

CIE Psychology A-level

The Psychology of Individual Differences

Notes



N.B. Details of Rosenham's study (On Being Sane in Insane Places) and Thigpen's study (A Case of Multiple Personality) can be found as the accompanying factsheets.

Core Study - Billington et al (2007)

- Billington et al (2007) - Cognitive style predicts entry into physical sciences and humanities: Questionnaire and performance tests of empathy and systemising.
- ¹The researchers used 415 participating students. Women scored significantly higher on the Empathy Quotient than men, suggesting that differences in empathy and the ability to make emotional connections with thoughts may be one of the reasons as to why there's a higher proportion of females studying humanities.
- The Systemizing Quotient yielded significantly higher scores for the scientists, suggesting that logical reasoning are more important than emotional understanding for scientific subjects. The researchers concluded that "the SQ was a significant predictor of entry into the physical sciences".

— **The study used a limited sample:** the 415 students may have guessed the aim of the study due to the equal split between the two disciplines and the two genders. If this was the case, then demand characteristics would have likely affected the findings, as participants would respond as they believed desirable to do so, rather than reflecting their own views. This in turn would reduce the reliability of the findings and also the ecological validity (reduces the ability of the findings to be generalised to the wider population).

+ **The study used the Empathy Quotient as a measure of empathy.** The EQ has been proven to provide 'good' test-retest reliability, and also showing 'acceptable psychometric properties', as suggested by ²Sreehari et al (2016). However, this does not exempt it from the problem of social desirability bias (a type of demand characteristic) often associated with self-report measures and would consequently decrease the reliability of the findings.

— **It is reductionist and deterministic to make the assumption that cognitive style alone is vital in predicting the likelihood that an individual will pursue a career in science.** There were likely to be significant participant variables between the students, such as funding opportunities, family history of going to university, school demographic and simply a general preference for one subject over another. These would act as confounding variables which would reduce the reliability and validity of the conclusions drawn.

Core Study - Veale and Riley (2001)

- Veale and Riley (2001) - Mirror, mirror on the wall, who is the ugliest of them all? The psychopathology of mirror gazing in body dysmorphic disorder.
- The frequency and type of body checking behaviours, alongside the attitudes and cognitions associated with this, was assessed using the mirror gazing questionnaire (an example of a self-report measure).
- The researchers found that there is a marked change in attitudes towards oneself both before and afterwards checking in the mirror. Beforehand, BDD patients were drawn towards the mirror as a way of confirming their perception of their appearance and ensuring that they maintain a positive public image through practicing facial expressions and body gestures to use in public. However, after body checking, the patient is often left dissatisfied and even disgusted by their appearance, thus explaining the selective attention they display towards certain 'problem areas' of their body.

— **The methodology is likely to be biased because the use of self-report measures may be inappropriate with patients suffering from eating disorders.** A characteristic trait of such disorders is the refusal to acknowledge that one has an issue with their self-perception and diet. It then

¹ Billington, J., Baron-Cohen, S. And Wheelwright, S. Cognitive style predicts entry into physical sciences and humanities: Questionnaire and performance tests of empathy and systemizing, *Learning and Individual Differences* (2007), 17(3), pp.260-268.

² Sreehari, R., Joseph Thomas R., Rathakrishnan, B. And Daisy, P.J. Measuring Empathy: Reliability and Validity of Empathy Quotient, *The International Journal of Indian Psychology* (2016), 3(3).



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follows that the self-report mirror going questionnaire should reflect this bias. Respondents may deliberately change their scores due to social desirability bias - convincing themselves and the researchers that they do not have an illness. This further reduces the (internal) validity of the findings because the study is not investigating what it intended to study.

- + **There is a practical real-life application** associated with an increased understanding of the mechanisms of anxiety which underlie Body Dysmorphic Disorder (BDD). For example, the researchers concluded that ³“it does not follow a simple model of anxiety reduction that occurs in the compulsive checking of obsessive-compulsive disorder”. This can therefore improve the current therapies for BDD through shifting focus away from addressing typical anxiety reduction methods.
- + **The researchers used a control group of 55 healthy volunteers.** This is particularly useful because it allows for a baseline measurement and comparisons to be made with the BDD group, in an effort to establish whether the exhibited frequency and type of body checking behaviours were statistically significantly different to that of healthy individuals. This in turn increases the validity of the conclusions drawn.

³ Veale, D. and Riley, S. Mirror, mirror on the wall, who is the ugliest of them all? The psychopathology of mirror gazing in body dysmorphic disorder, *Behaviour Research and Therapy* (2001), 39(12), pp. 1381-1393.

