*Brit. J. Psychiat.* (1967), 113, 521–523

# A Short Scale for the Assessment of Mental Health in the Community Aged

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Recent years have seen increase of interest in problems relating to the health of the aged. One of the major difficulties has been the practical problem of assessment, whether it be of physical, social or mental health. It is essential that any measures employed are appropriate to the aged population, should be easy and brief to administer, as well as being reliable and valid. Some advances have been made in tests of cognitive functioning developed or derived for use with the aged (Dixon, 1965; Britton and Savage, 1966). As yet, however, no simple psychometric test has been proposed for aiding the psychologist, psychiatrist, general practitioner, social scientist or those concerned with the care of the community aged in the early recognition of possible psychiatric abnormality. This report aims to remedy this omission to a certain extent. We have derived from an extensively used psychometric measure, the Minnesota Multiphasic Personality Inventory (MMPI, Hathaway and McKinley, 1951), a short scale of fifteen questions which has been shown to be a valid, easily usable measure of mental illness in the aged.

## Procedure and Results

The full 550 questions card form of the MMPI was administered to 83 subjects aged over 70, of both sexes, selected at random from the community sample of Kay, Beamish and Roth (1964a and b). A psychiatric diagnosis was available for all subjects. The items were read to each subject over two sessions in his own home.

Analysis produced a scale of 15 items which was then administered orally to 30 subjects selected at random from a new sample of community aged (65+) in Newcastle upon Tyne. Composition of the groups are given in

Table I

*Newcastle upon Tyne Community Aged*

Sample I

*Derivation Group*

| | Sex | | |
|---|---|---|---|
| | Male | Female | Total |
| Psychiatric Diagnosis: | | | |
| Normal .. .. | 16 | 27 | 43 |
| Abnormal .. .. | 11 | 29 | 40 |
| Total .. .. | 27 | 56 | 83 |

Sample II

*Validation Group*

| | Sex | | |
|---|---|---|---|
| | Male | Female | Total |
| Psychiatric Diagnosis: | | | |
| Normal .. .. | 9 | 5 | 14 |
| Abnormal .. .. | 4 | 12 | 16 |
| Total .. .. | 13 | 17 | 30 |

Table I, the abnormal psychiatric diagnoses, with one organic exception, were of functional illnesses.

The data from the MMPI were subjected to analyses, producing intercorrelations, factor, regression and item analysis for each of the basic clinical scales. From these analyses, items were selected for the short scale which satisfied all of the following criteria. Firstly, each item had a high loading on the first factor (a general mental illness factor derived from a principal component factor analysis). Secondly, the item had a high correlation with its scale score in the MMPI scale (or scales) in which it occurred. The third criterion was a high correlation of the item with psychiatric diagnosis. Finally, it was required that each item

selected contributed satisfactorily to the spread of scores on the original clinical scale (or scales).

Those items, 15 in all, selected on this basis were slightly adapted in some cases to a form more suitable for oral administration; as questions rather than statements. Direction of response was randomized to reduce possible acquiescence bias. The scale items with scored direction are given in Appendix I.

Table II presents the means and standard deviations of scores on the short scale for both samples.

It can be seen that whilst differences between the derivation and validation groups are not significant, a significant difference in mean scale score ($p<0.01$) is apparent between normal and abnormal subgroups within each group.

The accuracy of prediction of the scale in individual differentiation into abnormal/normal categories is given in Table III. It will be seen that a score of *6 and above* is suggested as an abnormal score. Using this cut-off point, the percentage "correct" classifications appear satisfactory with the proportion of "incorrect" classifications slightly biased towards the inclusion of normals in the abnormal category. This we feel is preferable, since it is advisable that should any doubt exist as to mental status the subject should be referred for more extensive psychiatric and psychometric assessment.

We therefore suggest that the above data provide support for the validity of the scale as a *preliminary screening device* in the assessment of the aged. The relative ease of administration and scoring lead us to hope that the scale will prove of use to those who are engaged in the community care of the aged, whether in general practice or in community services. We should like the scale to be extensively used which will lead to its adequate standardization on aged and younger samples. Dr. Savage would welcome communication with anyone wishing to use the scale. In connection with the short form of the WAIS (Britton and Savage, 1966), it should make a useful screening battery for mental illness, cognitive and personality, in the aged.

TABLE II

*Newcastle upon Tyne Community Aged*

*Means and Standard Deviations of Short Scale Scores*

| | Derivation Group N=83 | | Validation Group N=30 | |
|---|---|---|---|---|
| | M | SD | M | SD |
| Psychiatric Diagnosis: | | | | |
| Normal .. .. | 3·70 | 2·23 | 3·14 | 3·00 |
| Abnormal .. .. | 9·34 | 2·75 | 9·06 | 3·55 |
| Total .. .. | 6·52 | 4·00 | 6·30 | 4·34 |

TABLE III

*Accuracy of Individual Predictions into Normal Abnormal Groups using Short Scale (cut off score 6+ as abnormal)*

| Derivation Sample N=83 | | | |
|---|---|---|---|
| Psychiatric diagnosis | Normal | Abnormal | Total |
| Percentage correct .. | 81 | 95 | 88 |
| incorrect .. | 19 | 5 | 12 |
| **Validation Sample N=30** | | | |
| Psychiatric diagnosis | Normal | Abnormal | Total |
| Percentage correct .. | 86 | 88 | 87 |
| incorrect .. | 14 | 12 | 13 |

## SUMMARY

The derivation of a short screening measure for the identification of psychiatric abnormality in the community aged is discussed. Data are given on the validation of the measure together with some suggestions as to possible applications.

### ACKNOWLEDGMENTS

The authors are indebted to the Ministry of Health, whose research grant to Professor M. Roth made this work possible. We also gratefully acknowledge the assistance of Dr. D. W. K. Kay and Dr. K. Bergmann of the Department of Psychological Medicine in the provision of psychiatric diagnoses.

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## APPENDIX I

| | | |
|---|---|---|
| 1. Have you been well most of the time during the last few years? | Yes | NO |
| 2. Do you often worry about your health? | YES | No |
| 3. Do you have many headaches? | YES | No |
| 4. Have you had any dizzy spells lately? | YES | No |
| 5. Does your hand often shake when you try to do something? | YES | No |
| 6. Do you have little or no trouble with your muscles twitching or jumping? | Yes | NO |
| 7. Would you say that you have few or no pains? | Yes | NO |
| 8. Do you have numbness in one or more regions of your skin? | YES | No |
| 9. Are your hands and feet usually warm enough? | Yes | NO |
| 10. Is your sleep fitful or disturbed? | YES | No |
| 11. Do you go to sleep on most nights without thoughts or ideas bothering you? | Yes | NO |
| 12. Do you enjoy social gatherings just to be with people? | Yes | NO |
| 13. Have you frequently found yourself worrying about something? | YES | No |
| 14. Are you sometimes full of energy? | Yes | NO |
| 15. Do you feel useless at times? | YES | No |

### NOTE

The questions should be read to the subject and a definite YES/NO response obtained. The scored direction of "abnormal" response is indicated by capitals, one point is scored for each "abnormal" response.

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(*Received 15 August, 1966*)