The Study of the Psychiatric Symptoms of Systemic Lupus Erythematosus:

A Biometric Study

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This study was originally stimulated by a personal communication from Dr. Samuel Sutton, Deputy Chief of Biometrics Research. We also appreciate the continued encouragement and advice of Dr. Joseph Zubin, Chief of Biometrics Research, and Dr. Joseph L. Fleiss, Head of the Biometrics section on Biostatistics. Further, we are grateful to Drs. John O'Connor, Charles Christian, William Robbins, and Harry Speira for their help in the execution of the study. Finally, we thank the staffs of the Columbia-Presbyterian Medical Center, the Hospital for Special Surgery and Mt. Sinai Hospital which allowed us the use of their facilities.
Psychiatric symptoms in patients with Systemic Lupus Erythematosus, and in patients with Rheumatoid Arthritis, were examined and compared by use of a structured interview that covers 179 items of psychopathology. The SLE patients were 68 consecutive attenders at three general hospitals. The 36 RA patients were chosen from attenders at the same clinics as the SLE patients.

The major conclusions of this paper are that (1) structured interviewing is feasible and useful in somato-psychic studies; that (2) SLE patients have, as reported previously in the literature, a high frequency of psychiatric syndromes including those without organic symptoms; but that (3) contrary to expectations derived from the literature, there are no important differences in the psychiatric symptoms of the SLE and RA patients selected for this study.
INTRODUCTION

Aims of this study: Studies that describe psychiatric symptoms in Systemic Lupus Erythematosus (SLE) have been reviewed by these authors in a previous paper. We pointed therein to the fact that investigators usually report a strikingly high frequency of psychiatric episodes in patients with SLE; and that a substantial proportion of the psychiatric episodes are said to closely resemble the functional psychoses. We also discussed the potential importance of such findings. However, because of critical errors in method, detailed in our prior paper, a skeptical stance must be taken with regard to the results of studies so far published in this field. The most common errors of method in previous studies have been biased sampling, unreliable techniques of data collection, and inconsistent format for presentation of results.

This paper will present a study that was designed to reexamine the psychiatric complications of SLE in a way that reduces some of the errors of method noted in previous studies. It also introduces two features of design which are rarely used in the field of "somato-psychics", namely, structured interviewing and provision of a comparison group, in this case rheumatoid arthritis (RA). This study was focused upon answering questions
about 1) the feasibility of structured interviewing in somato-
psychic conditions; and 2) the frequency and form of psychiatric
symptoms in SLE sufferers, especially as compared to a group of
RA patients.

Reasons for choosing RA as a comparison group: The most
likely causes of psychiatric symptoms in SLE can be deduced by
comparing the psychiatric symptoms of SLE with those in
other groups such as the general population, a general hospital
population, or a disease (such as RA) that possesses some but not
all of the characteristics of SLE. At best, if SLE is shown to
have a uniquely high frequency of a certain psychiatric symptom,
then the causes of that symptom may be sought in a process that
is unique to SLE.

Patients with RA were chosen as a comparison group in this
study because there is nothing in the literature to suggest that
they have the same high frequency of severe psychiatric
complications as is reported in SLE. In fact, one of the few
references to psychiatric disorders in RA in the literature dates
from 1936. In that article only three patients with "mental
disease" were found among 500 chronic arthritics. (2) Further-
more, in 1955 King (3) pointed out that it was unusual for
schizophrenia and RA to be present simultaneously in the same
individual. It is true that personality disorders may be common
in RA (4-8), but these are very different from the major
psychiatric disorders reported in SLE.
A further advantage of comparing SLE with RA is that these two conditions have certain similarities in pathology, form, sex distribution, treatment, and clinic attendance. These similarities narrow the possible causes of any differences in psychiatric symptoms that might emerge between SLE and RA. The similarities also allow the rater to be kept blind to the patient's physical diagnosis, thus removing a source of bias on the part of the examiner in assessing psychopathology.

DESCRIPTION OF SAMPLE

Selection: SLE and RA patients at three large teaching hospitals were interviewed. The SLE sample consisted of 68 consecutive inpatients and outpatients as they came to the hospital after the start of the study. The inpatients were interviewed within a few days after admission. Thirty-six patients with RA served as a comparison group. The latter patients were interviewed only when their attendance at the hospital happened to be convenient for the interviewer. An attending physician was instructed to refer RA patients (who attended the same clinic and ward as the SLE patients) to the interviewer without regard to psychopathology or any other variable.

Later, in order to investigate possible bias in selecting the "RA interviewed" sample, the case notes were scrutinized of an additional 56 rheumatoid arthritic patients who had not been
interviewed, but who had all attended the Arthritis Clinic or had been hospitalized on one of the same dates as those who had been interviewed. The latter sample will be called the "RA non-interviewed" group.

Hospital status: Table 1 gives the distribution among hospitals and hospital status of the SLE and RA samples of patients that were interviewed.

______________________________
Insert Table 1 about here
______________________________

Background characteristics: Background information on the SLE and RA groups of patients is summarized in Table 2.

______________________________
Insert Table 2 about here.
______________________________

PROCEDURE

Reduction of bias: In order to reduce rater bias, the interviewer was not informed as to whether the patients belonged to the RA or SLE group during the phase that patients from both groups were being interviewed. The study was thus blind for 22 SLE and for the vast majority of the RA outpatients. However, 46 SLE patients were also interviewed, all of whose diagnoses were previously known to the interviewer.
Table 1

Distribution of the Samples of Patients by Hospital and by Hospital Status

<table>
<thead>
<tr>
<th>Disease</th>
<th>Hospital status</th>
<th>Total patients</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLE</td>
<td>Total patients</td>
<td>68</td>
<td>10</td>
<td>20</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>Outpatients</td>
<td>45</td>
<td>7</td>
<td>12</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Inpatients</td>
<td>23</td>
<td>3</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>RA</td>
<td>Total patients</td>
<td>36</td>
<td>14</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>(interviewed)</td>
<td>Outpatients</td>
<td>31</td>
<td>12</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Inpatients</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>
Hoff, Gurland, Deming

Table 2
Percentage Distribution of
Selected Background Characteristics
of SLE and RA Patients

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Systemic lupus erythematosus (n = 68)</th>
<th>Rheumatoid arthritis (Interviewed) (n = 36)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Both sexes</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>93</td>
</tr>
<tr>
<td>Age</td>
<td>All ages (Range 16-72)</td>
<td>(Range 100)</td>
</tr>
<tr>
<td>(in years)</td>
<td>16-29</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>30-44</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>45 or over</td>
<td>29</td>
</tr>
<tr>
<td>Length of illness</td>
<td>All patients</td>
<td>100</td>
</tr>
<tr>
<td>(in years)</td>
<td>Less than 5</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td>5-9</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>10-19</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>20 or over</td>
<td>12</td>
</tr>
<tr>
<td>Current steroid</td>
<td>All patients</td>
<td>100</td>
</tr>
<tr>
<td>dosage (in mg)*</td>
<td>None</td>
<td>31</td>
</tr>
<tr>
<td></td>
<td>Low (less than 10)</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>Medium (10-39)</td>
<td>38</td>
</tr>
<tr>
<td></td>
<td>High (40 or over)</td>
<td>15</td>
</tr>
</tbody>
</table>

*Average daily dose in the two weeks prior to interview
Restriction of examination to current psychopathology: In a previous paper we discussed the relative merits of assessing current or past psychiatric symptoms. For this study we chose to emphasize accuracy rather than completeness of information and thus restricted ourselves to current psychopathology. In a later paper we will report a follow-up of the patients examined here and in that paper we will include the psychiatric symptoms experienced by these patients over an interval of several years.

Structured Clinical Interview: Interviews were conducted by use of a short, structured psychological interview. This instrument consists of a series of formulated questions and 179 items to be scored True or Not True by the examiner during the interview, based upon the patient's responses and behavior.

The questions are phrased so as to provide a fairly neutral stimulus for eliciting psychopathology. The interview takes about twenty minutes. Emphasis is on current status. It is designed to give a quantitative evaluation of an individual for psychopathology, and yields scores in the following areas: anger-hostility, conceptual dysfunction, fear-worry, incongruous behavior, incongruous ideation, lethargy-dejection, perceptual dysfunction, physical complaints, self-depreciation, and sexual problems. A profile of scores is derived for individuals or for groups of subjects. The profile is based upon standard scores obtained from a sample of "normals" with the zero line representing the
means, and the units above and below the zero line representing the standard deviations, of the normal scores. Scores above the mean represent more (and scores below the mean, less) psychopathology than the mean of the normals.

The ten SCI subtests are not necessarily the most appropriate for a population of SLE or RA patients, because few of the subjects on whom they were derived were physically ill. Thus, in addition to analyses based on SCI subtests, we also identified those SCI items which we felt on clinical grounds could be confidently held to indicate important symptoms if positive in the patients under study. We grouped and scored these symptoms by the area of psychopathology to which they appeared clinically to belong. Four symptom groupings were of major concern: "Organic" for symptoms such as memory impairment or disorientation; "Depressive" for symptoms such as depressed mood, feelings of guilt and anxiety; "Schizophreniform" for symptoms such as paranoid delusions, delusions of control or thought disorder. Symptoms in the borderland between psychopathology and physical disturbance (e.g. insomnia, lack of energy, and aches and pains) were grouped as "Psychophysical". The clinically selected items and their grouping are shown in the appendix.

Prior to the start of the study, the senior author, who also carried out all the structured interviews, participated in
a test of reliability of SCI ratings together with an interviewer
who was experienced in the use of this instrument. The design
of the reliability trial was to alternate the interviewer and
the rating observer. Interclass correlations of over .80 were
attained.

RESULTS

The feasibility of structured interviewing in somato-psychic
conditions: Structured interviewing has seldom been used in the
study of somato-psychic conditions. The advantages gained from
structured interview techniques are well known. Reliability and
thoroughness are two of these advantages over unstructured
clinical interviews (10). It is thus important to determine
whether patients who are physically ill will tolerate a series
of set questions about their psychiatric symptoms by an
interviewer who is independent of the treatment program.

Sixty-eight SLE patients and thirty-six RA patients were
approached with a request to be interviewed. The cooperation of
the patient was not a basis for selection. Each patient was
told that we would like to ask her a few questions for research
purposes. We explained that we were studying the kinds of problems
that people have, and that we hoped that this research might
help us find out what starts or aggravates an illness. The
patient was also reassured that we ask the same questions of
everyone. Towards the end of the interview each patient was
asked, "How do you feel about answering these questions?" and
an item was provided for recording if the patient expressed
"resentment about one of the questions." Another item indicated whether the patient answered questions "with single words or brief phrases only."

All those patients who were approached agreed to be interviewed and only one (an SLE patient) refused to complete an interview. Only seven (10%) of the SLE and one (3%) of the RA patients expressed resentment about being questioned. Six out of those seven SLE patients and the one RA patient had high scores of psychopathology, suggesting that their resentment was primarily a reflection of their psychological disturbance. Two (3%) of the SLE and none of the RA patients appeared to be restricted in their answers, but in any event this did not prevent evaluation of their mental state.

Thus it appears that a structured interview was acceptable to the patients included in this study. The tactful phrasing of the questions in the SCI and the hospital setting in which the study took place may have contributed to the smooth acceptance of this technique.

The frequency and form of psychiatric symptoms in SLE: A high proportion (71%) of SLE patients showed one or more positive responses on those SCI items deemed clinically important. This proportion became 57% if only depressive, schizophreniform and organic symptoms are considered (psychophysical symptoms being excluded).

From Tables 3A and 3B can be seen the frequency of positive responses in SLE for various clinical groups of SCI items.
Table 3

Number of SLE Patients and Number of RA Patients that Showed Positive Responses to Groups of Symptoms

Constructed from 70 SCI Items

A. In Mutually Exclusive Clinical Groupings

<table>
<thead>
<tr>
<th>Clinical group</th>
<th>SLE Number</th>
<th>Percent</th>
<th>RA Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>68</td>
<td>98</td>
<td>36</td>
<td>100</td>
</tr>
<tr>
<td>No Symptoms</td>
<td>20</td>
<td>29</td>
<td>11</td>
<td>30</td>
</tr>
<tr>
<td>Organic</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Depressive</td>
<td>13</td>
<td>19</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>Schizophreniform</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Psychophysical</td>
<td>9</td>
<td>13</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>Organic Depressive</td>
<td>4</td>
<td>6</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Organic Schizophreniform</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Organic Psychophysical</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Organic Depressive Psychophysical</td>
<td>6</td>
<td>9</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Organic Schizophreniform Psychophysical</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Depressive Schizophreniform</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Depressive Psychophysical</td>
<td>8</td>
<td>12</td>
<td>7</td>
<td>19</td>
</tr>
<tr>
<td>Depressive Schizophreniform Psychophysical</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Organic Depressive Schizophreniform Psychophysical</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

* One patient showed compulsive behavior
B. In Various Clinical Groupings
(not mutually exclusive)

<table>
<thead>
<tr>
<th></th>
<th>Organic</th>
<th>Depressive</th>
<th>Schizophreniform</th>
<th>Psychophysical</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLE n=68</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>15</td>
<td>35</td>
<td>5</td>
<td>28</td>
</tr>
<tr>
<td>Percent</td>
<td>22</td>
<td>51</td>
<td>7</td>
<td>41</td>
</tr>
<tr>
<td>RA n=36</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>8</td>
<td>17</td>
<td>2</td>
<td>17</td>
</tr>
<tr>
<td>Percent</td>
<td>22</td>
<td>47</td>
<td>6</td>
<td>47</td>
</tr>
</tbody>
</table>
Thirty-five (51%) of the SLE patients had depressive symptoms. The depressive symptoms were well over twice as common as organic symptoms and seven times as common as schizophreniform symptoms.

Thirteen SLE patients had pure depressive symptoms and an additional 11 patients had depressive symptoms mixed with schizophreniform or psychophysical or both but without organic symptoms. There were only 5 patients with schizophreniform symptoms, and two of these patients also had organic symptoms. In all, 24 (35%) of SLE patients had functional depressive or schizophreniform symptoms without organic symptoms. Fifteen patients (22%) had organic symptoms and these were almost invariably joined to other psychiatric symptoms.

There was a positive relationship between certain of the symptom groups shown by SLE patients. For instance, patients with organic symptoms had depressive symptoms almost twice as often as patients without organic symptoms (73% versus 45% of cases). Equally interesting was the absence of a relationship between certain other symptom groups. For example, patients with psychophysical symptoms were only slightly more likely to have depressive symptoms than patients without psychophysical symptoms (57% versus 48% of cases).
Comparison of psychiatric symptoms in SLE and RA: Sixty-nine percent of RA patients showed one or more positive responses on those SCI items deemed clinically important. This proportion became 56% if only depressive, schizophreniform and organic symptoms are considered. These proportions were almost exactly the same as for those in SLE patients (71% including and 57% excluding psychophysical complaints).

Table 3B compares the number of SLE and RA patients who have various clinical groups of symptoms. For each group of symptoms, the proportions of SLE and RA patients having symptoms are virtually identical.

A somewhat different picture was obtained when severity of illness was taken into account. Specifically, given that a patient has psychiatric symptoms, he will have more such symptoms if he is an SLE patient than if he is an RA patient. The boxes on the right of Tables 4, 5 and 6 show the average number of symptoms noted in patients that had some psychiatric manifestation. These tables are stratified by level of steroid dosage* (Table 4), age (Table 5) and length of illness (Table 6) because the SLE and RA groups differed on these characteristics.

*Data on the relationship between steroid administration and psychiatric manifestations in SLE will be reported in a separate paper.
Table 4

Comparison of 68 SLE and 36 RA Patients for Severity of Psychiatric Symptoms Stratified by Steroid Dosage

<table>
<thead>
<tr>
<th>Steroid Dosage (mg per day)</th>
<th>Number of patients with symptoms</th>
<th>Average number of symptoms for patients with symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SLE</td>
<td>RA</td>
</tr>
<tr>
<td>Total</td>
<td>48</td>
<td>25</td>
</tr>
<tr>
<td>None</td>
<td>15</td>
<td>18</td>
</tr>
<tr>
<td>All dosages</td>
<td>33</td>
<td>7</td>
</tr>
<tr>
<td>0 - 9</td>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>10 - 39</td>
<td>18</td>
<td>3</td>
</tr>
<tr>
<td>40 or over</td>
<td>8</td>
<td>-</td>
</tr>
</tbody>
</table>
Table 5

Comparison of 68 SLE and 36 RA Patients

For Severity of Psychiatric Symptoms

Stratified by Age

<table>
<thead>
<tr>
<th>Age (in years)</th>
<th>Number of patients with symptoms</th>
<th>Average number of symptoms for patients with symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SLE</td>
<td>RA</td>
</tr>
<tr>
<td>All ages</td>
<td>48</td>
<td>25</td>
</tr>
<tr>
<td>16 - 29</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>30 - 44</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>45 or over</td>
<td>18</td>
<td>20</td>
</tr>
</tbody>
</table>
Table 6

Comparison of 68 SLE and 36 RA Patients

for Severity of Psychiatric Symptoms

Stratified by Length of Illness

<table>
<thead>
<tr>
<th>Length of illness (in years)</th>
<th>Number of patients with symptoms</th>
<th>Average number of symptoms for patients with symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SLE</td>
<td>RA</td>
</tr>
<tr>
<td>All years</td>
<td>48</td>
<td>25</td>
</tr>
<tr>
<td>less than 5</td>
<td>16</td>
<td>10</td>
</tr>
<tr>
<td>5 - 9</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>10 - 19</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td>20 or over</td>
<td>8</td>
<td>4</td>
</tr>
</tbody>
</table>
Considering only patients with psychiatric manifestations, the SLE patients had on the average about 50% more symptoms than the RA patients. This predominance of symptoms in SLE patients is particularly seen in patients who were not on steroids, were 45 years or older, and with a ten year or longer duration of illness.

Table 7 compares SLE and RA patients for severity of the various groups of symptoms.

Insert Table 7 about here

The previously noted greater severity in symptoms in SLE as opposed to RA patients was seen to be due mainly to the depressive symptoms.

The foregoing results were based on 70 items selected from the SCI, and clinically grouped as described earlier. Actually the SCI contains 179 items, grouped empirically into 10 subtests. It is important to ask whether the 10 subtests that constitute the SCI would conflict with or corroborate the results just presented. The profiles for the SLE and RA patients on the 10 subtests of the SCI are in Figure 1.

Insert Figure 1 about here

The profile comparison was consistent with the previous analyses of the selected "clinically important" SCI items. SLE patients had slightly more psychiatric symptoms than RA patients. The grounds for this statement lie in the fact that the SLE group scored higher
Table 7

Comparison of 68 SLE and 36 RA Patients
for Severity of Psychiatric Symptoms
by Clinical Group

<table>
<thead>
<tr>
<th>Clinical group*</th>
<th>Number of patients with symptoms</th>
<th>Average number of symptoms for patients with symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SLE</td>
<td>RA</td>
</tr>
<tr>
<td>Organic</td>
<td>15</td>
<td>8</td>
</tr>
<tr>
<td>Depressive</td>
<td>35</td>
<td>17</td>
</tr>
<tr>
<td>Schizophreniform</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Psychophysical</td>
<td>28</td>
<td>17</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>-</td>
</tr>
</tbody>
</table>

* These groups are not mutually exclusive, but consist of patients at least with the indicated kind of symptom.
Figure 1

SLE vs. RA Patients: Profiles of 10 Subtest Scores
From Structured Clinical Interview (SCI)

- SLE Patients (N=68) ---
- RA Patients (N=36) ---

standard scores (in $\sigma$)

SCI Subtests

* signif. diff; p<.05
Than the RA group on six subtests, lower on only one, and the same on three. However, only on conceptual dysfunction was the difference between SLT and RA patients statistically significant.

Investigation of bias in the RA sample: RA patients were selected for interview only when convenient for the interviewer. To test for possible bias in selection, we compared the psychiatric symptoms recorded in the case notes of the 36 RA patients that were interviewed and the 56 RA patients that were not interviewed. As mentioned before, the latter group were those patients that had attended the same hospitals on the same day as the RA patients that were interviewed.

The following procedure was adopted in order to make a comparison on the basis of symptoms recorded in the case notes. Psychiatric symptoms evident in the case notes were extracted using a list of 60 items of psychopathology such as anxiety, mild depression, or auditory hallucinations. A dictionary of equivalent terms was constructed to cope with the wide variety of descriptive language encountered in the case notes.

Each patient was assigned to three categories of behavior:
1) "Florid" if his symptoms included hallucinations, delusions, disorientation, or such psychotic phenomena; 2) "Other" if psychiatric symptoms other than florid were present; and 3) "None" if there were no symptoms or if the only symptoms present were
clearly physical. This coarse classification was rendered necessary by the imprecise descriptive language of the case notes.

Table 8 compares the symptomatology of the RA groups who were interviewed and those who were not interviewed.

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Insert Table 8 about here

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There was a slight tendency for the RA interviewed group to be less ill than the RA non-interviewed group. Thus bias in selection of the RA patients may explain the finding that SLE patients had a slight excess of psychiatric symptoms over RA patients.

DISCUSSION

Inferences from comparing SLE and RA: This study clearly demonstrates the importance of comparison groups for understanding the relationship between psychiatric symptoms and SLE. The high frequency of psychiatric symptoms in SLE patients (71%) might easily be attributed to a special characteristic of SLE except that almost exactly the same frequency is found in the RA comparison group (69%). The latter finding could not be anticipated from the literature but opens a range of hypotheses for testing. At one extreme of this range is the possibility that there is no difference in psychopathology between any of the physical disorders found in a hospital setting. At the other
Table 8

RA Interviewed vs. RA Non-Interviewed:

By Case Note Evaluation of Psychiatric Symptomatology*

<table>
<thead>
<tr>
<th></th>
<th>RA Interviewed</th>
<th></th>
<th>RA Non-Interviewed</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>Total</td>
<td>36</td>
<td>100</td>
<td>56</td>
<td>100</td>
</tr>
<tr>
<td>Florid</td>
<td>1</td>
<td>3</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
<td>33</td>
<td>24</td>
<td>43</td>
</tr>
<tr>
<td>None</td>
<td>23</td>
<td>64</td>
<td>26</td>
<td>46</td>
</tr>
</tbody>
</table>

* As recorded in case notes at any time before, during, or up to one year after the month in which the SCI interview took place.
extreme is the possibility that SLE and RA have something in common that provokes psychiatric symptoms.

Implications for treatment: The similarity between SLE and RA should not obscure the finding that there is a high frequency of psychiatric symptoms in both these disorders. This says nothing about whether an equally high frequency would be found in patients with other physical conditions or even in "normals". Nonetheless, the relief of these symptoms should be a central concern in the management of both SLE and RA. It remains an open question whether treatment should be directed primarily at the psychiatric symptoms or only at the concomitant physical condition. The relative dependence we found between organic and depressive
psychopathology indicates either that depressive and organic symptoms are not easily distinguished one from the other, or that general toxic factors or central neurological damage underlie at least part of the depressive disturbance. However, fully 24 of the 35 SLE patients suffering depressive symptoms did not show organic psychopathology. Perhaps a special effort to alleviate psychiatric distress might improve the patient's ability to cooperate in his medical treatment and might also increase his natural resistance to the disease process. Patients who have functional syndromes without organic psychopathology (35% of the SLE group and 33% of the RA group) could be a particular target of psychiatric therapy.

The relative independence between psychophysical complaints and depressive psychopathology suggests that the former realm requires medical rather than psychiatric treatment. In psychiatric clinics, complaints which refer to a psychophysiological state such as tiredness, insomnia, lack of energy, aches and pains, tremor or slowness might often be part of a depressive disturbance. However, this does not appear to be the case in patients with a serious physical condition such as SLE.

Use of standard methods for research: Results from different investigators could be pooled if standard methods of assessing and reporting psychopathology were more widely practiced. Thus it is
of interest that the structured interview techniques used in this study proved reliable and also acceptable to patients with physical conditions. Also, that the sensitivity of these techniques appears at least adequate in that the frequency of psychopathology detected in this study is not lower than that reported in other studies of SLE.\(^1\) This, despite restricting ourselves to examining current psychopathology (i.e., excluding past psychopathology).

To the same end of making the results of different studies comparable, we tried to report our results in a form which is both explicit and comprehensive. We employed common clinical groups with lists of symptoms which defined those groups; and empirically derived dimensions of psychopathology whose components are described in published literature. Numbers of patients showing symptoms of psychopathology were tabulated for each clinical group of symptoms as well as for mutually exclusive symptom categories. Comparisons between patients also took into account the magnitude of psychopathology.

**Bias in sample selection:** In the interests of accurately estimating prevalence of psychopathology we took consecutive SLE patients from three different hospitals. However, our method of selecting RA patients was less stringent. We asked physicians to refer RA patients to us without regard to their psychiatric symptoms. As we have shown, the price paid for this looseness
in the selection procedure was that, despite our instructions to the physicians, they did in fact refer to us a group of patients who had fewer psychiatric complications on the average than the group that was not referred to us.

**SUMMARY**

The major conclusions of this paper are that (1) structured interviewing is feasible and useful in somato-psychic studies; that (2) SLE patients have, as reported previously in the literature, a high frequency of psychiatric syndromes including those without organic symptoms; but that (3) contrary to expectations derived from the literature, there are no important differences in the psychiatric symptoms of the SLE and RA patients selected for this study.

Psychiatric symptoms in patients with Systemic Lupus Erythematosus, and in patients with Rheumatoid Arthritis, were examined and compared by use of a structured interview that covers 179 items of psychopathology. The SLE patients were 68 consecutive attenders at three general hospitals. The 36 RA patients were chosen from attenders at the same clinics as the SLE patients.

Out of 104 patients who were approached for a structured interview all agreed to be interviewed, only one refused to complete the interview, and only 8 expressed resentment at being
questioned. Of the latter 8 patients, 7 had high scores of psychopathology.

Thirty-nine (57%) of the SLE patients had at least one psychiatric symptom of an organic, depressive or schizophreniform type. Depressive symptoms were over twice as common as organic symptoms and seven times as common as schizophreniform symptoms. Twenty-four (35%) of SLE patients had depressive or schizophreniform symptoms without organic signs.

There were unexpected and striking similarities between SLE and RA patients in the proportion of patients within each group manifesting organic, depressive or schizophreniform symptoms. However, among those patients who had psychiatric symptoms, the SLE patients tended to have more depressive symptoms than the RA patients. Biased selection of RA patients could have accounted for this discrepancy.
Appendix

Clinical Grouping of Selected Items from the Structured Clinical Interview

**Organic Type (N = 9)**

(7) Fails to give his name
(8) Fails to specify month and year
(9) Fails to mention institution or street
(10) Fails to identify the general nature of his surroundings
(62) Mentions that his memory is impaired or that he keeps forgetting things
(63) Reports difficulty in recalling important details of past experience
(129) Forgets what he is talking about
(167) Plays with or exposes genitals
(178) Shows difficulty recalling recent events

**Depressive Type (N = 26)**

(20) Mentions that he worries a lot or that he cannot stop worrying
(21) Mentions that he has lots of fears or that he keeps feeling afraid of different things
(24) Speaks of concern about attack of panic
(37) Mentions that he feels depressed or despondent
(38) Mentions that he feels he is getting nowhere
(46) Says that his body is decaying or rotting
(47) Imagines that he has a fatal illness or that he is about to die
(55) Says that he has lost his appetite or the capacity to enjoy food
(59) Indicates that he is thinking about killing himself
(60) Reports that he broods over a certain unpleasant thought or feeling
( 71) Says he has lost his sense of humor
( 72) Does not smile either spontaneously or in response to suggestion
( 91) Indicates that he feels he is being punished for his sin or immorality
( 92) Expresses feeling of guilt
(104) Mentions nothing that interests him
(105) Mentions nothing that he enjoys doing
(106) Expresses feeling of inferiority or inadequacy
(108) Expresses a negative attitude toward his future accomplishments or attainments
(111) Expresses intense regret for something he has done or failed to do
(153) Has a sad expression or holds his body in a dejected or despondent posture
(154) Sighs repeatedly
(155) Weeps, moans or wrings hands
(156) Has a frightened or apprehensive expression
(157) Has attack of panicky fear
(166) Gets up and moves about restlessly

Schizophreniform Type (N = 18)
( 31) Says that someone is in his mind or body or that he is "possessed" by a spirit or devil
( 56) Reports that his food tastes or looks suspicious or that he is being poisoned
( 67) Reports or expresses weird or bizarre thought
(95) Says that person in position of authority or power has mistreated or harmed him (e.g. staff member, policeman, employer, etc.)

(98) Indicates that he detects a personal reference in seemingly insignificant remark or event

(99) Says that someone talks about him or ridicules him

(100) Expresses a belief that he has been harassed or persecuted which is almost certainly not true (e.g., he has been followed by members of a secret organization)

(102) Claims that his mind or actions are controlled or mysteriously influenced by other person or by strange force

(112) Talks of a serious personal problem in a flat, unemotional manner

(113) Gives or reports incongruous emotional response (e.g., laughs or scoffs at occasion of death or disaster)

(121) Repeats word or phrase in a mechanical manner

(122) Mixes up words, makes up new words or talks gibberish

(127) Claims power or knowledge beyond the bounds of credibility

(160) Stands up throughout the interview

(164) Ceremoniously performs some apparently irrelevant act

(165) Writhe or contorts his body

(168) Assumes strange pose for no apparent reason

(172) Repeatedly laughs or giggles in a foolish way

**Psychophysical Type (N = 6)**

(39) Indicates that he has trouble sleeping or that he requires drugs to sleep

(40) Indicates that feels tired, sleepy or without energy
(41) Mentions that he has various aches and pains or physical dysfunctions

(64) Tells of fit, seizure or lapse of consciousness

(174) Has tremor of hands or fingers

(175) Is slow in all his movements

**Manic Type (N = 6)**

(16) Tells about a period of elation

(36) Indicates that he feels elated or "high"

(109) Speaks of contact, power, knowledge or sensational plans which, though not impossible, is extremely unlikely (e.g., says the President will come to take him out of the hospital)

(126) Assumes the identity of a famous figure or makes impossible claim of personal fame (e.g., "The whole country knows me," "I am Mary, Mother of God").

(132) Talks on and on and resists interruption

(152) Expresses feeling of extravagant elation

**Depersonalization (N=3)**

(18) Says that he feels nothing, has no feelings or his feelings have dried up

(69) Reports that things seem unreal or dreamlike

(70) Says that he feels as if he is outside of his body

**Compulsive or Phobic Type (N = 2)**

(23) Indicates that he has an irrational fear of a particular object or situation (e.g., crowds, heights)

(33) Says that he cannot make up his mind or that he has difficulty making decisions
References


