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Abstract. A test-retest study of reliability was made for the 15-item Lie Scale found in the Taylor Manifest Anxiety Scale (TMAS). The subjects for this study were the students of a Midwestern college for men. The TMAS was administered and, within a week, the Manifest Hostility Scale in which the Taylor Lie Scale had been placed. A correlation coefficient of +.70 was obtained. This was found to be very near average when compared to the reliability of other self-inventories.

THE PROBLEM OF LYING

One of the most important failings of almost all structured personality tests is their susceptibility to faking or lying in one way or another. This falsification of response has long been known to be an important factor which limits the validity of the personality inventory or questionnaire, and is a matter of considerable interest and importance.

Most items in such inventories have one answer which is pretty clearly the desirable or socially acceptable response. Consequently, there is a strong tendency for the individual to check what he recognizes as the socially approved answer, rather than the answer which corresponds to his own habitual behavior. This may occur even when there is no deliberate or recognized attempt to alter the score. If, in addition, the individual is motivated to appear in the most favorable light, as in the case of a job applicant. it is quite easy for him to create the desired impression on such a test.

Evidence of the success with which subjects can dissemble on personality inventories is plentiful. A wide variety of clinical and consulting experience shows clearly that self-inventories can be influenced in a desired direction (cf 4,9,13).

In a study made in 1956 (12), the Taylor scale was administered to 84 naval aviation cadets under instructions to choose the socially most acceptable answers. They were given the ACE on the same day and there was a signiifcant negative correlation of —.29 between the ACE score and the best Taylor score, indicating that the more intelligent cadets were more successful in detecting and avoiding anxious responses and, therefore, received lower Taylor scores.

Ellis (3), in a study of the validity of personality questionnaires, sums up the experiments in this area: "Of 52 experi-

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mental attempts, to discover whether or not respondents overrated themselves on self-description instruments, 6 investigators found that they did not, and 36 found that they did."

The results of these studies clearly demonstrate the facility with which the desired impression can be deliberately created on such inventories and they require that further research be devoted to the study of ways to control or to detect falsification of response.

The Lie Scale

One attempt made to control falsification is the method utilized in the Minnesota Multiphasic Personality Inventory Lie Scale (MMPI Lie Scale) and later in the Taylor Lie Scale. The fundamental fact upon which these faking keys are based is that when an individual tries to fake his responses, he tends to overdo it. By including questions in the inventory which can be answered favorably, or in the socially desirable direction, by few or no subjects, the lying person is detected.

Explaining this method in more detail, everyone has at least a few highly desirable traits, but no one has all of them. Without knowing anything whatsoever about a particular person, we can write down on common-sense grounds a list of extremely good and rare human qualities which it is statistically absurd to suppose will all, or in a large part, be his. If he says, however, that he has all, or a very great many of them, we decide that he is not telling the truth.

As a final measure, the Taylor Lie Scale is composed of only desirable attributes which will very rarely belong, even singly, to anyone; and which, furthermore, relatively few normal persons claim for themselves when given the chance. For example, the item "Sometimes when I am not feeling will I am cross," or another, "I sometimes put off until tomorrow what I ought to do today" can be answered *False* by very few honest people. If a subject gives such responses with some considerable frequency, the inference is obvious.

The Taylor Lie Scale consists of 15 items selected from the MMPI Lie Scale. The items are scattered throughout the main body of items, constituting a fairly subtle trap for anyone who wants to give an unusually good impression of himself. It was recognized that very conscientious persons would frequently have more than average of these L items, but for a person to have seven or more of them seemed almost impossible. This score is used as an over-all evaluation of the test record. If the score exceeds a certain maximum value, the record is suspect.

The L scale has also been shown to possess clinical significance in its own right. Persons securing high L scores are often over-conventional, self-centered, rigid, and uncompromising (1).

Procedure

Subjects

The subjects for this study were the approximately 1200 students of Loras College, a Midwestern Catholic college for men. They were almost exclusively Catholic and white. These men were primarily the subjects for a study of the concurrence of anxiety and hostility being made by the Rev. James O. Barta in partial fulfillment of the requirements for the doctorate degree at Fordham University.

Since all the Catholic students are in a religion class, the tests were administered during a religion period. A pilot study was conducted during the past summer in the same college and it was found that one class period was sufficient to administer the tests.

Instruments

The Taylor Manifest Anxiety Scale (TMAS). The manifest anxiety scale was originally constructed by Taylor for use as device for selecting subjects for experimental purposes in a study of eyelid conditioning.

Approximately 200 items from the MMPI were submitted to five clinicians, along with a definition of manifest anxiety, and they were asked to designate the items indicative of manifest anxiety according to the definition. Sixty-five items on which there was 80 percent agreement or better were selected for the anxiety scale. After statistical analysis the original 65-item scale was reduced to the 50 most discriminating statements (11).

The TMAS is one test which makes explicit recognition of the problem of dissembling by the inclusion of an internal set of validity indicators. This is the 15-item Lie Scale which may be employed in attempting to assess the dependability and trustworthiness of obtained results.

The Manifest Hostility Scale (MHS). The Manifest Hostility Scale was developed by Saul M. Siegal (10) in much the same manner as that utilized by Taylor. The MMPI was scanned for all items that might possibly reflect hostility. These were then submitted to five judges and 50 items were used on which there was 80 per cent or better agreement.

Siegal did not incorporate a lie scale into his test, but because of its similarity to Taylor's anxiety scale in size, technique, and

appearance, the 15 items of the Taylor Lie Scale were interspersed among the items of the hostility scale in the exact order and position in which they are found in the TMAS.

Results

The test-retest method of obtaining two independently derived scores was employed with the order of presentation being: the manifest anxiety scale followed within one week by the manifest hostility scale.

Table 1 shows the mean scores on the Lie Scale from both tests grouped according to the subjects class. The data were analyzed according to the subject's class level on the possibility that by so doing some difference might be found to exist between the various classes.

Table 1. Mean Scores for the Taylor Lie Scale

Class	Percent (N)	MAS	MHS
Senior	13 (98)	10.7 (S.D.=2.2)	11.2 (S.D.=2.1)
Junior	21 (151)	10.5 (S.D.=2.2)	10.7 (S.D.=2.5)
Sophomore	33 (256)	10.8 (S.D.=2.1)	11.1 (S.D.=2.1)
Freshman	33 (256)	10.5 (S.D.=2.3)	10.9 (S.D.=2.2)

No significant difference was found to exist between the mean scores of the various classes nor between the mean scores of the two tests.

The mean for the entire group of subjects was found to be 10.6 (S.D. = 2.3) on the MAS and 10.9 (S.D. = 2.2) on the MHS. These figures are very close to those found in other studies in which the mean scores were situated between 10 and 12 (8).

The reliability of a test for a given group can be expressed in terms of the correlation coefficient for two independently derived scores of that test. The following table shows the correlations by which the reliability of the Taylor Lie Scale was deter-

Table 2. Test-Retest Reliabiltiy Coefficients for the Taylor Lie Scale

Class	Percent (N)	r
Senior	13 (98)	.69
Junior	21 (151)	.81
Sophomore	33 (256)	.74
Freshman	33 (256)	.63

mined. The cross-classified table method of correlating scores was used.

A correlation of .70 was found for the scores of the entire group. This appears quite satisfactory when compared to the average correlation of .74 which Hathaway and McKinley reported from a test-retest study of six MMPI scales (cf. 5,6,7).

Cottle (2) also reported an average test-retest coefficient of .74 for twelve MMPI scales, with a comparatively low coefficient of .46 for the Lie Scale. But, since Cottle did not use the same form of the test for both testings, the coefficients which he reported may provide only a conservative basis for comparison.

It should also be noted that by correlating the L scores of both tests for each class a significant difference in reliability was found to exist between them. This could be due to such variables as amount of education, or the status which membership in a certain class brings. Answering this question requires that further research be devoted to the study of ways to control or detect falsification of response.

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References

1. Abramson, H. A. 1945. Psychomatic Med. 7: 178-184.
2. Cottle, W. C. 1950. J. Appl. Psychol. 34: 255-259.
3. Ellis, A. 1946. The validity of personality questionnaires. Psychol. Bull. 43: 420.
4. Green, R. F. 1951. Educ. Psychol. Measmt. 11: 503-515.
5. Hathaway, S. R., and McKinley, J. C. 1942. J. Psychol. 14: 73-84.
6. McKinley, J. C., and Hathaway, S. R. 1942. J. Appl. Psychol. 26: 614-624.
7. McKinley, J. C., and Hathaway, S. R. 1944. J. Appl. Psychol. 28: 153-174.
8. Meehl, P. E., and Hathaway, S. R. 1946. J. Appl. Psychol. 30: 525-564.
9. Noll, V. H. 1951. Educ. Psychol. Measmt. 11: 478-488.
10. Siegal, S. M. 1956. The relationship of hostility to authoritarianism. J. Abnom. Soc. Psychol. 52: 368-372.
11. Taylor, Janet A. 1953. A personality scale of manifest anxiety. J. Abnorm. Soc. Psychol. 48: 285-290.
12. Voss, R. B. 1956. Psychol. Reports 2: 87-88.
13. Wesman, A. G. 1952. J. Appl. Psychol. 36: 112-113.