THE EFFECTS OF SOME ANTIFERTILITY MEDICINAL PLANTS ON THE STRESS AND ANXIETY RELATED BEHAVIOR IN FEMALE ALBINO RATS

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ABSTRACT – Exposure to elevated plus-maze is known to evoke approach-avoidance conflicts behavior and anxiety related movements in female albino rats were studied in relation to some anti-fertility medicinal plant extracts viz., dried seeds and inflorescence of Abrus precatorius (Linn.) (T1), dried stem bark of Cedrus deodara (Roxb.) Loud. (T2), Mallotus philippensis (Muell.-Arg.) (T4) and Moringa oleifera (Lam.) (T7), fresh leaves of Artabotrys hexapetalus (Linn.F. Bhandri) (T3), dried seeds of Ocimum tenuiflorum (Linn.) (T5) and Peganum harmala (Linn.) (T8), fresh flower buds of Jasminum arborescens (Roxb.) (T6), and dried roots of Momordica tuberosa (Roxb.) Cogl. (T9) were applied at a dose of 250 mg/kg. body weight for 15 days on test animals. The present investigation was undertaken to probe in to some psychobiological changes e.g., aversiveness to restraint, struggle and defecation seen during the experiment were also studied and compared in between the selected herbs.

The treatment of rats with the alcoholic extract of Moringa oleifera (T7) in relation to behavioral assessment through elevated plus-maze showed a remarkable difference from rest of the eight plant products. In this treatment rats expressed itself totally restless and full of anxiety with de-railed physiology as compared to control as it crossed the equal time in open and closed arms of the plus-maze but with emulsion oil extract of Mallotus philippensis (T4) and alcoholic extract of Momordica tuberosa (T9) female albino rats showed lethargic and timid behavior because treated animal crossed maximum time in closed arms. The effect of selected anti-fertility plant products and their effect on the muscle protein resilin were examined through a physical exercise applied without sacrificing the experimental animals, designed as tight-rope bridge or wire bridge test. In case of Mallotus philippensis (T4), petroleum ether extract of Jasminum arborescens (T6), Moringa oleifera (T7) and Momordica tuberosa (T9) the resilin level was flickered up to a imbalance level and created a lost action on muscle activity and promptly effective on neuro-muscular-co-ordination to produce typical neurosis problem while rest of treatments were at par to control.

The non-sexual behavior study revealed that alcoholic extract of A. precatorius (T1) and P. harmala (T8), petroleum ether extract of C. deodara (T2), O. tenuiflorum (T5), and A. hexapetalus (T3) were at par to control and represented themselves with no post-treatment stress on the treated rats while the M. philippensis (T4), J. arborescens (T6) and M. oleifera (T7) were clearly apparent for their adverse effects on psycho-biological changes. The M. tuberosa (T9) was highly significant as compared to control in providing abrupt data which might be due to exo or endogenous depression.

Key words : Plus-maze, anti-fertility, resilin, neuro-muscular-co-ordination, psycho-biological.