SHORT REVIEW ARTICLE

AN ANALYTICAL STUDY OF PAIN RELIEF MANAGEMENT THROUGH ALTERNATIVE MEDICINES

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ABSTRACT:

Background: Besides the allopathic medications, alternative medicines can be applied for the pain management. These are massages, homeopathy, yoga, Ayurveda, acupuncture, mind body therapies. All these therapies are based on different mode of action to reduce the inflammation. Alternatives therapies generally don't have any side effects on the body like allopathic medications. **Objectives:** To find factors responsible in choosing alternative treatment for pain. **Methods and materials:** Objectives have been converted into multiple hypothesis. Convenience sampling technique has been used to collect the data from a sample of 200 patients in the health areas suffering from different types of pain. Chi square test and Independent t-test have been done to study the impact of type of treatment on various factors like level of pain, difficulty in diagnosis, proactivity towards health and coping. All these tests were analyzed with the help of Statistical Package for the Social sciences (SPSS). **Results**: There is no significant relation between demographic factors like gender, age, educational qualification, annual income, duration of pain, length of treatment, difficulty in diagnosis, number of health care providers, level of Pain and type of treatment. However, there is significant relation between number of medication along with natural medication and type of treatment. **Conclusion:** Gender, age, educational qualification, annual income had no relationship in deciding the type of treatment of pain. Further, the study also revealed that duration of pain and type of treatment also is not an important factor in deciding the treatment of pain. It may also be concluded that in case when the patients do not get relief, they switch to alternative measures.

Key Words: Medication, Ayurved, Alternative, Analytical, Pain relief management

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INTRODUCTION

The term ''alternative therapy'' by and large is utilized to depict any medical treatment or mediation that is utilized as a part of place of customary prescription. At the point when alternative treatments are utilized as a part of conjunction with traditional drug, it is called corresponding pharmaceutical. Alternative therapy envelops an assortment of controls, including acupuncture, guided imagery, chiropractic treatment, yoga, hypnosis, biofeedback, aromatherapy, relaxation, herbal remedies, massage and numerous others.

The writing on pain and the body to a great extent underlines the socio-cultural elements of anguish. Inside this domain, the therapeutic establishment is regularly foremost in controlling how pain is comprehended and the reactions that are fitting in overseeing pain. Less is thought about different types of social insurance that treat pain, to be specific Complementary and Alternative Medicine (CAM). While most research clarifies the by and large "who" of the number of inhabitants in elective measure clients, few examinations address the "why" and the general impacts of utilizing a nonconventional arrangement of prescription. This prompted us to our objective for the present research which are stated below.

Objective 1: To find factors responsible in choosing alternative treatment for pain.

To test the present objective, we tried to review the existing literature and then have framed the hypothesis which we will see in the next part of the paper.

Literature Review

DiMatteo MR, Lepper HS, Croghan TW [1] examined the literature and found that anxiety and noncompliance were variably related with no significance. Compared with non-depressed patients, the odds are 3 times greater that depressed patients will be noncompliant with medical treatment recommendations. In the research by Chou et al. [2], They gave certain recommendations to give direction on initiation and titration of chronic opioid therapy, patient selection and risk stratification; monitoring of patients on chronic opioid therapy; informed consent and opioid management plans; use of methadone; dose escalations, high-dose opioid therapy, opioid rotation, and indications for discontinuation of therapy; prevention and management of opioid-related adverse effects; driving and work safety; identifying a medical home and when to obtain consultation; management of breakthrough pain; chronic opioid therapy in pregnancy; and opioid-related polices. Cleeland CS, Gonin R, Hatfield AK, Edmonson JH, Blum RH, Stewart JA, Pandya KJ [3] surveyed the sufficiency of

endorsed analgesic drugs utilizing guidelines created by the WHO. They additionally considered the components that affected whether absense of pain was satisfactory, and decided the impacts of lacking absense of pain on the patients' perception of pain relief and practical status. Sixty-seven percent of the patients announced that they had pain or had taken analgesic drugs every day amid the week going before the examination, and 36 percent had pain sufficiently serious to hinder their capacity to work. Forty-two percent of those with painwere not given satisfactory analgesic treatment. Patients seen at centers that treated prevalently minorities were three times more probable than those treated somewhere else to have insufficient pain administration. An error amongst patient and physician in judging the seriousness of the patient's pain was prescient of deficient pain administration. Different elements that anticipated lacking pain administration included pain that physicians did not ascribe to growth, better execution status, age of 70 years or more established, and female sex. Patients with less satisfactory absense of pain announced less pain relief and more noteworthy pain-related hindrance of capacity. They reasoned that in spite of distributed guidelines for pain administration, numerous patients with disease have impressive pain and get lacking absense of

pain. Carlsson AM [4] says that the visual analogue scale (VAS) is a basic and usually utilized technique for the evaluation of varieties in intensity of pain. In clinical practice the level of pain relief, evaluated by VAS, is regularly considered as a measure of the viability of treatment. In any case, as outlined in the present examination, the legitimacy of VAS estimates performed by patients with chronic pain might be unsuitable. Two sorts of VAS, a flat out and a relative scale, were contrasted with deference with factors impacting the unwavering quality and legitimacy of pain estimates. As appeared in this examination the outright sort of VAS is by all accounts less delicate to bias than the relative one and is subsequently best for general clinical utilize. In addition, the patients seem to vary significantly in their capacity to utilize the VAS dependably. While evaluating adequacy of treatment consideration ought to along these lines be paid to a few corresponding files of pain relief and also to the person's propensity to bias his estimates. Linton SJ[5] in their research endeavored to abridge momentum mindfulness identified with the part of psychological variables in the etiology and improvement of neck and back pain. He additionally expresses that the accessible writing demonstrated a reasonable connection between psychological variables and neck and back pain. The planned studies

showed that psychological variables were identified with the beginning of pain, and to intense, subacute, and unending pain. Stress, distress, or nervousness and additionally state of mind and feelings, cognitive working, and pain conduct all were observed to be huge components. Identity factors delivered blended outcomes. In spite of the fact that the level of proof was low, manhandle likewise was observed to be a possibly critical factor. It was presumed that Psychological components assume a critical part in constant pain, as well as in the etiology of intense pain, especially in the change to unending issues. Particular kinds of psychological variables rise and might be imperative in unmistakable formative time periods, additionally inferring that appraisal and intercession need to mirror these variables. All things considered, psychological components represent just a part of the difference, in this way featuring the multidimensional view. Since the methodologic nature of the studies fluctuated impressively, future research should center around enhancing quality and tending to new inquiries, for example, the system, the formative time factor, and the significance that these hazard factors have for intercession. Romano JM, and Turner JA[6] analyzed the degree to which chronic pain and depression coincide by outlining pertinent literature and features normal calculated and

methodological issues in this literature. The degree to which depression and chronic pain are related remains a dubious issue that empirical investigations have neglected to determine totally. An assessment of pertinent literature offers help for a relationship between the 2 disorders and recommends that existing together pain and depression might be a last basic introduction come to by various potential pathways. Current biological, psychodynamic, and behavioral cognitive models of the systems by which chronic pain and depression may collaborate are outlined. The literature proposes that an exploration approach is required to examine the assortment of ways by which people land at both chronic pain and depression. The convenience of this procedure would be exhibited if factors segregating among subgroups of patients with both chronic pain and depression, and ideal mediation methodologies for each, were resolved. Rosenstiel AK, Keefe FJ[7] said that Cognitive and behavioral pain coping systems were evaluated by methods for questionnaire in an example of 61 ceaseless low back pain patients in their examination. Information examination showed that the questionnaire was inside dependable. While patients revealed utilizing an assortment of coping systems, certain techniques were utilized as often as possible though others were seldom

utilized. Three factors: (a) Cognitive Coping and Suppression, (b) Helplessness and (c) Diverting Attention or Praying, represented a substantial extent of change in questionnaire reactions. These 3 factors were observed to be prescient of measures of behavioral and passionate change in accordance with unending pain well beyond what might be anticipated based on quiet history factors (length of persistent pain, incapacity status and number of pain medical procedures) and the inclination of patients to somaticize. Every one of the 3 coping factors was identified with particular measures of change in accordance with perpetual pain. Research by Turk DC, Okifuji A [8] has shown the significance of psychological factors in adapting, personal satisfaction, and incapacity in chronic pain. Moreover, the commitments of brain science in the viability of treatment of chronic pain patients have gotten experimental help. The creators portray a biopsychosocial model of chronic pain and give a report on investigate ensnaring the significance of individuals' examinations of their symptoms, their capacity to self-oversee pain and related issues, and their feelings of dread about pain and damage that propel endeavours to keep away from fuel of symptoms and further damage. They give a chose survey to outline treatment result look into, methodological issues, functional, and clinical issues to recognize promising

bearings. In spite of the fact that there remain impediments, there are additionally open doors for analysts to add to enhanced comprehension of pain and treatment of individuals who experience the ill effects of chronic pain. The creators finish up by taking note of that pain has gotten a huge measure of consideration coming full circle in the entry of a law by the U.S. Congress assigning the period 2001– 2011 as "The Decade of Pain Control and Research."

METHODOLOGY

Convenience sampling technique has been used to collect the data from a sample of 200 patients in the health areas suffering from different types of pain. Components like type of pain, its duration, time of treatment and type of treatment of patients have been discussed. A structured questionnaire based on the Likert scale [9] has been used to collect the data. Chi square test and Independent t-test have been done to study the impact of type of treatment on various factors like level of pain, difficulty in diagnosis, proactivity towards health and coping. All these tests were analyzed with the help of Statistical Package for the Social sciences (SPSS). The basic data is shown with the help of pie-charts, bar diagrams, histograms and with percentage method.

DATA TABULATION AND ANALYSIS

Total 200 data points were gathered for analyzing the level of pain, difficulty in diagnosis, proactivity towards health and there are very few studies on alternative medicine for pain management. In the sample of various income groups, male and female patients form the state of Maharashtra are present. The results of the proposed study will significantly increase the knowledge about Pain relief management through alternative medicines among the patients suffering from pain. The results will be useful for students, educational institutions, doctors and patients in resolving the problem of pain. A survey questionnaire of 22 questions other than personal information has been used as a primary instrument to collect information. The survey was conducted in Maharashtra. A total of 250 questionnaires were distributed. The questionnaire responses were digitized using Microsoft excel. The statements/items so developed are rated on a five point Likert scale. There are thirteen hypotheses tested for the collected data. To test each hypothesis couple of questions were asked. One question was asked to rate on the scale of 5-Rating Scale., 1 being least and 5 being maximum satisfaction. Thereafter, information gathered from 22 questions were tabulated, grouped and presented in a graphical form with average and variance details. Later on, Cronbach's Alpha Test, chi square test and t-test was used to find out the significant levels. Cronbach Alpha for all the parameters has shown an average scale or results, however overall Cronbach alpha value is more than 0.70. So, it can be concluded that the data can used for further analysis.

Hypothesis Testing

Hypothesis 1

H_0^1: *There is no significant relationship between gender and type of treatment.*

The chi-square test statistics shows that test value is not significant (Table 1). Since the p value is more than 0.05, the null hypothesis is accepted and alternate hypothesis is rejected. Therefore, there is no significant relation between gender and type of treatment.

Table 1: Chi-square test statistics for gender in relation to type of treatment.

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.206[a]	1	.650
N of Valid Cases	200		

Hypothesis 2:

H_0^2: *There is no significant relationship between age and type of treatment.*

The chi-square test statistics shows that test value is not significant (Table 2). Since the p value is more than 0.05, the null hypothesis is accepted and alternate hypothesis is rejected. Therefore, there is no significant relation between age and type of treatment.

Table 2: Chi-square test statistics for age in relation to type of treatment

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.197	5	.821
N of Valid Cases	200		

Hypothesis 3:

H_0^3: *There is no significant relationship between educational qualification and type of treatment.*

The chi-square test statistics shows that test value is not significant (Table 3). Since the p value is more than 0.05, the null hypothesis is accepted and alternate hypothesis is rejected. Therefore, there is no significant relation between educational qualification and type of treatment.

Table 3: Chi-square test statistics for educational qualification in relation to type of treatment

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.000	3	.573
N of Valid Cases	200		

Annual Income

Hypothesis 4:

H_0^4: *There is no significant relationship between annual income and type of treatment.*

The chi-square test statistics shows that test value is not significant (Table 4). Since the p value is more than 0.05, the null hypothesis is accepted and alternate hypothesis is rejected. Therefore, there is no significant relation between annual income and type of treatment.

Table 4: Chi-square test statistics for annual income in relation to type of treatment

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.700^a	3	.440
N of Valid Cases	200		

Duration of Pain

Hypothesis 5:

H_0^5: *There is no significant relationship between duration of pain and type of treatment.*

The chi-square test statistics shows that test value is not significant (Table 5). Since the p value is more than 0.05, the null hypothesis is accepted and alternate hypothesis is rejected. Therefore, there is no significant relation between duration of pain and type of treatment.

Table 5: Chi-square test statistics for duration of pain in relation to type of treatment

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.902^a	3	.272
N of Valid Cases	200		

Hypothesis 6:

H_0^6: *There is no significant relationship between length of treatment and type of treatment.*

The chi-square test statistics shows that test value is not significant (Table 6). Since the p value is more than 0.05, the null hypothesis is accepted and alternate hypothesis is rejected. Therefore, there is no significant relation between length of treatment and type of treatment.

Table 6: Chi-square test statistics for length of treatment in relation to type of treatment

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	$.251^a$	2	.882
N of Valid Cases	200		

Hypothesis 7:

H_0^7: *There is no significant relationship between difficulty in diagnosis and type of treatment.*

The chi-square test statistics shows that test value is not significant (Table 7). Since the p value is more than 0.05, the null hypothesis is accepted and alternate hypothesis is rejected.

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Therefore, there is no significant relation between difficulty in diagnosis and type of treatment.

Table 7: Chi-square test statistics for difficulty in diagnosis in relation to type of treatment

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.138^a	2	.343
N of Valid Cases	200		

Hypothesis 8:

H_0^8: *There is no significant relationship between number of health care providers seen prior to diagnosis and type of treatment.* The chi-square test statistics shows that test value is not significant (Table 8). Since the p value is more than 0.05, the null hypothesis is accepted and alternate hypothesis is rejected. Therefore, there is no significant relation between number of health care providers seen prior to diagnosis and type of treatment.

Table 8: Chi-square test statistics for number of health care providers seen prior to diagnosis in relation to type of treatment

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.253	3	.354
N of Valid Cases	200		

Hypothesis 9

H_0^9: *There is no significant relationship between level of pain and type of treatment.* The chi-square test statistics shows that test value is not significant (Table 9). Since the p value is more than 0.05, the null hypothesis is accepted and alternate hypothesis is rejected. Therefore, there is no significant relation between level of pain and type of treatment.

Table 9: Chi-square test statistics for level of pain in relation to type of treatment

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.212^a	9	.719
N of Valid Cases	200		

Hypothesis 10:

$H_0{}^{10}$: *There is a significant relationship between number of medications and type of treatment.*

The t-test statistics shows that test value is significant (Table 10). Since the p value is less than 0.05, the null hypothesis is rejected and alternate hypothesis is accepted. Therefore, there is a significant relation between number of medications and type of treatment.

Table 10: T test statistics for number of medications in relation to type of treatment

	Levene's Test for Equality of Variances	
	F	**Sig.**
Equal variances assumed	37.667	.000
	t-test for Equality of Means		
	t	**df**	**Sig. (2-tailed)**
Equal variances assumed	10.843	198	.000
Equal variances not assumed	10.927	176.869	.000

Natural Medications

Hypothesis 11

$H_0{}^{11}$: *There is no significant relationship between natural medications and type of treatment.*

The chi-square test statistics shows that test value is significant (Table 11). Since the p value is less than 0.05, the null hypothesis is rejected and alternate hypothesis is accepted. Therefore, there is significant relation between natural medication and type of treatment.

Table 11: Chi-square test statistics for natural medication in relation to type of treatment

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	56.182[a]	1	.000
N of Valid Cases[b]	200		

Self-efficacy

A self-efficacy scale was developed by choosing statements pertinent to chronic pain and health proactivity from a distributed scale [10] and making others. A few things were somewhat re-worded to fit the populace and reason for this investigation. At last, nine things were utilized as a part of the examination. Members were requested to react on a 5-point Likert-scale of unequivocally differ to firmly concur as per how the statements portrayed their considerations, emotions, practices in their lives. Along these lines, hypothetically, higher scores reflect more elevated amounts of self-efficacy as to wellbeing. Two elements were separated, one that was demonstrating an adapting self-and another showing a master action self-efficacy. The adapting self-efficacy scale estimated one's capacity to deal with oneself and manage ceaseless agony (keeping up a day by day calendar and figuring out how to manage the torment), while the proactivity self-

efficacy factor demonstrated one's capacity to be dynamic toward one's wellbeing, i.e. in deciding, finding data, discovering support and furthermore helping other people. Next, an unwavering quality examination was directed (in SPSS) to make certain that these things frame a solid scale—that is a scale with high connections between the things. For the two factors, Cronbach's alpha turned out to be genuinely high inward consistency at .71 and .78 individually (Table 12, Table 15)[10] . In this manner, we can expect that both adapting and proactivity self-efficacy are solid measures. Adapting self-efficacy and proactivity self-efficacy were chosen for investigation in this phase of the examination in light of the fact that proactive self-efficacy all the more correctly demonstrate the capacity to be dynamic in one's wellbeing, and the adapting conduct is more about keeping up one's every day timetable and duties.

Coping Self-efficacy

Table 12: Reliability Statistics for coping factor of self-efficacy

Reliability Statistics	
Cronbach's Alpha	0.71149

Hypothesis 12:

H$_0^{12}$: *There is no significant relationship between coping self-efficacy and type of treatment.*

The t-test statistics shows that test value is significant (Table 13). Since the p value is less than 0.05, the null hypothesis is rejected and alternate hypothesis is accepted. Therefore, there is a significant relation between coping

self-efficacy and type of treatment. Moreover, the p values for individual coping factors are also less than 0.05, Hence it can be concluded that there is a significant relation between all the coping factors and type of treatment the patient takes (Table 14).

Table 13: T test statistics for coping factor in relation to type of treatment

Levene's Test for Equality of Variances		F		Sig.
		F		Sig.
Total coping		11.915		.001
t-test for Equality of Means				
		t	df	Sig. (2-tailed)
Total coping	Equal variances assumed	-19.940	198	.000
	Equal variances not assumed	-20.090	178.142	.000

Table 14: T test statistics for individual coping factors in relation to type of treatment

	Levene's Test for Equality of Variances		
		F	Sig.
C1		95.946	.000
C2		45.450	.000
C3		77.544	.000
C4		39.631	.000
C5		95.054	.000
t-test for Equality of Means			
		t	df	Sig. (2-tailed)
C1	Equal variances assumed	-8.259	198	.000
	Equal variances not assumed	-8.351	156.420	.000
C2	Equal variances assumed	-9.029	198	.000
	Equal variances not assumed	-9.105	172.967	.000

C3	Equal variances assumed	-8.475	198	.000
	Equal variances not assumed	-8.562	161.763	.000
C4	Equal variances assumed	-8.803	198	.000
	Equal variances not assumed	-8.893	161.805	.000
C5	Equal variances assumed	-8.132	198	.000
	Equal variances not assumed	-8.226	153.881	.000

Proactive Self-Efficacy

Table 15: Reliability Statistics for proactivity factor of self-efficacy

Reliability Statistics	
Cronbach's Alpha	0.779017

Hypothesis 13:

H_0^{13}: *There is no significant relationship between proactive self-efficacy and type of treatment.*

The t-test statistics shows that test value is significant (Table 16). Since the p value is less than 0.05, the null hypothesis is rejected and alternate hypothesis is accepted. Therefore, there is a significant relation between proactive self-efficacy and type of treatment. Moreover, the p values for individual proactivity factors are also less than 0.05, Hence it can be concluded that there is a significant relation between all the proactive factors and type of treatment the patient takes (Table 17).

Table 16: T test statistics for total proactivity factor in relation to type of treatment

		Levene's Test for Equality of Variances		
		F		Sig.
Total_P		25.992		.000
T Test for equality of means				
		t	df	Sig. (2-tailed)
Total Proactivity	Equal variances assumed	-17.332	198	.000
	Equal variances not assumed	-17.178	160.700	.000

Table 17: T test statistics for individual proactivity factors in relation to type of treatment

Proactivity	Levene's Test for Equality of Variances	
	F	Sig.
P1	14.012	.000
P2	11.739	.001
P3	27.071	.000
P4	28.322	.000

Table 18: T test statistics for individual proactivity factors in relation to type of treatment

T Test for equality of means				
Proactivity		t	df	Sig. (2-tailed)
P1	Equal variances assumed	-7.672	198	.000
	Equal variances not assumed	-7.630	180.683	.000
P2	Equal variances assumed	-7.904	198	.000
	Equal variances not assumed	-7.858	178.818	.000
P3	Equal variances assumed	-10.516	198	.000
	Equal variances not assumed	-10.404	150.155	.000
P4	Equal variances assumed	-10.810	198	.000
	Equal variances not assumed	-10.709	158.088	.000

The analysis of the data revealed that gender, age, educational qualification, annual income had no relationship with the type of treatment of pain. This results are obvious because every person want relief from pain and no matter the way they follow (Table 18).

Further, the study also revealed no significant relationship between duration of pain and type of treatment. This reveals that most people keep on their treatment until they relieved. Though data shows that more of alternative measures patient have less than one year of pain. It may also be conclude that after treatment by pain management techniques, when the patients do not get relief, they switch to alternative measures (Table 18).Another hypothesis on length of treatment was also rejected. Similarly, there

was no significant relationship between time to diagnosis, number of healthcare providers and level of pain with type of treatment (Table 18).

The study revealed significant relationship between number of medication and type of treatment.

The number of medications taken by alternative measure patients were significantly less as compared to pain management patients (Table 18).

Furthermore, natural medication also had significant relation with the type of treatment. It can be seen that the patients with alternative measures of treatment, prefer more natural medications (Table 18). Significant relationship was found between coping self-efficacy and type of treatment. Similarly, a significant relationship between proactive self-efficacy and type of treatment (Table 18).

CONCLUSION

Hence we can state that gender, age, educational qualification, annual income had no relationship with the type of treatment of pain. Further, the study also revealed no significant relationship between duration of pain and type of treatment. It may also be concluded that in case when the patients do not get relief, they switch to alternative measures. The study revealed significant relationship between number of medication

and type of treatment. It can be seen that the patients with alternative measures of treatment, prefer more natural medications. Significant relationship was found between coping self-efficacy and type of treatment. Similarly, a significant relationship between proactive self-efficacy and type of treatment.

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