

Effect of Adjunctive Music Listening Intervention on Craving and Withdrawal Symptoms in Patients with Alcohol Dependence: A Pilot Study

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Abstract

Music listening intervention seems to be a suitable treatment option for patients with alcohol dependence. Researchers have indicated the positive role of music listening in addictive behavior treatment. The effect of music listening on the neurological processes by effecting mesolimbic structural changes which is responsible for reward processing has been explored. Listening to pleasurable music is studied to help the addicts to recover soon. However, there are not many studies which conclusively indicate the beneficial effects of listening to music on the recovery of the biological aspects of craving and withdrawal symptoms in patients with alcoholic dependence. This pilot study was conducted on 10 male patients with Alcoholic Dependency Syndrome (ADS) in the age group of 18 to 64 with an aim to arrive at a suitable research methodology and to detect any limitations relating to recruitment of patients for the study, randomization, period of intervention and compliance to interventional procedures to do a PhD dissertation on the effect of music listening on the craving and withdrawal symptoms of patients with ADS. All the ten patients registered for de-addiction treatment aged between with the diagnosis of ADS and hospitalized received music listening intervention in the form of relaxation music for two weeks on all the days for duration of half an hour. Music used for the intervention was pre-recorded, relaxing, non-lyrical, instrumental music having soft timbre and slow tempo with the properties of predictability and short melodic phrases. Patients completed the assessment of Alcohol Craving Questionnaire – Short Form - Revised (ACQ - SF - R) , to assess the level of craving and Clinical Institute Withdrawal Assessment of Alcohol Scale, Revised (CIWA-Ar) to assess the level of withdrawal symptoms before the music listening intervention commenced, on the 7th day, on the 14th day when the study was completed and when the patients came for follow-up after one week of discharge. The results indicated that the methodology was robust and the study proved to be feasible. Some limitations were indicated regarding recruitment, follow ups and relapse situations. The findings also indicated that music listening may support de-addictive treatment by reducing the withdrawal and craving symptoms in patients diagnosed with ADS. The presentation will detail on the results of the pilot study.

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I. Introduction

Music Therapy has been described as clinical & evidence-based use of music interventions by a certified music therapist, to accomplish therapeutic goals. In contrast, music listening is receptive/passive music therapy wherever the patient solely listens to music and without interaction with the therapist. Whereas music medicine is defined as passive listening to prerecorded music offered as an ancillary therapy, by medical personnel who are not essentially specialized in the field of music therapy. Alcohol dependence or alcoholism is considered to be a progressive chronic disorder that both the American Medical Association and the American Psychiatric Association recognize as a disease posing a heavy burden on patients, their families and the society. The effect of music listening on the neurological processes by effecting mesolimbic structural changes which is responsible for reward processing has been explored.

II. Aim & Objectives

- To study the effect of adjunctive music listening intervention on craving and withdrawal symptoms in patients with alcohol dependence.

- To assess the level of craving and withdrawal symptoms of patients with Alcohol Dependence Syndrome, receiving treatment as usual (pharmacological and psychological interventions) with music listening intervention.

Hypothesis

H:1 Music listening intervention will reduce withdrawal symptoms of alcoholics

H:2 Music listening intervention will reduce craving level of alcoholics

III. Methodology

This pilot study was conducted on 10 male patients with Alcoholic Dependence Syndrome (ADS) in the age group of 18 to 64 with an aim to arrive at a suitable research methodology and to detect any limitations relating to recruitment of patients for the study, randomization, period of intervention and compliance to interventional procedures to do a PhD dissertation on the effect of music listening on the craving and withdrawal symptoms of patients with ADS. All the ten patients registered for de-addiction treatment aged between with the diagnosis of ADS and hospitalized received music listening intervention in the form of relaxation music for two weeks on all the days for duration of half an hour.

Inclusion & Exclusion Criteria

Inclusions: Patients diagnosed of alcohol dependence syndrome as per DSM 5, aged 18 to 64 years, admitted to the in-patient unit of the department of psychiatry for a minimum period of 14 days, availability of informed consent form from the patient/caretaker

Exclusions: Patients with psychosis, Persistent acute physical problems. Other co morbidities in psychiatric diagnosis (Depression, Anxiety, OCD, etc), requiring electro convulsive therapy, Cognitive impairment, Intellectual disability and Hearing loss

Scales & Assessments

- Alcohol Craving Questionnaire – Short Form - Revised (ACQ - SF - R) , to assess the level of craving.
- Clinical Institute Withdrawal Assessment of Alcohol Scale, Revised (CIWA-Ar) to assess the level of withdrawal symptoms.
- Assessed on before the music listening intervention commences, on the 7th day and on the 14th day when the study gets completed and when the patients come for follow-up after one week of discharge.

Table – 1 shows Mean, SD and t-value between pre and post assessment of withdrawal of alcoholics.

	Pair	N	Mean	Std. Deviation	T	P
Pair 1	CIWA (Baseline)	10	24.60	20.759	3.532**	0.006
	CIWA (7th Day)	10	8.90	14.647		
Pair 2	CIWA (Baseline)	10	24.60	20.759	3.933**	0.003
	CIWA (14th Day)	10	2.70	5.889		
Pair 3	CIWA (Baseline)	10	24.60	20.759	3.847**	0.004
	CIWA (Follow up)	10	0.40	1.265		

**Significant at 0.01 level.

Table – 1 shows Mean, SD and t – value between pre and post assessment of Clinical Institute withdrawal Assessment (CIWA) of alcoholics. Mean value of pre and post assessment of withdrawal is 24.60 and 8.90 respectively. SD is 20.759 and 14.647 respectively. The t-value is 3.532 is significant at 0.01 level. This shows that there is significant difference between music listening intervention in pre and post assessment of withdrawal in alcoholics. The hypothesis (H:1) is accepted. This shows that there is significant difference between music listening intervention impact on pre and post assessment of withdrawal level in alcoholics.

From pair 2, there is significant difference in Clinical Institute withdrawal Assessment (CIWA) of alcoholics between the mean score of pre-test (baseline) and post-test (14th day)of withdrawal is 24.60 and 2.70 respectively. SD is 20.759 and 5.889 respectively. The t-value is 3.933 is significant at 0.01 levels. This shows that there is significant difference between music listening intervention in pre (baseline) and post (14th

day) assessment of withdrawal in alcoholics. The hypothesis (H:2) is accepted. This shows that there is significant difference between music listening intervention impact on pre (baseline) and post (14th day) assessment of withdrawal level in alcoholics.

From pair 3, there is significant difference in Clinical Institute withdrawal Assessment (CIWA) of alcoholics between the mean score of pre-test (baseline) and post-test (follow up)of withdrawal is 24.60and0.40respectively. SD is 20.759and 1.265respectively. The t-value is 3.847is significant at 0.01 level. This shows that there is significant difference between music listening intervention in pre (baseline) and post (Follow-up) assessment of withdrawal in alcoholics. The hypothesis (H:3) is accepted. This shows that there is significant difference between music listening intervention impact on pre (baseline) and post (Follow-up) assessment of withdrawal level in alcoholics.

Table: 2 showing the paired ‘t’ test value for Alcohol Craving Questionnaire (ACQ) of alcoholics

	Pair	N	Mean	Std. Deviation	T	P
Pair 1	ACQ (Baseline)	10	34.20	20.121	4.960	0.001
	ACQ (7th Day)	10	18.30	18.992		
Pair 2	ACQ (Baseline)	10	34.20	20.121	3.933	0.003
	ACQ (14th Day)	10	5.30	7.424		
Pair 3	ACQ (Baseline)	10	34.20	20.121	3.847	0.004
	ACQ (Follow up)	10	1.50	2.799		

Table – 1 shows Mean, SD and t – value between pre and post assessment of **Alcohol Craving Questionnaire (ACQ) of alcoholics**. Mean value of pre and post assessment of craving is 34.20and 18.30respectively. SD is 20.121and 18.992respectively. The t-value is 4.960is significant at 0.01 level. This shows that there is significant difference between music listening intervention in pre and post assessment of craving in alcoholics. The hypothesis (H:4) is accepted. This shows that there is significant difference between music listening intervention impact on pre and post assessment of craving level in alcoholics.

From pair 2, there is significant difference in **Alcohol Craving Questionnaire (ACQ) of alcoholics** between the mean score of pre-test (baseline) and post-test (14thday)of craving is 34.20and5.30respectively. SD is 20.121and 7.424respectively. The t-value is 3.933is significant at 0.01 levels. This shows that there is significant difference between music listening therapy in pre (baseline) and post (14th day) assessment of craving in alcoholics. The hypothesis (H:5) is accepted. This shows that there is significant difference between music listening intervention impact on pre (baseline) and post (14th day) assessment of craving level in alcoholics.

When reveal analysis From pair 3, there is significant difference in **Alcohol Craving Questionnaire (ACQ) of alcoholics** between the mean score of pre-test (baseline) and post-test (follow up)of craving is 34.20and1.50respectively. SD is 20.121and 2.799respectively. The t-value is 3.847is significant at 0.01 levels. This shows that there is significant difference between music listening intervention in pre (baseline) and post (Follow-up) assessment of craving in alcoholics. The hypothesis (H:6) is accepted. This shows that there is significant difference between music listening intervention impact on pre (baseline) and post (Follow-up) assessment of craving level in alcoholics.

IV. Discussion & conclusion

The results indicated that the methodology was robust and the study proved to be feasible. Some limitations were indicated regarding recruitment, follow ups and relapse situations. Modification relating to the procedure of randomization to be overseen by a quality assurance officer. Exclusion of second time music listening intervention to the patients who are readmitted after relapse have been made. The findings also indicated that music listening supports de-addictive treatment by reducing the withdrawal and craving symptoms in patients diagnosed with ADS.

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