A) ABSTRACT

•**Background**   Psychomotor disturbance has been recognized by clinicians in diverse psychiatric conditions, although its clinical relevance has remained unclear. The present study evaluated psychomotor performance in two patients groups, depressives and schizophrenics, and a normal (non-psychiatric) control group using two simple pencil-and-paper maze tasks. Secondly, it included a cautious attempt to evaluate whether symptom improvement in the depressive group might be accompanied by a parallel improvement in psychomotor deficit. This study aimed to examine the use of two maze-tracing paradigm in: (a) capturing the psychomotor impairment in depressive patients, (b) discriminating depressives from another psychiatric group, namely, schizophrenic patients, and (c) as a simple assessment for symptom improvement in depressive patients.

•**Methods**   20 depressives and 42 schizophrenics (all patients satisfying the ICD-10 diagnostic criteria upon hospital admission) together with 19 non-psychiatric control subjects were recruited for the present study. All subjects were required to perform two simple "pencil-and-paper' psychomotor tasks based on maze-drawing paradigms. They were also assessed on the Hamilton depression scale (HDRS) and Zung self-rating depression scale (SDS), followed by the motor agitation and retardation

scales (MARS). Data on demography, symptoms and treatment received were also collected. A subset of the ten depressive patients were followed longitudinally and evaluated again upon their discharge from hospital.

- **Results** Compared with the control subjects, both depressives and schizophrenics exhibited significant psychomotor impairment on the two maze-tracing tasks. However, these psychomotor tasks failed to reliably discriminate depressives from schizophrenics. Supplementary analysis further revealed that, similar to the depressives, schizophrenics scoring high on the HDRS were particularly impaired on the 'Square' psychomotor task; this difference was however not seen on the 'Spiral' psychomotor task. Secondly, no significant difference in psychomotor performance or SDS was obtained in depressive patients upon discharge relative to their initial performance upon admission, despite of a clear reduction in HDRS and MARS in these patients.

- **Conclusions** Depression and schizophrenia were both associated with clear psychomotor impairment when compared to non-psychiatric control subjects. Neither the MARS nor the maze-tracing tasks were able to discriminate depressives from schizophrenics reliably. This failure did not seem to be attributable to the presence of depressive signs among the present schizophrenic samples. The present study showed that MARS scores were improved in depressives upon discharge from hospitalization,

but this was not accompanied by any significant improvement in psychomotor performance as assessed with the maze-tracing tasks. It was concluded that the simple maze-tracing tasks as employed here would not have much clinical values in differentiating depressive from schizophrenic, although the results might be of potential interest to the theoretical construct of psychomotor disturbance.

•**Key Words**   Psychomotor disturbance, Depression, Schizophrenia, Maze-drawing, HDRS, SDS, MARS.