

“A STUDY TO ASSESS THE EFFECTIVENESS OF NATURE SOUND THERAPY IN ENHANCING MOOD AND PSYCHOLOGICAL RELAXATION AMONG ALCOHOL INMATES IN SELECTED DE-ADDICTION CENTERS OF BELAGAVI CITY, KARNATAKA.”

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ABSTRACT

TITLE: “A Study to Assess the Effectiveness of Nature Sound Therapy in Enhancing Mood and Psychological Relaxation Among Alcohol Inmates in Selected De-Addiction centers of Belagavi City, Karnataka.”

AIM: This study aimed to assess the Effectiveness of Nature Sound Therapy in Enhancing Mood and Psychological Relaxation Among Alcohol Inmates in Selected De-Addiction centers of Belagavi City, Karnataka

METHODS: A quantitative pre-experimental one-group pre-test post-test design was adopted. A total of 100 alcohol-dependent individuals were selected using a non-probability convenient sampling technique. Baseline assessment of mood and psychological relaxation was conducted using standardized tools, namely the Positive and Negative Affect Schedule (PANAS) and the Relaxation State Questionnaire (RSQ). The intervention consisted of 14 sessions of nature sound therapy, each lasting 40 minutes, administered on alternate days. The therapy included exposure to natural sounds such as flowing water, birdsong, and rainfall, along with guided relaxation and breathing exercises. Post-test assessment was conducted using the same tools. Data were analyzed using descriptive statistics (frequency, percentage, mean) and inferential statistics (paired t-test and chi-square test).

RESULTS: All 100 participants completed the study (no dropout). The findings revealed a significant improvement in psychological relaxation and mood following the intervention. The proportion of participants with high relaxation increased from 3% in the pre-test to 44% in the post-test. Positive affect improved, while negative affect decreased significantly. Statistical analysis showed a significant difference between pre-test and post-test scores ($p < 0.05$).

CONCLUSION: Nature sound therapy is an effective, simple, and cost-effective non-pharmacological intervention for improving mood and psychological relaxation among alcohol-dependent individuals. It can be incorporated into routine nursing care in de-addiction settings.

KEYWORDS: Nature sound therapy, alcohol inmates, psychological relaxation, mood.

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INTRODUCTION

Alcohol dependence is a major public health

concern contributing significantly to global disease burden and disability ^{1,2}. While alcohol

consumption is socially accepted in many cultures, excessive use leads to serious physical, psychological, and social consequences².

Alcohol Use Disorder (AUD) is characterized by impaired control over alcohol consumption, persistent craving, and continued use despite harmful consequences^{3,4}. It is influenced by a combination of biological, psychological, and environmental factors, including genetic predisposition, stress, and social influences⁵.

Psychological disturbances such as anxiety, depression, emotional dysregulation, and reduced relaxation are common among individuals with alcohol dependence^{5,6}. These factors negatively affect recovery and increase the risk of relapse⁶. Management of alcohol dependence includes pharmacological treatment and psychological therapies such as motivational interviewing and

behavioral interventions⁷. However, there is increasing emphasis on complementary therapies that promote holistic well-being⁸.

Nature sound therapy is a non-invasive intervention involving exposure to natural auditory stimuli such as flowing water, birdsong, and rainfall^{9,10}. Based on stress reduction theory, such stimuli activate the parasympathetic nervous system, promoting relaxation and emotional stability¹⁰.

Despite its potential benefits, limited research has examined its effectiveness among alcohol-dependent individuals, highlighting the need for this study¹¹.

METHODS

Study Design

Pre-experimental one-group pre-test post-test design.

Setting

Selected de-addiction centers in Belagavi, Karnataka.

Sample

- Sample size: 100 participants
- Sampling technique: Non-probability convenient sampling

Inclusion Criteria

- Clients who are willing to participate in the study.
- Clients who are available during the data collection period.

Exclusion Criteria

- The clients who have any hearing impairment
- Clients with aggressive behavior.
- The clients who had previous nature sound therapy intervention.

Tools

- Socio-demographic questionnaire

- Positive and Negative Affect Schedule (PANAS)
- Relaxation State Questionnaire (RSQ)

Data Collection Procedure:

- Pre-test conducted using PANAS and RSQ
- Nature sound therapy administered
- Post-test conducted after completion

Data Analysis

- Descriptive statistics: Mean, percentage
- Inferential statistics: Paired t-test, Chi-square test

RESULTS

Socio-Demographic Findings

- Majority (82%) aged 26–50 years
- All participants were male
- Majority were married (64%)
- Most belonged to lower and middle socioeconomic groups

Baseline Findings

- 40% had poor relaxation
- 50% had high negative affect
- Majority had low to moderate positive affect

Post-Intervention Findings

- High relaxation increased to 44%
- Negative affect reduced to 0% in high category
- Positive affect significantly improved

Effectiveness of Intervention

- Significant improvement in:
 - Relaxation ($p < 0.05$)
 - Positive affect ($p < 0.05$)
 - Negative affect ($p < 0.05$)

Association Findings

- No significant association between socio-demographic variables and outcomes ($p > 0.05$), except minor variations.

DISCUSSION:

The present study evaluated the effectiveness of nature sound therapy in improving mood and psychological relaxation among alcohol-dependent individuals. The findings demonstrated a significant improvement in both relaxation levels and affect following the intervention. Participants showed a shift from poor and mild relaxation in the pre-test to moderate and high relaxation levels in the post-test, indicating the calming effect of natural auditory stimuli.

Similarly, positive affect increased and negative affect decreased after the intervention, suggesting enhanced emotional regulation and reduced psychological distress. These findings support the hypothesis that nature sound therapy has a

significant impact on mood and psychological relaxation among alcohol-dependent individuals. No statistically significant association was found between outcome variables and selected socio-demographic characteristics, indicating that the effectiveness of the intervention was consistent across different groups.

The findings of the present study are consistent with previous research. A study by Alvarsson et al. reported that exposure to natural sounds significantly accelerates stress recovery compared to environmental noise ¹¹. Similarly, Ulrich demonstrated that natural environmental stimuli enhance emotional wellbeing and reduce stress levels ¹².

In addition, studies have shown that nature-based sound interventions improve psychological wellbeing and cognitive performance ^{13,15}. In alignment with these studies, the present findings confirm that nature sound therapy effectively improves relaxation and emotional states among alcohol-dependent individuals.

Overall, the results support the integration of nature sound therapy as a complementary, non-pharmacological intervention in de-addiction settings.

The present study has certain limitations. The pre-experimental design, relatively small sample, inclusion of only male participants, and reliance on self-reported measures may limit the generalizability of the findings. In addition, the short duration of follow-up did not permit evaluation of long-term effects.

CONCLUSION

The present study demonstrated that nature sound therapy significantly improves psychological relaxation and mood among alcohol-dependent individuals. A notable shift was observed from poor and mild relaxation levels in the pre-test to moderate and high levels in the post-test, along with an increase in positive affect and a reduction in negative affect. Statistical analysis confirmed a significant difference between pre-test and post-test scores ($p < 0.05$), indicating the effectiveness of the intervention.

No statistically significant association was found between relaxation and affect scores with selected socio-demographic variables, suggesting that the intervention is effective across different population groups. The study findings support the acceptance of the research hypothesis related to the effectiveness of nature sound therapy, while the hypothesis regarding association with demographic variables was not supported.

Nature sound therapy is a simple, non-invasive, and cost-effective intervention that can be easily integrated into routine nursing care in de-addiction centers. Its implementation may contribute to improved psychological wellbeing, emotional stability, and overall recovery among individuals with alcohol dependence.

Future research should include larger multicenter samples, compare nature sound therapy with other non-pharmacological interventions, and examine its long-term effects on psychological outcomes such as anxiety, depression, and quality of life.

TABLES AND GRAPHS

Table 1: Distribution of participants by socio demographic characteristics

		n	%
Age	<=25	5	5.0
	26-50	82	82.0
	>50	13	13.0
Sex	Male	97	97.0
	Female	0	0.0
	Transgender	0	0.0
Marital Status	Single	30	30.0
	Married	64	64.0
	Separated	1	1.0
	Divorced	5	5.0

	Widowed	0	.0
	Cohabiting/Live-in	0	.0
Religion	Hindu	87	87.0
	Muslim	2	2.0
	Christian	6	6.0
	Other	5	5.0
Mother tongue	English	3	3.0
	Hindi	8	8.0
	Kannada	62	62.0
	Konkani	5	5.0
	Marathi	20	20.0
	Telugu	1	1.0
	Urdu	1	1.0
Residential address	Urban	43	43.0
	Rural	47	47.0
	Semi-Urban	10	10.0
Type of family	Nuclear	51	51.0
	Joint/Extended	36	36.0
	Single-parent	10	10.0
	Other	3	3.0
Highest education completed	Primary	17	17.0
	Middle	7	7.0
	Secondary	14	14.0
	Higher secondary	26	26.0
	Diploma/ITI	16	16.0
	Graduate	17	17.0
	Postgraduate	3	3.0
Occupation	Student	4	4.0
	Unemployed	7	7.0
	Daily Wage/Labour	25	25.0
	Self-employed/Business	32	32.0
	Employed-Government	6	6.0
	Employed-Private	18	18.0

	Homemaker	0	.0
	Retired	3	3.0
	Other	5	5.0
Monthly family income	<5000	8	8.0
	5000-10000	24	24.0
	10001-20000	27	27.0
	20001-40000	18	18.0
	>40000	14	14.0
	Not willing to disclose	9	9.0
Socio economic status	Upper	14	14.0
	Upper middle	43	43.0
	Lower middle	31	31.0
	Upper Lower	4	4.0
	Lower	8	8.0
Living arrangement	Alone	4	4.0
	With family	85	85.0
	With spouse only	9	9.0
	With friends/roommate	1	1.0
	Institutional (shelter/hospital)	0	.0
	Other	1	1.0

Table 2 Distribution of participants by Relevant clinical & addiction background

		n	%
Pattern of use	Daily	51	51.0
	Binge/Heavy episodic	16	16.0
	Weekly	23	23.0
	Occasional/Social	9	9.0
	Don't know	1	1.0
Previous attempts at de addiction/rehabilitation	Yes	24	24.0
	No	76	76.0
	If yes then (no of times)	0	0.0
Current admission reason	Voluntary	24	24.0
	Referred by family	66	66.0
	Referred by employer/court	4	4.0
	Other	6	6.0
Other substance use	Yes (Specific substances and frequency)	33	33.0
	No	67	67.0
Any diagnosed psychiatric comorbidity?	No	100	100.0
	Yes (specify diagnosis)	0	0.0
Any chronic physical illnesses	No	82	82.0

	Yes (specify)	18	18.0
Family history of alcohol use/substance use	No	74	74.0
	Yes-Relation	26	26.0
Employment disruption due to alcohol	No	83	83.0
	Yes-Specify	17	17.0
Legal problem related to alcohol	No	86	86.0
	Yes-Specify	14	14.0
Previous psychiatric or psychological therapy	No	91	91.0
	Yes-Describe	9	9.0

Table 3: Distribution of Participants According to Pre-Test Relaxation Levels (RSQ)

RSQ		n	%
Pre-test	Poor relaxation	40	40.0
	Mild relaxation	35	35.0
	Moderate relaxation	22	22.0
	High relaxation	3	3.0

Table 4: Distribution of Participants According to Post-Test Relaxation Levels (RSQ)

RSQ		n	%
Post test	Poor relaxation	3	3.0
	Mild relaxation	5	5.0
	Moderate relaxation	48	48.0
	High relaxation	44	44.0

Table 5: Distribution of Participants According to Pre-Test Positive Affect (PA) Levels

PA		n	%
Pre-test	Low affect	40	40.0
	Moderate affect	54	54.0
	High affect	6	6.0

Table 6: Distribution of Participants According to Post-Test Positive Affect (PA) Levels

PA		n	%
Post test	Low affect	14	14.0
	Moderate affect	50	50.0
	High affect	36	36.0

Table 7: Distribution of Participants According to Pre-Test Negative Affect (NA) Level

NA		n	%
Pre	Low affect	9	9.0
	Moderate affect	41	41.0
	High affect	50	50.0

Table 8: Distribution of Participants According to Post-Test Negative Affect (NA) Levels

NA		n	%
Post	Low affect	58	58.0
	Moderate affect	42	42.0
	High affect	0	0.0

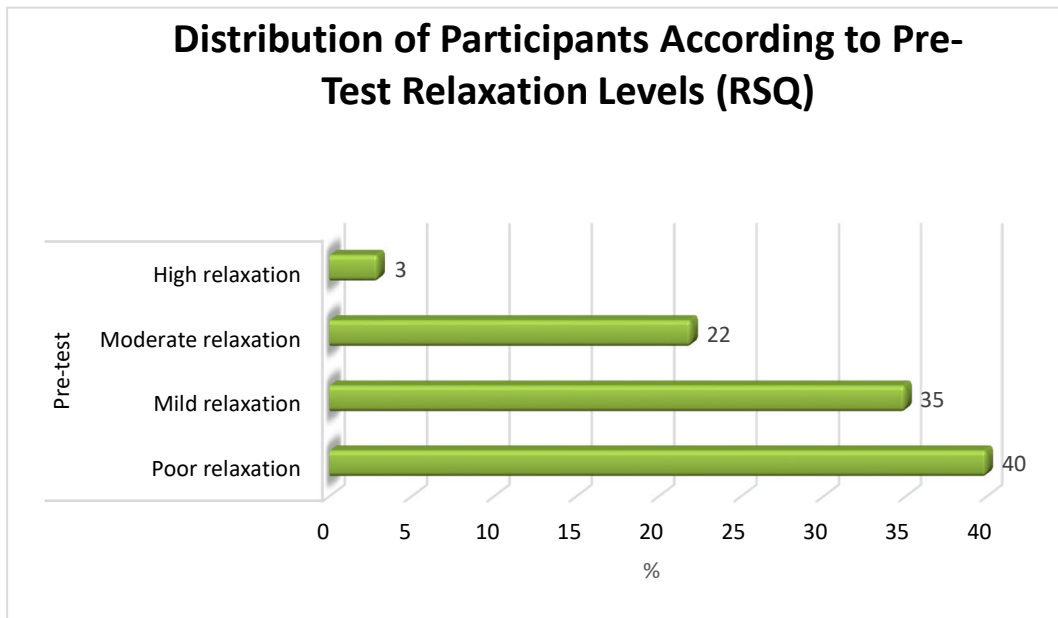
Table 9: Descriptive Statistics of Alcohol Use Characteristics Among Participants

	Mean	Standard Deviation	Minimum	Maximum
Age at first alcohol use (years)	23.06	6.38	13.00	50.00
Age at onset of regular drinking/problem drinking	25.36	7.17	2.00	50.00
Duration of alcohol use	12.84	9.92	2.00	50.00

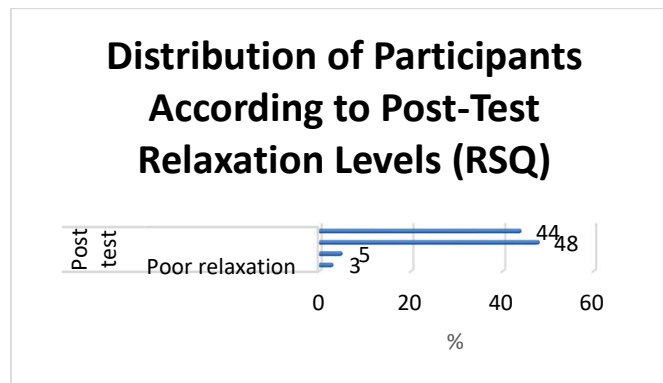
Table 10: Effect of Intervention on Relaxation and Affect Levels: Pre-Post Comparison

		Mean	SD	Mean difference	t	Sig.
RSQ	Pre test	25.87	6.56	-10.74	-11.571	<0.05*
	Post test	36.61	5.91			
PA	Pre test	27.68	6.06	-7.1	-11.053	<0.05*
	Post test	34.78	8.07			
NA	Pre test	35.40	10.57	14.46	10.78	<0.05*
	Post test	20.93	6.94			

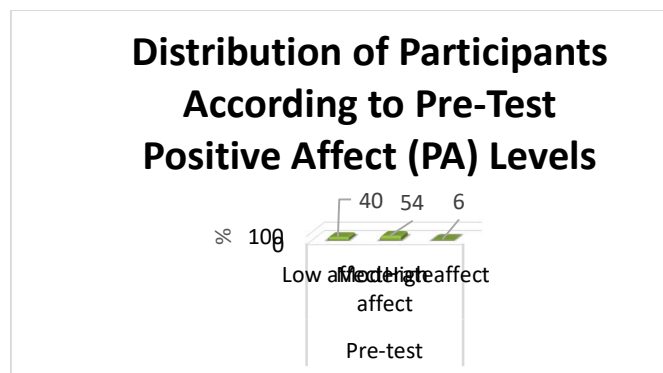
*<0.05 significance is obtained by paired t test



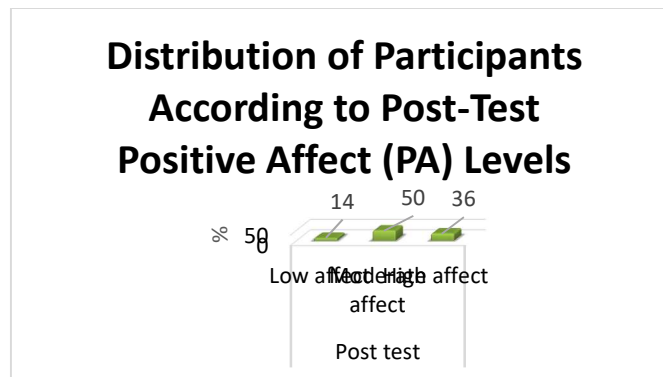
Graph 1: Distribution of Participants According to Pre-Test Relaxation Levels (RSQ)



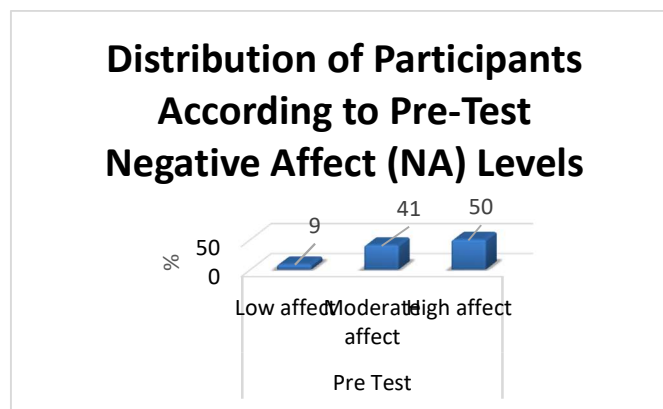
Graph 2: Distribution of Participants According to Post-Test Relaxation Levels (RSQ)



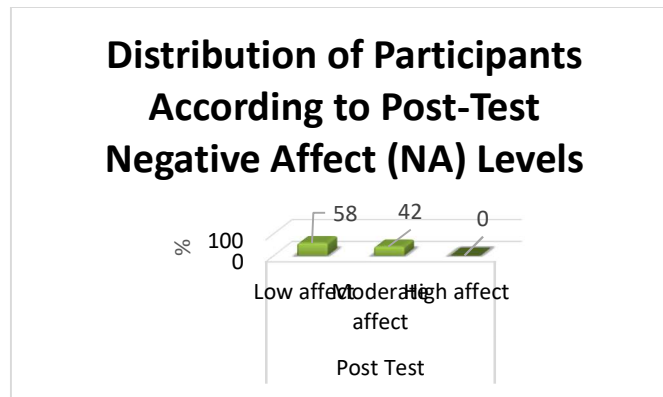
Graph 3: Distribution of Participants According to Pre-Test Positive Affect (PA) Levels



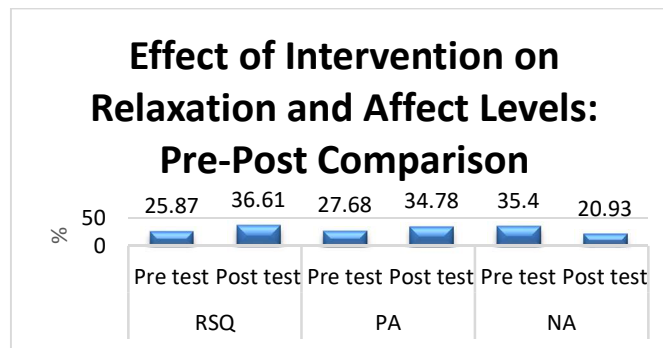
Graph 4: Distribution of Participants According to Post-Test Positive Affect (PA) Levels



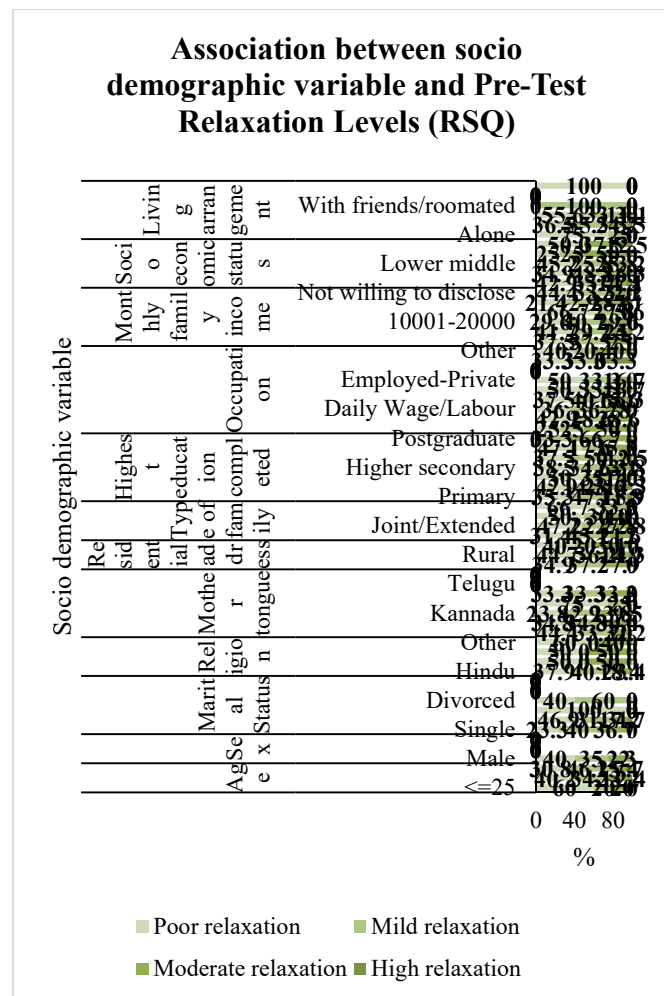
Graph 5: Distribution of Participants According to Pre-Test Negative Affect (NA) Levels



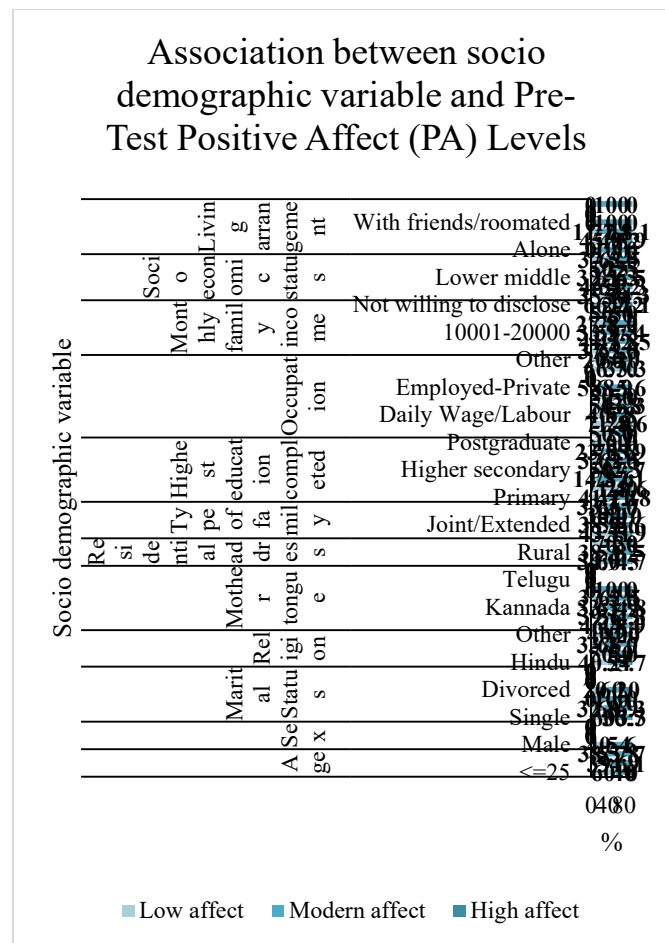
Graph 6: Distribution of Participants According to Post-Test Negative Affect (NA) Levels



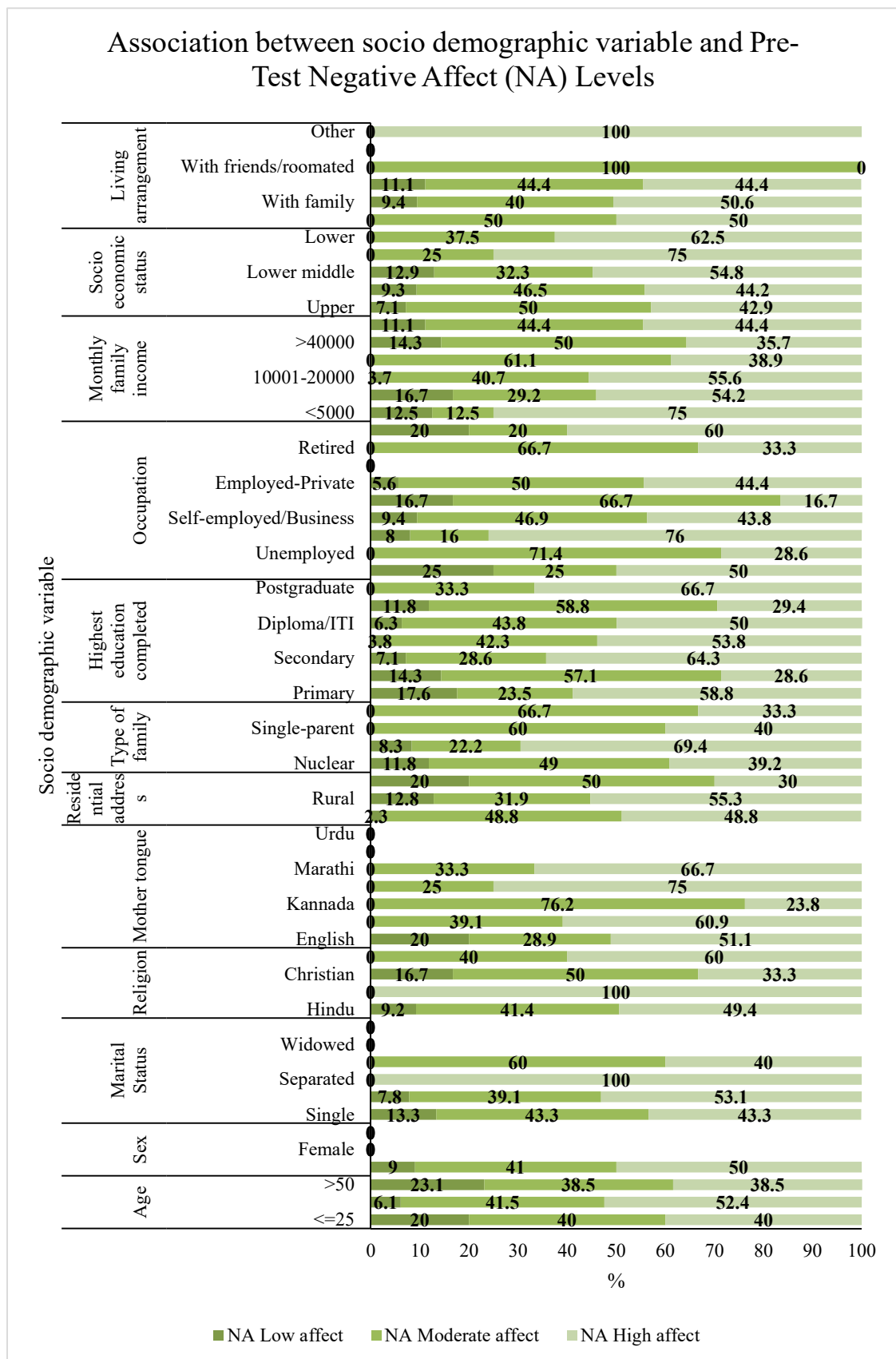
Graph 7: Effect of Intervention on Relaxation and Affect Levels: Pre-Post Comparison



Graph 8: Association between socio demographic variable and Pre-Test Relaxation Levels (RSQ)



Graph 9: Association between socio demographic variable and Pre-Test Positive Affect (PA) Levels



Graph 10: Association between socio demographic variable and Pre-Test Negative

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