



University of HUDDERSFIELD

University of Huddersfield Repository

Whitaker, Simon

Fact, hypothesis and infallibility

Original Citation

Whitaker, Simon (2003) Fact, hypothesis and infallibility. *Clinical Psychology* (28). pp. 9-11. ISSN 1473-8279

This version is available at <http://eprints.hud.ac.uk/id/eprint/5142/>

The University Repository is a digital collection of the research output of the University, available on Open Access. Copyright and Moral Rights for the items on this site are retained by the individual author and/or other copyright owners. Users may access full items free of charge; copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational or not-for-profit purposes without prior permission or charge, provided:

- The authors, title and full bibliographic details is credited in any copy;
- A hyperlink and/or URL is included for the original metadata page; and
- The content is not changed in any way.

For more information, including our policy and submission procedure, please contact the Repository Team at: E.mailbox@hud.ac.uk.

<http://eprints.hud.ac.uk/>

Fact, hypothesis and infallibility

By

Simon Whitaker

Fact, hypothesis and infallibility
Clinical Psychology, 29, 9-11, Aug, 2003

Although in these days of increasing education, accesses to the internet, and apparent inability of scientist to produce correct information with regard to BSE it is probably not possible to state that the public has unquestionable believe in experts, however, it is reasonable to assume that experts still have some credibility left. It is the feeling of the present author that what the public want of experts is unambiguous factual information. People expect their doctor to tell them what is wrong with them and to give them something to make them better, scientists are expected to come up with clear answers to questions such as is the MMR vaccine is safe, is it safe to eat beef, and whether junk food is bad for your health. The way science is portrayed in the media is mainly in a very factual way: programmes are shown where it is stated that dinosaurs became extinct after a meteor collided with the earth, that the Universe began in a "big bang" and that life on earth gradually evolved. The public on the whole do not usually question these assertions, possibly because they do not have the detailed evidence for and against, or the scientific skills to assess the evidence, making it very difficult to produce a case against the ideas being put forward.

It also seems a reasonable assumption that the status of the expert providing the facts will affect both the extent to which these facts are accepted as true and the willingness of others to question them. In the NHS it is the medical consultants who have the most status in clinical matters. Although it is not always the case, they are often in the position of being able to make statements that are not questioned and so become "true". If a psychiatrist give someone a diagnosis of schizophrenia then they are schizophrenic. This is what could be termed the doctrine of medical infallibility.

Clinical psychologists may now be seen as experts both by the general public, (with clinical psychologists frequently being asked for opinions by the mass media), and by professional colleges in other disciplines, a status we have attempted to enhance by taking on the titles of Doctor and Consultant. If the author's case load is typical, we are constantly being asked for clear factual information e.g. does this client have a learning disability, is the client autistic, does this client have pre-senile dementia. This makes it tempting to answer these questions in an clear unambiguous way, which raises the seductive possibility that we too may be able to make use of our status to make infallible statements. One could state ones opinions under the guise of presenting facts without fear of being contradicted or questioned. The more unusual the opinions the more it will demonstrate to others what a deep insight we have into people's psyches. However, in order to do this, one will have to state facts unambiguously and not suggest hypotheses.

It seems to the present author that there are very few facts in either academic or clinical psychology. The body of knowledge within psychology in a large part consists of observations and experimental findings, which are subject to error, with results that often can be interpreted in several different ways and that covers only a limited range of conditions. To take an example from the authors clinical work in learning disabilities. There have been a number of tightly controlled experiments which demonstrate that challenging behaviour is maintained by the immediate consequences of the behaviour (Carr, Newsom and Binkoff 1980; Emerson et al 1996; Iwata et al 1982; 1994). The clinical implication of this being that the treatment of challenging behaviour in people with learning disabilities should concentrate on finding out what these consequences are via a functional analysis and then use behavioural methods to treat them. Again there are abundant studies demonstrating that such

interventions can be effective (see Scotti et al 1991; Whitaker 1993; 2000 for reviews). It therefore seems reasonable for a clinical psychologist to state in a meeting or write in a report that challenging behaviours are maintained by their consequences and that the appropriate treatment is to alter these consequences. However, closer examination of this literature (Whitaker 1993; 1996; 2000) reveals a number of problems with these studies. First, the bulk of the studies were done on very high frequency challenging behaviours (more frequent than one an hour), however, the majority of people who show challenging behaviour do so at much lower frequencies (Harris 1993; Kessler et al 1984). Secondly the vast majority of the studies used single subject designs, which, although they showed a clear effect for the client in the study, did not demonstrate that these results would be found in other clients. Thirdly, the studies, on the whole, were done in controlled settings in which there were staff available to do the functional analysis and run the subsequent programme. Therefore, although a functional analysis followed by a behavioural intervention may be effective for some clients, it is not possible to state that it will be effective with a particular client. Nor is it possible to say that other interventions, such as cognitively based methods, are going to be effective, as the evidence for these is even less convincing (c.f. Whitaker 2001).

Similar problems occur even in the most routine tasks we undertake. For example, the WAIS III is subject to error even when given under ideal conditions, the 95% confidence range being about 4 to 7 points either side of the obtained IQ score. These errors may be even greater if the situations under which the assessment was administered was not ideal allowing a number of sources of error to effect the score, such distractions, tiredness, mental illness.

It therefore seems that, at least for psychology, it is very difficult to make definitive statements with regard to why a client has the problems they present or to the most effective treatment of their condition. Therefore it is very difficult to take on the role of both the expert, as in one who provides unequivocal facts. If we are to take on the role of the infallible expert not only will it require it a certain degree of bluff about the factual information we have but also there is a danger that we will start to believe what we are saying to others. Clients could therefore be wrongly labelled as having particular conditions such as a learning disability, dyspraxia or an autistic spectrum disorder, which could be written in their records and possibly stay with them for life. Inappropriate treatment programmes may be set up and continued in spite of evidence that they are not working (c.f. Woods and Cullen 1983). There is also likely to be an effect on how any staff working with the psychologist come to perceive clients and why they have the problems they have, which could perpetuate the ideas put forward by the infallible psychologist. One must also consider what would happen if it was eventually demonstrated by some mischievous scientist that what the psychologist had been saying was not altogether true.

If we take on the role of the scientist it may not give us the same boost to our self-esteem as playing the expert in the short term but it will probably be better for clients and the profession in the long term. Working clinically as an applied scientist should mean that we generate, and if possible test, hypotheses as to why a client has the problems they have. Treatment should then be based on what seems to be the most likely "working" hypothesis. As a hypothesis is only one of several possible explanations for what we can observe, it is clear, both to others and ourselves, that it could be wrong so there is no danger of a psychologist being shown to have been over stating their case. If a formulation

of a client's problems and proposed treatment plans are presented in terms of hypothesis it will mean that we continually check whether the evidence still supports the hypothesis and whether the treatment is working. This should mean that formulations are changed and treatment plans revised more often than they would be if the formulation were based on an unambiguous statement, which would lead to more effective treatment. Hopefully other professions will see how we approach cases and look at their own practice and start to question some of their own assumptions and start to consider things in terms of hypothesis. It also should lead to better targeted research, as to generate appropriate hypothesis we will need to be aware of the appropriate psychological research and the limitations of this research.

It seems to the present author that if we are to take on the role of the infallible expert then we will have to sacrifice our scientific integrity which, ultimately will do more harm than good to the profession and, more importantly, to those whom we treat. What we should do is to admit that there is a lot that we don't know and constantly question what we do. Ultimately this should lead to more knowledge and consequently better treatment for our clients.

References

- Carr, E.G., Newsom, C.D. and Binkoff, J.A. (1980)
Escape as a factor in the aggressive behavior of two retarded children.
Journal of Applied Behavior Analysis, 13, 101-117
- Emerson, E., Reeves, D., Thompson, S., Henderson, D., Robertson, J. and Howard, D. (1996)
Time-based lag sequential analysis and the functional assessment of challenging behaviour.
Journal of Intellectual Disability Research, 40, 260-274
- Iwata, B.A., Dorsey, M.F., Slifer, K.J., Bauman, K.E. and Richman, G.S. (1982)
Towards a functional analysis of self-injury
Analysis and Intervention in Developmental Disabilities, 2, 3-20
- Harris, P. (1993)
The nature and extent of aggressive behaviour amongst people with learning difficulties (mental handicap) in a single health district.
Journal of Intellectual Disability Research, 37 221-242.
- Iwata, B.A., Pace, G.M., Dorsey, M.F., Zarcone, J.R., Vollmer, T.R., Smith, R.G., Rodgers, T.A., Lerman, D.C., Shore, B.A., Mazaleski, J.L., Goh, H.L., Cowdery, G.E., Kalsher, M.J., McCosh, K.C. and Willis, K.D. (1994b)
The function of self-injurious behavior: An experimental-epidemiological analysis.
Journal of Applied Behavior Analysis, 27, 215-140

Kessler, J.W., Binzley, V.A., Arendt, R., Polomsky, P.
and Shah, P. (1984)

Dynamic analysis of aggression in an institutionalized mentally retarded
population.

In M. Berg and M de Jong (Eds) Perspectives and progress in mental retardation
vol II: Biological Aspects
Baltimore: University Park Press

Scotti, J.R., Evans, I.M, Meyer, L.H. and Walker, P. (1991)

A meta-analysis of intervention research with problem behaviour: treatment
validity and standards of practice.

American Journal on Mental Retardation, 96, 233-256

Whitaker, S. (1993)

The reduction of aggression in people with learning difficulties: A review of
psychological methods.

British Journal of Clinical Psychology, 32, 1-37.

Whitaker, S (1996)

A review of DRO: The influence of the degree of learning disability and the
frequency of the target behaviour.

Journal of Applied Research in Intellectual Disabilities, 9, 61-79.

Whitaker, S (2000)

The potential influences of frequency of challenging behaviour on treatment: An
analysis of the literature.

The British Journal of Developmental Disabilities, 46, 83-88

Whitaker, S. (2001)

Anger control for people with learning disabilities: A critical review.

Behavioural and Cognitive Psychotherapy, 29, 277-293

Woods, P.A. and Cullen, C. (1983)

Determinants of staff behaviour in long-term care.

Behavioural Psychotherapy, 11, 4-17