

An observational study on the effect of individualised homoeopathic medicine administered based on totality of symptoms vis-à-vis personality in cases of osteoarthritis knee

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Abstract

Background: Individualisation is the process of arriving at the image of the patient for the selection of remedy. The customary way of individualisation of the patient is through the construction of totality of symptoms. The little explored area in Homoeopathy is individualisation solely based on personality characteristics. **Objective:** The objective of this study was to compare the effect of individualised homoeopathic medicine administered based on totality of symptoms vis-à-vis personality in patients suffering from knee osteoarthritis. **Methods:** The observational study includes 60 clinically diagnosed cases of osteoarthritis knee, of which 30 cases were administered the homoeopathic medicine selected on the basis of totality of symptoms and thirty cases based on personality. Randomisation was done using computer-generated numbers. The personality of the patients was assessed through the 44-item Big-Five Inventory. A self-made tool, transcribing trait items to rubrics of the homoeopathic repertory, was prepared. The knee osteoarthritis scores on physical function, pain and patient global estimate in Routine Assessment of Patient Index Data 3 (RAPID3) sheet, before and after treatment, were compared. **Results:** The paired difference mean of RAPID3 in totality of symptom-based administration was 4.06 and for personality-based administration was 1.92 with a standard deviation of 3.91 and 3.29, respectively. The test result is statistically significant at 0.05 level ($P < 0.05$). **Conclusion:** Administration of individualised Homoeopathy medicine based on totality of symptoms is found to be more effective as compared to individualised Homoeopathy medicine based on personality amongst patients suffering from osteoarthritis knee.

Keywords: Big Five, individualised homoeopathy, osteoarthritis knee, personality, Routine Assessment of Patient Index Data 3, totality of symptoms

INTRODUCTION

Individualisation is one of the fundamental principles of Homoeopathy. Different methods of analysis are in use to individualise a patient in Homoeopathy.^[1] The most prominent and commonly practised method of individualisation of a case is through the construction of totality of symptoms. Hahnemann has narrated individualisation based on characteristic totality in aphorism 147 and 153 of *Organon of Medicine*.^[2] The other method of individualisation suggested by Dr. Kent is based on the general symptoms. Hahnemann and Kent also have stressed the importance of mind symptoms in individualisation of the case. The statement of Dr. Kent confirms his views in this regard as he observes, 'It is the man who is sick and man consist of what he thinks and what he loves and there is nothing else in a man. Man is the will and

understanding and the house in which he lives is his body'.^[3] Tyler and Weir opined that strong mental generals will rule out all other lesser marked symptoms.^[4] Dr. Richard Hughes pointed out that the final selection of a similar remedy should be based on individual similarity, especially in those diseases that affect every subject in their way.^[5] Thus, the views of Dr. Kent and Dr. Richard Hughes underline the same

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idea of Hahnemann as said in aphorism 5 of Organon that individualisation of the patient with the help of disposition is possible in Homoeopathy.

According to psychologists, personality is more or less a true representation of an individual. American psychological association defines, '*personality is the individual difference in the characteristic pattern of thinking, feeling and behaving*'.^[6] In personality psychology, the domain that is more concentrating on thinking, feeling and resultant external behaviour to designate personality is the trait theory of personality. McCrae views '*Traits are characteristics that lead people to behave in a more or less distinctive and consistent way across situations*'.^[7] These characters or traits are systematically arranged and categorised into different dimensions to designate the personality and individuality of a person. Personality psychologists now accept the five-dimensional concept as the most refined one amongst all trait concepts. The major dimensions used to designate personality in 'Big Five' are extraversion, agreeableness, conscientiousness, neuroticism and openness to experience. Psychologists have confirmed this fact that the five-factor model is the major structure underlying many existing personality inventories.^[8] Accordingly, the individualisation of a person is possible by assessing the dimensions of personality in an inventory.

Osteoarthritis is a disorder of diarthrodial joint that is characterised clinically by pain and functional limitation, radiographically by osteophytes and joint space narrowing, histopathologically by alteration in cartilage and subchondral bone.^[9] The epidemiological studies show that osteoarthritis affects people above the age of 50 years and largely female gender. It amounts to the global health burden by functional incapability and disability. It adds to global expenditure in the way of treatment cost and absenteeism from work. In a WHO study, it has been revealed that by the year 2050, 130 million will suffer from osteoarthritis worldwide, of whom 40 million will be disabled by the disease.^[10] Globally, knee osteoarthritis is the fourth significant cause of incapability in women and eighth in men.^[11] In India, approximately 45% of the population of over 65 years of age show symptoms of osteoarthritis.^[12] A study on women aged above 40 years in Kerala identified that 41.6% of people had symptoms of osteoarthritis knee, and amongst them, 66.2% had bilateral osteoarthritis.^[13] The diagnosis of osteoarthritis is confirmed on clinical symptoms alone or with clinical and radiographic findings. The main clinical symptoms include pain during and just after joint use; stiffness, especially rising from sitting; and buckling while walking. The major signs are crepitus, bony tenderness, bony enlargement, tenderness at medial ligament attachment and no palpable warmth on the affected joint.^[14]

The risk factors for the development of osteoarthritis include systemic, joint environment and joint overloading factors. Increasing age, female sex, heredity and race are the systemic risk factors.^[15] In females, the oestrogen deficiency during the menopausal age affects not only the bone and articular cartilage

directly but also increases the chance of being obese that, in turn, will lead to an increase in joint overloading.^[16] The role of heredity is more seen in hand osteoarthritis compared to the knee.^[17] Indians are more prone to osteoarthritis knee than the Western people.^[17] The joint environment factors and joint overloading factors such as obesity, repeated overuse of the joint and increased bone density may lead to articular cartilage destruction and thereby the development of osteoarthritis.

Apart from the previously mentioned factors, the role of personality and psychosocial events as an accompaniment for the development of osteoarthritis has been extensively studied. Psycho-emotional stress has a contributory role in the initiation and aggravation of degenerative changes of osteoarthritis.^[18] A study identified that negative effect on personality was elevated along with disease activity of osteoarthritis.^[19] In-depth study reports are available on the possible relationship between personality dimension and osteoarthritis. Two major studies considering this point are the relationship between osteoarthritis and depression^[20] and the role of personality dimensions of Big Five in osteoarthritis patients.^[21] All these study reports reiterate that osteoarthritis is a disease of constitutional affection that affects every individual their way.

Homoeopathy is a therapeutic system which is erected on the strong foundation of Law of Similia, *Similia similibus curentur*, meaning let likes be treated by likes.^[22] Even though it is an established thought that Homoeopathy relies much on the mental and emotional state of the patient for the selection of medicine, the systematisation of mental and emotional symptoms in a prescribed pattern to suit to individualise a patient for the selection of drug has not formulated so far efficiently and prudently. Finer shades in personality studies show that personality is more or less a true representation of individuality. In Homoeopathy, individuality has arrived at a great extent through personality characteristics though not fully. Trait theory of personality assesses personality from the commonly speaking words (trait words) that represent the behaviour. The homoeopathic case taking demands the recording of the symptoms of the patient in their own words. Quoting Hahnemann, Dr. Stuart Close opined that the language of drugs in homoeopathic materia medica is common man's language. In this context, the attempt for linking the individualisation concept of Homoeopathy with the trait theory of personality is more or less possible as the determining criteria of individualisation in both methods are the verbal expressions and outward behaviour. It is learned from the literature searches that so far no valid studies are available on medicine selection based on personality alone.

Hence, the objective of the present study was to compare the effect of individualised homoeopathic medicine administered on the basis of totality of symptoms vis-à-vis personality in patients suffering from knee osteoarthritis.

METHODS

Study design

Study design for this research study is a comparative, observational study.

Study duration

Data collection was done between June 2017 and December 2018. The patients who continued the treatment protocol for 6 months after initial consultation were considered for final analysis of comparison.

Study setting

Samples for the observational study were collected from the outpatient department of Dr. Padiar Memorial Homoeopathic Medical College, Chottanikkara, Ernakulam, Kerala. The study was conducted under the guidance of and support of School of Behavioural Sciences, Mahatma Gandhi University, Kottayam, Kerala.

Participants

A checklist of clinical diagnostic criteria for osteoarthritis by the American College of Rheumatology was used to screen the patients for the study.^[16]

The inclusion criteria were age above 40 years and persons strictly under the domain of clinical diagnostic criteria of the American College of Rheumatology. Patients who were having other rheumatic diseases such as rheumatoid arthritis and gout were excluded from the study. Patients who had a history of knee injury and who had undergone knee surgery were also exempted from the study group.

Sample size

Sample size calculation was done based on a pilot study. The coefficient variation of that study was 14%. Then, the sample size for the present study was calculated on the formula $n = (t^2 / \epsilon^2) \times (C.V)^2 = 31.36$. It is rounded and fixed as 30 for each group. Here, t is taken as two and ϵ is taken as 0.05, assuming at 5% interval. Since the procedure started after explaining all the study protocols to the patient and the study duration was fixed, the dropout from the study was nil. The items of Big-Five were transcribed into Homoeopathic rubrics and its reliability measure is shown as Annexure 1.

Sixty clinically diagnosed cases of osteoarthritis were selected for the final analysis of medicine selection of which thirty cases for individualisation based on totality of symptoms and thirty cases for individualisation based on personality. The total sample size is 60. Details have been presented as Figure 1 in the flow chart of the study.

Randomisation

The patients registered in the outpatient department were allotted the number sequence generated by the software www.randomiser.com to opt for each group.

Statistical methods

Statistical analysis was done using the Statistical Package for the Social Sciences version 20 (IBM India Ltd, Bangalore,

Karnataka, India). The effectiveness of treatment with individualised Homoeopathy based on totality of symptoms and based on personality is evaluated using paired t -test. The test to compare the effectiveness of the intervention on Routine Assessment of Patient Index Data 3 (RAPID3) to a statistically significant level is done using independent t -test. All the tests were considered statistically significant at <0.05 level.

Ethical statements

The Institutional Ethics Committee of School of Behavioural Sciences Mahatma Gandhi University, Kottayam, Kerala, had approved the study through the letter dated 22 September 2017. The Institution Ethics Committee of Dr. Padiar Memorial Homoeopathic Medical College also approved the study (IEC/DPMHMC/ECP-402/2019 dated 20 July 2019). Each patient was informed of the ethical issues related to the study through the informed consent form and was duly documented.

The study was performed following the protocol laid down in the 1964 Declaration of Helsinki.

Outcome assessment

The pre- and post-test scores of osteoarthritis patients were assessed with RAPID3 on the Multidimensional Health Assessment Questionnaire.^[23] RAPID3 measures physical function (FN), pain (PN) and patient global estimate (PTGE) and the three together as RAPID3. It is a standard tool in all rheumatic diseases and is usually correlated with the WOMAC scale for osteoarthritis.^[24]

Personality characters were framed according to 44-item inventory of John and Srivastava, known as Big-Five Inventory (BFI), the validated tool of trait theory of personality. In US and Canadian samples, the alpha reliability of BFI ranges from 0.75 to 0.90 averaging to above 0.80. It is most widely used to study the personality profiles of the patient suffering from various diseases including osteoarthritis.^[25] The 44-item BFI represents five dimensions in 44 questions. Each question has a keyword with a phrase that represents a trait with specificity in its meaning. Its measurement is on a five-point scale. It is translated into the regional language strictly adhering to the translation parameters of manual.

The third tool was a self-made tool to suit the purpose of this particular study. First, the keywords in every question of BFI were selected. A rubric in homoeopathic repertory exactly the same to the keyword in the inventory was identified and marked as the rubric for that trait word. The rubrics for this purpose were selected from the synthesis repertory 8.1 edited by Frederik Schroyens.^[26] If the same keyword was not present in the repertory, a rubric with similar meaning and content of the keyword in the question of inventory was set as the rubric for that trait word. In this manner, a list of 44 rubrics against 44 keywords in the inventory was prepared as the third tool for medicine selection based on personality. Here also, the translation manual of inventory was strictly adhered to. The reliability was calculated as the average percentile score and was found to be 92% which is highly significant.

Data collection

First, the symptoms of the patient were recorded and the diagnosis was confirmed. The pre-test scores on FN, PN and PTGE were noted down subsequently in RAPID3 sheet. Patients selected for personality-based study were asked to mark their responses in the five-point scale of 44-item BFI.

The investigator had a postgraduate degree in Homoeopathy and had teaching experience of 20 years in the Department of Organon of Medicine in a homoeopathic medical college.

The investigator, after seeing the case records of patients, framed the totality of symptoms. This totality of symptoms was subjected to repertorisation to identify the suitable medicine. A careful search of the inventory of patients in the personality-based study arm revealed the most prominent personality characters. This was listed out first. The matching rubrics were identified against the most prominent characters of the patient from the tool already prepared. The selected rubrics were repertorised. In both the groups, the medicine was administered to the patient following the rules of potency and dose and repetition. Follow-up assessment was done every month. RAPID3 scores were evaluated at the 3rd month and 6th month. The baseline score and the final score after 6 months were used for analysis.

RESULTS

Tables 1 and 2 show a *P* value ($P < 0.05$) and *t* value at a significant level on the paired *t*-test. The findings presented in Tables 1 and 2 show that there was a significant difference in the scores of FN, PN, global estimate and RAPID3 of patients suffering from osteoarthritis knee before and after treatment when an individualised homoeopathic medicine was administered based on totality of symptoms and based on personality.

Table 3 shows a *P* value and *t* value at a significant level. The result shows that there is a significant difference in the paired difference mean of RAPID3 score in patients suffering from osteoarthritis knee when an individualised homoeopathic medicine was administered based on totality of symptoms and based on personality.

Medicines prescribed

The individualised medicine prescribed for osteoarthritis knee based on totality of symptoms were *Sulphur* and *Kali carb.* ($n = 4, 13.3\%$), *Nat mur.* and *Lycopodium* ($n = 3, 10\%$), *Ars alb.* *Graphites*, *Pulsatilla*, *Cal. Phos.* *Phosphorus* and *Rhus. tox* ($n = 2, 6.7\%$), *Aur met.* *Kali bich.* *Lachesis* and *Cal. carb* ($n = 1, 3.3\%$). The medicines administered based on personality were *Lachesis* and *Ars alb.* ($n = 5, 16.7\%$), *Sulphur*, *Cal. carb*, *Phosphorus* and *Nat mur.* ($n = 3, 10\%$), *Lycopodium* and *Pulsatilla* ($n = 2, 6.7\%$) and the rest of medicines were *Nux vomica*, *Causticum*, *Ignatia* and *Aurum met.* ($n = 1, 3.3\%$). All the medicines were administered in 200th potency in two doses as night and morning dose. After the follow up of 3 months the same medicine in same potency were repeated as the first instance.

DISCUSSION

The independent *t*-test values on paired difference mean show an inference that individualised medicine administered based on totality of symptoms was more effective than personality-based medicine in reducing the sufferings of osteoarthritis knee patients. Earlier studies on osteoarthritis proved the effectiveness of homoeopathic medicine administered based on individualised Homoeopathy.^[27] The individualised medicine selected in this study are more or less same to the referred study. Here, in this particular study, the remedies were selected focusing mainly on the constitutional nature that predisposes for osteoarthritis. The primary symptoms included

Table 1: Paired *t*-test value of medicine selection based on totality of symptoms

Variable	<i>n</i>	Before treatment		After treatment		Paired difference		<i>t</i>	<i>P</i>
		Mean	SD	Mean	SD	Mean	SD		
FN	30	3.82	1.29	2.40	1.52	1.41	1.20	6.47	0.000
PN	30	3.52	1.05	2.41	1.55	1.10	1.49	4.03	0.000
PTGE	30	3.93	1.30	2.41	1.81	1.52	1.50	5.51	0.000
RAPID	30	11.27	3.3	7.21	4.69	4.06	3.91	5.62	0.000

FN: Physical function; PN: Pain; PTGE: Patient global estimate; RAPID: Routine Assessment of Patient Index Data; SD: Standard deviation

Table 2: Paired *t*-test value of medicine selection based on personality

Variable	<i>n</i>	Before treatment		After treatment		Paired difference		<i>t</i>	<i>P</i>
		Mean	SD	Mean	SD	Mean	SD		
FN	30	3.59	1.67	2.97	1.53	0.62	1.14	2.98	0.006
PN	30	4.25	1.74	3.58	1.63	0.67	1.15	3.18	0.003
PTGE	30	4.47	1.89	3.83	1.70	0.63	1.24	2.80	0.009
RAPID	30	12.30	5.13	10.38	4.68	1.92	3.29	3.19	0.003

FN: Physical function; PN: Pain; PTGE: Patient global estimate; RAPID: Routine Assessment of Patient Index Data; SD: Standard deviation

Table 3: Independent t-test to compare the effect of individualised Homoeopathy medicine administered based on totality of symptoms and personality on Routine Assessment of Patient Index Data 3 amongst patients suffering from osteoarthritis knee

Osteoarthritis	Variable	Paired difference mean	SD	t	P
Totality of symptoms	RAPID3	4.06	3.91	2.245	0.029
Personality	RAPID3	1.92	3.29		

Significance at 0.05 level. RAPID: Routine Assessment of Patient Index Data; SD: Standard deviation

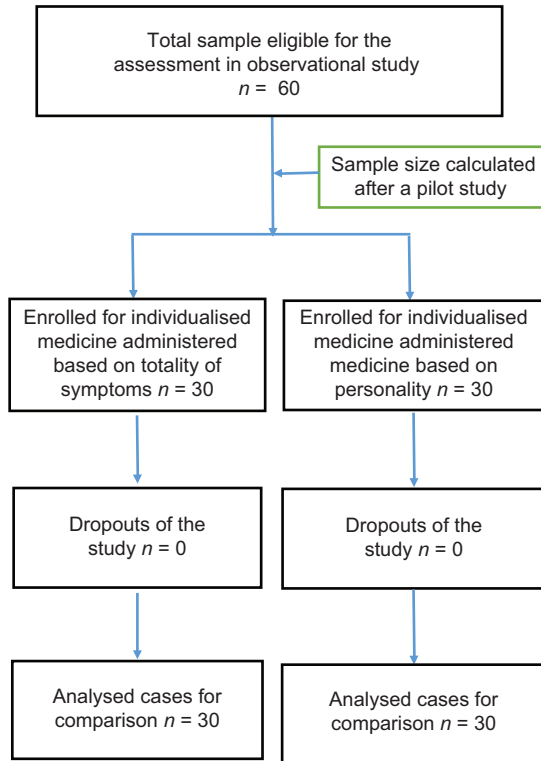


Figure 1: Flow chart of the study

were obesity, old age or menopausal age, over exertion of knee joint in cases based on their presence. To these primary symptoms, the general and particular characteristics of the patient with modalities were added to frame the totality. Therefore, this study squarely matches with the earlier findings that Homoeopathy is effective in reducing the sufferings of osteoarthritis patients when a medicine was administered based on individualised Homoeopathy. However, this particular study involving medicine selection based on the personality of BFI helped to move one step forwards to keep the view that homoeopathic medicine administration is effective when the medicine is selected based on personality characters also.

Individualised medicine is the rule in Homoeopathy. Various studies have been done using individualised homoeopathic medicine selection based either on the totality of characteristic symptoms as per Hahnemann or general symptoms as per Kent.^[28-30] There are research studies available on the role of

personality in general and five-factor model of personality in particular in patients suffering from osteoarthritis. However, so far no works of literature available in peer-reviewed journals on valid attempts of linking personality with homoeopathic medicine selection. This study is an attempt for linking the trait theory of personality to homoeopathic medicine selection. Therefore, this study concentrates on the effectiveness as well as on the comparison of effectiveness of homoeopathic medicine administered based on totality of symptoms and administered based on personality in patients suffering from osteoarthritis.

The results indicate that medicine administration based on totality of symptoms is better in comparison to personality-based administration amongst patients suffering from osteoarthritis knee. Scrutiny of literature on the concept of sickness in Homoeopathy and nature of disease osteoarthritis will amply justify the results of this study. Homoeopathy is a therapeutic system developed by Hahnemann, who always insisted on the importance of totality of symptoms in framing the image of a patient. Hahnemann believed that the characteristic totality (aph. 153) framed from mental and emotional symptoms (aphs. 211 and 212), physical constitution and life situation (aph. 5) and particular symptoms will help to individualise the patient. He has shaped and sharpened the drug knowledge accordingly. That is why Kent said, ‘*The idea of sickness in man must be formed from the idea of sickness perceived in our materia medica. As we perceive the nature of sickness in a drug image, so must we perceive the nature of sickness in human being to be healed*’.^[31] Osteoarthritis is a degenerative disease related to the risk factors of ageing, heredity and psychosocial stress, which reflects that it is a disease having a constitutional affection and requires individualised treatment.

Small sample size was a limitation of this study. A major difficulty faced was the inclusion and conversion of the mental symptoms in the repertory to the contextual language of the BFI. A large number of symptoms and their medicine in the mind chapter of synthesis repertory are frequently and efficiently used for remedy selection in clinical practice other than that which comes under personality profiles, which has to be deliberately sacrificed when the prescription is restricted to individualisation based on any of the short inventory of modern personality psychology. Future studies are required with a larger sample size to confirm the findings and to find out the personality profiles that show a predilection to osteoarthritis. For that purpose, personality inventory having more trait words like NEO-Personality Inventory-Revised, which has 240 items, can be utilised.

The homoeopathic treatment based on the totality of symptoms is a person-centred, individualised treatment. Therefore, totality of symptoms-based individualisation is more effective in the treatment of disease showing affections due to risk factors that have an impact on the patient as a whole like osteoarthritis. The second reason is that Hahnemann has developed and nurtured Homoeopathy in such spirits that the patient’s image and drug image are better matched

only by individualised Homoeopathy based on totality of symptoms than any other parameters of individualisation. At the same time, the present study's results give a direction to the homoeopaths that homoeopathic medicine selection is feasible based on personality also. This study opens avenues for personality based studies in Homoeopathy.

CONCLUSION

This study shows that the administration of individualised homoeopathic medicine based on totality of symptoms is more effective as compared to individualised homoeopathic medicine merely based on personality amongst patients suffering from osteoarthritis knee.

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Conflicts of interest

None declared.

REFERENCES

- Dean ME, Coulter MK, Fisher P, Johst K, Walach H. Reporting data on homoeopathic treatment (RedHot): A supplement to CONSORT. *Homoeopathy* 2007;96:42-5.
- Hahnemann S. *Organon of Medicine*. Reprint ed. New Delhi: B. Jain Publishers Pvt. Ltd.; 1995.
- Kent JT. *Lectures on Homoeopathic Philosophy*. New Delhi: B. Jain Publishers Pvt. Ltd.; 2002. p. 21.
- Tyler M, Weir J. *Repertorising, Use of the Repertory by Dr JT Kent*. 12th Impression. New Delhi: B Jain Publishers Pvt. Ltd.; 2018.
- Hughes R. *The Principle and Practice of Homoeopathy*. Reprint ed. New Delhi: B Jain Publishers Pvt. Ltd.; 1991. p. 94.
- American Psychological Association. *Personality*. Available from: <https://www.apa.org/topics/personality>. [Last accessed on 2020 May 05].
- Morgan CT, King RA, editors. *Introduction to Psychology*. 7th ed. New Delhi: McGraw Hill; 2004. p. 571.
- Larsen RJ, Buss DM. *Personality Psychology: Domains of Knowledge about Human Nature*. 2nd ed. New York: McGraw-Hill; 2005. p. 91.
- Goldman L, Ausiello DA, editors. *Cecil Medicine*. 23rd Indian Reprint ed., Vol. 2. New Delhi: Elsevier; 2007. p. 1993.
- Tanna S. Osteoarthritis. In: *Priority Medicines for Europe and the World*. Updated on 2004 Background Paper. Geneva: World Health Organization; 2013. p. 126. https://www.who.int/medicines/areas/priority_medicines/BP6_12Osteo.pdf. Last accessed on 2017 Sep 02].
- Azad CS, Singh AK, Pandey P, Singh M, Chaudhary P, Tia N, *et al*. Osteoarthritis in India: An epidemiologic aspect. *Int J Recent Sci Res* 2017;8:20918-22.
- Pal CP, Singh P, Chaturvedi S, Pruthi KK, Vij A. Epidemiology of knee osteoarthritis in India and related factors. *Indian J Orthop* 2016;50:518-22.
- Bhaskar A, Areekal B, Vasudevan B, Ajith R, Ravi S, Sankar S. Osteoarthritis of knee and factors associated with it in middle aged women in a rural area of central Kerala, India. *Int J Community Med Public Health* 2016;3:2926-31.
- Das KK. *Textbook of Medicine*. 5th ed. New Delhi: Jaypee Brothers Medical Publishers; 2008. p. 734.
- Felson DT. Osteoarthritis. In: Fauci AS, Braunwald E, Kasper D, Hauser S, Longo D, Jameson JL, *et al.*, editors. *Harrison's Principles of Internal Medicine*. 17th ed., Vol. II. New Delhi: McGraw-Hill; 2008. p. 2159.
- Brion PH, Kalunian KC. Osteoarthritis. In: Warrell DA, Cox TM, Firth JD, editors. *Oxford Textbook of Medicine*. 5th ed., Vol. 2. New York: Oxford University Press; 2010. p. 3629-30.
- Das SK. Osteoarthritis. In: Shah SN, editor. *API Text Book of Medicine*. 8th ed. Mumbai: The Associations of Physicians India; 2008. p. 279.
- Ebnezar J, Nagarathna R, Yogitha B, Nagendra HR. Effect of integrated yoga therapy on pain, morning stiffness and anxiety in osteoarthritis of the knee joint: A randomized control study. *Int J Yoga* 2012;5:28-36.
- Smith BW, Zautra AJ. The role of personality in exposure and reactivity to interpersonal stress in relation to arthritis disease activity and negative affect in women. *Health Psychol* 2002;21:81-8.
- Park K, Gignac MA, Badley EM. Physical disability, perceived dependence and depression in older women with osteoarthritis. In: *ACR/ARHP Annual Meeting*. Washington, DC: American College of Rheumatology, Wiley; 2012. Available from: <https://acrabstracts.org/meetings/2012-acrarhp-annual-meeting/>. [Last accessed on 2020 May 05].
- Zhou M, Bannuru RR, Price LL, Park M, & Wang C. (2018). The Role of Personality in Patients with Knee Osteoarthritis [abstract]. *Arthritis Rheumatol*. 2018; 70 (suppl 10). Retrieved from <https://acrabstracts.org/abstract/the-role-of-personality-in-patients-with-knee-osteoarthritis/>. [Last accessed on 2019 Mar 08].
- Hughes R. *The Principle & Practice of Homoeopathy*. Reprint ed. New Delhi: B Jain Publishers Pvt Ltd; 1991. p. 2.
- Pincus T, Bergman MJ, Yazici Y. RAPID3 – An index of physical function, pain, and global status as “vital signs” to improve care for people with chronic rheumatic diseases. *Bull NYU Hosp Jt Dis* 2009;67:211-25.
- Lurati A, Scarpellini M. Routine assessment of patient index data 3 (RAPID3) is a valid index for routine care in patients with osteoarthritis. *Br J Med Res* 2013;3:1823.
- Ahmadi O, Rasoulzadeh Y, Abbaspour A, Damanab PS, Rahimzadeh M, Keshizadeh F, *et al*. Personality and its relationship with prevalence of musculoskeletal disorders. *Jentashapir J Health Res* 2016;7:e37936.
- Schroyens F. *Synthesis Repertorium Homoeopathicum Syntheticum*. 8.1 ed. New Delhi: B. Jain Publishers; 2005.
- Motiwala FF, Kundu T, Bagmar K, Kakatkar V, Dhole Y. Effect of homoeopathic treatment on activity of daily living (ADL) in knee osteoarthritis: A prospective observational study. *Indian J Res Homoeopathy* 2016;10:182-7.
- Sitharthan R, Abdurahiman T. Relevance of hahnemannian concepts in the management of bronchial asthma assessed by immunoglobulin e (IgE), absolute eosinophil count (AEC) and pulmonary function test (PFT). *Int J Curr Res* 2017;9:57641-6.
- Long L, Ernst E. Homeopathic remedies for the treatment of osteoarthritis: A systematic review. *Br Homeopath J* 2001;90:37-43.
- Nayak C, Singh V, Gupta J, Ali MS, Pal R, Arya M, *et al*. Homoeopathic individualized LM-potencies versus Centesimal potencies for pain management of cervical spondylosis: A multicenter prospective randomized exploratory clinical study. *Indian J Res Homoeopathy* 2012;6:16-23.
- Kent JT. *Lectures on Homoeopathic Philosophy*. Reprint ed. New Delhi: B. Jain Publishers Pvt. Ltd.; 2002. p. 24.

घुटने की अस्थिसंधिशोथ वाले मामलों में व्यक्तित्व की तुलना में लक्षणों की समग्रता पर आधारित वैयक्तिक प्रबंधित होम्योपैथिक दवाओं की प्रभावकारिता पर अध्ययन

पृष्ठभूमि : चिकित्सा को चुनने के लिए रोगी की कल्पना तक पहुँचने की प्रक्रिया वैयक्तिकता है। रोगी की वैयक्तिकता को प्रथागत करने का तरीका लक्षणों की संपूर्णता को निर्मित करने के माध्यम से है। होम्योपैथी में सबसे कम अन्वेषित क्षेत्र वैयक्तिकता है जो पूर्णतया व्यवहार विशेषताओं पर आधारित है। **उद्देश्य :** इस अध्ययन का उद्देश्य घुटने की अस्थिसंधिशोथ से पीड़ित रोगियों में व्यक्तित्व की तुलना में लक्षणों की समग्रता पर आधारित वैयक्तिक प्रबंधित होम्योपैथिक दवाओं की प्रभावकारिता की तुलना करना है। प्रणालियाँ : अवलोकनात्मक अध्ययन में घुटने की अस्थिसंधिशोथ के छह नैदानिक निरूपित मामले हैं, जिसमें से लक्षणों की समग्रता के आधार पर चुने गए तीस मामलों को होम्योपैथिक दवाओं द्वारा प्रबंधित किया गया था तथा तीस मामले व्यक्तित्व पर आधारित थे। कंप्यूटर-उत्पन्न अंकों का इस्तेमाल करते हुए यादृच्छिकरण किया गया था। रोगियों के व्यक्तित्व को 44-मद बिग फाइव इन्वेंटरी के माध्यम से निर्धारित किया गया था। होम्योपैथिक लक्षण सूचिका के शीर्षकों को विशिष्ट सामग्रियों से प्रतिलिपित करता हुआ एक स्वनिर्मित साधन तैयार किया गया था। रोगी सूचक आंकड़ा 3 (रैपिड 3) शीट के नियमित आंकलन में, घुटने की अस्थिसंधिशोथ के शारीरिक प्रकार्य, दर्द और रोगी के वैश्विक अनुमान पर दर्ज आंकड़ों के, चिकित्सा से पहले और बाद में, तुलना की गई थी। **परिणाम :** रैपिड 3 का लक्षण-आधारित प्रबंधन की समग्रता में युग्म अंतर मान 4.06 था तथा व्यक्तित्व आधारित प्रबंधन में 1.92 था जिसमें मानक विचलन क्रमशः 3.91 तथा 3.29 थी। परीक्षण के परिणाम 0.05 स्तर (पी < 0.05) पर आंकड़ों की दृष्टि से महत्वपूर्ण थे। **निष्कर्ष :** घुटने के अस्थिसंधिशोथ से पीड़ित रोगियों में व्यक्तित्व आधारित वैयक्तिक होम्योपैथिक दवाओं की तुलना में लक्षणों की समग्रता पर आधारित वैयक्तिक होम्योपैथिक दवाओं का प्रबंधन ज्यादा प्रभावकारी पाया गया।

Une étude sur l'effet d'un médicament homéopathique individualisé administré en fonction de la totalité des symptômes vis-à-vis de la personnalité dans les cas d'arthrose du genou

Contexte : L'individualisation est le processus qui permet d'arriver à l'image du patient pour le choix du remède. La manière habituelle d'individualiser le patient consiste à construire la totalité des symptômes. Le domaine peu exploré de l'homéopathie est l'individualisation basée uniquement sur les caractéristiques de la personnalité. **Objectif :** L'objectif de cette étude était de comparer l'effet d'un médicament homéopathique individualisé administré sur la base de la totalité des symptômes vis-à-vis de la personnalité chez des patients souffrant d'arthrose du genou. **Les méthodes :** L'étude d'observation comprend soixante cas d'arthrose du genou diagnostiqués cliniquement, dont trente cas ont reçu le médicament homéopathique sélectionné sur la base de la totalité des symptômes et trente cas sur la base de la personnalité. La randomisation a été effectuée à l'aide de nombres générés par ordinateur. La personnalité des patients a été évaluée par le biais de l'inventaire Big-Five en 44 points. Un outil de transcription des traits de caractère dans les rubriques du répertoire homéopathique a été préparé par l'auteur lui-même. Les scores de l'arthrose du genou en termes de fonction physique, de douleur et d'estimation globale du patient dans la feuille RAPID3 (Routine Assessment of Patient Index Data 3), avant et après le traitement, ont été comparés. **Résultats :** La moyenne de la différence par paires de RAPID3 pour l'ensemble de l'administration basée sur les symptômes était de 4,06 et pour l'administration basée sur la personnalité de 1,92 avec un écart-type de 3,91 et 3,29, respectivement. Le résultat du test est statistiquement significatif au niveau de 0,05 ($P < 0,05$). **Le Conclusion:** L'administration d'un médicament homéopathique individualisé basé sur la totalité des symptômes s'avère plus efficace que celle d'un médicament homéopathique individualisé basé sur la personnalité chez les patients souffrant d'arthrose du genou.

Un estudio sobre el efecto de la medicina homeopática individualizada administrada basado en la totalidad de los síntomas frente a (vis-à-vis) la personalidad en casos de artrosis de rodilla

Antecedente: La individualización es el proceso de llegar a la imagen del paciente para la selección del remedio. La forma habitual de individualización del paciente es a través de la construcción de la totalidad de los síntomas. El área poco explorada en la Homeopatía es la individualización basada únicamente en las características de la personalidad. **Objetivo:** El objetivo de este estudio fue comparar el efecto de la medicina homeopática individualizada administrada en base a la totalidad de los síntomas frente a la personalidad en pacientes con osteoartritis de rodilla. **Métodos:** El estudio observacional incluye sesenta casos clínicamente diagnosticados de osteoartritis de rodilla, de los cuales treinta casos fueron administrados la medicina homeopática seleccionada sobre la base de la totalidad de los síntomas y treinta casos basados en la personalidad. La aleatorización se realizó utilizando números generados por ordenador. La personalidad de los pacientes fue evaluada a través del Inventario Big-Five de 44 ítems. Se preparó una herramienta autohecha que transcribía los elementos de los rasgos a la rubrica del repertorio homeopático. Se compararon las puntuaciones de la artrosis de rodilla sobre la función física, el dolor y la estimación global del paciente en la hoja de evaluación rutinaria de los datos 3 del índice del paciente (RAPID3), antes y después del tratamiento. **Resultados:** La media de diferencia pareada de RAPID3 en la totalidad de la administración basada en síntomas fue de 4.06 y para la administración basada en personalidad fue de 1.92 con una desviación estándar de 3.91 y 3.29, respectivamente. El resultado de la prueba es estadísticamente significativo a nivel de 0.05 ($P < 0.05$). **Conclusión:** La administración de la medicina individualizada de la homeopatía basada en la totalidad de los síntomas se encuentra para ser más eficaz en comparación con la medicina individualizada de la homeopatía basada en la personalidad entre los pacientes que sufren de osteoartritis de rodilla.

Eine Studie über die Wirkung individualisierter homöopathischer Arzneimittel auf der Grundlage der Gesamtheit der Symptome gegenüber der Persönlichkeit bei Arthrose.

Hintergrund: Individualisierung ist der Prozess des Erreichens des Bildes des Patienten für die Auswahl des Mittels. Die übliche Art der Individualisierung des Patienten ist die Konstruktion der Gesamtheit der Symptome. Das wenig erforschte Gebiet in der Homöopathie ist die Individualisierung allein aufgrund von Persönlichkeitsmerkmalen. **Zielsetzung:** Das Ziel dieser Studie war der Vergleich der Wirkung von individualisierten homöopathischen Medizin verabreicht, basierend auf der Totalität der Symptome vis-à-vis Persönlichkeit bei Patienten mit Knie-Arthrose. **Methoden:** Die Beobachtungsstudie umfasst sechzig klinisch diagnostizierte Fälle von Arthrose Knie, von denen dreißig Fälle wurden die homöopathische Medizin ausgewählt auf der Grundlage der Gesamtheit der Symptome und dreißig Fälle basierend auf Persönlichkeit verabreicht. Die Randomisierung erfolgte mit computergenerierten Zahlen. Die Persönlichkeit des Patienten beurteilt wurde durch die 44-item Big Five Inventory. Ein selbstgemachtes Werkzeug, das Merkmalsgegenstände in Rubriken des homöopathischen Repertoires transkribiert, wurde vorbereitet. Die Knie-Arthrose-scores auf die physische Funktion, Schmerzen und Patienten, die Globale Schätzung, die in Routine Assessment of Patient Index Data 3 (RAPID3) Blatt, vor und nach der Behandlung verglichen wurden. **Ergebnisse:** Der paarige Differenzmittelwert von RAPID3 in der Gesamtheit der symptom-basierten Verabreichung betrug 4,06 und für die persönlichkeitsbasierte Verabreichung 1,92 mit einer Standardabweichung von 3,91 bzw. Das Testergebnis ist statistisch signifikant bei 0,05 ($P < 0,05$). **Schlussfolgerung:** Die Verabreichung von individualisierter Homöopathie auf der Grundlage der Gesamtheit der Symptome ist im Vergleich zu individualisierter Homöopathie auf der Grundlage der Persönlichkeit bei Patienten mit Arthrose wirksamer Knie.

基于整体症状的个性化顺势疗法治疗膝关节骨关节炎患者的疗效研究

背景: 个性化是到达患者的形象为补救的选择的过程。患者个性化的习惯方法是通过构建整体症状。顺势疗法中的小探索领域是完全基于个性特征的个性化。 **目标:** 这项研究的目的是比较个体化顺势疗法药物管理基于整体的症状相对于人格的膝关节骨关节炎患者的影响。 **方法:** 观察性研究包括60例临床诊断的骨关节炎膝关节，其中30例给予顺势疗法药物选择的基础上，整体症状和30例基于人格。随机化是使用计算机生成的数字。通过44项大五库存评估患者的个性。编写了一个自制的工具，将性状项目转录到顺势疗法剧目的量规中。在常规评估患者指数数据3(RAPID3)表中，对治疗前后的膝关节骨关节炎的物理功能、疼痛和患者全局估计的评分进行了比较。 **结果:** 以症状为基础的给药总量中RAPID3的配对差异平均值为4.06，以个性为基础的给药为1.92，标准偏差分别为3.91和3.29。试验结果在0.05水平有统计学意义($P < 0.05$)。 **结论:** 与基于骨关节炎膝关节患者个性的个性化顺势疗法药物相比，基于整体症状的个性化顺势疗法药物的管理被发现更有效。

ANNEXURE

Annexure 1: Items of Big-Five transcribed in to Homoeopathic rubrics

Statement of trait	Homoeopathic rubric
1. Is talkative	1. Loquacity
2. Tends to find fault with others	2. Censorious
3. Dose a thorough job	3. Industrious
4. Is depressed, blue	4. Sadness
5. Is original, comes up with new ideas	5. Ideas, abundant
6. Is reserved	6. Reserved
7. Is helpful and unselfish with others	7. Benevolence
8. Can be somewhat careless	8. Heedless
9. Is relaxed handles stress well	9. Tranquillity
10. Is curious about many different things	10. curious
11. Is full of energy	11. Vivacious
12. Start quarrels with others	12. Quarrelsome
13. Is a reliable worker	13. Duty too much sense of
14. Can be tense	14. Anguish
15. Is ingenious, a deep thinker	15. Thought-thoughtful
16. Generates a lot of enthusiasm	16. Exhilaration
17. Has a forgiving nature	17. Mildness
18. Tends to be disorganised	18. Chaotic
19. Worries a lot	19. Anxiety
20. Has an active imagination	20. Fancies-vivid
21. Tends to be quiet	21. Quiet want to be
22. Is generally trusting	22. Confiding
23. Tends to be lazy	23. Laziness
24. Is emotionally stable, not easily upset	24. Confident
25. Is inventive	25. Activity-creative
26. Has an assertive personality	26. Dogmatic
27. Can be cold and aloof	27. Unfeeling
28. Perseveres until the task is finished	28. Perseverance
29. Can be moody	29. Morose
30. Values artistic, aesthetic experiences	30. Amusement desire
31. Is sometimes shy, inhibited	31. Timidity
32. Is considerate and kind to every one	32. Sympathetic
33. Does things efficiently	33. Conscientious
34. Remains calm in tensed situations	34. Quiet disposition
35. Prefers work that is routine	35. Conformism
36. Outgoing, sociable	36. Communicative
37. Is sometimes rude to others	37. Rudeness
38. Makes plans and follows with them	38. Obstinate plans
39. Get nervous easily	39. Restlessness
40. Likes to reflect, play with ideas	40. Reflecting
41. Has a few artistic interests	41. Art inability for
42. Likes to co-operate with others	42. Affectionate
43. Is easily distracted	43. Concentration difficult
44. Is sophisticated in art, music or literature	44. Music-desire, art-ability for

The selection of homoeopathic rubrics from the chapter mind in the homoeopathic repertory 'synthesis edited by Dr. Frederik Schroyens' based on the 44-item BFI*. *Even though other suitable rubrics having similar meaning to trait words of BFI are available in the repertory, for this particular study, the rubrics against the trait words have been taken in consensus with the text and translation manual of Big-Five Inventory. BFI: Big-Five Inventory

Reliability test for the matching of items of Big-Five with homoeopathic rubrics

Items number in Big-Five	Scores of items of Big-Five	Scores of transcribed words
1	4	4
2	4	4
3	4	3
4	4	4
5	4	4
6	4	4
7	4	4
8	4	4
9	4	4
10	4	4
11	4	4
12	4	4
13	4	3
14	4	3
15	4	4
16	4	4
17	4	4
18	4	4
19	4	4
20	4	3
21	4	4
22	4	3
23	4	4
24	4	4
25	4	3
26	4	4
27	4	3
28	4	4
29	4	4
30	4	2
31	4	4
32	4	4
33	4	4
34	4	4
35	4	3
36	4	4
37	4	4
38	4	3
39	4	4
40	4	4
41	4	3
42	4	4
43	4	4
44	4	2

The average percentile score of the test is 92%

Scoring instructions

All the 44 items in the inventory carry the score 4. The transcribed words have the respective scores based on their availability in the homoeopathic repertory.

- Score 4 – Item in the inventory is present in the repertory in the same word/item in the inventory is present in the repertory in the same word with a given cross reference/item is represented in the repertory by a single synonym matched from a dictionary
- Score 3 – Most appropriate symptom present in the repertory similar in contextual meaning to the item in inventory/those symptoms present in the repertory in the same word to the item but presented as subrubrics
- Score 2 – Symptoms in the repertory that are similar in meaning to the items in inventory matched from a dictionary
- Score 1 – Symptoms in repertory that are the vague representation of items in inventory
- Score 0 – No matching symptoms present in the repertory to items in the inventory.