Kumaun University Campus, Almora, Uttarakhand, India

\*Responding Author

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A survey was conducted by Cyber Pulse, a division of Impulse Research Corporation in Los Angeles, and commissioned by CIBA Vision. The survey questioned 1,016 women ages 16 to 35. The results found that women often associate different eye colors with specific personality traits the study found that 34% of participants considered people with brown eyes intelligent, kind, and trustworthy. In contrast, people with blue eyes were considered kind, sweet, and sexy, but only 7% of participants described blue-eyes people as intelligent. Finally, 29% of research participants said they considered green eyes, the sexiest of all the different colors, and their owners to be creative, sexy and a bit devious.

Human eye has become more than a window into such medical problems as thyroid disease and hepatitis. It is inspiring a host of cutting-edge studies on brain abnormalities and behavioral conditions. Experts in cognition, epidemiology, ophthalmology, and neuroscience are collaborating to explore the potential of our eyes to identify our risk for mood disorders, learning disabilities, or cognitive impediments. The research largely remains preliminary, but it holds the promise of providing new ways to diagnose impending problems involving the brain. In the 1960s, Raymond Cattell reported differences in cognitive styles between people with blue and brown eyes. Since then, several other studies have drawn connections between eye color and physiological or behavioral traits. But few scientists have been able to replicate those findings, in part because the eye color effect appears to fade over the course of childhood. Researchers at Orebro University in Sweden looked beyond eye color to find personality variables, focusing on other features of the iris. Psychological scientist Mats Larsson and colleagues administered a standard personality test to 428 volunteers and also took photos of their eyes they found that a low number of squiggly lines, known as crypts, radiating out from the pupil were associated with tender-mindedness, warmth, trust, and positive emotions.

Therefore the study was planned to investigate the relationship between colour of eyes relates with personality and psychiatric illness.

### **METHOD**

#### *Participants*

This study was conducted on 300 subjects of them 143 were normal subjects (77male & 66female) and 157psychiatric patients suffering with three types of mental disorder schizophrenia, mod disorder and conversion disorder (102male & 55 female). They were hailed from Nirwan neuropsychiatric clinic Lucknow U.P. & Bareilly mental hospital, Bareilly U.P.India. GHQ negative (score less than 3) subjects from the community formed the normal group for the study. Sentence Completion Test was administered on all the included subjects.

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### *Tools:*

**General Health Questionnaire-12 (GHQ-12):** The 12-Item General Health Questionnaire (Jacob et al. 1997) is the most extensively used screening instrument for common mental disorders, in addition to being a more general measure of psychiatric well-being.

**Sentence Completion Test:** This test is developed by **Dubey and Dubey(2006)** and it is comprised of 50 incomplete sentence and the participants are instructed to complete every incomplete sentence by the first appearing thought of their mind. The objective of this test to measure certain personality traits. An attempt has been made to measure three personality characteristics through the responses of the subjects. These traits are (1) Sociability, (2) Self Confidence, and (3) Ambitious. All the sentences are so framed that they lead to reveal the positive or negative aspect related to one of the traits.

### *Procedure:*

This study was conducted on 300 subjects of either sex. Participants taken from psychiatric clinics and community both, psychiatric patients taken from the psychiatric clinic on the basis of OPD & indoor setup with schizophrenia, mood disorder and conversion disorder, giving written informed consent were taken as psychiatric patients. GHQ negative (score less than 3) subjects from the community formed the normal group for the study. Sentence Completion Test **Dubey and Dubey(2006)** was administered on all included subjects. The eye colour data in this study only taken for observation basis of all the participants. Uncooperative subjects, having problem in speech and communication which can impede the interview were excluded from the study. Data was analyzed using chi square test.

## **RESULTS**

Keeping in view the main objectives of the present study chi-square was employed to see the difference between normal and psychiatric individual's personality traits regarding eye colour. 2x2 contingency table and 3x3 contingency table has been used for knowing the significant level, any cell was having an observed frequency less than 5, then Yates' correction was applied for the test significant.

The result of the present study has been given below and consecutively discussed.

Table-1 Socio-demographic characteristics of the participants there is two groups include in this study from the society. One group is normal and the other group is psychiatrically ill. Most of the participant in both groups was married. Occupation wise most of the participant (48.25%) employee and the psychiatric group (54.77%) were unemployed. Education level of the participant in normal group almost found up to 12<sup>th</sup> and the psychiatric group (62.42%) found up to be 9<sup>th</sup> standard. 59.44% normal participant belonging from urban area and 64.96% psychiatric patient belonging from rural area. Most of the participants in group one have middle economic

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status and the other counterpart has lower economic status. Majority of the participants belong from 40 to 50 year of age.

**Table-1 Showing other socio-demographic detail of normal and psychiatric group**

| Variable         | Category      | Group I ( Normal) |        | Group II (Psychiatric) |        |
|------------------|---------------|-------------------|--------|------------------------|--------|
|                  |               | N=143             | %      | N=157                  | %      |
| Marital Status   | Married       | 82                | 57.34% | 86                     | 54.77% |
|                  | Unmarried     | 59                | 41.25% | 68                     | 43.31% |
|                  | Other         | 6                 | 4.19%  | 3                      | 1.91%  |
| Occupation       | Unemployed    | 60                | 41.95% | 86                     | 54.77% |
|                  | Employed      | 69                | 48.25% | 40                     | 25.47% |
|                  | Semi skillful | 18                | 12.58% | 31                     | 19.74% |
| Education        | Up to-9th     | 43                | 30.06% | 98                     | 62.42% |
|                  | Up to 12      | 59                | 41.25% | 35                     | 22.29% |
|                  | Graduation    | 45                | 31.46% | 24                     | 15.28% |
| Residence        | Urban         | 85                | 59.44% | 55                     | 35.03% |
|                  | Rural         | 62                | 43.35% | 102                    | 64.96% |
| Income (monthly) | Below-6000    | 36                | 25.17% | 78                     | 49.68% |
|                  | 6000 to 12000 | 63                | 44.05% | 56                     | 35.66% |
|                  | Above 12000   | 48                | 33.56% | 23                     | 14.64% |
| Age              | 20-30 year    | 33                | 23.07% | 45                     | 28.66% |
|                  | 40-50 year    | 69                | 48.25% | 53                     | 33.75% |
|                  | 60 and above  | 45                | 31.46% | 59                     | 37.57% |

**Table -2 Diagnostic distributions of the participants on the basis of eye colour**

| Colour of eyes       | Gender         | Normal Group<br>N=143 | Psychiatric group |               |            |                            | X <sup>2</sup>               |
|----------------------|----------------|-----------------------|-------------------|---------------|------------|----------------------------|------------------------------|
|                      |                |                       | Schizophrenia     | Mood disorder | Conversion | Total Psychiatric<br>N=157 |                              |
| Light Brown<br>N=119 | Male<br>N=73   | 23(31.50%)            | 25(34.24%)        | 15(20.54%)    | 10(13.69%) | 50(68.49%)                 | 5.05<br>df-1                 |
|                      | Female<br>N=46 | 24(52.17%)            | 12(26.08%)        | 7(15.21%)     | 3(6.52%)   | 22(47.82%)                 |                              |
| Dark Brown<br>N=120  | Male<br>N=71   | 44(61.97%)            | 8(11.26%)         | 15(21.12%)    | 4(5.63%)   | 27(38.02%)                 | 0.36 df-1<br>non significant |
|                      | Female<br>N=49 | 26(53.06%)            | 10(20.40%)        | 7(14.28%)     | 6(12.24%)  | 23(46.93%)                 |                              |
| Black<br>N=61        | Male<br>N=35   | 10(28.57%)            | 9(25.71%)         | 12(34.28%)    | 4(11.42%)  | 25(71.42%)                 | 6.62<br>df-1                 |
|                      | Female<br>N=26 | 16(61.53%)            | 5(19.29%)         | 2(7.69%)      | 3(11.53%)  | 10(38.46%)                 |                              |

Table-2 indicate that colour of eyes relate with normal and psychiatric population. Table indicate that male having light brown color of eyes had high psychiatric morbidity (68.47%) then

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female, the difference is statistically significant ( $p < .01$ ) and the other combination male black colour of eyes had very high psychiatric morbidity (71.42%) in comparison to female group this difference is also statistically significant ( $p < .01$ ). But in dark brown colour of eyes (61.97%) found in normal male population there was no significant difference was found.

**Table-3 Personality traits of normal male psychiatric male on the basis of eye colour**

| Color of eyes | Total Normal & psychiatric male | Personality Traits                           |            |            | X <sup>2</sup> |
|---------------|---------------------------------|--|------------|------------|----------------|
|               |                                 | Sociability, Self confidence & ambitiousness |            |            |                |
|               |                                 | Very high                                    | Average    | Very low   |                |
| Light brown   | Male<br>N=73                    | 43(58.90%)                                   | 10(13.69%) | 19(26.02%) | 10.08<br>df-4  |
| Dark brown    | Male<br>N=71                    | 44(61.97%)                                   | 9(12.67%)  | 18(25.35%) |                |
| Black         | Male<br>N=35                    | 13(37.14%)                                   | 12(34.28%) | 10(28.57%) |                |

**Table-4 Personality traits of normal female psychiatric female on the basis of eye colour**

| Color of eyes | Total Normal & Psychiatric female | Personality Traits                           |            |            | X <sup>2</sup> |
|---------------|-----------------------------------|--|------------|------------|----------------|
|               |                                   | Sociability, Self confidence & ambitiousness |            |            |                |
|               |                                   | Very high                                    | Average    | Very low   |                |
| Light brown   | female=46                         | 16(34.78%)                                   | 10(21.73%) | 20(43.47%) | 10.86<br>df=4  |
| Dark brown    | female=49                         | 22(44.89%)                                   | 8(16.32%)  | 19(38.77%) |                |
| Black         | female=26                         | 2(7.69%)                                     | 7(26.92%)  | 17(65.38%) |                |

Table-3 indicate the colour of eyes relate with the personality traits. According to the table normal and psychiatric male have light brown colour of eyes high (58.90%) level sociability, self confidence and ambitiousness and the other combination dark brown eyes normal and psychiatric male very low (25.35%) on these three personality traits. Statistically significant difference ( $p < .01$ ) was found in color of eyes between male group.

Table-4 indicate the colour of eyes relate with the personality traits. According to the table normal and psychiatric female have high (44.89%) level of sociability, self confidence and

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ambitiousness and the other combination dark brown eyes normal and psychiatric male very low (38.77%) on these three personality traits. Statistically significant difference ( $p < .01$ ) was found in color of eyes between female personality traits.

### DISCUSSION

The study was conducted to explore the difference of personality between normal and psychiatric population having different colour of eyes. The results show that male having light brown color of eyes have high psychiatric morbidity (68.47%) then female, the difference is statistically significant ( $p < .01$ ) and the other combination male black colour of eyes have very high psychiatric morbidity (71.42%) in comparison to female group this difference is also statistically significant ( $p < .01$ ). Other study regarding physical trait relation between baldness and mood disorder was found to be statistically significant ( $p < 0.00$ ) (Tiwari & Singh, 2014). Light brown color of eyes in normal and psychiatric male population having high level of sociality, self confident and ambitiousness traits of personality and the other counterpart light brown colour of eyes normal and psychiatric female very low in all these personality traits. Some studies reported that people with brown eyes are often individualists who are steadfast, serious, practical, self sufficient, with a somewhat retiring nature, and a strong sense of commitment. Often attractive, adorable, and enjoys making new friends kind, loyal and devoted to the special people in their lives. 65.38% female having black colour of eyes very low social, self confident and ambitious In comparison to male Studies related to black colour of eye have a dynamic character full of vitality, people with black eyes tone to be hot-tempered, impulsive and often seek dangerous adventures. They command respect, exhibit great dignity, but they are often pretentious, secretive and mysterious.

### CONCLUSION

Colour of eye can be indicate the personality trait of human being black colour of eyes indicate negative traits of personality in female and light brown eyes indicate negative traits of personality in male group.

#### *Acknowledgement*

Authors are grateful to the Director and staff of Bareilly mental hospital, Bareilly India & Nirwan neuropsychiatric clinic, Lucknow UP, India. For permission of data collection and study subjects study for their cooperativeness.

#### *Conflict of Interest*

The paper is based on the ongoing PhD work.

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**How to cite this article:** R Chandola (2016), Eye Colour: A Physical Trait Correlates with Personality & Mental Health, International Journal of Indian Psychology, Volume 3, Issue 4, No. 56, ISSN 2348-5396 (e), ISSN: 2349-3429 (p), DIP: 18.01.012/20160304, ISBN: 978-1-365-23992-2