

P-1113 - HOW DO PSYCHOTROPIC DRUGS WORK?

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The theory of “action-reaction” in living systems was used for studying the mechanism of action of psychotropic drugs.

Primary action (PA) is the direct/immediate effect of drug. It consists of therapeutic and side effect profile of drug. The PA of each drug was compared with symptoms of the illness that it is used for. Also long term patterns of behaviour of drugs and response of body were extracted from National British Formulary (BNF) too. Findings could be summarized into two main groups:

Contrary based: Consists of drugs which their PA counteracts the symptoms of illness e.g. drowsiness as PA of hypnotics when they are used for treatment of insomnia.

1. PA of drug is therapeutic therefore improvement starts quickly.
2. Tolerance develops in long term use.

Simulation based: Consists of drugs which their PA simulates the symptoms of illness e.g. anxiety and palpitation as PA of Citalopram used for Panic disorder.

1. There is possibility of initial paradoxical worsening due to PA of drug. It can be minimized by reducing the initial dose.
2. Unlike above, here the reaction of body (we call it as secondary action) seems to provide the therapeutic effect and therefore improvement starts with delay.
3. They can be used long term without developing tolerance.

Results: Show that 10% of psychotropic drugs work in contrary based and 47% in simulation based mode. Information in BNF has not been conclusive for 43% of drugs, like Benperidol for antisocial behaviour. Confirmation of clinical value requires further studies.