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Pharmaco-Therapeutic Study Of *Shankhpushpiyadi Yog (Kalpit Yog)* In Management Of *Manoavsad* W.S.R. To Mental Depression: A Research Article

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ABSTRACT: *Ayurveda* is one of the world's most ancient medical sciences. *Ayurveda* originating from *Vedas* is an eternal medical science that covers all aspects of life, health, disease, and therapy. *Ayurveda* is regarded *Atharvaveda's Upaveda* and thus has its birthplace from *Vedas*, the earth's oldest recorded wisdom. *Darshana's* spirit is the basic foundation of *Ayurvedic* values. *Dharma, Artha, Karma* and *Moksha* are the primary objectives of life that constitute the root cause of health. The human life has been regarded the invaluable opportunity to accomplish all these stuff and one requires a good and peaceful life. Our ancient society's goal was to accomplish these objectives by having a soft, sound, calm, steady and healthy lifestyle. On the other side, in today's modern era life has become so advanced that modifications in lifestyle and dietary habits along with over-ambitiousness lead to enhanced mental depression, which acts as a predisposing factor to trigger multiple psychological disturbances and mental disorders. Therefore, today's metaphysical society faced stressful circumstances and changed the lifestyle every day. As a consequence, anxiety, depression, insomnia, stress-related disorders and other mental illnesses come into being like forest fire, and the present era has become an age of psychiatric problems. *Shankhpushpi* (*Convolvulus pluricaulis*, fam. Convolvulaceae), *Mandukparni* (*Centella asiatica*, fam. Umbelliferae), *Jyotishmati* (*Celastrus paniculatus*, fam. Celastraceae), *Tagara* (*Valeriana wallichii*, fam. Valerianaceae), *Jatamansi* (*Nardostachys jatamansi*, fam. Valerianaceae) & *Ashvagandha* (*Withania somnifera*, fam. Solanaceae) have been traditionally used in mental disorders. In this chapter consists of detailed conceptual study regarding the plant *Shankhpushpi* (*Convolvulus pluricaulis*), *Mandukparni* (*Centella asiatica*), *Jyotishmati* (*Celastrus paniculatus*), *Tagara* (*Valeriana wallichii*), *Jatamansi* (*Nardostachys jatamansi*) & *Ashvagandha* (*Withania somnifera*) with literary review compiled from various Floras and Materia medica, a detailed information about these plants, its medicinal uses, botanical description comprising vernacular names, habit, habitat, morphological characters, distribution, officinal part and chemical constitution. The study entitled "**Pharmaco-Therapeutic Study of Shankhpushpiyadi Yog (Kalpit Yog) in Management of Manoavsad W.S.R. to Mental Depression**" was undertaken as dissertation work for the degree of M.D. (Ayu.) under Dr. Sarvepalli Radhakrishnan Rajasthan Ayurved University, Jodhpur.

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INTRODUCTION :-

For people, families and communities, mental wellbeing is important and is more than just the lack of a mental illness. The World Health Organization (WHO) define the mental health is a state of well-being in which the individual realizes his or her own abilities, can cope with the normal life stresses, can work productive and fruitful and can contribute to his or her society. At present in the society the man, who is social animal, living under different kinds of stresses and pressures which leading and landing into Mood disturbances further converted into Mood disorders. These Mood disorders are two depressive disorder which is also known as Major Depressive Disorder and Bipolar Disorder. Depression is a symptom in some physical and psychological diseases and itself is a major psychological disease or disorder. Different varieties of herbal and

herbomineral preparations are being tried for the efficacy in controlling the depression. According to *Ayurvedic* view *Manas* is an important component of the *Ayu* (life) in addition to the other three components *Sarira* (physical body), *Indriya* (sense organs) and the *Atma* (soul).¹

Two conditions which are closely related to depression in *Ayurveda* are *Vishada* and *Avasada*.

Vishado Rogavardhananam Agrya:

means *Vishada* is the primary cause that worsens the condition of the disease. In *Ayurveda*, this is the first concept concerning psycho-neuro-immunology.

One of those diseases that are caused by Doshas vitiation is *Avasada*.

Shankhpushpi (*Convolvulus pluricaulis*, fam. Convolvulaceae), *Mandukparni* (*Centella asiatica*, fam. Umbelliferae), *Jyotishmati* (*Celastrus paniculatus*, fam. Celastraceae), *Tagara* (*Valeriana wallichii*, fam.

Valerianaceae), *Jatamansi* (*Nardostachys jatamansi*, fam. Valerianaceae) & *Ashvagandha* (*Withania somnifera*, fam. Solanaceae) have been traditionally used in mental disorders. So to further appraise their medicinal uses, *Shankhpushpi* (*Convolvulus pluricaulis*), *Mandukparni* (*Centella asiatica*), *Jyotishmati* (*Celastrus paniculatus*), *Tagara* (*Valeriana wallichii*), *Jatamansi* (*Nardostachys jatamansi*) & *Ashvagandha* (*Withania somnifera*) are being used for the present study.

NEED OF STUDY:-

WHO estimated that in worldwide 13% burden of disease is due to mental health problems. Depression is commonest psychiatric disorder affecting about 121 million people worldwide. The incidence of depression is high on rise as World Health Organization reports the following facts : Depression is the leading cause of disability as measured by YLDs (Years Lived with Disability) and the 4th leading contributor to the global burden of disease (Disability Adjusted Life Years - DALYs) in 2000. By the year 2020, depression is projected to reach 2nd place of the ranking of DALYs calculated for all ages, both sexes. Considering all the above facts and figures in mind, the study has been planned to

assess the efficacy of *Shankhpushpi* (*Convolvulus pluricaulis*), *Mandukparni* (*Centella asiatica*), *Jyotishmati* (*Celastrus paniculatus*), *Tagara* (*Valeriana wallichii*), *Jatamansi* (*Nardostachys jatamansi*) & *Ashvagandha* (*Withania somnifera*) in the management of *Manoavsad* (Mental Depression).

- Affordable & economical new treatment procedure is highly needed in this regard.
- Ayurvedic drugs are beneficial in such case.

AIMS AND OBJECTIVES :-

- To carry out pharmacognostical study of these 6 drugs *Shankhpushpi* (*Convolvulus pluricaulis*), *Mandukparni* (*Centella asiatica*), *Jyotishmati* (*Celastrus paniculatus*), *Tagara* (*Valeriana wallichii*), *Jatamansi* (*Nardostachys jatamansi*) & *Ashvagandha* (*Withania somnifera*).
- To find out an easily available and considerably low cost safe and effective remedy for treatment of *Manoavsad* (Mental Depression).
- To evaluate the therapeutic efficacy of these 6 drugs in the treatment of *Manoavsad* (Mental Depression).
- To evaluate the efficacy of *Shankhpushpiyadi yog* (kalpit yog) in

comparison to Dabur Stresscom in management of *Manoavsad* (Mental Depression).

- To compare the results of the groups. Their results were observed and analyzed.

DRUG REVIEW :-

Group A – Shankpushpiyadi yog :-

In Drug review, various references of *Shankpushpi* (*Convolvulus pluricaulis*), *Mandukparni* (*Centella asiatica*), *Jyotishmati* (*Celastrus paniculatus*), *Tagara* (*Valeriana wallichii*), *Jatamansi* (*Nardostachys jatamansi*) & *Ashvagandha* (*Withania somnifera*) were compiled from various texts according to *Samhita kala* and *Nighantu Kala*. *Shankpushpi*², *Mandukparni*³, *Jyotishmati*⁴ and *Jatamansi*⁵ work as *medhya drug* according to “*Bhavprakash Nighantu*”. According to “*Bhavprakash Nighantu*” *Tagara*⁶ works as “*Vish apasmar shoolakshirog dosh triyapham*”. According to “*Bhavprakash Nighantu*” *Ashvagandha*⁷ works as *balya* and *rasayana* drug. According to “*Charaka Samhita*” *Shankpushpi kalka* and *Mandukparni swarasa* work as *medhya rasayana* and *Shankpushpi* is “*Medhya visheshena*”⁸.

In the Pharmacognostical study, these 6 plants were described in detail according to their morphological Characters, Macroscopic study and microscopic identifying characters of plants were also described with the help of photographs of these characters.

Analytical study was dealt with physicochemical and qualitative analysis.

Group B – Stresscom :-

Dabur Stresscom capsules contains dry extract of *Ashvagandha* roots – 300 mg.

EXPERIMENTAL STUDY –

1. PHARMACOGNOSTICAL STUDY:

Materials -

- *Shankpushpi* (*Convolvulus pluricaulis*) (used part – *Panchang*), *Mandukparni* (*Centella asiatica*) (used part – *Panchang*), *Jyotishmati* (*Celastrus paniculatus*) (used part – *Beej-taila*), *Tagara* (*Valeriana wallichii*) (used part – *Mool*), *Jatamansi* (*Nardostachys jatamansi*) (used part – *Mool*) & *Ashvagandha* (*Withania somnifera*) (used part – *Mool*) were used as material.

Collection of drugs –

The useful parts of the plants of *Shankpushpi*, *Mandukparni*, *Jyotishmati*, *Tagara*, *Jatamansi* & *Ashvagandha* of good

quality were bought from the market of Jaipur (Rajasthan) and further the authenticity of the sample was confirmed and verified by the expert Dr. Chandan

singh (Asso. Prof. & HOD of Dravyaguna Vigyan Department, DSRRAU, Jodhpur, Rajasthan).

Table no. 1. - PHARMACODYNAMICS OF SHANKHPUSHPIYADI YOG

S. No.	Drug	Botanical Name	Family	Rasa	Guna	Virya	Vipaka	Dosh Karma
1.	<i>Shankhpushpi</i>	<i>Convolvulus pluricaulis</i>	Convolvulaceae	<i>Tikta, Kashaya, Katu</i>	<i>Sara, Snigdha, Pichhila</i>	<i>Shita</i>	<i>Madhura</i>	↓vpk (↓vp)
2.	<i>Mandukparni</i>	<i>Centella asiatica</i>	Umbelliferae	<i>Tikta, Madhura, Kashaya, Katu</i>	<i>Laghu, Sara</i>	<i>Shita</i>	<i>Madhura</i>	↓ kp
3.	<i>Jyotishmati</i>	<i>Celastrus paniculatus</i>	Celastraceae	<i>Katu, Tikta</i>	<i>Sara, Ushna, Tikshna</i>	<i>Ushna</i>	<i>Katu</i>	↓ vk
4.	<i>Tagara</i>	<i>Valeriana wallichii</i>	Valerianaceae	<i>Tikta, Katu, Kashaya</i>	<i>Laghu, Snigdha</i>	<i>Ushna</i>	<i>Katu</i>	↓ vk
5.	<i>Jatamansi</i>	<i>Nardostachys jatamansi</i>	Valerianaceae	<i>Tikta, Kashaya, Madhura</i>	<i>Laghu, Snigdha</i>	<i>Shita</i>	<i>Katu</i>	↓vpk
6.	<i>Ashvagandha</i>	<i>Withania somnifera</i>	Solanaceae	<i>Tikta, Kashaya</i>	<i>Laghu, Snigdha</i>	<i>Ushna</i>	<i>Madhura</i>	↓ vk



Shankpushpi



Mandukarni



Jyotishmati



Tagara



Jatamansi



Ashvagandha



2. ANALYTICAL STUDY :-

Discussion of this part is dealt in the chapter concerned along with the results got in that experiment. These parameters help in standardizing drug and give us an idea of chemistry of plants.

A). Physio-chemical analysis :

The **ash value** indicates the presence of inorganic and salt materials in the sample. Total Ash value, Acid insoluble Ash value and Water soluble Ash value of the *Shankhpushpiyadi Yog churna* were found to be **22.38% w/w**, **12.78% w/w** and **2.80% w/w** respectively.

B). Phytochemical investigation :

Qualitative analysis reveals the presence of certain chemicals like Carbohydrates and proteins in *Shankhpushpiyadi Yog churna*.

C). Chromatography - TLC :

➤ **T.L.C.** is the most common form of chromatographic method used by *ayurvedic* research workers to detect the number of compounds present in a product. It also helps to determine the purity of the sample. Identity of a compound is also possible by comparing it with the R_f value of a known (standard) compound. After careful analysis and discussion with experts the mobile phase was fixed to be

Methanol Ext.(Chloroform: Methanol: Glacial acetic acid) in the proportion of 9.5:0.01:0.25 respectively Derivatives in 5% Methanolic sulphuric acid. The spots produced by TLC were observed in day light, short UV and long UV and R_f value was calculated.

Shankhpushpiyadi Yog churna showed **6 spots** with R_f **0.15, 0.27, 0.44, 0.73, 0.80, 0.94** at **365 nm** and **4 spot 0.34, 0.56, 0.90, 0.94** at **254 nm** were found, while after derivatised *Shankhpushpiyadi Yog churna* showed **7 spots** with R_f **0.19, 0.26, 0.44, 0.76, 0.85, 0.92, 0.97** at **365 nm** and **4 spots** were found with R_f **0.76, 0.85, 0.92, 0.97** at **254 nm**. So this implies the definite presence of certain constituents in the sample.

DISEASE REVIEW:-

The conceptual part deals with the understanding of the *Manoavsad* (Mental Depression) in the terms of *Ayurvedic* and *Modern* fundamentals. The *Ayurvedic* review begins with historical consideration of *Vishada* and *Avasada* (*Manasa roga*) with description of *Manoavsad*. In *Ayurvedic* Psychiatry, there is no specific

disease that can be directly link with mental depression. Usually the terms '*Vishada*', '*Avasada*' and '*Chittavasad*' are used for depression. *Vishada* and *Avasada* are two conditions which are closely similar to depression in *Ayurveda*. *Acharya Charaka* quotes that '*Vishado Rogavardhananam Agrya*'⁹ means *vishada* is the foremost factor to worsen the disease condition. This is the first principle regarding psycho-neuro-immunology in *Ayurveda*.

The commentators *Chakrapani Datta* and *Dallhana* elaborated the definitions of depression in different places of *Charaka*, *Susruta* and *Vagbhata Samhita* which can be correlated with modern scientific views. *Vishada* as a condition originated from apprehension of failure resulting into incapability of mind and body to function properly.¹⁰ In other definition, *Vishada* is a feeling of incompetence to accomplish or

perform a desired work. This refers to the loss of self confidence in the disorder leading the person to triad of hopelessness, helplessness and worthlessness.¹⁰ *Vishada* also comprises a condition; *Avasada* that is lassitude of speech, body and mind. This definition clearly indicates the feelings of unwillingness to respond or retardation of physical and mental activities.¹¹ It is a persistent feeling of sadness and inappropriate guilt which are the cardinal signs of depression. The other condition *Avasada* is defined as lassitude of mind and body in their functions.¹⁰

Clinically diagnosed *Manoavsad*, in which the maximum numbers of patients are included in this research are summarized within *Nidana*, *Poorvarupa*, *Rupa*, *Samprapti* and *Chikitsa*.

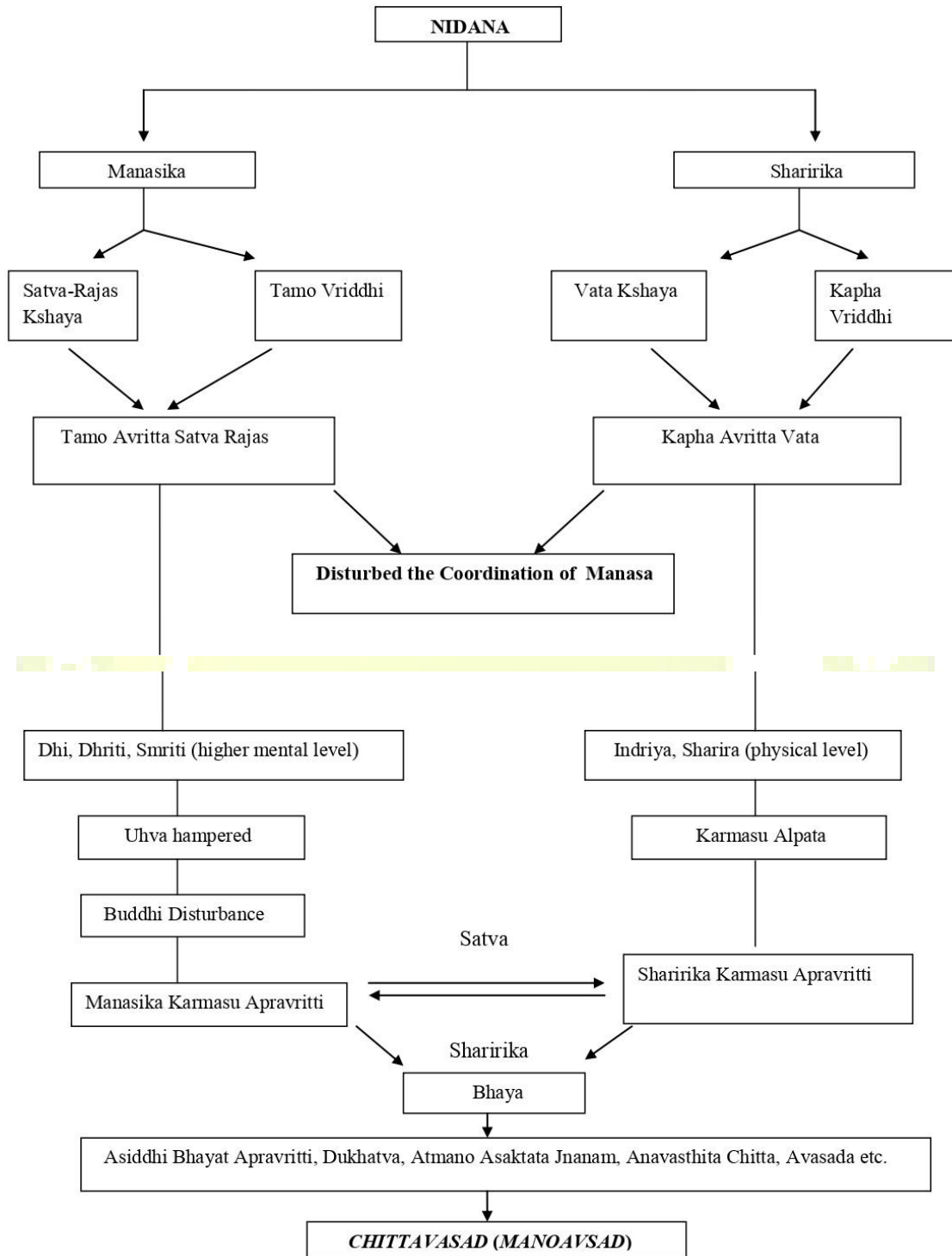


Fig.1. Probable Mechanism of *Manoavsada* in *Ayurveda*

MODERN CONCEPT OF MANOAVSAD (MENTAL DEPRESSION) MOOD DISORDERS

Mood or affective disorders include :¹²

- *unipolar depression* : the patient suffers one or more episodes of lowered mood.
- *bipolar disorder* (Manic Depression): the patient also experiences episodes of elevated mood, usually but not always interspersed with episodes of depression.
- *dysthymia* : describes a particularly chronic low-grade depression.

Clinically significant depression is referred to as major depressive disorder.

Major depressive disorder has a prevalence of 5-10% in the general population and up to 20% in medical patients. It is a major cause of disability and of suicide. If comorbid with a medical condition, depression magnifies disability, diminishes adherence to medical treatment and rehabilitation, and may even shorten life expectancy.¹² Depressive disorders or 'episodes' are primarily classified as bipolar or unipolar and secondarily as mild, moderate or severe, with or without

somatic symptoms. Severe depressive episodes are divided according to the presence or absence of psychotic symptoms. About 10% of patients with depressive illness are eventually found to have bipolar illnesses.¹³

CLINICAL STUDY :-

MATERIAL AND METHODS –

Patients were diagnosed on the basis of signs and symptoms of *Manoavsad* (Mental Depression) mentioned in *Ayurveda* text. Sampling of patients of inclusion criteria was selected by method of simple random sampling. Totally 40 patients will be selected in present clinical study. Patient will be randomly selected from OPD / IPD of Hospital UCA, DSRRAU, Jodhpur. Various medical camps will be also screened for selection of patient. Selected patient will be randomly divided in Group A and Group B with 20 patients in each group. 40 patients of *Manoavsad* (Mental Depression) who fulfill the inclusion and exclusion criteria will be treated in a both group.

IEC Number:- Sr. No/dsrrau/uca/iec/18-19/84

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Preparation of medicine :-

All these drugs including *Shankhpushpi*, *Mandukparni*, *Tagara*, *Jatamansi* and

Ashvagandha, took 2-2 kg and powdered them, then boiled them all with 8 times water of the total quantity until fourth part of the remainder. This quath was filtered and reheated the leftover liquid portion and made extract and dried. Then the extract was crushed and powdered. Then powder of *Jyotishmati*'s seeds (300 gm.) was added to

the extract and filtered the entire powder (1.28 kg.) and filled it in capsules (500 mg.) and packed it. This medicine was named ***Shankhpushpiyadi yog***.

The drug for research i.e. *Shankhpushpiyadi yog* (cap.) was prepared in the Pharmacy UCA, DSRRAU, Jodhpur.

Drug in powder form (extract)



Drug in Capsule form



Inclusion criteria:

- 1- Patients of either sex from age 16 to 70 years
- 2- Patients, who are not benefitted by taking other medicines, will be included without disturbing their regular medicines.

Exclusion criteria:-

- 1- Recent history of alcoholism and drug abuse
- 2- Pregnancy and lactating mother
- 3- Mental Depression with any associated severe complication.

Study Design :- Open and Randomized controlled clinical trial.

Drug and Posology :- The selected patients were randomly allocated into two groups as Follows :-

Table No. – 2.

	Group – (A)	Group – (B)
Drug	<i>Shankhpushpiyadi yog</i>	Stresscom
Dose	1 capsule twice a day, after meal (1 cap.= 500 mg)	1 capsule twice a day, after meal (1 cap.= 300 mg)
No. of patients	20	20
Duration	2 Month	2 Month
<i>Anupana</i>	Lukewarm milk	Lukewarm milk

FOLLOW UP STUDY:

- The duration of treatment were kept for 2 months with regular follow-ups of 15 days interval each. The effect of trial drugs were assessed based on improvement in sign, symptoms and investigations.
- During that period, volunteers were asked to stop all other medication and advised to adopt following dietary regimen regarding *pathya - apathya*.

- (a) *Durmana* (Feeling of sadness) ¹⁴
- (b) *Dourbalya* (Weakness) ¹⁴
- (c) *Chittavibhransha* (Instability of mind and poor concentration) ¹⁵
- (d) *Mandvak* (Slowness of speech) ¹⁶
- (e) *Mandcheshta* (Lack of activities) ¹⁶
- (f) *Aruchi* (Loss of interest) ¹⁶
- (g) *Viviktapriyata* (Seclusiveness) ¹⁶
- (h) *Manas sadana* (Depressed mood) ¹⁷
- (i) *Utsahkshya* (Loss of excitement) ¹⁸

CRITERIA FOR ASSESSMENT :-**(A) Subjective parameters –**

The rating scale of following symptoms will be used for the assessment of improvement. On this scale, various symptoms are graded into different grades as per their severity.

THE HAMILTON RATING SCALE FOR DEPRESSION :-

The Hamilton Depression Rating Scale (HDRS) has proven useful for many years as a way of determining a patient's level of depression before , during and after treatment. Although the HDRS from lists 21 items, the scoring is based on the first 17.

1. Depressed Mood

2. Feelings of guilt
3. Suicide
4. Insomnia – initial
5. Insomnia – middle
6. Insomnia – delayed
7. Work and interests
8. Retardation
9. Agitation
10. Anxiety – psychic
11. Anxiety – somatic
12. Somatic symptoms – Gastrointestinal
13. Somatic symptoms – General
14. Genital symptoms
15. Hypochondriasis
16. Weight loss
17. Insight

(B) Objective parameters-

The objective assessment of patients will be done on the basis of the investigational reports of the laboratory parameters obtained before and after the trial, the evaluation was done and any change will recorded and will used to assess the progress in relation to the course of disease *Manoavsad* (Mental Depression). Following investigations will be performed in all the patients.

- (a) Haemoglobin
- (b) Serum Bilirubin
- (c) Serum Creatinine

Observations and Results : This section deals with presentation of observation and results and their statistical analysis.

Thereafter, general observation like Age, Sex, Occupation etc of all 40 patients of *Manoavsad* (Mental Depression) are described. Effect of therapy on each individual's signs & symptoms are also presented methodically. The analysis of data was done using statistical software **GraphPad InStat 3 Trial**. The items on demographic profile and personal characteristics were summarized using tables, percentage, graphs etc. Results with comparison of before and after the treatment for Biochemical and Hematological study have been illustrated.

For intragroup comparison **Wilcoxon matched-pairs signed ranks test** is used for Nonparametric Data while for Parametric Data **Paired 't' Test** is used and results Calculated within the group. For intergroup comparison (Between the groups) **Mann-Whitney test** is used for Nonparametric Data while for Parametric Data **Unpaired 't' Test** were applied for multiple comparisons, identifying significant pairs of groups.

OBSERVATIONS :-

The observations were made on 40 patients of *Manoavsad* (Mental Depression).

- Maximum no. of patients were 13 (32.5%) in 3rd decade (21-30 yrs.), Maximum no. of patients i.e. 31 (77.5%) were male, Maximum no. of patients i.e. 38 (95%) were Hindu, In this study 26 (65%) patients were married, Most of the patients 16 (40%) in this study were Graduated, Highest no. of patients 20 (50%) were from middle class, In present clinical trial most of the patients were 27 (67.5%) vegetarian, Most of the patients 20 (50%) were having *Mandagni*, Maximum patients 22 (55%) were having *Madhyama koshta*, In present clinical trial most of the patients 26 (65%) revealed negative family history, Maximum no. of patients 21 (52.5%) were from Urban areas, Maximum no. of patients 18 (45%) were in the group of student, Maximum 21 (52.5%) patients were having *Vata-Kaphaja Prakriti*, While assessing the *Manasika prakriti* of patients, it was observed that majority of patients 26 (65%) were *Rajasik*, In present study maximum no. of patients 31 (77.5%) were of *Madhyama sara*, Maximum no. of patients 28 (70%) were having

Madhyama Samhanana, Out of 40 patients 30 (75%) were of *Madhyama satva*, Maximum no. of patients 28 (70%) were having *Madhyama Ahara jarana Shakti*, Maximum no. of patients 29 (72.5%) were having *Madhyama Ahara Abhyavaharana Shakti* & Maximum no. of patients 30 (75%) were having *Madhyama Vyayama Shakti*.

- **Relative incidence of various symptoms (Ayurvedic) seen in *Manoavsad* (Mental Depression) in present study (n= 40) :**

The majority of patients were having :

1. *Durmana* in 32 (80%) cases,
2. *Dourbalya* in 28 (70%) cases,
3. *Chittavibhransha* in 35 (87.5%) cases,
4. *Mandvak* in 35 (87.5%) cases,
5. *Mandcheshta* in 29 (72.5%) cases,
6. *Aruchi* in 21 (52.5%) cases,
7. *Viviktapriyata* in 27 (67.5%) cases,
8. *Manas sadana* in 21 (52.5%) cases,
9. *Utsahkshya* in 28 (70%) cases.

- **Relative incidence of various symptoms of The Hamilton Depression Rating Scale (HDRS) seen in *Manoavsad* (Mental Depression) in present study (n= 40) :** The majority of patients were having :

1. Depressed Mood in 37 (92.5%) cases,
2. Feelings of guilt in 30 (75%) cases,
3. Suicide in 20 (50%) cases,
4. Insomnia – initial in 27 (67.5%) cases,
5. Insomnia – middle in 32 (80%) cases,
6. Insomnia – delayed in 30 (75%) cases,
7. Work and interests in 29 (72.5%) cases,
8. Retardation in 30 (75%) cases,
9. Agitation in 28 (70%) cases,
10. Anxiety – psychic in 31 (77.5%) cases,
11. Anxiety – somatic in 26 (65%) cases,
12. Somatic symptoms – Gastrointestinal in 27 (67.5%) cases,
13. Somatic symptoms – General in 28 (70%) cases,
14. Genital symptoms in 31 (77.5%) cases,
15. Hypochondriasis in 37 (92.5%) cases,
16. Weight loss in 27 (67.5%) cases,
17. Insight in 32 (80%) cases.

RESULTS :-

The result of therapeutic trial was made on 40 patients of *Manoavsad* (Mental Depression).

- 1- **Effect of therapeutic trial on clinical symptoms (Ayurvedic) in 40 patients of *Manoavsad* (Mental Depression) based on INTRA GROUP comparison (Wilcoxon matched-pairs signed-ranks test) :**

Patients of group-A:- showed statistically extremely significant changes in the symptoms of *Durmana* ($P<0.0001$), *Dourbalya* ($P=0.0002$), *Chittavibhransha* ($P=0.0005$), *Mandvak* ($P=0.0005$), *Mandcheshta* ($P=0.0005$), *Viviktapriyata* ($P=0.0010$) and *Utsahkshya* ($P=0.0005$) & very significant changes in the symptoms of *Aruchi* ($P=0.0078$) and *Manas sadana* ($P=0.0078$), While statistically significant and not significant result was not found.

Patients of group-B :- showed statistically very significant changes in the symptoms of *Durmana* ($P=0.0098$), *Dourbalya* ($P=0.0020$), *Chittavibhransha* ($P=0.0098$), *Mandcheshta* ($P=0.0020$) and *Viviktapriyata* ($P=0.0020$) & significant changes in the symptoms of *Mandvak* ($P=0.0195$), *Manas sadana* ($P=0.0313$) and *Utsahkshya* ($P=0.0273$) While in *Aruchi* ($P=0.0625$) statistically not quite significant result was found.

2-Effect of therapeutic trial on clinical symptoms of HDRS in 40 patients of *Manoavsad* (Mental Depression) based on INTRA GROUP comparison (Wilcoxon matched-pairs signed-ranks test) :

Patients of group-A:- showed statistically extremely significant changes in the symptoms of **Depressed Mood** ($P<0.0001$),

Suicide (P=0.0010), Retardation (P=0.0002), Anxiety – psychic (P=0.0001), Anxiety – somatic (P<0.0001), Somatic symptoms – Gastrointestinal (P=0.0005), Somatic symptoms – General (P=0.0001), Genital symptoms (P=0.0001), Hypochondriasis (P<0.0001), Weight loss (P=0.0002) and Insight (P=0.0001) & very significant changes in the symptoms of **Feelings of guilt (P=0.0034), Insomnia – initial (P=0.0039), Insomnia – middle (P=0.0039), Insomnia – delayed (P=0.0023), Work and interests (P=0.0017) and Agitation (P=0.0034)**, While statistically significant and not significant result was not found.

Patients of group-B:- showed statistically extremely significant changes in the symptoms of **Depressed Mood (P<0.0001), Feelings of guilt (P=0.0002), Work and interests (P=0.0001), Retardation (P<0.0001), Anxiety – psychic (P=0.0005), Genital symptoms (P=0.0010) and Hypochondriasis (P=0.0001)** & very significant changes in the symptoms of **Insomnia – middle (P=0.0039), Agitation (P<0.0020), Somatic symptoms – Gastrointestinal (P=0.0078), Somatic symptoms – General (P=0.0049), Weight loss (P=0.0020) and Insight (P=0.0012)** & significant changes in the symptoms of

Suicide (P=0.0156), Insomnia – delayed (P=0.0195) and Anxiety – somatic (P=0.0195) & in Insomnia – initial (P=0.0820) statistically not quite significant result was found.

3- Effect of therapeutic trial on clinical symptoms (Ayurvedic) in 40 patients of *Manoavsad* (Mental Depression) based on INTER GROUP comparison (Mann-Whitney test) :

i)-Durmana shows **very significant results** & *Utsahkshya* shows **significant results.**

ii)-Dourbalya, Chittavibhransha, Mandvak, Mandcheshta, Aruchi, Viviktapriyata & Manas sadana show **not significant results.**

4-Effect of therapeutic trial on clinical symptoms (HDRS) in 40 patients of *Manoavsad* (Mental Depression) based on INTER GROUP comparison (Mann-Whitney test) :

i)-Depressed Mood shows **very significant results** & *Anxiety – somatic* shows **significant results.**

ii)-Feelings of guilt, Suicide, Insomnia – initial, Insomnia – middle, Insomnia – delayed, Work and interests, Retardation, Agitation, Anxiety – psychic, Som. symp. Gastrointest., Somatic symp. Gen.,

Hypochondriasis, Weight loss & Insight show **not significant results**.

iii)-Genital symp. shows **not quite significant results**.

5-Effect of therapeutic trial on lab parameters in 40 patients of *Manoavsad* (Mental Depression) based on INTRA GROUP comparison (paired t-test) :

Patients of group-A showed statistically very significant changes in **Haemoglobin** (P=0.0044) & not significant result was found in **Serum Bilirubin** (P=0.4451) and **Serum Creatinine** (P=0.3085).

Patients of group-B showed statistically not significant result was found in **Haemoglobin** (P=0.4219) and **Serum Bilirubin** (P=0.2366) & not quite significant result was found in **Serum Creatinine** (P=0.0612).

6-Effect of therapeutic trial on lab parameters in 40 patients of *Manoavsad* (Mental Depression) based on INTER-GROUP comparison (unpaired t-test):

- i) Haemoglobin shows **significant results**.
- ii) Serum Bilirubin & Serum Creatinine show **not significant results**.

Table No. 3 : Overall effect of therapy –

S.N.	Observations	Group A	Group B
1.	No relief (0%)	0%	0%
2.	Mild relief (0≤25%)	10.34%	34.48%
3.	Moderate relief (26-50%)	51.72%	48.28%
4.	Significant relief (51-75%)	34.48%	17.24%
5.	Excellent relief (76-99%)	3.45%	0%
6.	Cure (100%)	0%	0%

In Group A – 10.34% patients were found mild relief, 51.72% were found moderate relief, 34.48% were found significant relief & 3.45% were found excellent relief.

In Group B – 34.48% patients were found mild relief, 48.28% were found moderate

relief, 17.24% were found significant relief & no excellent relief was found.

DISCUSSION :-

All the observations obtained in phytochemical study and clinical trial suggest that *Shankpushpiyadi Yog*

produce symptomatic relief in *Manoavsad* (Mental Depression) and Group A is found more marked. Thus it is clear from the current research project that this *Shankhpushpiyadi Yog* may be used as effective Antidepressant drug in *Manoavsad* (Mental Depression).

CONCLUSION :-

In this research work entitled “**Pharmaco-Therapeutic Study of *Shankhpushpiyadi Yog (Kalpit Yog)* in Management of *Manoavsad* W.S.R. to Mental Depression**” following conclusion was drawn :

- *Shankhpushpiyadi Yog* is effective in the management of *Manoavsad* (Mental Depression). *Shankhpushpiyadi Yog* reduce the symptoms of *Manoavsad* that include *Durmana*, *Dourbalya*, *Chittavibhransha*, *Mandvak*, *Mandcheshta*, *Aruchi*, *Viviktapriyata*, *Manas sadana*, *Utsahkshya*, Depressed Mood, Feelings of guilt, Suicide, Insomnia – initial, Insomnia – middle, Insomnia – delayed, Work and interests, Retardation, Agitation,

Anxiety – psychic, Anxiety – somatic, Som. symp. – Gastrointestinal, Som. symp. – General, Genital symptoms, Hypochondriasis, Weight loss and Insight. This improvement in symptoms is brought about by *Samprapti Vighatana* of the disease.

- Increased haemoglobin after treatment may indicate haemoglobin increasing tendency of *Shankhpushpiyadi Yog* .
- The study concluded that *Shankhpushpiyadi Yog* (Group A) has more potent Antidepressant action as compared to Dabur Stresscom (Group B).
- Therapy was well tolerated by all the patients and no toxic or unwanted effects were noticed in any patient, suggesting that the drugs selected for current clinical trial are absolutely safe for internal use.

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