**Title** - Pattern of Medical pluralism in patients under treatment for lifestyle diseases in a tertiary level hospital in Uttarakhand, India.

**Abstract:**

**Introduction**: Medical pluralism (MP) can be defined as the employment of more than one medical system or the use of both conventional and complementary and alternative medicine (CAM) for health and illness. A study about the pattern of medical pluralism in patients under treatment for lifestyle diseases would help in understanding the various aspects of use of CAM in such patients for achieving best outcomes.

**Methods**:The present study was a cross sectional study which was conducted among the patients under treatment for lifestyle diseases in a tertiary level hospital in Uttarakhand. A total of 125 patients were interviewed for the present study.

**Results**: Most of the participants had Type 2 Diabetes mellitus (47%), and about one fourth had both diabetes and hypertension. About 43% had used complementary and alternative medicine (CAM) at some time since diagnosis. About 40% of the ever users of CAM were using it currently also, the proportion being higher in males as compared to females. The most common modality used was ayurveda, followed by herbal medicines, naturopathy and yoga. A bivariate analysis of sociodemographic characteristics and CAM use showed that no other factor except for the absence of health insurance had a statistical association with the use of CAM.

**Conclusions**: The use of CAM by people under treatment for lifestyle diseases is quite high. It is high time that CAM should be integrated scientifically with the conventional medicine to achieve the best possible outcomes in terms of health on an individual.

**Key words-** Medicalpluralism**,** Alternative Medicine, Lifestyle diseases

**Introduction** –

Medical pluralism (MP) can be defined as the employment of more than one medical system or the use of both conventional and complementary and alternative medicine (CAM) for health and illness.(1)

Pluralism has always existed in health care systems due to the presence of multiple practitioners to choose from and multiple ways of understanding health and healing.(2)Previous researches in several countries have documented the increased adoption of MP for US and Taiwan.(1)(3)

Life style diseases such as diabetes mellitus and hypertension, sadly, do not find a ‘cure’ in the conventional allopathic system of medicine and are amenable for control only, with dedicated and uninterrupted use of prescribed medicines throughout the life of the patient, subjecting them to the daily agony of swallowing a pill. This in turn makes the patients’ search for alternative therapies with the hope of finding a cure in a more naturalistic manner.(4)(5)(6)

Traditional and complementary/alternative medicine has demonstrated efficacy in areas such as mental health, disease prevention, treatment of non-communicable diseases, and improvement of the quality of life for persons living with chronic diseases as well as for the ageing population.(7)CAM has also been reported to be more affordable, more closely corresponding to the patient’s ideology, and being less paternalistic than the conventional allopathic medicine.(4)

However, medical pluralism is not bereft of the negative impact on the health of the people, mostly because the use of CAM is usually not evidence based and not sought from a Registered Medical Practitioner. There have been reports of adverse effects from ingestion of herbal teaand increased chances of interaction of these alternative remedies with that of allopathic ones when taken simultaneously.(7)Unqualified practice provides suboptimal, often costly and dangerous treatment for patients. On the other hand, evidence based use of these remedies can prove to be very helpful in providing holistic health to the people. This has also been envisaged in the National Rural Health Mission by the Government of India, where mainstreaming of AYUSH is stated as an important strategy for achieving the goal of the mission.

A study about the pattern of medical pluralism in patients under treatment for lifestyle diseases would help in understanding thevarious aspects of use of CAM in such patients and thus help in designing better integrative treatment regimens to balance the effectiveness, affordability, acceptability, faith and convenience of the therapy regimens for best outcomes.

Therefore the present study would be undertaken with the following objectives:

1. To find out the prevalence and pattern of medical pluralism among patients under treatment for lifestyle diseases in a tertiary level hospital in Uttarakhand.
2. To find out the association between the various factors (sociodemographic, economic, cultural& health facility available) and Medical Pluralism for managing lifestyle diseases.
3. To find out the determining factors for adoption of Medical pluralism.

**Methodology** –

**Study Design**: The present study was a cross sectional study which was conducted among the patients under treatment for lifestyle diseases in a tertiary level hospital in Uttarakhand.

**Case definitions for the present study**:

* **Lifestyle diseases:** For the purpose of present study, patients under treatment for diabetes or hypertension or both were included.
* **CAM**: According to the definition used by the Cochrane Collaboration, ‘complementary and alternative medicine’ is a broad domain of healing resources that encompasses all health systems, modalities, practices and their accompanying theories and beliefs, other than those intrinsic to the politically dominant health system of a particular society or culture in a given historical period.(8)For the purpose of present study, any treatment modality other than the allopathic medicine prescribed, were considered as CAM.

**Study population & inclusion criteria**: Patients over 18 years of age, irrespective of the gender, under treatment for diabetes or hypertension or both presenting to the OPD were included.

**Exclusion criteria**: Those patients not willing to participate, severely ill or hard of hearing were excluded from the study due to obvious reasons.

**Sample size**:

Prevalence of CAM in diabetes mellitus as reported in a study in Lebanon has been reported to be 38%.(9)

The sample size for the study was calculated using the formula(10)

n = Z21-α/2pq

L2

Z(0.05) = 1.96

n = required sample size

p (prevalence rate) = 38.0

q = 100-p = 62

L = least permissible error (absolute precision)= 5%

Desired confidence level= 95%

Hence sample size = (1.96)2 x 38 x 62

5 x 5

= 361.88 ≈ 362

Since the total number of patients currently under treatment for diabetes or hypertension or both in the OPD is about 190, which is less than the calculated sample size, following formula given by Kish, L (1965)(11)was used to calculate the final sample size:

Sample size = n / [1+(n/population)]

= 362 / [1+(362/190)]

=124.6 ≈ 125

Therefore a total of 125 patients were interviewed for the present study.

**Sampling Technique**:The patients attending the Medicine OPD at the hospital and meeting the inclusion criteria were interviewed, consecutively till the completion of the sample size.

**Tools of Data collection**: A structured questionnaire was administered to the patients while they were waiting in the waiting area. The questionnaire consisted of sociodemographic variables, treatment related variables and CAM related variables along with factors determining the adoption of CAM. The questionnaire was pilot tested on a group of patients and modified accordingly before starting the study to assess the suitability of the questionnaire.

**Statistical analysis**:The data was checked for completeness, and responses were coded and entered into Microsoft excel 2010. Frequencies and percentages wereused to assess the prevalence, types, mode and patterns of CAM. Chi-square test wasused to chart comparisons of categorical and continuous variables between groups. A p-value of 0.05 wasused to determine statistical significance.

**Ethical consideration**: Ethical clearance for the study was obtained from the Institutional ethical committee of the present institute.

**Results**:

This study included 125 patients of Diabetes and/ or hypertension, who were interviewed at the tertiary level hospital in the state of Uttarakhand. The average age of subjects was observed to be around 57 years with a Standard deviation of 11.5 years. The study samplecomprised of 58% males and 42% females. Of all, 53.6% were from rural area while the rest were from urban areas. 90% of subjects were Hindu and majority of the participants (92%) were married. Majority of the participants (39%)belonged to Class 2 of the Socioeconomic status as per Kuppuswamy classification. The proportion of participants having a nuclear or joint family was almost equal (Around 50% each). Around 21% of patients reported having some or the other addiction in the form of tobacco, alcohol etc. Only 27% had any form of health insurance.

It was observed that most of the participants had Type 2 Diabetes mellitus (47%), and about one fourth had both diabetes and hypertension. (Fig 1)

An exploration of details of treatment of DM1 patients showed that both of them had a family history, they had never interrupted their treatment, yet both of them reported having complications.

30% of the patients reported having a family history in Diabetes and the co infection group, whereas it was only 23% for hypertensives. About 65% of Diabetics reported having some or the other complications. This proportion was relatively less in case of hypertensives as well as the co-diseased patients.

An enquiry of treatment characteristics of patients with different diagnosis showed that about 40% of the DM2 patients had interrupted treatment at some point of time. The proportions were similar for patients having both DM and Hypertension. This percentage was higher (60%) for those with hypertension alone. The reasons for interrupting treatment in Diabetics alone were the relief from symptoms, inaccessibility, high cost of treatment, and side effects. The reasons were similar in hypertensives except for a few who said that they did not want to get habitual to the medicines. Patients with both the disease conditions interrupted the treatment on account of being relieved, high cost and few other personal reasons such as dislike for medicines and lack of money (Table 1).

An assessment of the use of Complementary and alternative Medicine (CAM) for the chronic lifestyle diseases showed that most people (113, 90%) started the treatment with allopathic medicines, about 10% (13) started with CAM and one patient started with both simultaneously. It was also observed that about 43% (54) had used it at some time since diagnosis, half of whom (53%) were males.30% (38) of the patients had used CAM in the last year. Currently, only 17% (21) of the patients were using CAM for the treatment of their diseases (Table not provided).

About 40% of the ever users of CAM were using it currently also, the proportion being higher in males as compared to females. The most common modality used was ayurveda, followed by herbal medicines, naturopathy and yoga. Naturopathy and ayurveda were preferred in males, whereas homeopathy and herbal medicines were used by higher proportions of females. The patients did not report about using other complementary systems of medicine such as Unani, Siddha or spiritual healing. Only 31% of the ever users had consulted a doctor/ practitioner before using CAMand approximately equal number had told the treating physician about the use of CAM.

The patients reported to being motivated by friends, media, their own family and neighbours, to use CAM for their illness. Only four patients received the advice for using CAM from a health practitioner. Other sources of motivation included self, relatives, other patients, acquaintances and colleagues.

About 30% of them found it to be very useful and an equal number reported it be of no use. Another 25% reported that CAM was of limited usefulness, while the rest 11% were unable to assess its usefulness and hence undecided about using it again. About 44% wanted to use it again, while an equal proportion decided against it.Yet, more than half of ever users wanted to recommend it to others. About 17% of the ever users reported some side effects with the use of CAM. (Table 2)

An exploration regarding the perception of ever users showed that about half of them had used CAM in an attempt to find another solution for their disease. Another one fourth of the users had a belief in its advantages. Few found it to be more accessible and affordable than the allopathic medicines, whereas other used it as an experiment or as a last resort after losing all hopes with current treatment. People perceived CAM to be free of side effects also. The other reasons cited for using it were that CAM prevents from side effects of allopathic medicines and that the symptoms were not relieved by conventional allopathic medicines.

More than half of the users expected a complete cure by the use of CAM, while another 46% expected at least a control of symptoms. Other respondents expected to get symptomatic relief from the disease or to be relieved of the side effects of the allopathic medicines.

An enquiry about the feeling after use of CAM revealed that about half of the users reported no change in their disease status, some reported better psychological condition and disappearance of symptoms, while others reported rise of symptoms and feeling of being in a physically worse state. Only 23 patients reported their condition to be under control, out of which 15 attributed it to allopathic medicines, while the rest attributed it to either CAM or both modalities (Table 3). .

About 36% of never users stated that they did not feel the need of using CAM for their illness; another 15% said that they did not use it since their doctor had not prescribed it. Others either did not have a belief in it or were not interested in other modalities. Few reported that it added extra burden on the expenses. None of them reported that they did not use it because it was not evidence based. Only one female said that she did not use it because she was afraid of the interaction of CAM with allopathic medicines and another did not use it because her doctor had asked her not to take any other medicine.

48% of the never users of CAM replied affirmatively when they were asked for future use of CAM, 19.7% were indecisive while the rest 32% denied (Table 4).

A bivariate analysis of sociodemographic characteristics and CAM use showed that no other factor except for the absence of health insurance had a statistical association with the use of CAM (Table 5).

Examination of association between sociodemographic characteristics and practice of continuous or interrupted treatment showed that no other factor except the place of residence was associated with it (Table 6).

**Discussion**:

The present study reported that the prevalence of ever use of CAM by the respondents was 43.2%, whereas the current use was only 16.8% which was in accordance with the findings of various other studies around the world.(9,16,18–20,22) It was also noticed that people have more faith on the allopathic system of medicine for the treatment of chronic diseases in the current set up since it was observed that majority had initiated their treatment by this modality.

The modality of CAM commonly used in the present study comprised of alternative medical systems as classified by NCCAM which included Ayurveda, Naturopathy and Yoga.(17) Apart from this, biologically based therapies in the form of herbal medicines were also used. Other modalities such as body based methods (chiropractic & massage) and mid- body medicine in the form of meditation and spiritual healing were not used at all.

India has a rich cultural heritage with a very strong, deep rooted presence of the various modalities of treatments prevalent all over the country, which have sustained the test of time. However, we have not been able to gather and assimilate the scientific evidence regarding the efficiency & effectiveness of these modalities and in turn promote the use of these modalities for the treatment of chronic lifestyle diseases as well as other diseases. The scientific data generated by the different scientific communities involved in provision of care through CAM, is lacking integration at a common platform, so that it can be used in the best possible way for the benefit of the health of the individual.

Other countries all over the world provide CAM through CAM providers which make it more robust, scientific and reliable, whereas in our scenario, most of the patients used it without being prescribed by a CAM provider on the advice of friends, neighbours, relatives etc. or through information on media. This has been reported in few studies from other countries as well. (21)

To complicate the matters further, patients refrained from disclosing about the use of CAM to their care providers. This has been commonly reported in other studies as well(22). This could lead to drug interactions with other medicines such as herbal medicines and ayurvedic medicines, as has been reported in other studies as well.(16)

Patients expect a complete cure from the disease condition after the use of CAM, which is due to unsupervised self prescription of CAM, which leads to an escalation of their expectations stemming out from ignorance. This emanates a mixed response from the use of CAM, which ranges from no change or worsening of symptoms to better psychological states and feeling of strength. A proper supervised prescription of CAM under the guidance of specialists and evidence based prescription would be able to produce more consistent and better effects on the disease condition. This would also help provide information, alleviate the fear and remove the myths regarding several aspects of CAM and their interaction with conventional therapy as has been reported in the present study as well as other studies.

CAM use in other studies has been reported to be less authoritarian, more empowering and more personal autonomy. It has also been stated to be effective, leading to better regulation of blood glucose level and leading to better psychological relaxation.(6, 21) These responses were also obtained in the present study.

Examination of association of sociodemographic characteristics with CAM use did not show any association in the present study except for a negative association with the presence of health insurance. Other studies have reported a higher likelihood of the use of CAM in females, higher education, income and age.(18)(19)

**Limitations**: The present study was a hospital based study carried out in a tertiary care set up. The prevalence of CAM use in the community may be even higher than that reported in the present study. However since the study involved patients of chronic diseases and with the resource constraints, it was feasible to conduct the study in a hospital.

**Conclusion**:

It is concluded that the use of CAM by people under treatment for lifestyle diseases is quite high. This is however coupled with different perceptions, expectations and experiences of people, which range from most negative to the most positive responses. It is high time that CAM should be based on evidence to alleviate all fear and myths among people. Also CAM should be integrated scientifically with the conventional medicine to achieve the best possible outcomes in terms of health on an individual.

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Table 1: Details of the treatment characteristics in patients with different diagnosis

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Variables | DM2 (59) | | Hypertension (29) | | Both DM & Hypertension (35) | |
| Number | % | Number | % | Number | % |
| Age in years (Mean, SD) | 48.3, 12.2 | | 49.6, 13.1 | | 53.9, 10.5 | |
| Duration of disease in years (Median, IQR) | 4, 1.75 to 10 | | 4, 1.25 to 9 | | 7, 2 to 9 | |
| Family History | 18 | 30 | 8 | 23 | 9 | 31 |
| Complications | 38 | 64.4 | 14 | 40 | 17 | 58.6 |
| Type of treatment |  |  |  |  |  |  |
| Continuous | 36 | 61 | 14 | 40 | 18 | 62 |
| Interrupted | 23 | 39 | 21 | 60 | 11 | 38 |
| Reason of interruption |  |  |  |  |  |  |
| No benefit | - | - | 2 | 6.9 | 0 | 0 |
| Relieved | 8 | 13.6 | 7 | 24.1 | 5 | 14.3 |
| Inaccessible | 7 | 11.9 | 1 | 3.4 | - |  |
| Costly | 5 | 8.5 | 2 | 6.9 | 3 | 8.6 |
| Side effects | 3 | 5.1 | 1 | 3.4 |  |  |
| Don’t want to get habitual | - | - | 3 | 10.3 | - |  |
| Others | 2 (forgot, can’t take daily) | 3.4 | 5 (less belief, personal reasons, forgot, doctor didn’t tell about continuous use) | 17.2 | 3 (don’t like medicines, personal reasons, lack of money) | 8.6 |

Table 2: Characteristics related to use of CAM among ever users of CAM according to gender

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variables | | Males (29) | | Females (25) | | Total (54) | |
| Number | % | Number | % | Number | % |
| Currently using | | 13 | 44.8 | 8 | 32.0 | 21 | 38.9 |
| Modalities used under CAM | Ayurveda | 14 | 48.3 | 10 | 40.0 | 24 | 44.4 |
| Herbal medicine | 10 | 34.5 | 12 | 48.0 | 22 | 40.7 |
| Naturopathy | 10 | 34.5 | 2 | 8.0 | 12 | 22.2 |
| Homeopathy | 4 | 13.8 | 7 | 28.0 | 11 | 20.4 |
| Yoga | 5 | 17.2 | 1 | 4.0 | 6 | 11.1 |
| Others (Unani, Siddha, Spiritual healing) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Consulted doctor/ practitioner | | 7 | 24.1 | 10 | 40.0 | 17 | 31.5 |
| Told treating physician | | 11 | 37.9 | 5 | 20.0 | 16 | 29.6 |
| Who motivated | Friends | 7 | 24.1 | 6 | 24.0 | 13 | 24.1 |
| Media | 7 | 24.1 | 3 | 12.0 | 10 | 18.5 |
| Family beliefs | 6 | 20.7 | 4 | 16.0 | 10 | 18.5 |
| Neighbour | 7 | 24.1 | 2 | 8.0 | 9 | 16.7 |
| Health practitioner | 1 | 3.4 | 3 | 12.0 | 4 | 7.4 |
| Others | 4 | 13.8 | 7 | 28 | 11 | 20.4 |
| Usefulness of CAM | Not useful | 7 | 24.1 | 10 | 40.0 | 17 | 31.5 |
| Of limited usefulness | 6 | 20.7 | 8 | 32.0 | 14 | 25.9 |
| Not sure/unable to assess | 5 | 17.2 | 1 | 4.0 | 6 | 11.1 |
| Very useful | 11 | 37.9 | 6 | 24.0 | 17 | 31.5 |
| Again use | Y | 16 | 55.2 | 8 | 32.0 | 24 | 44.4 |
| N | 9 | 31.0 | 15 | 60.0 | 24 | 44.4 |
| Undecided | 4 | 13.8 | 2 | 8.0 | 6 | 11.1 |
| Side effects | | 4 | 13.8 | 5 | 20.0 | 9 | 16.7 |
| Recommend to other | Y | 17 | 58.6 | 12 | 48.0 | 29 | 53.7 |
| N | 10 | 34.5 | 10 | 40.0 | 20 | 37.0 |
| Undecided | 2 | 6.9 | 3 | 12.0 | 5 | 9.3 |

Table 3: Perception related to CAM among ever users of CAM

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variables | | Males (29) | | Females (25) | | Total (54) | |
| Number | % | Number | % | Number | % |
| Reasons for use | Another solution | 12 | 41.4 | 14 | 56.0 | 26 | 48.1 |
| Belief in Advantages | 8 | 27.6 | 5 | 20.0 | 13 | 24.1 |
| Accessible and affordable | 3 | 10.3 | 2 | 8.0 | 5 | 9.3 |
| Experiment | 1 | 3.4 | 2 | 8.0 | 3 | 5.6 |
| Allopathic has side effects | 1 | 3.4 | 2 | 8.0 | 3 | 5.6 |
| CAM has no side effects | 1 | 3.4 | 1 | 4.0 | 2 | 3.7 |
| Lost hope with current treatment | 2 | 6.9 | 1 | 4.0 | 3 | 5.6 |
| Others | 2 | 6.9 | 1 | 4.0 | 8 | 14.8 |
| Expectation | Complete cure | 15 | 51.7 | 15 | 60.0 | 30 | 55.6 |
| Low BP/ glucose level | 16 | 55.2 | 9 | 36.0 | 25 | 46.3 |
| Prevent progression | 1 | 3.4 | 4 | 16.0 | 5 | 9.3 |
| No expectation | 1 | 3.4 | 0 | 0.0 | 1 | 1.9 |
| Others | 1 | 3.4 | 1 | 4.0 | 2 | 3.7 |
| Feeling after use | No change | 18 | 62.1 | 10 | 40.0 | 28 | 51.9 |
| Good psychological condition | 4 | 13.8 | 5 | 20.0 | 9 | 16.7 |
| Physically worse | 4 | 13.8 | 5 | 20.0 | 9 | 16.7 |
| Disappearance of several symptoms | 3 | 10.3 | 3 | 12.0 | 6 | 11.1 |
| Rise of several symptom | 2 | 6.9 | 3 | 12.0 | 5 | 9.3 |
| Strengthening | 0 | 0.0 | 2 | 8.0 | 2 | 3.7 |
| Others | 0 | 0.0 | 1 | 4.0 | 1 | 1.9 |
| Is condition controlled | | 13 | 44.8 | 10 | 40.0 | 23 | 42.6 |
| If Y, which modality | Allopathic medicines | 9 | 31.0 | 6 | 24.0 | 15 | 27.8 |
| CAM | 3 | 10.3 | 1 | 4.0 | 4 | 7.4 |
| Both | 1 | 3.4 | 3 | 12.0 | 4 | 7.4 |

Table 4: Reasons for not using CAM among never-users of CAM (71)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Responses** | Males (44) | | Females (27) | | Total (71) | |
| Number | % | Number | % | Number | % |
| **Reasons for not using** |  |  |  |  |  |  |
| Do not need it | 18 | 40.9 | 8 | 29.6 | 26 | 36.6 |
| Doctor didn’t prescribe | 7 | 15.9 | 4 | 14.8 | 11 | 15.5 |
| Do not believe in it | 7 | 15.9 | 2 | 7.4 | 9 | 12.7 |
| Slow in action | 5 | 11.4 | 2 | 7.4 | 7 | 9.9 |
| Don’t know any source | 3 | 6.8 | 1 | 3.7 | 4 | 5.6 |
| Inaccessible | 2 | 4.5 | 1 | 3.7 | 3 | 4.2 |
| Relieved by allopathic | 2 | 4.5 | 3 | 11.1 | 5 | 7.0 |
| Not interested | 2 | 4.5 | 3 | 11.1 | 5 | 7.0 |
| Additional expenses & useless | 2 | 4.5 | 2 | 7.4 | 4 | 5.6 |
| No one Advised its use | 1 | 2.3 | 3 | 11.1 | 4 | 5.6 |
| Never heard of it | 0 | 0.0 | 2 | 7.4 | 2 | 2.8 |
| Mainstream medicine is best | 1 | 2.3 | 1 | 3.7 | 2 | 2.8 |
| Afraid of interaction of CAM with allopathic medicines | 0 | 0.0 | 1 | 3.7 | 1 | 1.4 |
| Doctor told not to take any other medicine | 0 | 0.0 | 1 | 3.7 | 1 | 1.4 |
| CAM is not evidence based | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Other | 3 | 6.8 | 2 | 7.4 | 5 | 7.0 |
| **Consider CAM in future** |  |  |  |  |  |  |
| Yes | 25 | 56.8 | 9 | 33.3 | 34 | 47.9 |
| No | 13 | 29.5 | 10 | 37.0 | 23 | 32.4 |
| Can’t say | 6 | 13.6 | 8 | 29.6 | 14 | 19.7 |

Table 5: Association of sociodemographic characteristics with CAM use for lifestyle diseases

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Variables** | | **Users (54)** | | **Non users (71)** | | **Chi square value** | **P value** |
| Number | % | Number | % |
| Gender | Males | 29 | 53.7 | 44 | 62.0 | 0.856 | 0.35 |
| Females | 25 | 46.3 | 27 | 38.0 |  |  |
| Locality | Urban | 26 | 48.1 | 32 | 45.1 | 0.116 | 0.73 |
| Rural | 28 | 51.9 | 39 | 54.9 |  |  |
| Religion | Hindu | 49 | 90.7 | 64 | 90.1 | 0.017 | 0.89 |
| Others | 5 | 9.3 | 6 | 8.5 |  |  |
| Type of family | Nuclear | 26 | 48.1 | 35 | 49.3 | 0.031 | 0.85 |
| Joint | 28 | 51.9 | 36 | 50.7 |  |  |
| Marriage status | Single (Single, Widow, separated) | 4 | 7.4 | 6 | 8.5 | 0.45 | 0.83 |
| Married | 50 | 92.6 | 65 | 91.5 |  |  |
| Addiction status | Addicted | 12 | 22.2 | 14 | 19.7 | 0.116 | 0.73 |
| Not addicted | 42 | 77.8 | 57 | 80.3 |  |  |
| Health insurance | Present | 7 | 13.0 | 20 | 28.2 | 4.15 | 0.04 |
| Absent | 47 | 87.0 | 51 | 71.8 |  |  |

Table 6: Association between sociodemographic characteristics and practice of continuous or interrupted treatment

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Variables | | Continuous treatment (70) | | Interrupted treatment (55) | | Chi square value | P value |
| Number | % | Number | % |
| Age | ≤50 | 22 | 31.4 | 22 | 40.0 | 0.984 | 0.32 |
| >50 | 48 | 68.6 | 33 | 60.0 |
| Residence | urban | 38 | 54.3 | 20 | 36.4 | 3.946 | 0.047 |
| rural | 32 | 45.7 | 35 | 63.6 |
| Family | Nuclear | 35 | 50.0 | 26 | 47.3 | 0.091 | 0.763 |
| joint | 35 | 50.0 | 29 | 52.7 |
| Marital status | Single (Unmarried, widow, divorced) | 6 | 8.6 | 4 | 7.3 | 0.07 | 0.79 |
| married | 64 | 91.4 | 51 | 92.7 |
| Addiction | Yes | 13 | 18.6 | 13 | 23.6 | 0.476 | 0.49 |
| No | 57 | 81.4 | 42 | 76.4 |
| Health insurance | Yes | 11 | 15.7 | 16 | 29.1 | 3.22 | 0.07 |
| No | 59 | 84.3 | 39 | 70.9 |