

EFFECT OF SIMPLIFIED KUNDALINI YOGA COMBINED WITH ACUPRESSURE ON ETHYL GLUCURONIDE (ETG) LEVELS AND LIFE SATISFACTION AMONG ALCOHOLIC MIDDLE-AGED MEN

N. Ramanathan¹, Dr Murugesan S^{2*}

¹Ph.D. Scholar, Faculty of Yoga Sciences and Therapy, Meenakshi Academy of Higher Education and Research, K K Nagar, Chennai 600 078, Tamil Nadu, India. E-mail ID :vishwaramanathan@gmail.com

^{2*}Professor, Faculty of Yoga science and Therapy, Meenakshi Academy of Higher Education and Research, West K.K.Nagar, Chennai-78, Tamil Nadu, India. E-mail ID: murugeshyoga@gmail.com.

***Corresponding Author:** Dr Murugesan S

*Professor, Faculty of Yoga science and Therapy, Meenakshi Academy of Higher Education and Research, West K.K.Nagar, Chennai-78, Tamil Nadu, India. E-mail ID: murugeshyoga@gmail.com.

ABSTRACT

Background: Alcoholism is a significant public health issue, particularly among middle-aged men, leading to adverse physical and mental health outcomes. Ethyl glucuronide (ETG), a reliable biomarker for recent alcohol consumption, provides a crucial measure of abstinence. Simplified Kundalini Yoga (SKY) and acupressure have been explored as complementary interventions for managing addiction and enhancing psychological well-being.

Objective: This study aimed to investigate the efficacy of SKY combined with acupressure in reducing ETG levels and improving life satisfaction among middle-aged men with alcohol use disorder.

Methodology: A total of 60 alcoholic men aged 40-60 years were randomly assigned to three groups: Group A (SKY + Acupressure), Group B (SKY only), and Group C (Control). The intervention lasted 12 weeks, with participants practicing SKY and/or receiving acupressure for 60 minutes daily. Pre- and post-intervention ETG levels were measured using urine samples, and life satisfaction was assessed via the Satisfaction with Life Scale (SWLS). Data were analyzed using paired t-tests and ANOVA.

Results: Group A (SKY + Acupressure) showed the most significant reduction in ETG levels ($p < 0.01$) and improvement in life satisfaction ($p < 0.01$) compared to Group B (SKY only) and Group C (Control). ANOVA revealed significant differences between the groups in both ETG reduction and life satisfaction improvement.

Conclusion: Simplified Kundalini Yoga combined with acupressure demonstrated significant benefits in reducing alcohol consumption and enhancing life satisfaction in middle-aged alcoholic men. These findings suggest the potential of integrative mind-body interventions in addiction recovery programs.

Keywords: Alcoholism, Simplified Kundalini Yoga, Acupressure, Ethyl Glucuronide (ETG), Life Satisfaction, Addiction Recovery, Middle-Aged Men

INTRODUCTION

Alcoholism is a widespread public health concern, particularly among middle-aged men, with long-term alcohol use leading to severe physical, psychological, and social consequences. Chronic alcohol consumption not only affects liver function but also disrupts mental health and life satisfaction (Gowin et al., 2021). In recent years, various holistic practices, such as **Simplified Kundalini Yoga (SKY)** and **acupressure**, have emerged as complementary therapies for managing addiction and its effects on well-

being (Sinha et al., 2022).

Ethyl glucuronide (ETG) is a direct biomarker of alcohol consumption, providing evidence of recent alcohol intake. It is detectable in urine and other bodily fluids, serving as an objective indicator to monitor abstinence and treatment efficacy in alcohol-dependent individuals (Wurst et al., 2020). The presence of ETG is linked to both acute and chronic alcohol consumption, making it a valuable tool for assessing the effectiveness of interventions aimed at reducing alcohol intake (Gomes et al., 2023).

The introduction of **Simplified Kundalini Yoga**, which combines breathwork, meditation, and subtle energy practices, is gaining attention for its potential benefits in managing stress, enhancing emotional regulation, and promoting abstinence in individuals recovering from alcohol dependence (Verma et al., 2022). Additionally, **acupressure**, an ancient healing technique involving the application of pressure to specific points on the body, has been shown to influence various physiological responses, including reducing cravings and withdrawal symptoms (Cheng et al., 2021).

Emerging research suggests that combining mindfulness-based practices such as SKY with physical interventions like acupressure could have a synergistic effect in reducing alcohol dependence biomarkers (e.g., ETG) and improving overall life satisfaction. Life satisfaction, a key indicator of psychological well-being, tends to decline significantly in individuals with alcohol use disorder, further perpetuating unhealthy behaviors (Fitzpatrick et al., 2021). There is a growing interest in understanding how integrative approaches like SKY and acupressure can promote not only abstinence from alcohol but also improve life satisfaction among alcoholic men (Pandey et al., 2022).

This study aims to explore the efficacy of **Simplified Kundalini Yoga** combined with **acupressure** on reducing ETG levels and enhancing life satisfaction in middle-aged alcoholic men. By addressing both the physiological and psychological aspects of alcohol dependence, this integrative approach could offer a promising avenue for holistic recovery.

Aim:

The primary aim of this study is to assess the efficacy of **Simplified Kundalini Yoga (SKY)** combined with **acupressure** in reducing **Ethyl Glucuronide (ETG)** levels and improving **life satisfaction** among alcoholic middle-aged men.

Hypothesis:

1. There would be a significant reduction in ETG levels after 12 weeks of SKY and acupressure in comparison to the control group.
2. Life satisfaction scores would significantly improve in participants undergoing SKY and acupressure compared to the control group.

MATERIAL & METHODS

A randomized controlled trial (RCT) was conducted involving 60 middle-aged men (aged 40-60 years) diagnosed with alcohol use disorder. Participants were randomly divided into three groups:

- **Group A:** Simplified Kundalini Yoga (SKY) + Acupressure (n = 20).
- **Group B:** Simplified Kundalini Yoga (SKY) only (n = 20).
- **Group C:** Control group (n = 20, no intervention).

The intervention lasted for **12 weeks**. Both yoga groups practiced for **60 minutes daily** for six days a week:

- **Simplified Kundalini Yoga (SKY)** included breathing techniques, meditation, and specific postures aimed at improving mental and physical health.

- **Acupressure** was administered to **Group A** using specific pressure points associated with reducing cravings and enhancing relaxation.

- **Group C** received no intervention but were instructed to maintain their regular lifestyle.

SKY and Acupressure have been documented to reduce stress, promote emotional regulation, and enhance overall health outcomes in individuals struggling with addiction (Verma et al., 2022; Cheng et al., 2021). Acupressure, specifically, has been shown to stimulate neural responses that aid in reducing withdrawal symptoms (Gomes et al., 2023).

1. **Ethyl Glucuronide (ETG) levels:** Measured via **urine samples** at baseline and after 12 weeks to assess recent alcohol consumption. ETG is a direct and reliable biomarker for detecting alcohol intake (Wurst et al., 2020).

2. **Life Satisfaction:** Assessed using the **Satisfaction with Life Scale (SWLS)**, a validated instrument for measuring subjective well-being and satisfaction (Fitzpatrick et al., 2021).

Statistical Analysis followed is

- **Paired t-tests** were used to compare pre- and post-intervention scores within each group.
- **ANOVA** was employed to assess differences between groups. A significance level of $p < 0.05$ was set for all analyses.

Inclusion Criteria:

- Male participants aged **40 to 60 years**.
- Diagnosed with **alcohol use disorder** for at least one year.
- Regular alcohol consumers with **positive ETG results** at baseline.
- Willing to participate and commit to the 12-week intervention.

Exclusion Criteria:

- Presence of severe physical or psychological conditions.
- Participants undergoing any other addiction therapy.
- Individuals who are not physically capable of performing yoga.

RESULTS & DISCUSSION

Table 1: ETG Results Pre- and Post-Intervention

Variable	Group A (SKY + Acupressure)	Group B (SKY only)	Group C (Control)	F-value (df = 2, 57)	p-value
ETG Levels (ng/mL)	Mean ± SD	Mean ± SD	Mean ± SD		
- Pre Test	145.7 ± 15.3	144.8 ± 14.9	143.5 ± 15.1		
- Post-Intervention	45.3 ± 9.1	85.6 ± 10.5	140.9 ± 14.6	12.76	< 0.01
Δ Change	-100.4	-59.2	-2.6		
p-value (Paired t-test)	< 0.01	< 0.05	> 0.05		

Table 2: Life Satisfaction Results Pre- and Post-Intervention

Variable	Group A (SKY + Acupressure)	Group B (SKY only)	Group C (Control)	F-value (df = 2, 57)	p-value
Life Satisfaction (SWLS)	Mean ± SD	Mean ± SD	Mean ± SD		
- Pre Test	18.3 ± 3.9	17.9 ± 4.1	17.5 ± 3.8		
- Post-Intervention	27.5 ± 3.2	23.8 ± 3.5	18.1 ± 3.7	9.53	< 0.01
Δ Change	+9.2	+5.9	+0.6		
p-value (Paired t-test)	< 0.01	< 0.05	> 0.05		

The results from this study highlight the efficacy of **Simplified Kundalini Yoga (SKY) combined with acupressure** in significantly reducing **ETG levels** and improving **life satisfaction** among middle-aged alcoholic men. Group A (SKY + Acupressure) showed the most substantial reductions in ETG levels ($p < 0.01$), indicating a significant decrease in recent alcohol consumption, while Group B (SKY only) also saw improvements but to a lesser degree ($p < 0.05$). The control group showed minimal changes, further emphasizing the impact of the intervention.

This study aligns with existing research that suggests **holistic practices like yoga** can modulate the stress response and reduce cravings for substances, including alcohol (Pandey et al., 2022; Verma et al., 2022). Acupressure's role in addressing physical withdrawal symptoms and emotional balance has also been supported in previous literature (Cheng et al., 2021).

Moreover, improvements in life satisfaction scores in both yoga groups highlight the psychological benefits of these interventions, supporting findings from Fitzpatrick et al. (2021), who observed that enhancing emotional well-being plays a crucial role in addiction recovery.

CONCLUSION

The results suggest that **Simplified Kundalini Yoga combined with acupressure** is an effective holistic intervention for reducing alcohol consumption, as measured by ETG levels, and improving life satisfaction among middle-aged alcoholic men. Group A showed the most significant improvements, confirming the additive benefit of acupressure when combined with SKY. These findings underscore the importance of integrating mind-body practices in addiction treatment programs.

REFERENCES

- Cheng, F., Zhang, Y., & Li, Y. (2021). The role of acupressure in managing addiction and withdrawal symptoms: A review of clinical trials. **Journal of Integrative Medicine**, 19(4), 287-293. <https://doi.org/10.1016/j.joim.2021.01.003>
- Fitzpatrick, K., Williams, J., & Gomez, A. (2021). Life satisfaction and its relationship to alcohol use and recovery: A systematic review. **Substance Use & Misuse**, 56(9), 1207-1220. <https://doi.org/10.1080/10826084.2021.1882569>
- Gomes, M. L., Rodrigues, C. S., & Costa, C. L. (2023). Biomarkers in alcohol addiction: Ethyl glucuronide as a reliable measure of recent alcohol intake. **Alcohol and Alcoholism**, 58(1), 15-23. <https://doi.org/10.1093/alcalc/agaa003>

4. Verma, R., Sharma, A., & Kumar, N. (2022). Simplified Kundalini Yoga: A novel approach to enhancing emotional resilience and managing addiction. *International Journal of Yoga*, 15(2), 128-135. https://doi.org/10.4103/ijoy.ijoy_62_22
5. Wurst, F. M., Thon, N., & Weinmann, W. (2020). Ethyl glucuronide—The direct alcohol biomarker for assessing recent alcohol consumption. *Journal of Clinical Medicine*, 9(4), 1191. <https://doi.org/10.3390/jcm9041191>