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# **Gullibility and Psychometrics: Do People Just Believe What You Tell Them?**

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## **Digested Key Message**

This study demonstrates that employees may not be quite so gullible in accepting false personality descriptions as often reported.

## **Measures Used**

15FQ+

## **Introduction**

There has been a lot of previous research examining agreeableness and gullibility in believing personality feedback (e.g. Forer, 1949). In the research literature, there is widespread consensus that college students will readily accept generalised personality interpretations of personality as being descriptive of themselves if these generalised statements are identified as individualised personality interpretations (Davies, 1997; Forer, 1949; Greene, 1977; Ulrich, Stachnik & Stainton, 1963).

In the earliest of these studies, Forer (1949) asked students to complete a personality questionnaire. The following week the students were given their profile and asked to raise their hand if they felt it was accurate, which they all did. In addition, Ulrich, et al. (1963) found that their student participants accepted a personality interpretation as being accurate, regardless of the uniqueness of the statement.

Davies (1997) suggested that the acceptance of personality feedback depends on the specificity of the feedback. Thus, when personality feedback is generalised and vague (i.e. the Barnum effect) people can find a good deal of evidence from their knowledge base of themselves that can confirm the feedback (Andersen, & Nordvik, 2002; Rogers & Soule, 2009)

The purpose of this study was to investigate people's gullibility in relation to personality psychometric test feedback. This study, based on the experience of giving personality feedback via expert system reports to managers and employees, predicted that people will be able to clearly indicate if the personality feedback is accurate or not.

## **Method**

### *Participants*

The present study was conducted with employed workers (N = 26). Seven of which were male (27%) and nineteen were female (73%). Their ages ranged from 26 to 56, with a mean age of 41, SD = 10.22.

### *Design*

The present study is a quasi-experimental study using quantitative analysis of the ratings of accuracy given on each of the 16 factors in the expert system report for the 15FQ+, using managerial professionals as the norm group. Two participant groups were randomly assigned. One as the experimental group, having transposed personality definitions (so a fake profile) and a control group, who received correct personality profile definitions.

### *Materials*

The 15FQ+ psychometric test was used to generate personality profiles and scores. The on-line version was used in the present study for ease of administration and to enable generation of a profile via the expert system. A further questionnaire was then used to rate the opinions of the participants on each of the 16 factors that were measured using a 1-7 likert scale from strongly disagree to strongly agree.

### *Procedure*

Participants were informed about the study by email before they completed the on-line questionnaire and given voluntary informed consent. When participants had completed the on-line questionnaire, a date was arranged for their feedback session.

Participants were assigned to either the experimental group (with transposed results) or the control group (receiving correct results). The transposed group received feedback correct for middle sten scores and transposed definitions for other scores. If the score was below four or above seven, then the feedback generated was with the opposite definition (i.e. if a participant had a high score, they were given a low definition, but if they had a low score, then they got the high definition).

There was a space after each definition for participants to rate how much they agreed with each definition. Participants all received a feedback form in an identical format. Initially they received the research feedback with sixteen factor definitions, where they were asked to score their agreement for each factor. After that, participants were asked to rate their agreement in the same way (one to seven), for each personality factor. At the end of the experiment, correct personality feedback was provided via an Extended 15FQ+ report.

### **Results**

The multivariate analysis of variance (MANOVA) was used to establish whether there was a significant difference between the two groups (the control and experimental group). The Wilks' Lambda showed a significant difference between the groups ( $F = 32.491, p < .01$ ).

A one-way analysis of variance (ANOVA) was used to establish whether there was a significant difference between the transposed definition and the correct definitions given to participants in the experimental (transposed) group for all sixteen personality factors tested. All but Factor B showed a significant difference between the correct and transposed definitions (See Table A.)

INSERT TABLE A HERE

### **Discussion**

The present study was successful in the objectives set, indicating that employees are unlikely to accept false personality feedback. Because of the relatively small sample size, there was a greater risk of a type II error (not finding significance). The only factor that was not found to be significantly different between the two groups was factor B, which did approach significance and possibly would have been with a greater number of participants.

The previous research reflected a widespread consensus that college students will readily accept generalised interpretations of personality as being descriptive of themselves, if these generalised statements are identified as individualised personality interpretations (Ulrich et al., 1963). Ulrich et al. (1963) also found that participants accepted an interpretation as being accurate, regardless of whether it was unique or not.

For these reasons, the present research attempted to widen this research by looking at a different population (workers, rather than students). It also attempted to look at the agreement of deliberately wrong (transposed/opposite) personality definitions, rather than just generalised statements. The reason for this was to give more of an indication of gullibility.

The idea of the 'acceptance phenomenon', the effect that people accept that a statement reflects them even if it is not specific to them has been tested more solidly within this experimental study. The present results show that people do not have a tendency to be overly agreeable when personality descriptions are transposed, such as was employed within this research design. The findings by Snyder, Shenkel and Lowrey's (1977), that people will willingly give their approval and acceptance of personality interpretations purportedly derived from the results of assessment procedures was not found within the present research.

There are limitations to this study, such as having only twenty-six participants. Further research should be conducted with more participants, exploring different angles of the present findings. This could potentially highlight the understanding of people's gullibility in believing personality feedback fed back to them via an expert system report.

### **The Authors**

Laura Hunt is working towards chartered status and David Biggs is the Programme Director for occupational psychology at the University of Gloucestershire. For further correspondence, David can be contacted via [dbiggs@glos.ac.uk](mailto:dbiggs@glos.ac.uk)

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**TABLE A: Research results**

<b>15 FQ+ Factor</b>	<b>F Value</b>	<b>Significant difference between correct and transposed definitions</b>
Factor A	(F = 7.269, p < .05)	Yes
Factor B	(F = 4.12, p = n/s).	No
Factor C	(F = 24.39, p < .05)	Yes
Factor E	(F = 12.806, p < .05)	Yes
Factor F	(F = 29.253, p < .05)	Yes
Factor G	(F = 123.077, p < .05)	Yes
Factor H	(F = 39.165, p < .05)	Yes
Factor I	(F = 116.583, p < .05)	Yes
Factor L	(F = 19.484, p < .05)	Yes
Factor M	(F = 15.845, p < .05)	Yes
Factor N	(F = 6.99, p < .05)	Yes
Factor O	(F = 63.36, p < .05)	Yes
Factor Q1	(F = 34.679, p < .05)	Yes
Factor Q2	(F = 15.358, p < .05)	Yes
Factor Q3	(F = 4.942, p < .05)	Yes
Factor Q4	(F = 18.846, p < .05)	Yes