

The Relationship Between
LNNB Scale Scores and Neuroleptic Dosage Levels in Schizophrenics

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Performance on neuropsychological tests can be influenced by factors other than neural impairment. One variable affecting neuropsychological performance in psychiatric populations appears to be neuroleptic medication (Killian, Holzman, Davis & Gibbons, 1984). However, the effects of these drugs on neuropsychological performance has yet to be adequately documented.

To explore the role of drug dosage, 30 inpatient volunteers from a state hospital were individually administered the Luria-Nebraska Neuropsychological Battery (LNNB). Scores from the 14 scales of the LNNB were then correlated using Pearson's r to drug dosage levels. Considering that patients were receiving a wide variety of neuroleptic drugs, dosage levels were standardized by expressing them as chlorpromazine equivalents using the method described by Davis (1980).

As expected, the results indicated that no relationship between any of the scales of the LNNB existed with drug dosage levels. Whether this reflects such factors as sampling errors, the limitation of the LNNB, or of the usefulness of drug levels is not yet known. However, similar findings have been noted with other measures. For example, these results are supportive of those reported by Tune, Creese, De Paulo, Slavney, Coyle, and Snyder (1980) who reported that drug dosage levels were inadequate predictors of clinical rating scale scores. More important than dosage levels according to Tune and colleagues is blood serum levels of the neuroleptic.

Comparative Doses of Antipsychotic Medication

Generic Name	Trademark	Defined Dosage,* mg	Dose Equivalent,** mg
Chlorpromazine	Thorazine	100	100
Thioridazine	Mellaril	97 ± 7	100
Mesoridazine	Serentil	56 ± 6	51
Chlorprothixine	Taractan	44 ± 8	100
Trifluoperazine hydrochloride	Vesprin	28 ± 2	28
Carphenazine maleate	Proketazine	25 ± 2	28
Acetophenazine maleate	Tindal	23 ± 1	19
Prochlorperazine	Compazine	14 ± 2	15
Piperacetazine	Quide	11	14
Butaperazine maleate	Repoise Maleate	9 ± 1	13
Perphenazine	Trilafon	9 ± .6	10
Molindone hydrochloride	Moban	6 ± .9	10
Thiothixene	Navane	4.4 ± 1	3
Trifluoperazine hydrochloride	Stelazine	2.8 ± .4	5
Haloperidol	Haldol	1.6 ± .5	2
Fluphenazine hydrochloride	Prolixin, 5 mg	1.2 ± .1	2
Fluphenazine hydrochloride	Permitil, 10 mg	1.2 ± .1	2
Fluphenazine enanthate	Prolixin enanthate	.67	
Fluphenazine decanoate	Prolixin decanoate	.61	

* Empirically defined does in milligrams equivalent to 100 mg of chlorpromazine.

** Average does in milligrams equivalent to 100 mg of chlorpromazine, as defined by experts.

From: Davis, J. (1976). Comparative doses and costs of antipsychotic medication. Archives of General Psychiatry, 33, 858-861.