

Research Paper

The Power of Vague Words: Investigating the Barnum Effect

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ABSTRACT

The Barnum Effect is a psychological phenomenon in which individuals perceive vague personality descriptions as uniquely accurate. This study examined its relationship with openness to experience, paranormal belief, and skepticism among 60 participants aged 18–46 years. Participants completed the HEXACO Personality Inventory (openness subscale), Revised Paranormal Belief Scale, Professional Skepticism Questionnaire, and a revised Barnum Effect Test. Results indicated moderate-to-high susceptibility to the Barnum Effect ($M = 3.74$, $SD = 0.62$). Paranormal belief showed a weak positive correlation with susceptibility ($r = 0.24$), whereas openness had a negligible effect. Skepticism did not significantly reduce susceptibility, and regression analysis showed that the three traits together explained only 10.8% of variance. Findings suggest that while the Barnum Effect is robust, personality traits explain it only partially, indicating the presence of other cognitive and contextual factors.

Keywords: *Barnum Effect, Skepticism, Paranormal Belief, Openness to Experience, Cognitive Bias*

The Barnum Effect, also known as the Forer Effect, describes individuals' tendency to accept vague or general personality descriptions as uniquely accurate (Forer, 1948). This phenomenon explains the popularity of horoscopes, fortune-telling, and certain personality assessments. Research has shown links between the Barnum Effect and individual differences such as skepticism, paranormal belief, and personality traits (Britt, 1993; Dutton, 1998; Furnham, 2001). For example, Rutledge (1995) found that higher paranormal belief predicted greater susceptibility, whereas skepticism training has been found to reduce susceptibility (Dutton, 1998). However, the role of openness to experience remains unclear (Furnham, 2019). Most studies have been conducted in Western contexts, with limited research exploring these variables in India. This study aimed to investigate the relationships between the Barnum Effect, skepticism, openness to experience, and paranormal belief among Indian participants.

Objectives

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- To confirm the presence of the Barnum Effect among Indian participants.

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The Power of Vague Words: Investigating the Barnum Effect

- To examine the role of openness to experience, paranormal beliefs, and skepticism on Barnum Effect.

Hypothesis

- H1: Participants will rate vague personality descriptions as highly accurate, confirming the Barnum Effect.
- H2: Individuals with higher openness to experience or stronger belief in paranormal phenomena will be more susceptible to the Barnum Effect.
- H3: Individuals with higher skepticism will be less susceptible to the Barnum Effect.

METHOD

Sample

The study included 60 participants, aged between 18 and 46 years ($M = 31.9$). Participants were recruited online using convenience sampling.

Instruments

- Revised Barnum Effect Test (adapted from Forer, 1948)
- HEXACO Personality Inventory – Openness subscale (Lee & Ashton, 2004)
- Revised Paranormal Belief Scale (Tobacyk, 2004)
- Professional Skepticism Questionnaire

Procedure

Participants rated vague personality descriptions on a 5-point Likert scale. Data were analyzed using descriptive statistics, correlations, ANOVA, and regression analysis in Microsoft Excel.

RESULTS

Table 1 Descriptive Statistics for Main Variables

Variable	M	SD
Barnum Effect	3.74	0.62
Skepticism	3.12	0.54
Openness	3.25	0.58
Paranormal Belief	2.87	0.71

The descriptive statistics in Table 1 provide an overview of the main variables examined in the study. The mean score for the Barnum Effect was relatively high ($M = 3.74$, $SD = 0.62$), indicating that participants generally showed a strong tendency to accept vague or generalized personality feedback as personally accurate. Skepticism had a moderate mean ($M = 3.12$, $SD = 0.54$), suggesting that participants demonstrated an average level of critical thinking and questioning attitude.

In terms of personality and belief, the mean score for Openness was slightly above average ($M = 3.25$, $SD = 0.58$), showing that participants were moderately open to new experiences and ideas. Meanwhile, Paranormal Belief had the lowest mean ($M = 2.87$, $SD = 0.71$), reflecting comparatively lower endorsement of paranormal or supernatural beliefs. The standard deviations indicate a moderate spread in responses across all variables, with paranormal belief showing the greatest variability among participants.

Table 2 Correlations Between Variables

Variable	Barnum	Skepticism	Openness	Paranormal
Barnum	—	0.22	0.05	0.24
Skepticism		—	0.12	0.18
Openness			—	0.09
Paranormal				—

Table 2 presents the correlations among the main variables of the study. The Barnum Effect showed small positive correlations with both Skepticism ($r = 0.22$) and Paranormal Belief ($r = 0.24$), suggesting that individuals more prone to the Barnum Effect also tended to show slightly higher skepticism and paranormal belief. Its association with Openness was negligible ($r = 0.05$), indicating little to no relationship.

For the other variables, Skepticism was weakly related to both Openness ($r = 0.12$) and Paranormal Belief ($r = 0.18$), while Openness showed only a very small correlation with Paranormal Belief ($r = 0.09$). Overall, the correlations suggest that while some positive relationships exist among the variables, they are generally weak, indicating that each construct captures relatively distinct aspects of participants' responses.

Table 3 Regression Analysis Predicting Barnum Effect

Predictor	β	t	p
Skepticism	0.21	1.72	0.09
Openness	0.04	0.31	0.75
Paranormal Belief	0.24	1.95	0.05

Note. $R^2 = .108$, $F(3,56) = 2.28$, $p = .09$

Table 3 summarizes the regression analysis conducted to predict the Barnum Effect. Among the predictors, Paranormal Belief emerged as the strongest contributor ($\beta = 0.24$, $t = 1.95$, $p = 0.05$), indicating a marginally significant positive relationship, where higher paranormal belief was associated with greater susceptibility to the Barnum Effect. Skepticism also showed a positive but non-significant effect ($\beta = 0.21$, $t = 1.72$, $p = 0.09$), suggesting a trend but not strong enough to reach conventional significance.

In contrast, Openness had virtually no predictive value ($\beta = 0.04$, $t = 0.31$, $p = 0.75$), indicating that being open to new experiences did not meaningfully influence Barnum Effect tendencies. Overall, the findings suggest that belief in the paranormal plays the most notable role in predicting susceptibility to the Barnum Effect, while skepticism and openness show limited influence.

DISCUSSION

The study confirmed that participants demonstrated moderate to high susceptibility to the Barnum Effect, consistent with earlier research (Forer, 1948; Britt, 1993). This supports Hypothesis 1, as vague personality descriptions were generally perceived as accurate.

Regarding Hypothesis 2, which predicted that Openness to Experience and Paranormal Beliefs would increase susceptibility, the results were only partially supported. Paranormal Belief showed a weak positive relationship with Barnum susceptibility ($r = 0.24$) and was the only marginally significant predictor in regression analysis ($\beta = 0.24$, $p = 0.05$), aligning with Rutledge (1995). However, Openness to Experience was unrelated to susceptibility,

The Power of Vague Words: Investigating the Barnum Effect

contradicting Furnham's (2019) suggestion of personality influence. Thus, Hypothesis 2 received partial support.

Hypothesis 3, which proposed that Skepticism would reduce susceptibility, was not supported. Instead, Skepticism showed a small positive correlation with the Barnum Effect ($r = 0.22$) and did not significantly predict lower ratings, echoing Rogers and Soule's (2009) finding that skeptical individuals are not immune to vague feedback.

Together, the predictors of Skepticism, Openness, and Paranormal Belief explained only about 11% of the variance in Barnum Effect ratings, indicating that personality traits alone are weak predictors. These results highlight that while paranormal belief contributes slightly, other cognitive and cultural factors likely play a larger role in explaining why people continue to accept generalized feedback. Future research should therefore consider additional psychological mechanisms, such as need for validation, suggestibility, or contextual influences, to better account for this enduring cognitive bias.

CONCLUSION

The study affirms the presence of the Barnum Effect among Indian participants and shows that personality traits only weakly explain individual differences. The results highlight the need for incorporating critical thinking training in education to reduce susceptibility to vague or misleading feedback.

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The Power of Vague Words: Investigating the Barnum Effect

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Conflict of Interest

The author(s) declared no conflict of interest.

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