A Brief Self-Assessing Depression Scale

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Since 1966, we have been using the Zung Self-Rating Depression Scale (SDS) in evaluating patients with depressive disorders. However, many of our patients have required a great deal of assistance to complete the Zung scale, to the extent that in some cases we questioned whether the results represented a true self assessment.

The Wang Self-Assessing Depression Scale (SADS) was constructed for the purpose of establishing a reliable and less complex self report which could be completed by most depressed patients with a minimal amount of assistance. The present study was designed to compare the Wang SADS with the Zung SDS, a depression scale of established validity, to determine reliability and relative ease of completion.

Method

Patients

Fifty-five inpatients and outpatients of both sexes between the ages of 15 and 73 participated in this study at the Milwaukee County Mental Health Center, North Division. Thirty-five of these patients were diagnosed as having neurotic depressions and six as having psychotic depressions, while 14 had other diagnoses which ranged from various forms of neuroses to personality disorders accompanied by depression.

For purposes of comparison, both scales were also completed by 25 randomly selected hospital personnel with no history of mental illness. These volunteers were used as our normal population.

Characteristics of the Wang SADS

The SADS was constructed with the following criteria:

1. Inclusive for symptoms of depression
2. Brief and self explanatory, with diagnostic items stated in easily understood words and phrases
3. Statements and questions directly applicable to the individual in his present life situation
4. Responses clearly defined in quantitative scales

Using literature on depression rating scales3-4 and the findings of psychiatric associates as resources, we compiled a list of statements expressing experiences common to depressed patients. The Wang SADS contains ten items (Table I). Items 1, 3, and 8 relate to mood disturbances of sadness, hopelessness, and regression. Items 2, 4, and 10 express physical problems involving appetite, sleep, and fatigue. Other equivalents are item 5, self confidence; item 6, productivity; item 7, irritability; and item 9, anxiety.

The frequency with which these symptoms occur may be indicated on a five-point scale which includes "never", "rarely", "occasionally", "frequently", and "always". Six of the statements are worded to be symptomatically positive, and 4 are symptomatically negative.

Upon completion of the rating form, the
### TABLE 1
Wang Self-Assessing Depression Scale (SADS)

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Occasionally</th>
<th>Frequently</th>
<th>Always</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>I feel sad</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>I have a good appetite</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>I have crying spells, or feel like it</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>I have trouble sleeping at night</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>I have confidence in myself</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>I have an interest in doing things</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>I feel irritable</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>I am hopeful about the future</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>I feel anxious</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>I feel tired</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

The numerical value of each response is recorded and totaled. The total score is proportionate to the frequency of symptoms and indicates the severity of depression. To produce an index score, the total test score is divided by the number of available choices (50) and multiplied by 100. Thus the Wang SADS index score is the total test score multiplied by a factor of 2.

**Procedure**

After a standard explanation and question period, the Zung SDS and the Wang SADS were administered to each patient by the investigator. The order of administering the two rating scales was randomized. Half the patients took the Zung SDS first, while the order was reversed for an equal number of patients. Both scales appeared in the same type of print and on the same size paper with no identifying headings or labels.

The investigator (L.A.) timed each patient with a stopwatch, as inconspicuously as possible, for the period required to complete each rating scale. Data recorded for each patient include: order in which the scales were administered, length of time needed to complete each scale, number of times assistance was required after the initial instruction and question period, and number of errors made. Errors were determined by reviewing the scales with the patient after he had completed both of them. All errors were corrected before the scales were scored.

**Results**

A total of 93 scores were obtained on each scale. The 25 normal volunteers and 42 of the original 55 patients were rated once. The remaining 13 patients were also tested a second time during the course of their treatment, following the same procedure. For these subjects, the average interval between the two ratings was 21 days.

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Comparison between Wang SADS and Zung SDS

Correlation. To determine the validity of the Wang scale, mean Wang SADS scores were compared with mean Zung SDS values for the volunteer population and for all patients at each of four depression levels (Figure 1). Statistical analysis (paired t-test) revealed no significant difference between mean scores on the Zung SDS and those on the Wang SADS either for normal volunteers or for subjects at any of the four depression levels.

Correlation between Zung and Wang individual scores of depressed patients is shown in Figure 2. Using the Pearson correlation coefficient for the calculation of \( r \), a value of 0.8278 was obtained. As illustrated graphically, the linear regression slope of the \( x \) (Zung SDS) and the \( y \) (Wang SADS) coordinates is \( y = 0.8189x + 12.64 \). The significance of the correlation coefficient \( r \) was tested, and positive correlation is real \( (P<0.001) \). The correlation coefficient of the “normal” scores was also significant \( (P<0.001) \), with a value of 0.6779.

The relative ease and accuracy with which depressed patients completed each rating scale was evaluated using a two-tailed \( t \)-test. As shown in Table II, the total number of seconds required for completion, the number of errors, and the number of requests for assistance after the initial instruction period were significantly lower with the Wang SADS than with the Zung SDS.

Discussion

Self-rating forms have been found to be a useful tool in the evaluation, diag-
nosis, and follow-up of various mental states and disorders. The Zung SDS was designed as a self-assessing scale for originally used with inpatients, the SDS shows a high correlation with MMPI “D” scale scores in outpatients, and has been found to be free of significant bias in relation to age, sex, socioeconomic level, and level of education. Zung has subsequently revised his original scale to increase its effectiveness among depressed patients.

While we were satisfied with the reliability and diagnostic value of the Zung attention span encountered difficulty in completing the SDS. While it is possible that some depressed patients would have difficulty completing most self-reports effectively, many depressed patients sought guidance specifically related to the structure and content of the Zung scale.

When using the Zung scale, persons who had been hospitalized for a long period of time had trouble relating their present life situations to statements such as: “I find it easy to do the things I used to,” “I find it easy to make decisions,” “I feel that I am useful and needed”; “My life is pretty full”; “I still enjoy the same things I used to do”. For inpatients who were dependent on the hospital and lacked access to previously pleasurable and productive activities, meaningful response to such statements was extremely difficult.

Problems also resulted from items that required a comparison between the past and past of supposed well being. The following statements on the Zung SDS assume that the patient is able to recall a period of relatively sound mental health: “I eat as much as I used to”; “My mind is as clear as it used to be”; “I find it easy to do the things I used to”. Patients with long-standing depressions, both inpatients and outpatients, found it difficult to visualize a “good” time in the past as a reference.

### TABLE II

<table>
<thead>
<tr>
<th></th>
<th>Zung SDS</th>
<th>Wang SADS</th>
<th>Paired t-test</th>
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<tbody>
<tr>
<td></td>
<td>N</td>
<td>$\bar{x}$</td>
<td>S.D.</td>
</tr>
<tr>
<td>Total no. seconds</td>
<td>68</td>
<td>154.02</td>
<td>54.93</td>
</tr>
<tr>
<td>Total no. corrections</td>
<td>68</td>
<td>0.66</td>
<td>1.00</td>
</tr>
<tr>
<td>Total no. assists</td>
<td>68</td>
<td>0.71</td>
<td>1.32</td>
</tr>
</tbody>
</table>
for "I used to"; while patients with recurrent depression and histories of repeated treatment sometimes expressed confusion as to which point in the past they were supposed to relate to in making their response.

The Wang SADS was devised to avoid the requirement that the patient overtly compare his present condition with a previous level of function. Statements were also designed to minimize the effect of environment on the patients' response.

Since reductions in cognitive ability, attention span, and concentration are often associated with depression, all items on the Wang SADS have been presented as simply as possible. Compared with the SDS, the number of questions has been halved, and the wording reduced by two-thirds. While the number of frequency rating headings was increased from four to five, each heading has been simplified to one word. The purpose of these changes was to facilitate the process of selection for patients whose decision-making abilities had been impaired by their illness.

In the present study, we found the Wang SADS to be an effective means of quantifying depression. It was well accepted by patients and was completed in significantly less time and with fewer corrections than the Zung SDS, with which it demonstrated a high degree of correlation. Further studies to evaluate the Wang SADS as a form for monitoring antidepressant drug therapy have been completed and will be published at a later date.

Summary

The Wang Self-Assessing Depression Scale (SADS) was devised to provide a brief self-rating form for measuring depressive symptomatology. The present study compares the SADS with the Zung Self-Rating Depression Scale (SDS) to assess reliability and relative ease of completion.

Ninety-three ratings on each scale were obtained from a subject group that included normal volunteers and patients with differing degrees of depression. The paired t-test showed no significant difference between mean SDS scores and mean SADS scores for normal volunteers or subjects rated at any of the four depression levels. Positive correlation was demonstrated between SDS scores and SADS scores for depressed and normal subjects.

The period of time required to complete the Wang SADS was found to be significantly shorter than for the Zung SDS, while the number of errors and requests for additional assistance were significantly lower. It was felt that these differences would constitute an advantage in the clinical use of the Wang SADS for diagnosing, evaluating, and monitoring the progress of depressed inpatients and outpatients.

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References


