

Effect of Mindfulness Meditation on the Quality of Life of Alcoholics in a Selected De-addiction Centre at Mangalore, Karnataka

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Abstract

The aim of the study was to determine the effect of Mindfulness Meditation on the Quality of Life (QOL) of alcoholics. A quantitative experimental evaluative approach was adapted and pre-experimental research design (one group pre-test – post-test design) was used. The sample consisting of 30 alcoholics in the selected de-addiction centre chosen by purposive sampling technique. Tools used were baseline proforma, QOL and Mindfulness Meditation skills rating scales. The data were analysed using paired 't' test, ANOVA for repeated measures, Karl Pearson co-relation co-efficient and chi-square. The study revealed that mean post-test QOL score (101.57 ± 13.7) was greater than the mean pre-test QOL score (121.70 ± 10.02). There was a significant difference between the pre-intervention and post-intervention QOL scores ($t_{29} = 8.718$; $p < 0.05$). The mean of 15th day of Mindfulness Meditation Skill score (68.13 ± 4.0) was greater than the mean of 5th day (55.53 ± 7.06) and 10th day (60.80 ± 4.7) scores. There was a significant difference between the three different days of assessment ($F = 89.80$, $p < 0.05$). This indicates that the skill in Mindfulness Meditation increases when the number of days of practice progresses. There was a moderate positive correlation between post-interventional QOL and 15th day Mindfulness Meditation skill level ($r = 0.57$). This indicates that there is a significant relation between post-intervention QOL score and 15th day Mindfulness Meditation Skill scores. There was no association between pre-intervention QOL and selected baseline characteristics. The result showed that Mindfulness Meditation had a statistically significant positive effect on the QOL of the alcoholics.

Alcoholism is an all-pervasive ailment; it is a disease as listed in DSM-IV of the American Psychiatric Association. It is a disease of relationships or attachment to other things. It is also a disease of attitudes, reinforcing that being substances (alcohol) free without commensurate change of lifestyle or spiritual awakening, the net result is always relapsing into dysfunctional use (Jerajani, 2005).

Alcoholics experience a lower Quality of Life (QOL) than their non-alcoholic counterparts. A study assessed whether the perceived QOL differed between alcoholics and non-alcoholics. The patients admitted in an urban-based hospital were screened for alcoholism using CAGE questionnaire. Quality of Life scores indicated that alcoholics experienced a lower QOL than non-alcoholics (Welsh et al, 2004).

In India, alcohol addiction is common and de-ad-

diction has been very successful compared to the abuse of other substances. Many addiction treatment options are available in different medical streams for in rehabilitation, referred to as “recovery” or staying sober, outpatient and inpatient programmes are available. Behavioural change does not happen in one step for addictive behaviour.

Fernros et al (2008) conducted a study for improving QOL using compound mind-body therapies. The tool used was Health-related Quality of Life (HRQOL). The scores in the experimental group showed significant changes in items ($p < 0.01$), viz. general health perceptions, emotional wellbeing, cognitive functioning, sleep, pain, role limitations, family function, sexual, marital and physical function. The study concluded that the group of men and women had improved their HRQOL after the course of practice.

Mindfulness is based on Buddhist philosophy, however it is not a religion, neither is any religious belief necessary to its practice. Mindfulness was initially developed by Jon Kabat-Zinn to assist him in his work with people suffering from a wide range of

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medical problems, ranging from chronic pain to cancer and heart disease. Zinn (1995) showed that most people experienced benefit from the programme, and was likely to continue with their practice in some form after the course ended. Research has demonstrated that their overall QOL, and for those with terminal illness their chance of remaining in remission was significantly improved.

Objectives

The aim of the present study was to determine the effect of Mindfulness Meditation on the Quality of Life of the alcoholics. The specific objectives were: (a) to assess the QOL of alcoholics before and after the implementation of Mindfulness Meditation as measured by QOL scale; (b) to assess the Mindfulness Meditation skills of alcoholics after the implementation of Mindfulness Meditation; (c) to assess the effectiveness of the mindfulness meditation before and after the intervention; (d) to determine the relationship between the QOL of the alcoholics and Mindfulness Meditation skills; and (e) to determine the association between the QOL and other selected variables.

Materials and Methods

The present study is based on the "Human Becoming Theory." This theory was introduced by Rosemarie Rizzo Parse in 1981 (Tomey & Alligood, 2000).

An evaluative quantitative experimental research approach was adopted. Pre-experimental one group pre-test – post-test design was used for the study. The dependent variable was Quality of Life of the alcoholics and the independent variable was Mindfulness Meditation (MM). Extraneous variables were the age of the alcoholics, education, occupation, religion, marital status, family income, place of residence years of alcoholism, type of family, and circle of friends, amount of alcohol consumption, and facilities in the institution like provision of medications, counselling, yoga and other teaching sessions.

Sample and sampling technique: After the screening process 30 alcoholics, who had fulfilled the sampling criteria were selected for the intervention. Purposive sampling technique was used. The researcher visited all the alcoholics admitted in de-addiction centre during 30 days period and were invited to participate; hand-picked the subjects for screening of alcohol withdrawal symptom and then selected the sample according to the inclusion and exclusion criteria. The subjects selected had mild withdrawal or no withdrawal symptom. Other sampling criteria also

met for the selection of samples.

Tools and measurement: (a) Alcohol withdrawal symptom screening tool; (b) Tool 2: Baseline proforma; (c) Tool 3: Quality of Life scale; (d) Tool 4: Mindfulness Meditation Skill scale. Validity of the tool was done by 18 experts and Reliability of the QOL status tested by using Split Half Method. Karl Pearson Coefficient of Correlation was used to find out the reliability. Spearman Brown Prophecy formula was used to find out the reliability of full test. The reliability was found to be 0.94 ($r=0.94$). The reliability of Mindfulness Meditation Skill level tested by using test-retest method and the reliability was found to be 0.94 ($r=0.94$) by Spearman coefficient of correlation. Alcohol withdrawal symptom scale was tested by inter-rater method and the reliability found to be 0.96 by Spearman rank correlation.

The study was conducted in the Vailankanni Ward at the Father Muller Medical College Hospital, which is a 1050-bedded multi-specialty hospital.

Mindfulness Meditation Session: The researcher underwent one month theory and practical course on Mindfulness Meditation. The recorded cassette and CD was prepared by the help of the yoga therapist (naturopathy yoga centre) and modified by a clergyman and musician in the voice recording studio in three languages (English, Kannada, and Malayalam).

The recorded audio programme about Mindfulness Meditation consisted of the genesis of meditation, benefits, guidelines to practice and some tips to promote the motivation in the participants, followed by step by step instruction for the practice, silence, positive thoughts and ended with silent prayer to God. The programme was recorded with the help of background music throughout except at the time of instruction to practice. The participants were allowed to discuss the clarifications, obstructions, doubts about the Mindfulness Meditation as well as about rating of Mindfulness Meditation Skill scale after the practice session.

Pilot Study: The pilot study was conducted in the same setting among 10 alcoholics after obtaining formal permission from the concerned. The study was found to be feasible and practical.

Data collection process: The alcoholics who fulfilled the sampling criteria were identified. The purpose of the study was explained to them and written consent obtained. The participants were asked to think about their life during the past 2 weeks and pre-test of QOL along with their baseline proforma was administered and the participants were asked to come

for the meditation practice daily in the morning or evening. A brief introduction about the timings and practice guidelines of Mindfulness Meditation was given to the subjects. The sessions lasted for 20 minutes and continued daily for a 3 weeks duration. On day 5, day 10 and day 15, following the completion of the recorded audio programme, post-test of Mindfulness Meditation was given to them. On day 16, post assessment QOL obtained by requesting them to evaluate their past 2 week period of life and it lasted for half an hour for each individual. The data collected were analysed according to the objectives and hypothesis of the study.

Results

Less than half the subjects (40%) were in the age group of 41-50 years and one-fourth of the subjects (26.7%) between 31-40 years. Majority of the samples (60%) were married, from nuclear families (56.7%), Hindu (70%), half of the subjects (50%) were from rural areas and less than half of the subjects (40%) were educated up to primary school.

Duration of Alcohol Consumption: The data on the duration of alcohol consumption (Fig 1) reveal that about one-third of the subjects (36.7%) had addiction more than 20 years and 33.3 percent had addiction between 10-20 years duration.

The study revealed that mean post-test QOL score (101.57 ± 13.7) was greater than the mean pre-test QOL score (121.70 ± 10.02). There was a significant difference between the pre-intervention and post-intervention QOL scores ($t_{29} = 8.718$; $p < 0.05$). Area wise mean post-test score was higher than the mean pre-test scores in all domains. The significant improvement was seen in the psychological (17.75%) and physical functioning (16.18%) respectively. This indicates that Mindfulness Meditation was effective in changing the QOL of the alcoholics. The mean of 15th

day of Mindfulness Meditation Skill score (68.13 ± 4.0) was greater than the mean of 5th day (55.53 ± 7.06) and 10th day (60.80 ± 4.7) scores. There was a significant difference between the three different days of assessment ($F = 89.80$, $p < 0.05$) indicating that the skill in Mindfulness Meditation increases when the number of days of practice progresses. Significant improvement was seen in the areas of 'self-awareness' (20.8%) and 'bodily sensations' (20.75%). There was a moderate positive correlation between post-interventional QOL and 15th day Mindfulness Meditation skill level ($r = 0.57$) indicating that there was a significant relation between post-intervention Quality of Life score and 15th day Mindfulness Meditation Skill scores. There was no association between pre-intervention QOL and selected baseline characteristics.

Figure 2 depicts that less than half of subjects (43.3%) were not at all near QOL, 40 percent were a little near QOL, before the intervention. 40 percent of the subjects attained almost near QOL, and one-third of the subjects (30%) attained very near QOL after the intervention, while none of them attained QOL.

Table 1 shows that the computed t' value ($t = 8.718$; $p < 0.05$) was greater than the tabled value ($t_{29} = 2.04$, $p < 0.05$) implying that there was a significant difference between the pre-intervention and post-intervention scores. Hence the null hypothesis was rejected and research hypothesis was accepted and inferred that there was a significant difference between the pre-test and post-test scores. The null hypothesis was tested using repeated measure analysis of variance (ANOVA f-test).

Table 2 shows that the mean Mindfulness Meditation Skill on the 15th day score was higher than the mean of the 5th and 10th day scores. The computed 'f' value (ANOVA for repeated measures, $F = 89.80$, $p < 0.05$) was greater than the tabled value ($f_{2, 58} = 3.15$, $p < 0.05$) which shows that there was a significant difference between the 15th day score from that of the 5th and 10th day scores. Hence the null hypothesis was rejected and the research hypothesis was accepted. This indicates that the skill in Mindfulness Meditation increased when the number of days progressed.

Figure 3 shows that there was moderate positive correlation between post-interventional QOL and 15th day Mindfulness Meditation Skill level ($r = 0.57$). There was no significant association between pre-intervention QOL and selected variables such as age, education, and occupation marital status, type of family, place of residence, family

Figure 2: Distribution of subjects according to pre-test post-test Quality of Life score

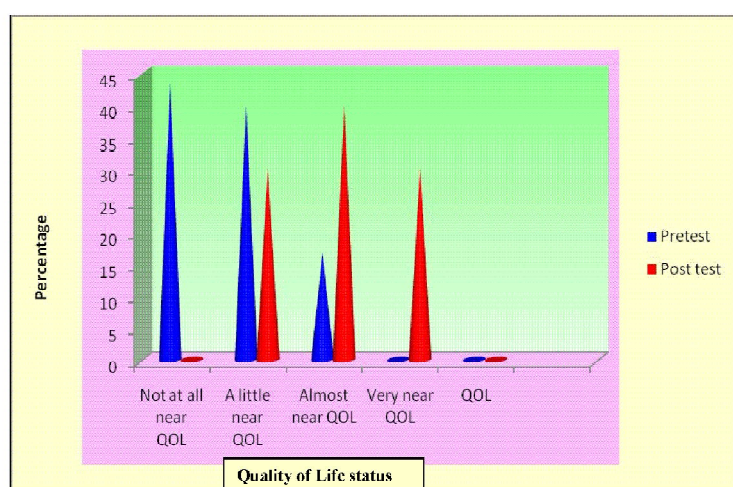


Table 1: Mean, SD and 't' value of pre-test post-test Quality of Life scores (N=30)

QOL	Mean±SD	't' value
Pre-test	101.57 ± 13.7	8.718*
Post-test	121.70 ± 10.02	

t₂₉ =2.04, P < 0.05; * Significant

Table 2: Mean, SD, and Mean difference 'f' value of 3 different post interventional days (N=30)

Days	Mean±SD	Mean difference	'f' value
5 th day	55.53±7.06	12.6	89.80*
10 th day	60.80±4.7		
15 th day	68.13±4		

F_(2, 89) =3.15, p<0.05; *Significant

support, and duration of alcohol consumption at 0.05 levels. Hence the null hypothesis was accepted and research hypothesis was rejected. This shows that there was no significant association between pre-interventional QOL and selected baseline variables.

Discussion

Sample Baseline Characteristics: In this study, less than half of the subjects (40%) were in the age group of 41-50 and one-fourth (26.7%) aged 31-40 years. Majority of the samples (60%) were married from nuclear families (56.7%), 70 percent were Hindu and less than half (40%) were educated up to primary school. Half the subjects (50%) were from rural areas.

Consistent similar studies: In a retrospective study done at the de-addiction clinic at Kasthurba Hospi-

tal, Manipal, Chauhan et al (2004) found that 85 percent of the samples were married, 82 percent were Hindu and 62 percent belonged to nuclear families, the mean age of the sample was 43.11 (SD=11.46) predominantly male (98%). In another study for substance-dependent women attending a de-addiction centre in North India Grovers et al (2005) reported that the typical subjects (63%) were married, belonged to nuclear families (60%) and more than half (54%) of the subjects educated up to high school.

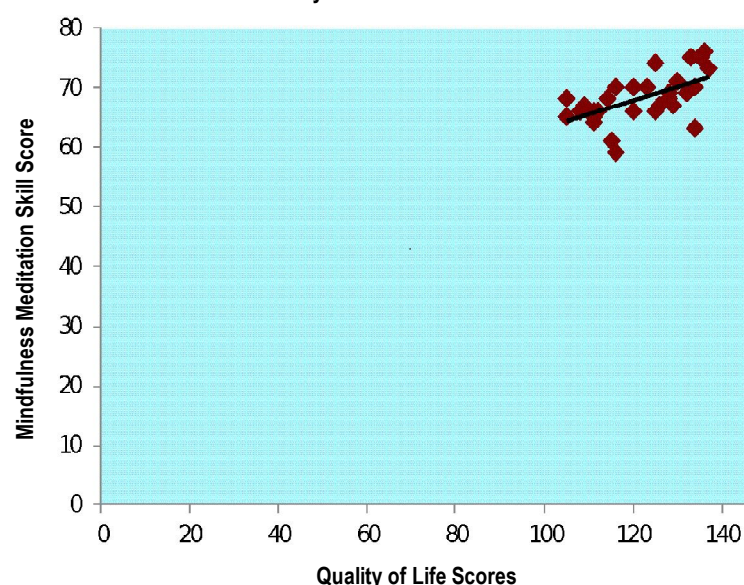
Some of the baseline characteristics of the present study were congruent with the findings of previous studies indicating that addiction for alcoholism was more prevalent in married people, more chances in nuclear families and more for below high school educational status and also prevalent in Hindu religion.

Quality of Life Status of Alcoholics: The mean pre-test QOL score was greater than the post-test QOL score (pre-test=101.57, post-test=121.70, p=0.000) and the Mean percentage (72.55% to 86.93%) QOL score also increased after the intervention. The highest mean difference observed in the area of psychological functioning (7.1%, p<0.05) and physiological functioning (4.53%, p=0.05). Less than half of the subjects (43.3%) were in not at all near QOL, 40 percent were in a little near QOL before the intervention; 40 percent of the subjects attained almost near QOL, and one-third of the subjects (30%) attained very near QOL after the intervention, whereas none of them attained QOL. It was based on pre-experimental design without a control group and without clinical control.

A pilot study was conducted on QOL and health of a 5-day care using a course with teachings in philosophy of life, psychotherapy, and body therapy, for patients with alcoholism (Pal et al, 2004). It was based on pre-experimental design without a control group and without clinical control. The group had low QOL, numerous health problems and alcohol dependency in spite of treatment with Antabuse (disulfiram). The study showed an increase in QOL from 57.6 percent before the course to 69.4 percent, three months after the course or an improvement in QOL, self-perceived mental health and satisfaction in health of 11.8 percent, 24 percent and 11.1 percent respectively.

Effect of Mindfulness Meditation on alcoholics: The pre-test QOL score was greater than the post-test QOL score (t=8.71, p<0.05) and the mean percentage (72.55% to 86.93%). QOL score increased after the intervention. The significant change observed in the area of psychological functioning (t=6.80, p<0.05) and physiological functioning (t=5.54, p<0.05).

Figure 3: Moderate positive correlation between post-interventional Quality of Life and 15th day Mindfulness Meditation Skill



A comparative study of brief intervention in alcohol use based on FRAMES of drinking patterns and QOL conducted in Delhi to evaluate readiness to change drinking pattern and QOL. The repeated measures of analysis of variance (ANOVA) showed a significant improvement in physical ($F=5.4$, $p=0.000$) and psychological ($F=4.99$, $p=0.000$) domains.

A cross-sectional survey to evaluate the impact of excessive alcohol consumption on the health-related Quality of Life of patients receiving methadone treatment for opioid dependence in out-patient clinics of south-east of England. AUDIT-positive patients reported more physical ($p=0.02$) and psychological ($p=0.034$) health problem and poorer QOL ($p=0.008$) with an estimated effect size of 0.46 and concluded that excessive alcohol consumption may be associated with a distinctive pattern of QOL impairment in methadone patients.

Comparison of Mindfulness Meditation Skills of subjects on 3 different days: The mean of Mindfulness Meditation Skill on the 15th days score was higher than the mean of the 5th and 10th day scores. The computed 'f' value (ANOVA for repeated measures, $F_{2, 58}$ (3.15)=89.80, $p<0.05$) was greater than the tabled value which showed that there was a significant difference between the 15th day score and that of the 5th and 10th day scores. There was gradual progress in the Mindfulness Meditation Skills of the subjects. On 5th intervention day majority of the subjects (60%) showed good MMS and on day 10 it increased to 80.3 percent whereas majority (86.7%) of subjects had very good Mindfulness Meditation Skills on day 15 of intervention.

In a randomised control study on 144 patients, training in Mindfulness Meditation for patients with stress and chronic illness conducted in Norway to manage stress and chronic illness over the last 25 years. Effect size was highest (Cohen's d in the range of 0.5 to 0.6) for mental symptom and mental function. This gives a tool to improve their health and QOL by increased understanding and ability to deal with one's own health and the patients seems to see themselves and their lives in a new way. This method may be suitable for schools and universities in addition to patient education centres (Senbanjo et al, 2006).

Relationship between post intervention QOL and 15th day of Mindfulness Meditation Skills: The present study showed a moderate positive correlation between post interventional QOL and 15th day Mindfulness Meditation Skill level ($r=0.57$, $p<0.05$).

Association between pre-intervention QOL and selected based characteristics: There was no association be-

tween pre-interventional QOL rating score and variables such as age, education, occupation, family support, type of family, place of residence, duration of alcohol consumption at 0.05 level of freedom. This shows that there was significant association between pre-interventional QOL and selected variables.

Implications in the Nursing Areas

Nursing education: The students should be made aware of these systems in health care and also they should be encouraged to learn Mindfulness Meditation technique to overcome daily hassles, negative emotions, tensions, to improve QOL, and to attain self-awareness and actualisation. Alternative therapies should be included in the curriculum for increasing the knowledge in this area. Consideration should be given to include clinical experience in providing and encouraging Mindfulness Meditation in de-addiction centres.

Nursing administration: The nurse administrator should make arrangement for necessary requirements for meditation programme to the patients during their stay in the de-addiction centre, like provision of CD player/tape recorder, mats for practicing meditation, and a hall with good ventilation etc

Nursing practice: Those working in de-addiction centres have to take care of the alcoholics to enhance motivation, self-awareness and prevention of relapses in very many ways. Mindfulness Meditation can be a remedy for this goal and the nurse has to take initiative.

Nursing research: There is also a great need for research in the area of alcoholism and holistic practices like transcendental meditation, motivational skill training, social skill training, and positive thought sessions in the de-addiction centres.

Limitations: Small number of subjects (30) participated in this study restricted the generalisation of results. The investigator had no control on events that took place between pre-test and post-test of the intervention.

Recommendations

The same study can be conducted on a larger sample over a longer period of time which might yield more reliable results. A similar study could be replicated with a control group. A comparative study can be conducted between Mindfulness Meditation and transcendental meditation. A study can be conducted on the effect of Mindfulness Meditation on wellbeing of nursing students, teaching faculty or for patients with other disease conditions.

Conclusion

Mindfulness Meditation is a simple non-invasive cost effective method that can be used for improving the Quality of Life of the alcoholics without any adverse effects. It can be routinely practiced in all the de-addiction centres with personnel or material assistance or the alcoholics by themselves can practice it at any time without any assistance.

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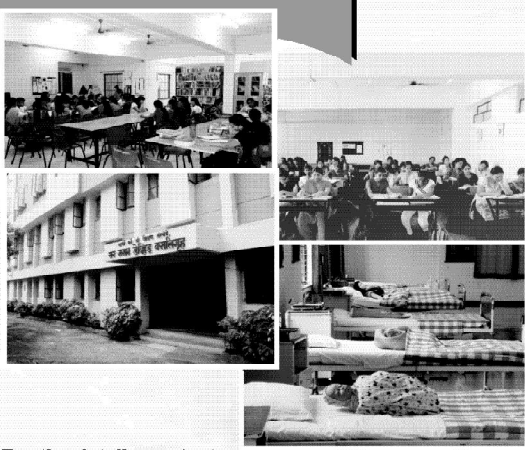
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