The Study of the Psychiatric Symptoms of Systemic Lupus Erythematosus: Theory and Method

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A tentative description of psychiatric symptoms in systemic lupus erythematosus and a brief discussion of their theoretical and practical importance are followed by a critical review of studies in this field. Reported findings vary by chronological order of publication, clinical orientation of the author, mode of selecting cases, and method of examination. This variation in findings reflects errors of methods, the most common of which are biased selection of subjects, lack of comparison groups, unreliable recording of observations on the patient, and inconsistent presentation of data. We make suggestions for repairing these errors, including the use of structured interviews and matched comparison groups.
Introduction:

A relationship between systemic lupus erythematosus (SLE) and coincident psychiatric symptoms has been described in the professional literature over the past 20 years. (2-4, 6-12, 21, 24) Nevertheless, uncertainty remains about the frequency, form, and origin of these psychiatric symptoms. We discuss in this article the importance of studying psychiatric symptoms in SLE, and we review critically the findings and methods of previous studies. We also suggest a design of research that will involve use of structured interviews, unbiased selection of subjects, and the use of comparison groups.

Reasons for studying psychiatric symptoms in SLE:

Important theoretical and practical issues wait upon proof that psychiatric symptoms in SLE are unusually frequent or of a distinctive form.

If psychiatric symptoms are particularly common in SLE then their relief is of special concern. Not only are psychiatric symptoms distressing to the patient but they may impair his ability to cooperate in the treatment of his physical condition.

Furthermore, if the form or frequency of such symptoms is
peculiar to SLE then further examination of this relationship would be warranted. This examination might throw light on the causes of psychiatric symptoms not only in SLE, but also in other physical conditions and even in functional syndromes.

In order to illustrate the wider theoretical relevance of studying psychiatric symptoms in SLE, we describe a particular interest of ours. As part of a cross-national study of psychiatric disorders*, we wish to isolate the effect of culture on the expression of severe psychiatric symptomatology. One way to do this is to focus on a physical condition known to have a high risk of psychiatric symptoms. If this physical condition can be recognized by laboratory techniques (such as the LE cell test) equally valid in two different cultures, then the cause of the psychiatric symptoms can be kept constant while the culture is allowed to vary. Any differences in the frequency or form of the psychiatric symptoms that arise between the two cultures can then be attributed to the effect of the culture (including its social and genetic aspects).

This strategy would be especially useful for throwing light on the functional psychoses (schizophrenia and the affective disorders), as we are ignorant of their underlying causes and have no way of knowing whether cross-cultural differences in their incidence can be ascribed to the culture or to different etiologies. We can reasonably ask the question whether there is a cultural effect

*Cross-national Study of the Diagnosis of Mental Disorders in the United States and United Kingdom.
evident on the schizophreniform and affective-like symptoms that occur in a given physical condition. SLE fits very well into this paradigm, provided of course that there be confirmation of the reported high risk of schizophreniform and affective-like symptoms.

The physical component

Clinical picture

SLE is a life-threatening disease of uncertain etiology which may attack many systems of the body, thus presenting a variety of clinical signs which mimic many other illnesses. The usual course is one of remissions and relapses. The incidence is infrequent but not rare. It usually occurs in females aged 20-40 years.

"The biological hallmark" of SLE is an altered immune reactivity with a profusion of serum factors with antibody properties directed at blood constituents, such as red blood cells, and at body organs. The most characteristic of these antibodies is the LE factor which promotes the phagocytosis of nucleoprotein. Systemic lupus is possibly related to other immune-type illnesses such as rheumatoid arthritis.

Laboratory tests

About 80% of patients with systemic lupus provide sooner or later, a positive LE cell test. The LE test is only
rarely positive in other diseases, other immune
reactions are also of diagnostic importance.
Biopsy of the skin, muscle, or lymph nodes may also
establish the diagnosis.

**Psychiatric symptoms in SLE, as described in the literature**

A confident description of the psychiatric symptoms in SLE
cannot yet be given because of the methodological vagaries of
studies in this area. Nonetheless findings from selected studies
help to sketch a tentative picture of psychiatric complications
in lupus.

a) Frequency:

Many studies report psychiatric abnormalities in over 25%
of cases of SLE (2–9) and this figure is over 50% in several of
these studies. (2–4, 6, 7)

b) Form:

Most studies report organic type syndromes to be the most
common (2–4, 6, 9), but some studies report a high incidence,
over 10% (2–5, 8) as high as 30% (2, 3, 8), of nonorganic
syndromes (functional psychoses or neuroses).

A wide variety of psychiatric symptoms are reported (2–4, 8, 10–13)
including deep depression, acute anxiety, depersonalization,
withdrawal, delusions of control, persecutory delusions, incoherence,
and hallucinations (especially auditory and visual).

c) Natural history:

Published case records (2,3,5,7,9, 13-18) suggest that the psychiatric symptoms are rarely over 6 months in duration and commonly clear up in less than 6 weeks. Episodes may be repeated as many as five times, but few patients suffer more than two attacks. The interval between the onset of lupus and the first psychiatric symptoms varies from a few months to 15 years, but in over half the cases it is less than 3 years. A worsening of the patients' physical condition may accompany the emergence of psychiatric symptoms. Occasionally an increase in the dosage of steroids precedes an exacerbation of psychiatric symptoms. The average duration of life after the advent of psychiatric symptoms in SLE appears to be about 3 years.

Concepts of the relationship between systemic lupus erythematosus and coincident psychiatric symptoms

Several concepts explain the possible coincidence of SLE and psychiatric symptoms.

1) In its early stages, the physical disease may easily go undiagnosed and the fluctuating nonspecific symptoms of tiredness, anorexia, and loss of weight may be mistakenly ascribed to a neurotic or depressive syndrome.

2) There may be only a chance relationship. Mild neurotic symptoms
occur frequently in the general population (19) and will therefore occur not uncommonly in patients with systemic lupus. However, by the same token, major psychiatric syndromes (rare in the general population (20)) should occur rarely by chance in lupus patients.

3) Becoming a patient might in itself predispose anyone to admit to psychiatric symptoms.

4) The physical disease and the psychiatric symptoms may arise from a common precipitant. It has been suggested that psychological stress may provoke a latent lupus process into eruption (13, 21). In that case the same psychological stress might produce concomitant psychiatric symptoms.

5) The lupus disease itself may be a psychological stress. It can be life-threatening, disfiguring, disabling and painful.

6) Autoimmune antibodies in SLE may cause local damage to the central neural system or disturb the physiology of the body by damage to organs such as the kidney. Either process might produce psychiatric symptoms.

7) Side effects of treatment may produce psychiatric symptoms. Steroids are the most effective agents for alleviating the lupus process, but have also been suspected (7, 14, 17, 22) (probably on insufficient grounds (2-4, 23)) of provoking psychiatric symptoms. However, an increase in dosage of steroids may be given for a deterioration in the lupus condition which equally well could be
the precipitant of the psychiatric symptoms \( (2-4, 6, 9) \).

Support for the latter theory may be given by the history of the incidence of psychiatric symptoms in lupus which does not parallel fluctuations in the popularity of steroids \( (2) \). Furthermore, an increase of the dosage of steroids may improve the patient's physical and psychiatric state together \( (3, 6) \).

**Variability of the findings published on the psychiatric symptoms of SLE**

The frequency and form of psychiatric symptoms are crucial variables for testing the concepts linking SLE and psychiatric symptoms. At one extreme, if this link be chance, there will be no difference in psychiatric symptoms between SLE and the general population. At the other extreme, if SLE specifically provokes psychiatric symptoms, then the latter will distinguish SLE from other physical disorders. In this section we shall emphasize the uncertainties in the findings so far obtained from inquiries into the frequency and form of psychiatric symptoms in SLE.

**Frequency of symptoms:**

The highest frequency of psychiatric symptoms in SLE noted in any of the studies reviewed is 65% \( (2) \). The lowest incidence reported is 3% \( (24) \). There is a fairly even spread of reported results between these two extremes, with a mean of 21%. The table suggests that a large part of this variability could be attributed
to biases of the respective investigators and to differences in their method of examination.

Insert Table about here

Box a shows that in each of the two five-year intervals before 1960 less than 20% of SLE patients were reported as having psychiatric symptoms. After 1960 the corresponding figures are around 40%. These trends cannot be matched in chronology with a trend in the use of steroids.

A plausible explanation of the jump in the reported incidence of psychiatric symptoms in SLE is that clinicians became aware of this peculiar association and found it more readily because they expected it. Also, with the growth of psychiatric interest in this area, psychiatrists became more involved in such studies bringing with them their tendency to perceive psychiatric symptoms more readily than do specialists in other branches of the medical profession.

The latter idea is supported by the data shown in Box b where the proportion of SLE patients reported as having psychiatric symptoms is set against the professional orientation of the senior author of the relevant report. The papers reviewed here did not explicitly exclude any type of symptom or SLE patient. However,
<table>
<thead>
<tr>
<th>ITEM</th>
<th>Number of papers reviewed</th>
<th>Number of patients included</th>
<th>Percentages of SLE patients with psychiatric symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>With-symptoms</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total</td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td>Box a</td>
<td>1950-54*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date of publication</td>
<td>9 (5,7,9,11,14,21,25,26)</td>
<td>850</td>
<td>15</td>
</tr>
<tr>
<td>1955-59</td>
<td>5 (2,6,10,13,24)</td>
<td>390</td>
<td>18</td>
</tr>
<tr>
<td>1960-64</td>
<td>2 (3,27)</td>
<td>98</td>
<td>43</td>
</tr>
<tr>
<td>1965-68</td>
<td>3 (4,8,12)</td>
<td>289</td>
<td>37</td>
</tr>
<tr>
<td>Box b Clinic Dermatology or orientation Medicine* of senior author Psychiatry</td>
<td>2 (13,26)</td>
<td>152</td>
<td>11</td>
</tr>
<tr>
<td>II(5,6,9,11,14,21,24,25,27)</td>
<td>400</td>
<td>46</td>
<td>8</td>
</tr>
<tr>
<td>Box c All attenders</td>
<td>7 (2,4,8,10,12,27)</td>
<td>574</td>
<td>30</td>
</tr>
<tr>
<td>Selection cases only</td>
<td>62</td>
<td>24</td>
<td>0</td>
</tr>
<tr>
<td>Selection only of Psychiatric consultation cases**</td>
<td>2 (3,6)</td>
<td>77</td>
<td>61</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>7 (5,7,13,14,24,26)</td>
<td>547</td>
<td>17</td>
</tr>
<tr>
<td>Box d Method case notes only of some personally examined *** interviewed</td>
<td>5 (8,10,12,23,24)</td>
<td>439</td>
<td>15</td>
</tr>
<tr>
<td>13 (2,7,9,13,14,21,25,27)</td>
<td>865</td>
<td>31</td>
<td>4</td>
</tr>
</tbody>
</table>

*One study (¶21) reports results in 2 parts, here they are combined and counted as 1 study.
** Data not available for both parts of 1 study (¶21); one with 44 patients, one with 323 patients.
*** Data not available for 1 part of 1 study (¶21) including 323 patients.
† Mild Symptoms include neurotic depression, phobias, anxiety, obsessive-compulsive behavior, etc.
†† Major symptoms include hallucinations, delusions, "psychosis" etc.
while dermatologists or internists report less than 15% of SLE patients with psychiatric symptoms, psychiatrists report over 45% of such patients.

Besides differences in perception between the different medical specialists, there are also likely to be differences in the kind of patient that they are called to evaluate. Box c shows that in those reports based on patients seen by psychiatrists when called to consult with their medical colleagues there is a much higher proportion of patients with psychiatric symptoms (61%) than in reports based on a less selective sample (30% or less found to have psychiatric symptoms).

Finally, one is not surprised to note that where SLE patients are interviewed personally the investigator is more likely to find psychiatric symptoms (in 31% of cases) than where he is dependent entirely upon case notes devoted to routine hospital records (psychiatric symptoms in 15% of cases). This difference would probably be larger were it not for the fact that in the vast majority of all studies the case notes provided the bulk of the information and "personal interview" was only on a subsample and sometimes during a quiescent phase of the patients' psychiatric state.

Form of symptoms:

Much the same story as for frequency may be related for the form of psychiatric symptoms found in SLE. For this purpose we shall divide psychiatric symptoms into "mild" (including such
symptoms as neurotic depression, anxiety, tension, phobias or obsessions), "major" (including florid symptoms such as hallucinations, delusions, disorientation and loss of insight), and unclassified. This crude classification is rendered necessary by the ambiguous descriptions of psychiatric symptoms in published reports.

Box a of the Table shows that prior to 1960 mild symptoms were hardly reported at all, and that major symptoms were found in not more than 10% of patients. After 1960, mild symptoms rose to 7 or 8 percent and major symptoms jumped to about 25%. Unclassified symptoms remained constant. The sharp increase of major symptoms is especially impressive because these are striking symptoms and not easily overlooked. However, it is clear from the data in Box b that the clinical orientation of the investigator has a profound effect on the type of psychiatric symptom reported. Dermatologists did not classify at all the psychiatric symptoms that they recorded; internists recorded no mild symptoms and major symptoms in only 8% of cases; while psychiatrists not only found mild symptoms but major symptoms in fully 29% of cases as well. Furthermore, not surprisingly, the proportion of major symptoms found among patients referred for psychiatric consultation (Box c) was twice as high as in any group unselected or selected on a different basis. Finally, Box d shows that major symptoms are more often found in patients personally interviewed than where reliance is placed on case note
information alone.

There must be a good deal of interaction in the studies reviewed here between the date of publication, the orientation of the author, the selection of cases, and the method of examination. However, it is not our purpose to tease out the specific from the interactional effects of these factors on the results reported. Rather we wish to point to the conflicting reports on even the simplest issues regarding the relationship between SLE and psychiatric symptoms; and also to indicate some sources of these conflicting reports; different orientations, criteria for sample selection, and methods of data gathering.

Critical review of methods previously employed to examine the psychiatric symptoms of SLE:

Common weaknesses of methods employed by the studies covered here occur in 1) the selection of subjects and research design, 2) the recording of observations on the patient, and 3) the presentation of data.

1) The selection of subjects and research design:

a) Sampling errors

Most of the SLE subjects who have been studied were patients in large general hospitals (2-12, 14, 21, 24-27). No study by a single team of investigators has attempted to draw upon a population that represents more than one general hospital, let alone to include
patients from other types of hospitals or sources outside hospitals. For reasons that will be discussed later, it is impossible to repair these omissions by pooling results from several investigators.

A close estimate of psychiatric complications in SLE may possibly be made from an examination of patients attending or in a general hospital. Probably most SLE sufferers eventually come to a general hospital, whether or not they have psychiatric symptoms, as the physical symptoms of systemic lupus sooner or later might require treatment where diagnostic and laboratory facilities are of high quality. Furthermore, it does not seem likely that a substantial number of SLE subjects become mental hospital patients without also being at some stage on the list of a general hospital. Probably also, only a minority of patients are seen exclusively by private practitioners. However, these assumptions remain to be substantiated and until then an estimate of the prevalence of psychiatric complications in SLE cannot be made with confidence from a study of a general hospital population alone. It seems reasonable to study first a convenient population of general hospital "in" and "out" patients taken from several hospitals that serve a wide sociocultural range of the general population, but the gaps in the universe must later be filled in.

More serious sampling errors can readily be found in published studies. In some reports (2,3,6,7,12) only inpatients (and not outpatients) are included. In other reported series, patients were
interviewed only if they had a complication that fell within the investigator's special domain such as dermatology \(13, 26\); or when the investigator was called in for consultation \(3, 6\).

An investigator may request that he be called for all occasions when psychiatric symptoms develop in a lupus sufferer. However, such a screening system is by no means free of prejudice. The patient may disclose to the ward staff only those symptoms which he believes the medical team can treat, or which his subculture encourages him to express; and of course he may not have insight into some symptoms. The staff on the ward, for that matter, may be more perceptive of symptoms that are management problems; or which conflict with their own sense of the usual accompaniments of physical disease; or which accord with their expectations of psychiatric complications.

b) **Lack of comparison groups**

We have already described the value of comparing the psychiatric symptoms in SLE with those in other carefully selected groups. Such comparisons highlight the mechanisms responsible for provoking psychiatric symptoms. It is surprising that not a single study reviewed here has utilized this approach.

Merely reporting a high proportion of some SLE patients showing psychopathology carries no information about causes. In fact, there may even be misinformation when judged on the basis of uses made of that statement. Thus the reader might be wrong in assuming from the above report that a high proportion of all SLE patients
showed psychopathology. In the event that a high proportion of all SLE patients did show psychopathology, the reader might be incorrect in assuming that this proportion was higher than in patients with other diseases or even than in normals.

The introduction of a comparison group simplifies some of the problems of inference about the causes of psychopathology. Comparison groups should be matched with respect to characteristics expected to be associated with psychopathology (other than the index that differentiates the groups). Thus matched, a significant difference of psychopathology between the two groups can be ascribed to the index characteristics. This is simply part of a more general statement that any inference about causes requires a comparison between groups (either between different groups or between the same group in different conditions over time).

c) **Lack of prospective or experimental studies**

Almost all the studies reviewed have depended upon a cross-sectional or retrospective survey. A stronger method of determining the prognosis of psychiatric symptoms in SLE would be a prospective or cohort study. Furthermore, in order to assess the beneficial and undesirable effects of treatment, controlled experiments are essential.

2) **Recording of observations on the patient**

Nowhere in any of the papers reviewed is evidence
tendered on the reliability of the observations made on the patients. Where at best, investigators have personally examined a series of patients, there is no assurance that interviews were consistent in style or scope from one patient to another, let alone between interviewers and least of all between different studies. Where at worst, investigators have in whole or part relied on case notes, even less confidence can be placed on the reliability of the ensuing data. Thus it is unacceptable to pool or to compare the results from different studies, as instrumental error and personal bias could overwhelm real differences or similarities. Inability to pool results from several studies leads to a great loss of efficiency in research.

Differences between psychiatrists in their style of interview are well chronicled (28) as are differences in their perceptions of psychopathology (29), use of psychiatric language (30), and criteria for diagnosis (31). These differences are compounded in case notes, as these are generally updated by a multiplicity of examiners. Furthermore, where lupus patients are concerned, the case notes are generally written up by non-psychiatrists (i.e., internists).

In the course of a recent study (32), we have examined the hospital case notes of 68 patients with SLE in three general hospitals in New York. Some of the more common deficiencies in psychiatric description as found in these case notes are as follows: the failure to make distinctions between symptoms of different
clinical importance such as mild and severe depression or recent and remote memory loss; the more frequent failure to make fine but significant distinctions such as between persecutory and self-condemnatory auditory hallucinations; the use of ambiguous terms such as "confusion," "poor judgment," or "nervous"; the use of ill-defined diagnostic labels such as "psychosis" or "delusional" instead of descriptions of the discrete psychopathology shown by the patient; the tendency to list the patient's complaints on the day of interview without reference to duration or to symptoms which had recovered prior to interview; and, almost inevitably, the failure to state positively which psychiatric symptoms are absent.

As will be apparent from the above comments, the authors of this paper see need for the introduction of structured interview techniques into somato-psychiatry research. These techniques involve the use of rules for presenting questions to the patient, suggestions for the order and phrasing of the questions, definitions of the psychopathology being examined and what constitutes an acceptable answer from the patient, dichotomized or scaled item responses, and precoding of the possible responses for ease of data analysis. Structured interviews have already been constructed for use with psychiatric patients (33) and shown to be a clinically comfortable procedure (34). Furthermore, structured psychiatric interviews have been successfully applied to non-psychiatric patients (35) and also to non-patients (36).
Nothing said here means that the problems of data gathering will end with the arrival of structured interviews. On the contrary, new problems will arise when accuracy of data is given priority. For instance, there are some patients who are too ill to be questioned at all and whose symptoms can be observed but not probed, while other patients have language problems or are reluctant to disclose socially undesirable symptoms.

Even where an investigator interviews all patients with a structured interview, he has to cope with the transience of psychiatric symptoms in SLE. These psychiatric episodes may last for only a small proportion of the patient's life, therefore interviewing the patient at random times renders it likely that psychiatric symptoms will appear only in the patient's history rather than in his current status. Because of lapses in memory, retrospective distortion and lack of sophistication as observers, the information obtained from a patient or from his informant about past psychiatric episodes is usually less reliable than that forthcoming at a current mental state examination. On the other hand, interviewing patients only when advised of an active psychiatric disturbance by the patient or by his relatives or by his medical attendants, is subject to selective bias. Thus random interviewing is inefficient, retrospective histories are unreliable, and interviewing on demand is biased.
The ideal way out of this dilemma lies in the direction of longitudinal cohort studies in which frequent, repeated, structured interviews are carried out. Brief self-administered rating scales or brief screening interviews may be used for routine reassessments and backed up by more intensive interviews for those subjects that exceed a criterion score on the screening instrument. Also, such objective indicators as temperature charts or sedimentation rates may be used to pick up a worsening of the medical condition which is very often accompanied by a worsening of psychiatric symptoms.

As outlined above in this section, gathering of data about the psychiatric complications of SLE requires an orderliness that will improve the accuracy of the data and allow comparability with other studies. This can be achieved by structured interviews.

3) Presentation of data

Perhaps the most frustrating difficulty encountered by a reviewer who wishes to compare or pool results from several studies is that several investigators may describe data on the same issue but each in a different way. This is often the case with regard to the psychiatric complications of SLE.

Some authors \(^{10,11}\) list the number of patients who were found to have a specific symptom (e.g. anxiety) in a given sample. A patient who has anxiety and depression would be counted once under each of these symptoms. Other authors\(^3\) catalogue symptom
clusters (syndromes) and the same patient with anxiety and
depression would be counted only once under the syndrome 'anxious
depression' but possibly again under a different syndrome if he
had additional symptoms. Still others \((2,4,6)\) allocate patients
to mutually exclusive diagnostic groups so that each patient is
counted only once during his hospital stay.

Even more confusing to the reviewer is the conflicting
practice of tallying either patients or episodes. For example,
suppose that a patient exhibits anxiety in one out of five episodes
of psychiatric illness, and that another patient does not show anxiety
in five otherwise similar episodes. Some authors \((10,11)\) would now
report anxiety in one out of two patients (50\% of cases), while
others \((12)\) would count each episode separately and report anxiety
in one out of ten episodes (10\% of episodes).

We have already referred in a previous section to differences
between clinicians in the way they record information on a patient.
Also in presenting their results, authors may employ different
language to describe the psychiatric condition of patients. This
language is often nontechnical and ambiguous (e.g., the patient
was "bewildered") or unduly broad and unspecified (e.g., the patient
was "delusional"). Diagnostic criteria are almost never defined
(though sometimes illustrated by case reports on "typical patients")
and a diagnosis may be as vague and inclusive as "mental aberration" \((27)\).

We make the following suggestions for reporting data on the
psychiatric complications of SLE. These suggestions relate only to
the minimal information required for comparing results of different studies.

a) The areas of psychopathology reported on should be those which have been derived (e.g., by factor analysis) from data on large series of psychiatric patients not necessarily suffering from physical illness. (It is unlikely that data on a sufficiently large number of SLE patients will accumulate to allow development of more relevant factors.) Component items are available already for such factors (Lorr\(^{37}\); Spitzer\(^{38}\); Fleiss\(^{39}\); Burdock\(^{40}\)). Of course, in order to be able to assign symptoms to these factorial dimensions, the items that make up the factors must be included in the interview with the patient. Results should show the degree of psychopathology in each of the above areas, at or about the time the patients were examined.

b) Syndromes (symptoms which frequently occur together) should be constructed so as to give rise to mutually exclusive categories. In line with common clinical practice, there should at least be a distinction between the following syndromes: clear-cut organic syndromes with disorientation, loss of memory, or clouding of consciousness; depressive syndromes with deeply depressed mood, crying, depressive delusions etc.; and clear-cut schizophreniform syndromes with schizophrenic thought disorder, delusions of control or inappropriate affect. Results should show the number of patients
with a particular syndrome at or about the time they were examined. In the context of SLE, psychiatric diagnoses do not appear to be as useful as syndrome categories, because the known presence of an underlying physical illness makes it difficult to diagnose anything other than an organic disorder. However, if diagnoses are needed, then the International Classification of Disease should be used with the appended descriptions given in DSM-II\(^{(41)}\).

**Summary**

Important theoretical and practical issues wait upon a satisfactory method of studying psychiatric symptoms in systemic lupus erythematosus and on proof that those symptoms are, as is often stated, unusually frequent or of a distinctive form. Such method and proof are lacking. Errors of method parallel variability in the relevant published findings. The findings vary by date of publication, clinical orientation of the author, mode of selecting cases, and method of examination. The most common errors of method are biased selection of subjects, lack of comparison groups, unreliable recording of observations on the patient, and inconsistent presentation of data. We suggest the use of samples unselected with respect to psychiatric symptoms; structured interviewing; and simplifying the problem of inference by comparing psychiatric symptoms in patients with systemic lupus and in patients with other physical diseases. We also suggest a format for presenting data in a standard fashion.
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