Psychological Prediction of Response to Lithium Therapy

INTRODUCTION

In 1968, Schou commented that ‘one of the tasks for future research is compare non-responders and responders, clinically and metabolically,’ and added that ‘knowledge of why some patients fail to respond may give a clue to the mode of action in cases that do respond’ (p. 72). It is, however, only in the past five or so years that serious attention has focussed upon the feasibility of predicting therapeutic response to lithium treatment by means of psychological tests. In 1970, Steinbrook and Chapman advanced the opinion that ‘it seems reasonable to hypothesize that there may be some common characteristic of patients who respond to lithium carbonate treatment’ (p. 524) and meant by this some common psychological characteristic. Since then a number of investigators have used various psychological test instruments in an attempt to uncover the ‘common characteristic’ to which Steinbrook and Chapman referred.

In the following discussion these studies will be reviewed, with the aim first of establishing whether or not any psychological predictors of lithium response and non-response have satisfactorily been demonstrated, and secondly of determining what future directions might be taken by research in this area if continued investigation appears likely to be profitable.

Carroll (1979) has reviewed the various biochemical, physiological and clinical factors which have been examined in an attempt to provide predictive criteria for lithium responsiveness, but concluded that there are few, if any, useful indices yet available, commenting that ‘for the time being ... clinicians must continue to rely on empirical trials of lithium in patients with affective disorders’ (p. 877). It may be that psychological predictive techniques can offer more hope, but there are considerable difficulties with this approach.
The decision as to which psychological test to use in looking for a lithium response predictor is not an easy one to make. There are literally hundreds of tests from which an experimenter may choose; some are better known and more widely used than others, but there are no firm criteria to guide one in making an initial selection even amongst these.

Investigators have tended, not unreasonably, to choose tests which have multiple sub-scales; this at least offers the possibility of finding one or more sub-scales, or group of test items, which show a correlation with response to lithium. Almost without exception these are tests of personality, such as the 16-Personality Factor (16PF) test and the Minnesota Multiphasic Personality Inventory (MMPI), or intelligence tests like the Wechsler Adult Intelligence scale (WAIS). It may, however, be that this approach directs attention away from less complex tests of more specific—and certainly more rigorously defined—areas of cognitive functioning, which might in fact prove to be more useful than tests of global characteristics such as personality, intelligence, and the like.

Given that a test, or set of test items, could be discovered which adequately predicted lithium treatment outcome, it would not be a particularly simple task to understand why the test was successful when used in this way. The interpretations to be placed on many psychological tests are still matters for debate, and the problem is heightened by the fact that test results are often sensitive to capricious environmental factors (the test room; incidental noise, interruptions, etc.) or to subject factors such as fatigue, transient motivational state, etc., which are difficult to standardise or to control.

Donnelly et al. (1978) have, however, commented that the ability to assign psychological meaning to an association between test results and the outcome of lithium therapy is really a secondary consideration in the context of patient management; at a practical level it is sufficient that a predictive device is available, and the question of why the device works is really of little consequence. Nevertheless, the answer to such a question might go a long way towards suggesting a better test, and might also play a part in elucidating the mechanism of action of lithium, and the view expressed by Donnelly and his colleagues that empirical prediction devices may be alternatives to prediction procedures based upon what they call a ‘theoretical-rational approach’ should not be allowed to obscure the search for a sound theoretical basis to the prediction of lithium response and non-response by psychological means.

In some of the studies which have been carried out to determine predictors of lithium responsiveness, the procedure adopted has involved first of all