

Homoeopathic management of stress of essential hypertension patients : a literature review.

Manejo homeopático del estrés de los pacientes con hipertensión esencial: una revisión de la literatura

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ABSTRACT

Hypertension kills insidiously as it is commonly asymptomatic. Stress is conceived to be a significant contributing element towards development of essential hypertension. Homeopathy being the second largest system of medicine has immense scope, allowing in depth study of stress and offering individualized approach to these cases of stress led essential hypertension. There are several homoeopathic medicines which could prove useful in managing stress of essential hypertension. This article attempts to review some of the existing literature in this context discussing role of homoeopathy in management of stress of essential hypertension patients.

Keywords: Blood pressure, Emotional stressors, Essential hypertension, Homoeopathy, Stress management.

RESUMEN

La hipertensión mata insidiosamente ya que es comúnmente asintomática. El estrés se concibe como un elemento importante que contribuye al desarrollo de la hipertensión esencial. Siendo la homeopatía el segundo sistema más grande de medicina, tiene un alcance inmenso, lo que permite un estudio en profundidad del estrés y ofrece un enfoque individualizado para estos casos de hipertensión esencial provocada por el estrés. Hay varios medicamentos homeopáticos que podrían resultar útiles para controlar el estrés de la hipertensión esencial. Este artículo intenta revisar parte de la literatura existente en este contexto que discute el papel de la homeopatía en el manejo del estrés de los pacientes con hipertensión esencial.

Palabras clave: Presión arterial, Estresores emocionales, Hipertensión esencial, Homeopatía, Manejo del estrés.

INTRODUCTION

Hypertension is a silent pernicious killer. It is a condition where the blood vessels have persistently raised pressure according to WHO.^[1] It is diagnosed when blood pressure is consistently ≥ 130 and/or ≥ 80 mm Hg.^[2] Amongst all cases of hypertension 95% are essential hypertension cases where there is high blood pressure in absence of secondary causes like renovascular disease, kidney failure, pheochromocytoma, aldosteronism, or any other causes of secondary hypertension or mendelian (monogenic) forms.^[3] Psychological stress is proposed to be a significant contributing factor towards development of hypertension.^[4] The occurrence of a transactional process when an event is being perceived as relevant to an individual's well being, having the potential for harm or loss, and requiring psychological, physiological and/or behavioral efforts to manage the event and its outcomes it is called stress.^[5] Stimuli or events that cause stress are called stressors(Mason, 1975).^[6] Homeopathy being the second largest system of medicine has immense scope , allowing in depth study of stress and offering individualised approach to these cases of stress led essential hypertension. There are several homoeopathic medicines which could prove useful in managing stress of essential hypertension such as *Aconite* for fear, *Arsenic Alb* for agitation, state of anxiety or nervous excitement, *Argentum nit* for anxiety ,excessive phobias, *Nux-vomica* for anger ,short tempered individuals, *Ignatia* for suppressed grief, *Staphysagria* for resentment, indignation or irritation, *Aurum met* for black depression, stress related hypertension, *Gelsemium* if some bad news aggravates the blood pressure, *Calcarea carb* for frightful ,overwhelmed individuals , *Belladonna* a sudden hypertension remedy, *Lachesis mutus* the psychological hypertension remedy, *Natrum mur* for hypertension in overly responsible individuals, *Aurum metallicum* a stress related hypertension remedy, *Glonoinum* a Heart-related Hypertension remedy, *Phosphorus* a remedy for sensitive people etc.^[7]

LITERATURE REVIEW

A study was done by Roja Varanasi et al in 2020, which was a single blind randomized , placebo controlled trial to see the effects of individualized homoeopathic intervention in stage I essential hypertension. It was done to see if homoeopathic medicines are effective in hypertension. The changes in systolic blood pressure and diastolic blood pressure from baseline after period of three months was assessed in Stage I essential hypertension patients in age group of 30-60 years of both sexes who were not having any anti-hypertensive medications. Two arm allocation where one arm was given homoeopathic potencies (LM Scale) along with lifestyle modifications of both physical activity and dietary modification and the other arm was given placebo and lifestyle modification. Intention-to-treat was basis of analysis. ANOVA was used to see results which showed that individualized homoeopathy + lifestyle modification group showed important changes in mean reduction of systolic blood pressure and diastolic blood pressure. Sulphur, Natrum mur, Lycopodium, Nux Vomica and Phosphorus were seen to be very useful. When individualized homoeopathic medicines were given in LM potency together with lifestyle modifications it was proven to be very effective in Stage I hypertensive patients as opposed to the placebo and lifestyle modifications group.

The main goal of treatment for hypertension should be effectively controlling blood pressure by preventing, reversing or delaying progress of complications and therefore reducing the long-term risks and not reducing quality of life of patient. LM potencies were used as they can be frequently repeated and are hence more suitable in chronic conditions. In diet modification the dietary approaches to stop hypertension (DASH) diet was followed and fibrous foods were included. Alcohol and Smoking were to be avoided. Physical activity scoring systems was used for assessing physical activity and evaluation of diet was done by diet adherence scale every month for the three month period. Holistic concept was basis for the prescription for the presenting complaint and hypertension. During treatment period of three months the medicines were not changed.

It was observed that clinical manifestations in relation to rheumatology, neurology and mental disorders, sleeplessness also improved and a powerful association was seen. The authors suggest that the psychological connection in patients with essential hypertension along with standard outcome assessment should be done to find cause oriented relationship and management by homoeopathy in such cases should be explored.^[8]

A paper by Dr. Sultana Perween and Dr. Shamim Alam in 2020 deals with role of Homoeopathy in Hypertension. They have expressed their opinions of how homoeopathic management of hypertension could be done. Allopathic medicines are used but they have many side effects and hence there is a need of different treatment where homoeopathy comes to the rescue in controlling hypertension. They have explained in their paper that in an essential hypertension patient as homoeopaths we need to have concern for the patient who has high blood pressure instead of the condition hypertension. They have stressed on the philosophical approach where management should be done based on Similia principle. We should give significance to individuality. Essential hypertension being a chronic condition requires constitutional anti-miasmatic management. Various miasmatic influences play a role in essential hypertension so when being treated the remedy should be selected corresponding to the dominant miasm.

In the palliative concept they have advised that for successful treatment of hypertension the remedy selected should be based on acute totality, following this the constitutional medicine should be given. The diet and regimen modifications also are equally important along with administration of appropriate similimum. During acute emergency, mother tinctures could be used which could lower the high blood pressure quickly. According to their paper, patients with a recent diagnosis of hypertension who have not yet started any medicine respond well to homoeopathic treatment. In patients with chronic raised blood pressure, who are dependent on conventional medication for lengthy time they have advised that initial phase conventional and homoeopathic treatment should be given together and later in a slow manner a changeover should be done into only homoeopathic management. They have discussed homoeopathic medicines useful for hypertension.

Aconite when there is anxiety along with restlessness. Allium sativum when there is high cholesterol levels with high blood pressure. Amylenum nitrosum when a sense of constriction is felt. Baryta mur when systolic pressure is high and diastolic pressure is low along with arteriosclerosis. Glonoinum when headaches

are present during raised blood pressure. Kali phos when due to stress or some worry element the blood pressure is raised. Nux vomica when young adults due to their lifestyles develop high blood pressure. Natrum mur when due to great intake of salt blood pressure is raised. Lachesis when menopausal women have high blood pressure. More scientific researches are required to be done.^[9]

The study by Dr. Supriya S. Naik was done in 2019 to alleviate stress induced hypertension with the help of homoeopathy. In the article the author has stated that the degree of stress is dependent on the response of the individual and various factors - like relationships, trauma, physical health, responsibilities and expectations. Our response to stress is decided by these factors; it is individualistic and also dependent on "resilience" of the person. The exhibition of chronic stress could be in physical or psychological form. Here 15 cases of stress induced hypertension were enrolled and homoeopathic treatment was given to them in line with the aim to check effectiveness of homoeopathy in such cases. 12 patients were better and faced no relapse in the span of 1 year. In addition it was seen that the patients had increased resilience levels to stress and were now capable of better stress handling. It was concluded that though in most cases it is not practically feasible to eliminate the origin of stress, however with the aid of homoeopathy the response of the individual could be changed.

The study was proof that homoeopathy provides good results in treatment of stress in hypertension patients. The individualistic approach after finding totality of the individual was successfully effective in treatment of hypertension. Important positive transformation with both symptomatic alleviation of patient and development of a feeling of well being was observed.

Only 15 cases were enrolled with inclusion criteria being non-responsive or persistent hypertension in the past 6 months inspite of being on medications. The study needs to be done on a larger number of participants. Case definition should be more precise regarding what grade of hypertensive patients that should be enrolled.^[10]

According to David Chinedu, Nigerian Institute Of Homoeopathy, Nigeria in a paper published in 2018 he has talked about how homoeopathic medicines are effective in high blood pressure levels. He mentioned that being dissatisfied, having overworked emotions leads to a state of tension in the body. The building blocks to Hypertension in the long run are enervating elements like worry, fear, grief, anger, passion, temper, overjoy, depression, self-pity, pride, egotism, envy, jealousy, gossip, lying, dishonesty and failure to complete obligations or appointments. Homoeopathy strives to determine the cause along with usage of remedies while also advising lifestyle modifications to try and manage the case.^[11]

A study was undertaken in 2018 by Leena Bagadia with the objective to establish that homoeopathic Similimum has the efficacy to modify the underlying anger in mild and moderate cases of patients suffering from essential hypertension. Study type : Prospective, randomized controlled. There were two parallel arms following simple randomization method. Control group : allopathic anti-hypertensives and placebo. Study group : homoeopathic Similimum and allopathic anti-hypertensives where required. Measurement of blood pressure was recorded and STAXI-2 was used to assess anger. (State-Trait Anger Expression Inventory-2). After

administration of Similimum the effect on both blood pressure and anger was gauged and kept a record of. Result: study group : B.P. decreased (93.3%) and anger decreased (80%), control group : decreased (59.4%) and anger nil improvement (0%).

According to the author , high scores of suppressing anger chiefly in association with low scores of outwardly anger expressing has shown association with blood pressure elevation and hypertension. When homoeopathic Similimum is given it has shown significant modification of anger-state , trait and expressions which are culpable for essential hypertension. With Similimum only, the associated illnesses showed significant improvements as well.

Only anger modification was attempted with the aid of homoeopathic Similimum, in a similar fashion other stress modification in a broader sense could be attempted as the study has shown promising results in both criterias of anger modification and blood pressure reduction.^[12]

A prospective study to understand psychological conflicts in patients with essential hypertension and exploring matching homoeopathic remedies was done by Neha Patel in 2018. It was done with 50 cases which met the inclusion criteria with the aim of understanding psychological variations in essential hypertension patients and seeking the Similimum homoeopathic medicines for those cases. The objective was to find what kind of psychological conflicts could be there in primary hypertension patients and what homoeopathic medicines match the totality. The data was collected in 18 months and analysis of data took 3 months. LSMC and ODP of presenting complaints along with life event analysis and a checklist which assesses the psychological conflict was used. Important life-space occurrences in essential hypertension cases were identified and classified into different groups – “illness to self/others, economic issues, sociocultural and personal issues are significant life events.”

Both internal and external conflicts were also assessed. Internal Intrapersonal conflicts in patients of essential hypertension such as suppressed anger , dependency formed 42% of the cases; 14% cases were of outburst of anger, hostility, guilt, dependency; 10% cases saw value based conflicts while 2% cases saw ambition, fear of undertaking new things.

Unconscious conflicts like ego-defences were also seen. Quality of external, family, Intrapersonal relations, economic, workplace, social conflicts was also assessed. Medicines which matched the conflict states were Bryonia, Calcarea carb, Kali group, Silicea, Nux vomica, Staphysagria, Naja , Veratrum Alb, Lycopodium, Ferrum met, Natrum mur etc.^[13]

A Semi-trial overview was done by Prof. Kiran Kapoor in 2018 to see efficacy of homoeopathic medicines in controlling stress, in multi-stages and before-after results were analyzed. The research was done to check how adequate individualized homoeopathic medicines were in management and control of anxiety and depression. A total of 32 participants were enrolled and divided into two groups – homoeopathic and placebo controlled. In 1st phase patients were evaluated, assessment was done via polls and the anxiety and depression rates were determined. In stage 2 the medicine was given on homoeopathic principles. In stage 3

observation and follow-up was done to compare effects. 30c potencies were used. The assessment tools included a homoeopathic questionnaire, State-Trait-Anxiety Inventory (STAIY) to assess anxiety and Depression Inventory (BDI) to assess depression. ANOVA test was used.

It was observed that anxiety and depression and their side effects could be diminished by homoeopathic medicines. It was also observed that homoeopathic management of anxiety and depression had good stable influence. Anxiety and depression and their side effects alone were considered in this research however other stress management like temperament disorders or such other can also be explored and their homoeopathic management should be assessed.^[14]

In another article in 2017 the author Dr. Barha Latif has described the role that homoeopathy plays in management of hypertension. Hypertension is a silent killer, it isn't a disease but merely a manifestation of some internal pathology. The increase in blood pressure acts as a compensation or conservation of the circulation of blood despite increased resistance to the blood flow. Allopathic medicines are used for controlling the high blood pressure but these medicines show many detrimental effects and hence there is ultimate requirement of an alternative means of treatment to manage hypertension. Hahnemann has advocated that the sick person needs to be cured and not the disease. In similar terms in a case of essential hypertension using homoeopathic medicines we should have concern of the patient with high blood pressure instead of hypertension itself. The author has further described the miasmatic influences in essential hypertension.

In predominantly Psora: hypertension may be observed due to long-standing emotional disturbances, anxiety, anger, grief, worry etc. As the stress factor is removed the blood pressure becomes normal. Several modalities and sensations, concomitants have association with Psora and help in finding Similimum. In predominantly Sycosis : excess is the keyword. There is in-coordination of the functions of the body. Narrow-mindedness of Sycotic individual is shared in the blood vessels which are also narrow and hence leading to hypertension. In metabolic syndrome - there is excess of fats, organ hypertrophy, fluid accumulation in body and the like which account as leading causes of hypertension. In predominantly Syphilis : destructiveness is keyword. Secondary and malignant hypertension have their origin in this miasm. Patients have inclination to die suddenly. In predominantly pseudo- psora or tubercular : Psora's subjective symptoms along with mental or emotional state and pathology, destructiveness of syphilis is found. The blood pressure shows fluctuations in a wide range. Tendency of manifestations that are hemorrhagic is present.

The author talks of philosophical concept of homoeopathy - in a chronic ailment constitutional anti miasmatic treatment is the need of the hour. The mental as well as emotional state of patient decides the remedy. In a case of essential hypertension the factors that are psychological cause the disease. According to the author such a case which has several Miasmatic influences should be treated in the fashion that first remedy matching the predominant Miasm should be administered and later if required change of remedy accordingly. In the palliative approach the author has described that first based on acute totality the remedy should be selected and later the constitutional medicine should be taken. Mother tincture are an alternative

that could be sought off during an acute emergency. The blood pressure could be lowered with even just a few drops of the mother tincture.

Amyl Nitrosum, Rauwolfia, Allium sativa, Crataegus, Passiflora, Strophanthus are some examples of mother tinctures. The author has also said that while management of hypertension case is being done the patient shouldn't be asked abruptly to stop his antihypertensive medicine but instead goal should be to lower the dose in gradual manner. Homoeopathic medicines for emotional stress caused hypertension: Aconite, Arsenic album, Argentum nitricum, Nux-vomica, Ignatia, Aurum metallicum, Gelsemium, Calcarea carb etc. Due to constant stress there is resultant increased levels of adrenaline, noradrenaline and cortisone due to which activity of heart is increased and narrowed blood vessels are seen causing the elevated blood pressure. Hahnemann has said mental and emotional state is important when selecting the Similimum. Need for more scientific research to prove effectiveness of homoeopathic medicines in treatment of hypertension. Modification in diet and lifestyle are equally vital for management of hypertension along with administration of Similimum.^[7]

A literature review was done in 2016 by Alexey V. Ushakov, Vera S. Ivanchenko, Alina A. Gagarina where the pathogenesis of essential hypertension and role of psychological stress in it was studied. The authors have provided documentation that in developing arterial hypertension psychological stress has an important role to play. The hypertension pathogenesis is very complex and multifaceted and differs in every individual. The authors have attributed urbanization as a global phenomenon, inactive lifestyle, everyday stress at work, inadequate physical exercise, inadequate social aid as the reasons for the increase in anxiety levels which finally leads to chronic stress both mentally and emotionally.

Incessant psychological stress causes alteration in the hypothalamic-pituitary-adrenal and sympathetic adrenomedullary axis. This in turn causes release of stress hormones like corticosteroids and catecholamines. This causes an array of things to happen. Pro-inflammatory cells and recruited acute phase proteins and reactants are activated, the oxidative stress increases and pro-inflammatory cytokines are released. These cause a low-grade vascular inflammation to occur. The endothelial damage causes endothelial dysfunction which is a consequence and main factor to cause this Pro-hypertension state. Physical exercise inadequacy also is an important factor in developing Hypertension.^[4]

A prospective, observational study was done by Dr. Nishant Daryani, Prof. Dr. Nivedita Pattanaik in 2016 to see the hypotensive effect of homoeopathic medicine in the management of patients suffering from uncomplicated essential hypertension. It was conducted with the aim to check if individualized homoeopathic medicines had any significant hypotensive or hypertension reducing action as opposed to placebo, given to patients suffering from uncomplicated essential hypertension. Study : prospective, double-blind, randomized, placebo-controlled, parallel arm critical trial. Out of 233 patients that were eligible 150 patients were enrolled, randomized into verum/homoeopathic group with 70 patients and control/placebo group with 80 patients. The data was recorded at baseline, 3 months and 6 months. Baseline data had no difference in both the arms. At end of 6 months mean systolic blood pressure in control group showed increase by 3.6 mm hg and in the

Homoeopathy group mean systolic blood pressure showed an decrease of 26.6 mm hg. In mean Diastolic blood pressure in control group an increase by 1.6 mm hg was noted whereas in homoeopathy group a decrease by 11.8 mm hg was seen.

Medicines like Lachesis, Natrum mur, Glonoine, Gelsemium, Bryonia Alba, Aurum metallicum, Pulsatilla, Sulphur, Digitalis and Belladonna proved most useful and successful. It was seen that compared to placebo individualized homoeopathic medicines had a noticeable hypotensive result. Homoeopathy showed promising scope in reducing hypertension. A holistic approach is required as many cases of mild to moderate hypertension could be apparently asymptomatic. Hence individualized homoeopathic medicines are useful. Specific remedies was not used to reduce hypertension. Malignant hypertension patients were excluded. Patients with complicated essential hypertension were excluded. Results cannot be said with certainty that homoeopathic medicines will work in above two conditions. Generalizability is also at question as only two centres were involved in study. So multicentric study needs to be done.^[15]

Karen A. Matthews et al undertook the CARDIA (Cardiovascular Risk Development In Young Adulthood) study in 2003 to check the hypothesis that young adults who have big continuous increases in blood pressure when undergoing psychological stress could be at risk of developing essential hypertension. The CARDIA study was conducted in more than 4100 normotensive people of both sexes , aged 18-30 years of both black and white origin. Survival analysis was used to foresee if they could develop hypertension in a follow-up period of 13 years. Cold pressor, Star tracing and video game task were the three psychological challenges to which the blood pressure reaction was checked for. Hypertension status : on antihypertensive medicines OR BP \geq 140/90 mm hg. It was observed that those patients who had larger blood pressure responses to the three parameters developed essential hypertension early. In women and white origin people systolic blood pressure event was seen for cold pressure parameter. In men diastolic blood pressure event was visible for video game parameter.

They concluded that young adults who previously have showed large blood pressure reaction to psychological stress could be at danger of developing hypertension in their middle age. To understand if stress is a etiological factor in development of essential hypertension this study was done. It was a cohort type study. Basis was several other studies where different “stressors” were used to foresee development of hypertension in young and middle-aged men after substantial period of 1-10 years. Why black and white were included of both sexes : the blood pressure response induced by the stresses could have differ ent dangers of developing hypertension in both genders and ethnicities. Analytical approach was used. The increasing risk of hypertension was predicted rather than constant risk.^[16]

In her book Homeopathic Guide To Stress the author Miranda Castro has given safe and effective natural ways to alleviate physical and emotional stress by using various homoeopathic medicines like *Aconitum napellus*, *Ambra grisea*, *Anacardium orientale*, *Argentum nitricum*, *Arsenicum album*, *Aurum mettalicum*, *Baryta carbonica*, *Belladonna*, *Borax venata*, *Calcarea carbonica*, *Calcarea phosphorica*, *Causticum*, *Cocculus indicus*, *Gelsemium*, *Ignatia amara*, *Kali phosphoricum*, *Lachesis*, *Lycopodium clavatum*, *Natrum carbonica*,

Natrum muriaticum, Nux vomica, Opium, Phosphoric acid, Phosphorus, Picric acid, Pulsatilla, Sepia, Silicea, Staphysagria, Stramonium, Sulphur, Veratrum album, Zincum metallicum etc. She has identified certain emotional stressors like betrayal, boredom, bullying, conflict, criticism, depression, disappointment, embarrassment, excitement, failure, fear, guilt, homesickness, humiliation, jealousy, loneliness, loss, mental strain, reprimand, resentment, shame, shock, transitions, uncertainty, and worry. She has provided literature to show how certain homoeopathic medicines can help with the emotional effects of such stressors. Table 1 shows some of the emotional stressors and homoeopathic remedies that are useful to deal with them.^[17]

Table 1. Emotional stressors and homoeopathic remedies that are useful ^[17] :

Emotional stressors	Homoeopathic remedies
Betrayal	Aurum metallicum, Natrum muriaticum, Phosphoric acid, Pulsatilla, Staphysagria
Conflict	Causticum, Nux Vomica, Phosphorus, Pulsatilla, Staphysagria
Criticism	Ignatia amara, Nux vomica, Silicea, Staphysagria
Depression	Aurum metallicum, Kali phosphorica, Lachesis, Natrum muriaticum, Pulsatilla, Sepia
Disappointment	Calcarea phosphorica, Ignatia amara, Natrum muriaticum, Phosphoric acid, Staphysagria
Failure	Argentum nitricum, Aurum metallicum, Nux Vomica, Silicea, Veratrum album
Fear	Aconitum napellus, Argentum nitricum, Arsenicum album, Borax venata, Gelsemium, Lycopodium, Phosphorus, Stramonium, Sulphur
Guilt	Arsenicum album, Aurum metallicum, Ignatia amara
Humiliation	Ignatia amara, Lycopodium, Natrum muriaticum, Nux Vomica, Pulsatilla, Staphysagria
Jealousy	Apis mellifica, Lachesis, Pulsatilla
Loss	Aurum metallicum, Causticum, Gelsemium, Ignatia amara, Natrum muriaticum, Pulsatilla Staphysagria, Veratrum album
Mental strain	Argentum nitricum, Calcarea phosphorica, Cocculus indicus, Coffea cruda, Kali phosphorica, Natrum carbonica, Nux Vomica, Phosphoric acid, Picric acid, Silicea, Zincum metallicum
Reprimand	Ignatia amara, Opium, Staphysagria
Resentment	Arsenicum album, Natrum muriaticum, Staphysagria

Shame	Aurum metallicum, Ignatia amara, Nux Vomica, Opium, Staphysagria
Shock	Aconitum napellus, Belladonna, Borax venata, Arnica montana, Calcarea phosphorica, Gelsemium, Ignatia amara, Opium, Stramonium
Transitions	Anacardium orientale, Arsenicum album, Baryta carbonica, Borax venata, Calcarea phosphorica, Lachesis, Lycopodium, Natrum muriaticum, Pulsatilla, Sepia, Sulphur
Uncertainty	Argentum nitricum, Arsenicum album, Calcarea carbonica, Causticum, Gelsemium, Phosphorus
Worry	Aconitum napellus, Ambra Grisea, Anacardium orientale, Argentum nitricum, Arsenicum album, Calcarea carbonica, Gelsemium, Kali phosphorica, Lachesis, Lycopodium, Natrum muriaticum, Nux Vomica, Silicea

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REFERENCES

1. Who.int. 2022. Hypertension. [online] Available at: <https://www.who.int/health-topics/hypertension/#tab=tab_1>.
2. Flack, J. and Adekola, B., 2020. Blood pressure and the new ACC/AHA hypertension guidelines. Trends in Cardiovascular Medicine, 30(3), pp.160-164.
3. Carretero, O. and Oparil, S., 2000. Essential Hypertension. Circulation, 101(3), pp.329-335.
4. V. Ushakov, A., S. Ivanchenko, V. and A. Gagarina, A., 2017. Psychological Stress in Pathogenesis of Essential Hypertension. Current Hypertension Reviews, 12(3), pp.203-214.
5. Lazarus, R.S. and Folkman, S., 1984. Stress, appraisal, and coping. Springer publishing company.
6. Mason, J.W., 1975. A historical view of the stress field. Journal of human stress, 1(2), pp.22-36.

7. Barha Latif. Role of homeopathy in the treatment of hypertension. *Int J Hom Sci* 2017;1(1):33-37
8. Varanasi, R., Kolli, R., Rai, Y., Ramesh, D., Kiranmayee, R., Chandra Reddy, G., Baig, H., Patole, T., Srivastava, P., Bhalaerao, R., Chaudhary, A., Kumar, A., Sarathy, V., Jayasri, G., Sachdeva, G., Jain, S., Sharma, N., Amsole, S., Oinam, A., Oberai, P. and Manchanda, R., 2020. Effects of individualised homoeopathic intervention in Stage I essential hypertension: A single-blind, randomised, placebo-controlled trial. *Indian Journal of Research in Homoeopathy*, 14(1), p.3.
9. Dr. Sultana Perween, Dr. Shamim Alam. Role of homoeopathy in hypertension. *Int J Hom Sci* 2020;4(3):17-20.
10. Naik, D., 2019. Alleviation of Stress induced Hypertension with help of Homoeopathy. *JETIR*, Volume 6(Issue 6).
11. Chinedu, D. (2018) "Homeopathic remedies effective for high blood pressure," *Alternative and Integrative Medicine*, 7, pp. 33–33. Available at: <https://doi.org/DOI: 10.4172/2327-5162-C4-050>.
12. Bagadia, L. and Dhawale, K., 2018. To Demonstrate the Efficacy of Homoeopathic Simillimum on Mild-to-Moderate Essential Hypertension by Modifying the Underlying Anger State, Trait and Expressions. *Homeopathy*, 107(S 01), pp.55-78.
13. Patel, N., 2018. Understanding Psychological Conflicts in Patients with Essential Hypertension and Exploring Matching Homoeopathic Remedies. *Homoeopathic Links*, 31(04), pp.234-240.
14. Kapoor, P., 2018. Efficacy of homeopathic medicines in controlling stress. *International Journal of Homoeopathic Sciences* 2(2): 01-04, E-ISSN: 2616-4493.
15. Daryani, D. and Pattanaik, N., 2016. The Hypotensive Effect of Homoeopathic Medicines In The Management Of The Patients Suffering From Uncomplicated Essential Hypertension - A Prospective, Observational Study. *International Journal Of Medical Science And Clinical Invention*, 15(8), pp.59-65.
16. Matthews, K., Zhu, S., Tucker, D. and Whooley, M., 2006. Blood Pressure Reactivity to Psychological Stress and Coronary Calcification in the Coronary Artery Risk Development in Young Adults Study. *Hypertension*, 47(3), pp.391-395.
17. Castro, M., 2003. Homeopathic guide to stress. St. Martin's Griffin pp88-91.