

19 December 1973

Julian J. Lasky, Ph.D.
Executive Secretary
Clinical Projects Research Review Committee
Division of Extramural Research Programs
National Institute of Mental Health
Room 10C25--Parklawn Building
5600 Fishers Lane
Rockville, Maryland 20852

Re: MH 25608-01

Dear Jack:

I have read the proposal, "EEG and VER Changes during Psychiatric Treatment" by Dr. E. L. Reilly. Dr. Reilly proposes to examine a small population of psychiatric patients ($N = 24$). In addition to a psychiatric evaluation using rating scales for mental status, he proposes a systematic EEG recording for background EEG by visual interpretation, and for the visual evoked response. Recordings will be done prior to drug treatment and at weekly intervals for the duration of hospitalization, for at least six weeks. He also proposes monthly recordings thereafter between the second and sixth months. The data are to be analyzed by complex statistical procedures of a multivariate type by consultants who are experienced in statistical analyses but not EEG.

The mission set by Dr. Reilly is a most commendable one. My comments can be divided into four sections: the problem and methods, facilities, significance, and conclusions.

1. Problem and Methods

The problem selected by Dr. Reilly is a significant one. In the description of the EEG recording and visual analyses, he describes acceptable methods reflecting his experience as an electroencephalographer. However, to describe a project in 1973 using visual description methods of a decade earlier may reflect a lack of experience with newer methods of EEG quantification. If the choice is based on data, then he should

explain why he uses non-quantitative methods for a quantitative problem.

I am concerned with the diagnostic criteria for psychiatric evaluation. It is unclear whether Dr. Reilly has the experience to select patients carefully, as the problem requires. (This question should be answered in a site visit.)

I am also concerned with the one-to-two-day drug-free period prior to the initial EEG. Considering the wide use of drugs, varied dosages, etc., this is inadequate. I do not have a good solution, but I would recommend placing all patients in a defined group on the same medication for a specific period of time before the EEG.

When we examined the issue of diagnosis-related EEG measures some years ago, we reported that the age differences were a more parsimonious explanation of the differences found between schizophrenics and depressives. Dr. Reilly does not indicate an awareness of this major pitfall in such research.

Thus the issue of quantification, psychiatric diagnosis, medication and age controls, in addition to the small sample, make me question the likelihood that the goal will be reached.

The application is also unclear as to whether VER, or resting EEG, are the foci of the study. The application lacks a specific hypothesis reflecting potential effects in either measure.

2. Facilities

The physical facilities seem adequate to the task, although I anticipate that Dr. Reilly will find that recordings made on a Beckman recorder will not be satisfactory for computer processing.

Dr. Reilly's training seems adequate for EEG and his co-workers are physiologists and statisticians. The participation of a psychiatrist (a behavioral typologist) seems lacking in the study.

The funds requested seem unusually modest. Considering the talents ascribed to the consultants, the sum requested (\$3,000) and the computer time (\$600) are inadequate for the analyses described in the text. While modesty may be a factor, I believe lack of experience is a better explanation.

3. Significance

The problem of physiological indices for the classification of the mentally ill and for the description of changes in psychiatric treatment are very important issues. The problem has been approached by many investigators. The literature survey presented by Dr. Reilly is adequate, although there are significant omissions, particularly the studies of Shagass, Callaway, and Monroe. Again, the references to clinical electroencephalographers, especially those associated with Knott, Wilson, and Doty, are well reported, but the contributions to this problem by psychopathologists are lacking.

4. Conclusions

I cannot help feeling that Dr. Reilly is an enthusiastic young man, experienced in climbing a small hill in the lower Appalachian Mountains, who became excited with the possibility of scaling Annapurna. The goal is commendable, but he seems to have learned only the rudiments necessary for this task, and I do not believe that the prognosis for success is favorable.

But how can one encourage such an interest? Is it possible to recommend that he spend some time with Callaway, Shagass, J. Small or Itil to obtain additional psychiatric experience relevant to the problem which interests him?

I would also suggest, if one can, that he become acquainted with Neil Burch and Peter Kellaway, both in Houston. These men understand EEG measurement and can probably contribute to his data processing. He should become acquainted with either Bernard Saltzberg of Tulane or Stanley Feldstein of the University of Maryland. Both of these men have devoted many years' effort to the statistical analysis of complex EEG data, Saltzberg with Burch and Feldstein with me. (I would ask that he be advised of the work of Dr. Burch, for on Page 21 he says, "There is no other source of the programs in running form available in Houston." It is my understanding that Dr. Burch has had quantitative EEG programs for background EEG and probably AER in running form since 1966.)

I trust these comments are helpful. I believe a man should be encouraged to climb mountains when he has had sufficient experience to handle these problems--for climbing the mountain that he has targetted is a worthwhile experience.

J. J. Lasky, Ph.D.

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Thank you for the opportunity to review this application.

Sincerely,

Max Fink, M.D.
Professor of Psychiatry

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