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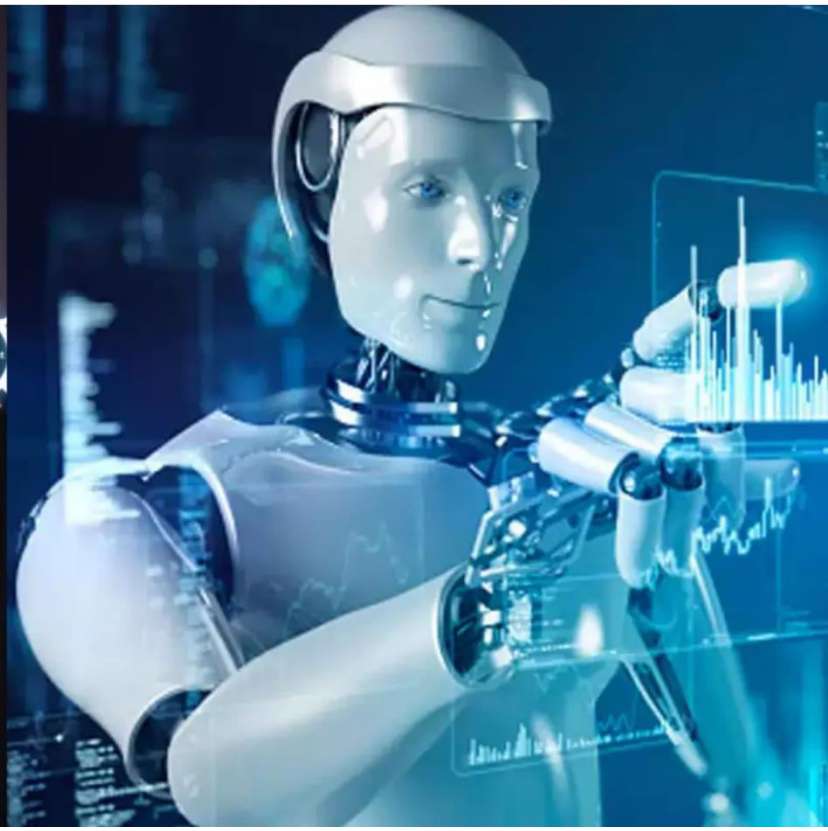
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Anti-Anxiety Activity of *Tamarindus indica linn* Stem Bark on Swiss Albino Mice

Mahjabeen Bano*, Bhavana Yadav, Manoj Kumar, Mariyam Fatima, Dr Abhay Pratap Yadav

R. K. Pharmacy College Sathion, Azamgarh, UP, India

ABSTRACT: Objective: To perform the anti-anxiety activity of methanolic extract of *Tamarindus indica* stem bark on experimental methods (elevated plus maze and Open- Field test) in through utilizing mice.

Materials and methods: Stems bark of *Tamarindus indica* was collected, dehydrated and creased. The Stems bark extracted via utilizing methanol through soxhelet apparatus. Afterward the abstraction phytochemical testing were completed. Methanol excerpt Stems bark of *T. indica* was applied at two quantity (250 and 500mg/kg, oral. admin) in animal through EPM and OFT model. The mice are divided into four groups of six mice respectively. Group-I receive Nacl, Group-II standard drug (Diazepam) 1mg/kg, Group-III *t. indica* 250mg/kg and Group-IV receive *t. indica* extract at 500mg/kg for 14 days. Anxiety protective activity of plant excerpt was assessed via EPM and OFT examination. In EPM and OFT test, plant excerpt of *t. indica* displayed improved the % of time spent in open arm and % of open arm entrances.

Results & Discussion: Phytochemical examination of *t. indica* methanolic extract showing the alkaloids, flavonoids, amino acids, proteins, and carbohydrates. Admin of Diazepam (1mg/kg i.p.) showed a significantly decline anxiety like activities when compared to control group. Management of plant extract (250 & 500mg/kg) to animal significantly reduction the anxiety alike symptoms when compared to control group. Diazepam treated group and plant excerpt dose 500mg/kg display greater antianxiety effect than 250mg/kg of plant extract.

Conclusion: Results recommend that stem bark of *Tamarindus indica* possess significantly anti-anxiety action.

KEYWORDS: *Tamarindus indica*, Diazepam, Antianxiety, EPM, OFT.

I. INTRODUCTION OF MICROORGANISM

1.1. Anxiety:

Anxiety is common mental illnesses, disturbing 10-15% of the people [1]. Anxiety can manifest as a range of behavioral and affective symptoms, including danger situations, flight, agitation, motionless, nervous, anxious, wound up scared etc. Anxiety is a negative emotional state characterized by unease, discomfort, and concern or fear over a known threat. These are common existence in life. Management is required when it is excessive and out of proportion to the situation. It manifests itself as fluctuations in our physical activity, feelings, ideas, and manners. Severe stress disorder, obsessive-compulsive disorder, generalized anxiety disorder, specific phobia, panic attack disorder, and post-traumatic stress disorder are some examples of anxiety illnesses. [3] For at least six months, anxiety has been linked to exasperation, agitation, a taut or worried sensation, a propensity to become fatigued rapidly, difficulties focusing or losing focus, trouble sleeping, and annoyance. [2]

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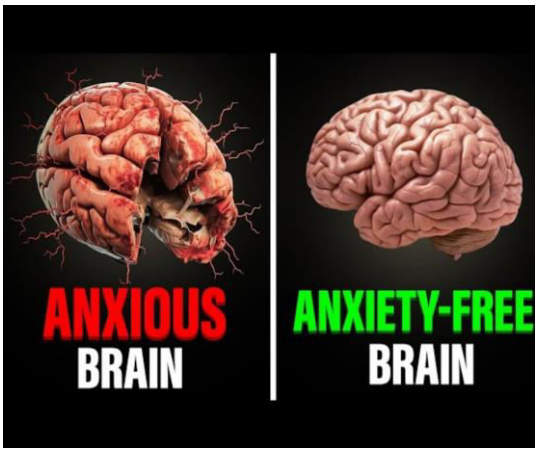


Figure no. 1. Anxiety condition

1.2. Varieties of anxiety disorders:

1.2.1. Generalized Anxiety Disorder (GAD):

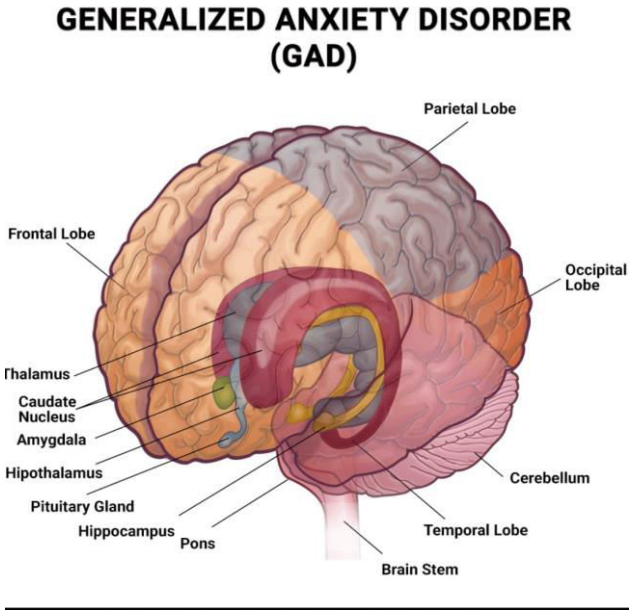


Figure no. 2. Generalized anxiety condition.

Excessive pressure and anxiety over a variation of measures or activities that arise more often than not through at least of six months, alongside through the signs that go along with it (e.g., overtiredness, lowly concentration).

1.2.2. Specific Phobia:

Specific Phobia is an anxiety sickness noticeable through an intense, illogical distress of a particular thing or condition that poses slight or no actual danger. The fear is immediate and can trigger strong anxiety or panic.

Communal Types

Animal Kind – dogs, spiders, snakes.
Natural Environment Kind – heights, storms, H2O.
Blood–Injection–Injury Type – needles, medical processes, seeing blood.

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Situational Type – airborne, elevators, enclosed spaces.
Other – choking, loud sounds, clowns, etc.

1.2.3. Post Traumatic Stress Disorder:
Irritation is reaction to disturbing episode in which body impairment occurred or risk (like fighting, or a normal disaster, youth misappropriation, rape), recurrences, and remembrances.

1.2.4. Social Phobia: This type disorder fast anxiety reaction is nearly always initiated via societal or presentation settings. This response can consist of tremors, perspiration, GIT distress, diarrhea, muscle tension, flushed, or bewilderment. In extreme cases, it may even meet requests for a calm occurrence **[3].**

1.2.5. Obsessive-Compulsive Disorder Obsessions: Compulsive persons usually try to ignore or repress these ideas or impulses, or they may effort to offset them through other thoughts or activities.

1.2.6. Compulsions: Repetitive movements (such as rinse your hands, compare, or analysis) or psychological practices that are produced through formalities.

1.2.7. Panic disorder: These are described via the repetitive and unpredicted existence of panic attacks. These episodes may be followed by persistent anxiety about experiencing additional attacks or about their possible magnitudes. Such concerns may continue for approximately one month or longer and may result in significant changes in the individual's behaviour. A distinct time of extreme dread or discomposure complemented via nearest 4 of the thirteen physical indications is the fundamental characteristic of a panic attack, including Palpitations, developed heart rate [4].

a) Sweltering
b) Trembling or shaky
c) Feelings of shortness of breath
d) Sense of pungent
e) Chest discomfort
f) Nausea or belly ache
g) Dizziness, wooziness
h) Panic of dropping control
i) Panic of failing

1.3. Some medical ailment anxiety like signs:

Table no. 1. : Certain sickness anxiety like indications:

Brain system	CNS tumors, dementia, migraine, pain.
Endocrine and Metabolic ,	Hyperthyroidism, hypoglycemia, Addison's disease, electrolyte imbalances, and hyperkalemia.
Cardiac	Angina pectoris, arrhythmias, CHF, MI etc
Abdominal	Ulcerative colitis, IBD (irritable bowel syndrome)
Lung system	Asthma, pulmonary edema, pneumonia, COPD.
Others	AIDS, anemia**[5]**

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1.4. Causes:
Anxiety disorder may be caused by various interface of biological, psychosomatic and social factors.

1.4.1. Societal factors:
- ❖ Bad situations of lifespan,
- ❖ A absence of communication by others
- ❖ Pressure in workshop
- ❖ Deficiency of societal capabilities

1.4.2. Psychosomatic factors:
- Behavioral features
- Reduced self-respect
- Unfavorable moods
- Perceptions of surrounding

1.4.3. Biological issues:
- ➢ Genetics
- ➢ Neurotransmitter condition
- ➢ Sickness
- ➢ Drugs
- ➢ Dietary habits

1.5. Clinical manifestation:
- ➢ Sense distressed
- ➢ Existence definitely tired
- ➢ Head pain, muscle pain, stomach pain or unexplained troubles
- ➢ Sweltering
- ➢ Chest ache
- ➢ Existence out of controller
- ➢ Trouble creation eye interaction to publics
- ➢ Consuming sleep harms
- ➢ Struggle in focused
- ➢ Running heart.[6]

1.6. Risk factors:
These elements could raise your risk of getting an anxiety disorder:
1. Trauma
Kids that were mistreated, faced trauma, or watched unpleasant events have a higher risk of developing anxiety problems as adults. Adults with severe trauma may also develop anxiety disorders.
- ➢ Stress associated with illness

A serious illness or medical condition may lead to intense fear almost future occurrences and the span of treatment, and other factors.
- ➢ Accumulation of stress

A major personal event, like a expiry in personal, pressure at labor, or constant economic anxiety, might trigger high levels of anxiety.
- ➢ Personality

Some kinds of personalities are additional susceptible to nervousness problems than others.
- ➢ Additional psychological health conditions

Individuals with anxiety problems commonly exist like sadness.
- ➢ An anxiety disorder past in family

Disorders of anxiety may originate in families.
- ➢ Alcohol or drug use

Anxiety can be produced by using abusing or quitting drugs or alcohol.

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II. METHODOLOGY

2.1. Choice and collection of plant materials:-
Plant was chosen for application view of its customary, phytochemical profile was collected from wild source , Azamgarh, Uttar Pradesh.

2.2. Authentication of plant:-
Plant authenticated via B.H.U. Varanasi, India, approved the plant. For future reference, a *Tamarindus indica L.* (Voucher specimen no. Foba. 2026/01) was set at herbarium.

2.3. Materials Rquirements:-

Table .Number 2. List of chemicals, instruments and drugs:

Instruments	Chemicals	Drugs
✓ Condenser	Lead acetate	➢ Diazepam
✓ Desiccator	Hager's	
✓ Grinder	Shinoda	
✓ EPM apparatus	Mayer's, Wagner's,	
✓ Digital pH meter	Biuret	
✓ Soxhlet extractor	Ninhydrin	
✓ Heating mantle	Foam test	
✓ Oral cannula	Ferric chloride test	
✓ Syringe ✓ Needle ✓ OFT apparatus	Methanol Reagents and Distilled Water	
	Molisch's test reagents	
	Benedict test	
	Keller-killiani test	

2.4. Preparation of extracts:-
We defatted 500 g of coarsely powdered stem bark of the plant with methanol and subsequently extracted the material through methanol utilizing a Soxhlet device at 60°C for 48 hours. We filtered the extract through Whatman No. 1 filter paper. We removed the solvent wholly under reduced pressure using a rotary vacuum evaporator to obtain a powdery mass. We stored the concerted excerpt in a vacuum desiccator for further usage [7]. We evaluated the methanolic extract (ME) for antianxiety activity at dosages of 250 and 500 mg per kg administered orally. We compared the results with those obtained using the standard antianxiety drug, diazepam (1 mg per kg, i.p.). We suspended all test materials in water as the vehicle.

2.5. Calculating of % Extractive Yield:
The **%** extractive yield will be calculated the amount of excerpt obtained since the coarse powdered stem bark material used for extraction. The final excerpt will be considered using an weighing balance. The initial weight of the plant coarse powder and the final weight of the excerpt will be accepted . The **%** yield will be calculated by using the following formula:

Extractive yield (%) = Weight of extract obtained /Weight of powdered stem bark used ×100
500 g of stem bark coarse powder provides 40 g of excerpt, then the yield is 8%.

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2.6. Methods for phytochemical screening tests:-

The ME were primary phytochemical showing for detection of occurrence or absence of alkaloids, flavonoids, tannins, coumarins, steroid, tri-terpenoids, protein and amino acid.

2.6.1. Test of alkaloids:

- ✓ **Mayer's test:** On a steam shower, 0.4 g ME was mixed by 4 ml 1 percent HCL, and the mixture was filtered. A couple of droplets of Mayer's substance were add to few ml of filtrate. White of creamy white precipitous indications the occurrence of alkaloid.
- ✓ **Wagner's test:** On a steam bath, 0.5 g ME was mixed with five ml 1 percent HCL and solution was filtered. A couple of droplets of Wagner's substance were added to one ml of filtrate. Brown or deep brown colored showed occurrence of alkaloids.
- ✓ **Hager's test:** On a steam bath, 0.4 g ME was mixed by using 5 ml 1 percent HCL and filtered. A few drop of Hager's reagent were added in 1 ml of excess. Occurrence of alkaloids showed Yellow crystalline precipitate[8].

2.6.2. Test of flavonoids:-

- ➢ **Shinoda test :** Take small amount of Plant extract & liquefied in 5mL 95 % alcohol , add two droplets concentrated HCl and 0.4 g magnesium turnings. Improvement pink pigment detected in the presence of flavonoids.
- ➢ **Specific test:** A test tube, taken was sample 0.5 ml. A lesser portion of magnesium or zinc ribbon was added. From that point onward 5-10 droplets concentrated HCL was added. The solution was heated for some minutes. Flavones, flavanols, and flavanones are shown through the Improvement of orange to red, red to ruby, crimson to magenta indicates.
- ➢ **Lead acetate test:** A little quantity plant excerpt and add lead acetate solution was engaged in a test tube, develop yellow colored precipitous is made in the presence of flavonoids.

2.6.3. Test of Proteins and Amino acids:-

b) **Biuret test:** In test tube two ml plant excerpt + one droplet of two percent copper sulphate sol. + one mL of 95% ethanol + KOH bits was engaged. When proteins and amino acids presence a pink colored improvement.

c) **Millon's test :** Dual mL filtrate + two droplets of Millon's substance was mixed in test tube. In the attendance of proteins and amino acids a white precipitous improve.

d) **Ninhydrin test:** In a test tube, 2mL filtrate was mix using two droplets ninhydrin solution. When proteins and amino acid present, purple colour develop.

2.6.4. Test of glycosides:-

❖ **In a general test:**

A smaller quantity of the excerpt was liquefied in 1 ml of H2O and 1–2 droplets of an aqueous NaOH solution. Yellow pigment makes glycosides visible.

❖ Legal's test for cardiac glycosides:-

In dual ml of sodium nitro-pruside solution (0.5 percent),100 milligrammes of the extract was liquefied. Basic preparation of the mixture involved NaOH (0.2N) solution. Heat, glycosides are present and create pink to crimson colour.

❖ Test of Baljet:

A small amount of the Baljet reagent was introduced along with the plant material. Due to the presence of cardiac glycosides, a yellow-orange tint developed.

2.6.5. Test of triterpenoids:-

❖ **Salkowski test:** In a test tube, extract and couple droplets of concerted H_2SO_4 (stirrer well and permitted to stand). Improve Golden yellow film in the existence of triterpenoids .

2.6.6. Test of tannins:-

❖ **Gelatin test :** Plant remove liquefied with five ml distilled water + one percent gelatin solution + 10% sodium chloride was added. Improve white precipitous existence of tannins.

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2.6.7. Test of steroid:-

- **Libermann- Burchard's test :** 2 ml excerpt and liquefied in 1ml of chloroform in test tube. Two ml of acetic anhydride and one ml of concerted H_2SO_4 was added. Existence of steroid develop light green color [9].

2.7. Estimation of phenolic Content:-

Complete phenolic content of *Tamarindus indica* methanol extract was determined utilizing the folin-ciocalteu strategy. Methanol was utilized to make a stock arrangement (20mg/10ml) of the concentrate. 1ml of the concentrate was removed from the stock arrangement and put in 25 ml volumetric flask. This add 1.5 ml of folin ciocalteu reagent and 10 ml of H2O. Further 5 minutes, four ml of 20% Na_2CO_3 preparation was added to the blend, the volume expanded toward 25 ml using two fold distilled H2O. Following 30 minutes, the mixture tried of absorbance with two fold distilled water in volume of 25 ml. Resulting 30 minutes, absorbance the blue pigment produced was noted on 765 nm. Intended for alignment bend, an answer of standard gallic acid in the focus scope of 10-100 ug/ml was delivered. Following 30 minutes, absorbance of blue tone shaped was estimated on 756 nm. For adjustment bend, an answer of standard gallic corrosive in the fixation scope of 10-100 ug/ml was created [10].

2.8. Estimate of Complete Flavonoid Content:-

All flavonoid concentrations are determined utilizing the aluminium trichloride test. In test tube, 0.3 ml concentrate, 3.4 ml of 30% ethanol, 0.15 ml of Sodium nitrite (0.5 M), and 0.15 milliliter of $AlCl_3.6H_2O$ (0.3 M) were combined. Following five minutes, one ml of NaOH (1M) was added. After completely mixed liquid absorbance was estimated on 504 nm versus a clear example.

2.9. Experimental Animals:-

For these experimentations, we used Swiss albino mice considering 25–30 g. We stored all animals in polypropylene cages (38 × 23 × 10 cm) containing paddy husk as bedding. We maintained the animals at a hotness of 25 ± 2°C and a comparative moistness of 50 ± 5%, with a controlled light–dark cycle of 12 hours of light and 12 hours of darkness. We providing fresh water ad libitum and fed all animals with a standard pellet diet. We conducted all experiments in accordance with the animal ethical guidelines of the Institutional Animal Ethics Committee (IAEC), under Approval No. 1384/PO/Re/S/10/CCSEA and Project ID No. IAEC/RK/26/01.

2.10. Elevated plus maze induced anxiety model:

The antianxiety action of plant extract was evaluated in Swiss albino mice utilizing the EPM method. The plus maze was designed in a cross-shaped configuration, consisting of two open arms (30 × 5 × 0.25 cm) and two closed arms (30 × 5 × 15 cm), extending from a central platform (5 × 5 cm) and elevated 50 cm above the ground. The entire maze was constructed of wood. Mice weighing 20–30 g were divided into 4 groups, with six mice in all group. Group I was designated as the control group and was administered normal saline. Group II was treated with the standard drug, diazepam (1 mg/kg, i.p.). Groups III (Test I) and IV (Test II) were administered the plant excerpt at doses of 250 and 500 mg/kg, respectively, by the oral route. Diazepam was administered intraperitoneally 30 minutes before the experiment, whereas the extracts were managed orally 45 min beforehand experiment. Every one animal was individually engaged on the central platform of the maze, facing an open arm. The number of entrances into the open and closed arms and the time spent in each arm were noted during a 5-minute observation period. An arm entry was clear as the entrance of wholly four paws into the respective arm.

Group-I is control managed only normal saline.
Group-II standard (Diazepam 1mg/kg) i.p..
Group-III (Test-I) METI 250mg/kg.
Group-IV (Test-II) METI 500mg/kg oral was administered.

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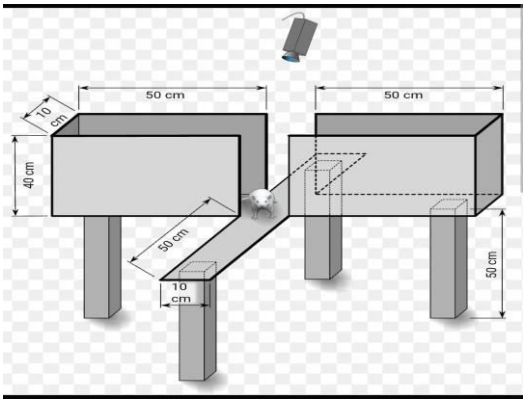


Figure no. 3. Elevated plus maze induced anxiety model

2.11. Open- Field apparatus test (OFT):
Albino mice weighing 25–30 g separated into four groups, with six in each one set. Prior to the experimentation, the mice were abstained overnight but were providing free access to water. Group I was designated as the normal control. Group II was administered diazepam (1 mg/kg, i.p.), whereas Groups III and IV were administered 250 and 500 mg/kg of excerpts orally on one occasion daily for 14 days. On the 14th day, one hour later the management of the vehicle, standard drug, and extracts, every one animal was engaged in the centre of the open-field apparatus. The relevant behavioral parameters were recorded during a 5-minute observation period.

Ambulation: Determining the quantity of squares crossed through mice.
Rearing: The number of times the mice were observed standing on their hind legs.
Group-I is control managed only normal saline.
Group-II standard (Diazepam 1mg/kg) i.p..
Group-III(Test-I) METI 250mg/kg.
Group-IV (Test-II) METI 500mg/kg oral was administered.

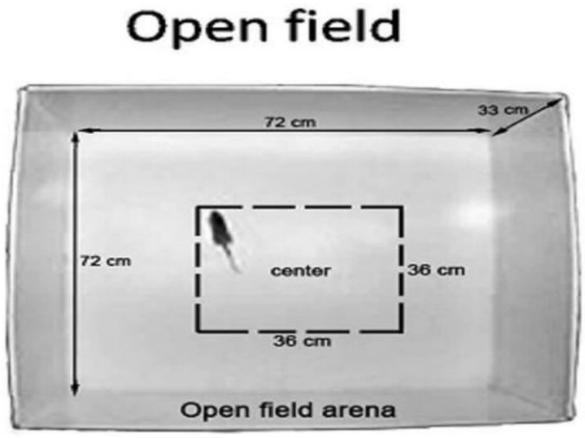


Figure .no. 4. Open- Field apparatus test (OFT)

2.12. Statistical Analysis: The results were presented as mean ± SEM. The differences were compared by using one-way ANOVA and Dunnett's test.

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III. RESULT

3.1. Plant authentication:

Plant was authentic by N.K. Dubey department of botany B.H.U., Varanasi specimen no. *Foba.* 2026/01

3.2. Percentage Yield of Extract:

500 g of stem bark coarse powder of *t. indica* provides 40 g of excerpt, then the yield is 8%.

3.3. Preliminary phytochemical investigation:-

T. indica showing the presence of triterpenoid, proteins and amino acids, alkaloids, flavonoids, and coumarin. In order to address the existence of numerous phenolic mixes, such as polyphenols, flavonoids, phenolic acid, etc.

Table no. 3: Primary phytochemical analysis.

Phytochemicals	**Name of the test**	**Observation**	**Result**
Steroid	Libermann-Burchard's test	No ppt	Absent
Proteins and Amino acids	Biuret Millon's Ninhydrin	A pink color A white ppt. grow No precipitate	Present Present Absent
Flavonoids	Shinoda Specific Lead acetate	Growth pink color Orange to red Yellow color	Present Present Present
Triterpenoid	Salkowski's test	Grow Golden yellow coating	Present
Tannins	Gelatin test	No ppt	Absent
Glycosides	General test Legal′s test Baljet test	Yellow colorant Pink to red colorant No ppt.	Present Present Absent
Alkaloids	Mayer's Wagner's Hager's	Creamy white precipitate. Deep chocolate precipitate. Yellow crystalline ppt.	Present Present Present

3.4. Effect of *Tamarindus indica* stems bark excerpt on EPM Model:

The methanolicolic extracts of Tamarindus indica stem bark at doses of 250 and 500 mg/kg oral. were assessed through Elevated Plus Maze (EPM) test (Table 4). A significant improvement the number of entrances into the open arms and the time spent in the open arms was observed. The anti-anxiety activity was originate to be significant at a quantity of 500 mg/kg p.o. The pharmacological effects of the methanolic excerpt of *Tamarindus indica* were found to be comparable to those produced by diazepam at a dose of 1 mg per kg i.p.

Table no. **4. :** Antianiety action of methanolic extract of *Tamarindus indica* plant on mice epm test.

Sr. no.	**Groups**	**Treatment**	**Number of entries open arm (counts)**	**Number of entries closed arm (counts)**	**Time spent in open arm (s)**	**Time spent in closed arm (s)**
1	Group-I	Control (normal saline)	5.20± .22	14.11±.35	66.1±0.56	228.3±.34
2	Group-II	Diazepam(1mg/kg)	9.50±.45*	6.15±.22*	179.34±0.36*	116.40±.35*
3	Group-III	METI(250mg/kg)	6.47±.06ns	9.32±.11*	91.11±0.30*	204.34±.20*
4	Group-IV	METI(500mg/kg)	7.64±.11b	8.12±.22*	134.08±0.09*	161.65±12*

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The values are stated as Mean ± SEM (n = 6). The data were examined via one-way ANOVA, monitored by Dunnett's test. Statistical significance was measured at aP < 0.05, bP < 0.01, #P < 0.001, and *P < 0.0001. The results were measured non-significant (ns) when matched with the control group.

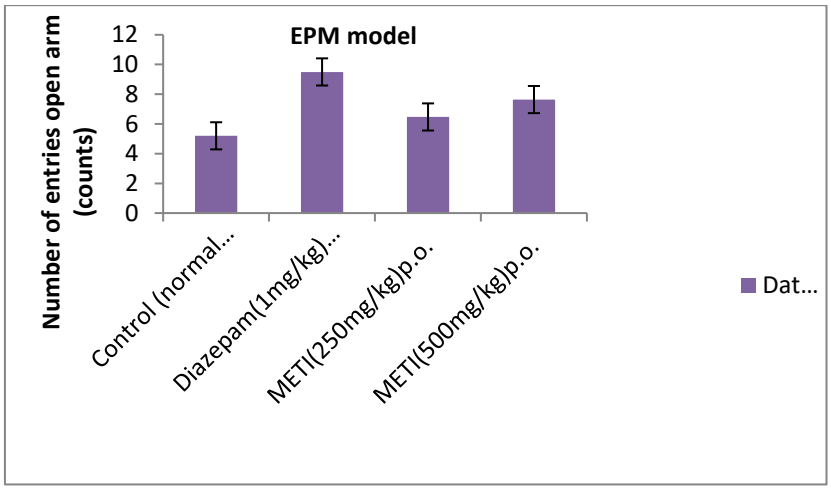


Figure no. 5. Result of EPM test of METI stems bark Number of open arm entries (counts):

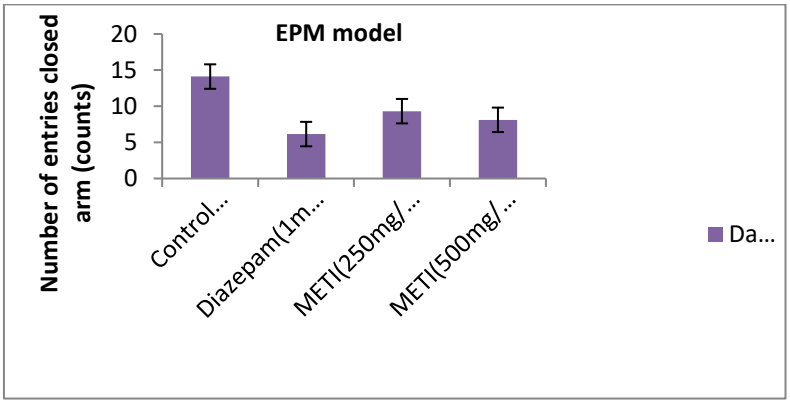


Figure no.6. Result of EPM test of METI stems bark No. of closed arm entries (counts):

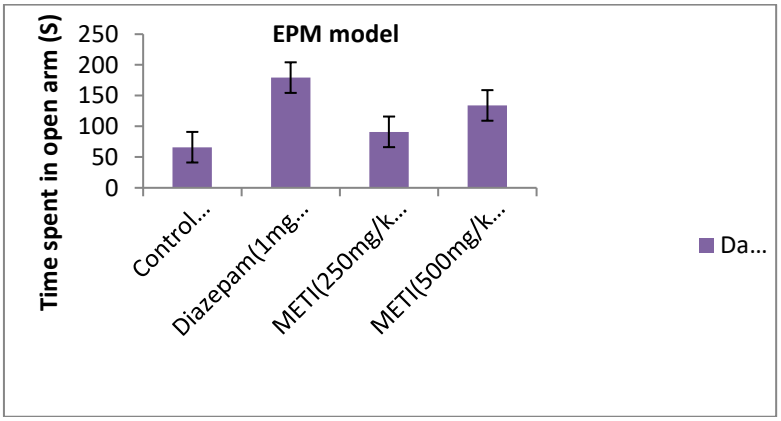


Figure no. 7. Result of EPM test of METI stems bark Time spent in open arm (s):

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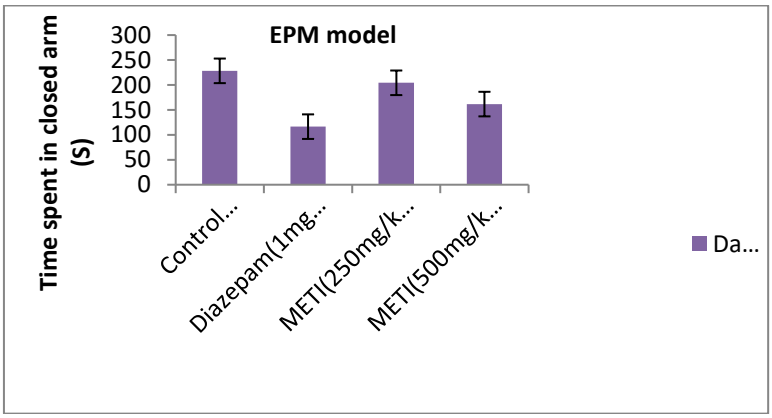


Figure no. 8. Result of EPM test of METI stems bark Time spent in closed arm (s):

3.5. Effect of *Tamarindus indica* stems bark extract on open field test:

In the open-field test, a significant rise in the digit of rearings and the digit of squares crossed during a 5-minute observation period was observed in animal cured through diazepam and Tamarindus indica methanolic extract at quantities of 250 and 500 mg/kg p.o., as matched with the vehicle-treated control group. The statistically significant results were particularly observed with the methanolic excerpt at a dose of 500 mg/kg p.o. [Table No. 5].

Table no. 5 : Effect of *Tamarindus indica* stems bark excerpt on the behavior of animal in OFT:

S. no.	**Group**	**Treatment**	No. of squares crossed	Rearing
1	Group-I	Control (normal saline)	115.21±1.21	9.14±3.25
2	Group-II	Diazepam(1mg/kg)	169.12±1.21***	26.33±3.23***
3	Group-III	METI(250mg/kg)	130.12±1.44^{ns}	15.33±4.06^{ns}
4	Group-IV	METI(500mg/kg)	158.08±2.11***	24.51±2.33**

Values are Mean SEM, (n=6), ns Non-significant* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ as accorded to control.

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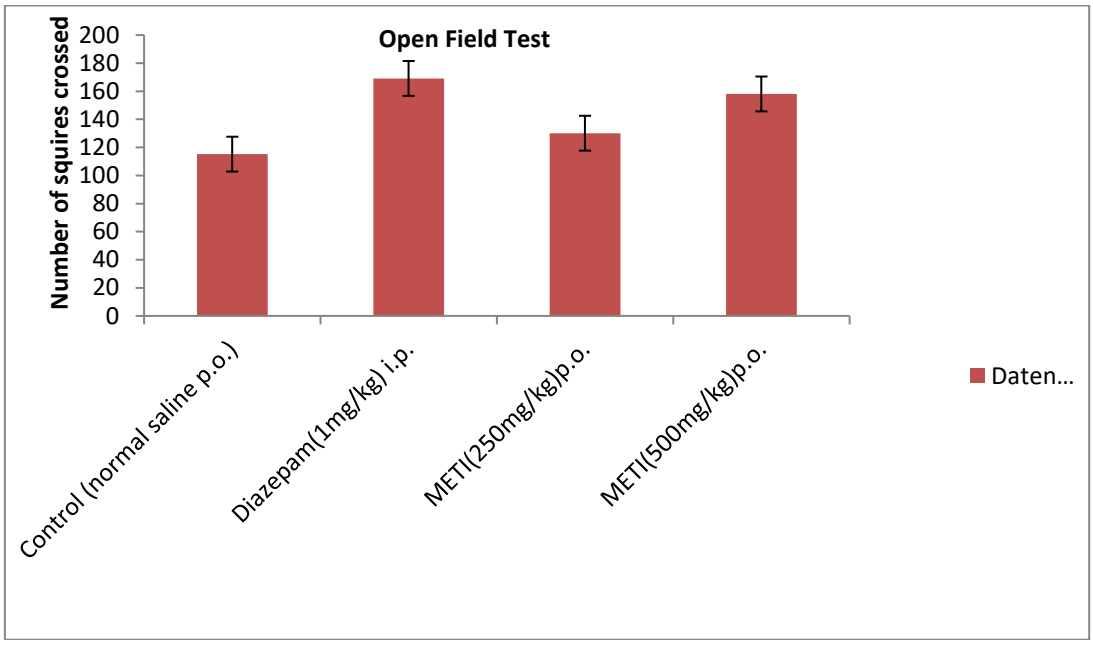


Figure no.9. Result of OFT test of METI stems bark No. of squares crossed:

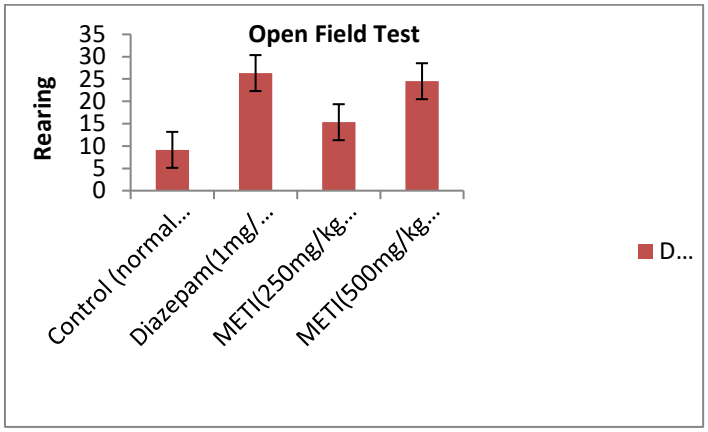


Figure no. 10. Result of OFT test of METI stems bark Rearing:

IV. DISCUSSION

No scientific reports on the assessment of the anti-anxiety action of *Tamarindus indica* stem bark have been reported, although it has historically been applied for the management of many disorders. Alkaloids, flavonoids, proteins, and glycosides have all been confirmed through phytochemical examination. Mice were designated for the valuation of anti-anxiety activity in the trial study because robust anxiety-like behavior is demonstrated by mice when they are exposed to stressors such as novelty, intense light, or social conflict. EPM models are utilized for the examination of the psychomotor and affective features of mice. The anxiolytic movement of the methanolic extract of *T. indica* stem bark at doses of 250 and 500 mg/kg orally was tested utilizing the EPM. This model is commended when an increase in open-arm entries is produced by the experimental agent without alteration of the total number of arm entrances. Diazepam has long been utilized as a standard anti-anxiety drug and is also commonly used in behavioral pharmacology as a reference compound for potentially anxiolytic substances. A significant increase in the proportion of entries into the open arms, as well as the time spent in the open arms of the maze, was observed in mice treated with 500 mg/kg body weight of the plant extract. The OFT is utilized for the determination of the emotional state of mice.

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In the OFT, anxiety-related behavior is investigated based on the animal's natural aversion to an open and illuminated space. Thus, when animals are removed from their familiar cages and placed in an unfamiliar environment, anxiety and fear are exhibited through alterations in one or more behavioral parameters. The fear-related behavior of animals in an open field is reduced by anxiolytic treatment. Following statistical analysis of the data obtained from the trials, anti-anxiety activity was demonstrated by the plant extract, as a significant rise in the number of rearings and the digit of squares crossed was observed in association with the vehicle-treated group. These findings indicate the anxiolytic properties of the plant extract.

V. CONCLUSSION

Rendering to the findings, methanolic excerpts of *Tamarindus indica* stems bark had anti-anxiety activity. These conclusions recommend that a stronger anti-anxiety effect is exhibited by the methanolic extract of *Tamarindus indica* stem bark in comparison with the control. Additionally, side effects that may worsen human health are associated with the allopathic drugs employed in its therapy. As a result, greater attention is now being given to herbal plants possessing therapeutic properties. A variability of phytochemicals, including alkaloids, flavonoids, phenols, glycosides, and others, are contained in these medicinal plants; these ingredients can be isolated and utilized for promoting health. Accordingly, medicinal plants exhibiting anxiolytic effects that are not only safe but also reasonably set a price are being sightseen.

Future prospects:
Despite this, *Tamarindus indica* stem bark have been used as antibacterial activity. The present study therefore set out to assess the antianxiety properties of the stem bark extract of *Tamarindus indica*.in an experimental animal model and contrast such properties with those of the standard medication, Diazepam.

VI. ACKNOWLEDGMENT

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